Improving Quality of Care in India's Family Welfare Programme

THE CHALLENGE AHEAD

EDITORS

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and

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Population Council

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Population Council
One Dag Hammarskjold Plaza
New York, NY 10017 USA
www.popcouncil.org

Library of Congress Cataloging-in-Publication Data

Improving quality of care in India's family welfare programme : the challenge ahead / Michael A. Koenig, M.E. Khan.
p. cm.
Includes bibliographical references.
ISBN 0-87834-099-8 (pbk. : alk. paper)
1. Family policy—India. I. Koenig, Michael Alan. II. Khan, M. E. III. Population Council.
HV700.I4 I46 1999
362.82'0954—dc21 99-16481
CIP

Cover design by Burstein/Max Associates Inc.
Cover pattern adapted from a photograph by Sanjay K. Singh.

Printed in the United States of America

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In memory of Professor George B. Simmons (1940–1990),
who combined a love for India
with an appreciation of
the power of organized interventions
to improve human welfare

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Foreword

This volume is a great step forward in the long history of publications on family planning in India. Here, finally, we have detailed empirical data and analysis of the various dimensions of quality of care from different regions in the country on such subjects as: women's perceptions of the care they receive; observations of provider–client interactions; barriers to quality of service delivery; existing interregional variations; contraceptive choice and interpersonal relations; technical quality of care, especially in regard to sterilization camps; and the effect of the target system on the work style of outreach staff. All elements of the quality-of-care framework elaborated by Judith Bruce are well documented and their relationships to broader program constraints are clearly identified. Although the picture that emerges is by no means uniform, the overall impression one receives from this volume is of the massive change that is needed before the Indian program can meet the reproductive and quality-of-care objectives in recent policy statements and address the needs of rural people.

Observers of family planning in India have been familiar with many of the conditions described in the volume, some of which have also been discussed in previous publications, from both within and outside of India. However, we have not yet seen analysis of quality of care that is as detailed and comprehensive as what appears here. In addition, no previous publications have paid as much sustained attention to the realities of program implementation and to the perspectives of local people. The volume also has special significance because it assembles research undertaken by Indian scholars and professionals whose work is often not readily accessible to an international audience.

The data presented here provide an essential baseline diagnosis for policymakers and program managers interested in advancing the

Indian program's transition to emphasizing quality of care. Given the current reorientation toward a target-free approach to family planning services in India, this is indeed an opportune moment for this volume to appear. One cannot help but wonder, however, why such detailed documentation and analysis of the status of quality of care in the Indian program was not published earlier. A picture this clear calls for action, and, as this book documents so clearly, action to reorient the program has been needed for a long time.

The book is also extremely relevant for researchers interested in the study of quality of care and the interactions between program representatives and local people. The value of both quantitative and qualitative data in such research is amply demonstrated. With this inventory in hand, researchers can now move forward in the continued study of quality of care, and especially in researching ways in which these findings can lead to improvements in the day-to-day provision of family planning services.

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Acknowledgments

This volume owes its existence to many individuals and institutions. We are indebted to the United States Agency for International Development, the Population Council, and the Ford Foundation for cofunding the original 1994 Bangalore workshop, "The Quality of Services in the Indian Family Welfare Programme," on which much of this volume is based. We are grateful to William Goldman, previously Chief of the Office of Population, Health, and Nutrition at USAID, New Delhi, and to John Townsend, previously Director of the Population Council's Asia and Near East Operations Research Project, for providing financial support. We wish to particularly recognize the Ford Foundation and David Arnold, previously the Representative for India, Nepal, and Sri Lanka, who understood early on the importance of this issue, and made publication of the volume possible through grants supporting Michael Koenig's time, as well as editorial and publication expenses.

A number of individuals have made key contributions at various stages of work on this volume. We are especially grateful to Sandra Ward, whose adeptness at transcontinental technical editing succeeded in melding a set of highly disparate papers into a common format and style, while retaining and often sharpening the meaning and intent of individual contributions. We also recognize the contributions of Deepika Ganju, who invigorated the process of chapter revisions at a time when the project was flagging. We are also grateful to Nance Cunningham of Johns Hopkins University and Jared Stamm of the Population Council, for their careful reading and editing in the final stages of work on the volume, and to Ann Extross and Renuka Agarwala of the Ford Foundation, New Delhi, and V. L. Thomas of the Population Council for their assistance with the prepa-

ration of the manuscript. Shireen Jejeebhoy, Leela Visaria, and Pravin Visaria—friends and colleagues—read the initial draft of the introduction and provided timely reassurance that it was not badly off track. The inputs from the two technical reviewers—John Kantner and Ruth Simmons—provided useful critiques and reinforced our belief that the volume made new and important contributions to an area that has already received extensive study. We deeply appreciate the contribution of Ethel Churchill of the Population Council to the publication of this volume, for her continued strong interest in the volume and her efforts to ensure wide dissemination of the volume both within and outside of India.

We would also be remiss without expressing our gratitude to the individual authors themselves, for going the "extra mile" in their willingness to, in many cases, make multiple revisions of their papers, and for ensuring that the final product was of a uniformly high standard. Finally, we wish to recognize the support and stimulation we have received from our respective families—Gillian, Matthew, and Leah in Baltimore and Nusrut, Rabia, and Irfan in Baroda—who give meaning to all of our work.

May 1999

MICHAEL A. KOENIG
M. E. KHAN

1 Introduction

MICHAEL A. KOENIG

In 1952, India became the first developing country to establish a national family planning program to address the issues of high fertility and rapid population growth. In the more than four decades of its existence, the Indian family planning program has been both highly visible and the subject of intensive international interest and analysis. A primary explanation for this interest lies in India's global demographic significance. With a population approaching one billion people, India accounts for almost one-sixth of the world's people. It is estimated that by the middle of the next century, it will surpass China as the world's most populous country.

Over the past four decades, significant growth and expansion of the Indian family planning program have been evident. Starting from virtually no infrastructure, the Indian program has grown to encompass over 150,000 primary health centers (PHCs) and subcenters, employing more than 300,000 family planning personnel. This network of services now extends to almost the entirety of India's people, three-fourths of whom continue to reside in 600,000 often small and isolated communities. As evidenced by the most recent National Family Health Survey in India, knowledge of family planning among reproductive-aged women is by now almost universal, and by the early 1990s 41 percent of couples were currently using a method of contraception (IIPS 1995). Largely as a result, total fertility rates in India have declined significantly over the last several decades, from 6.0 births in the 1950s to 3.4 births by the early 1990s. In addition, the program has gradually expanded the range of services it offers to include immunization, antenatal and delivery care, preventive and curative health care, and, most recently, reproductive health care.

These achievements notwithstanding, it is difficult to escape the conclusion that the Indian family planning program remains characterized by considerable unfilled potential and promise. Its modest progress stands in marked contrast to the progress of a number of neighboring family planning programs in Asia—most notably Bangladesh, Indonesia, and Thailand—which despite having launched their programs much later, have achieved considerable success in raising levels of contraceptive use. Nowhere is this disparity more apparent than in the large and populous northern states, which are home to more than 400 million people, more than 40 percent of India's total population.[1] The reasons for the limited success of the Indian program extend far beyond the service delivery program itself. They encompass a host of other social, cultural, and economic factors—including low levels of female and overall educational attainment, continuing high mortality, low status of women, and extreme poverty—which influence the demand for fertility limitation (Cassen 1978; Satia and Jejeebhoy 1991). In recent years, however, there has been a growing consensus among policymakers, researchers, and informed observers that the program itself—as reflected in its priorities, emphasis, and the implementation of services—must be accorded primary responsibility for the limited success of family planning in much of India.

Much has already been written about the Indian family planning program. As one of the most ambitious organized efforts to influence human fertility in a country of key demographic importance, the program has been extensively documented and critiqued over the last several decades. Much of this research has focused on the analysis of population and family planning policies within India. One set of studies has described the historical evolution of population and family planning policies in India since the program's inception in the 1950s (Narayana and Kantner 1992; Visaria and Chari 1998). A second constellation of studies has focused upon the impact of the politically turbulent 1976–77 Emergency Period—when compulsory sterilization was introduced in many parts of India—in terms of its immediate and subsequent political and programmatic impact (Basu 1985; Cassen 1978; Gwatkin 1979; Kocher 1980; Pai Panandiker and Umashankar 1994). Other more recent work has sought to describe the major shifts in population and reproductive health policies that have been taking place in India following the 1994 International Con-

ference on Population and Development (Measham and Heaver 1996; Visaria and Chari 1998; Visaria, Jejeebhoy, and Merrick 1997).

A second focus of research on the Indian family planning program has been its organization and resource inputs, in terms of structure (Misra et al. 1982; Narayana and Kantner 1992; Simmons and Ashraf 1978), facilities, equipment, and staffing (ICMR 1991; Satia and Giridhar 1991; Soni 1983), and financing and resource allocation (Berman and Khan 1993; World Bank 1995). Another set of studies has focused on program outputs, as reflected by contraceptive prevalence, acceptance levels for specific methods, and utilization of other maternal and child health (MCH) services (IIPS 1995; Satia and Jejeebhoy 1991; Soni 1983).

In view of this extensive body of research on the Indian family planning program, it is therefore surprising how little is actually known about how the program is implemented at the field level—at the interface between the program and its clients. Although frequent references are made to the serious gaps in quality of family planning services provided by the Indian public sector (Conly and Camp 1992), empirical evidence on this issue remains limited, unsystematic in nature, and largely unpublished and inaccessible to the research and policy communities.[2] Little has been published on how existing policies and program inputs translate into implementation practices at the field level. Even less is known about the nature and content of interactions that take place between family planning program personnel and current or potential clients on a day-to-day basis. Limited evidence also exists on how service providers themselves define, prioritize, and carry out their mandated responsibilities, as well as the barriers they face to providing high-quality services. And perhaps most importantly, little is known about the perspectives, perceptions, and direct experiences of Indian women themselves—both among users and especially among nonusers—in terms of the quality and adequacy of services they have received through the public-sector family planning program. Finally, we know remarkably little about how current standards of care inhibit or deter women from seeking or continuing to utilize family planning and other services offered through the Family Welfare Programme.

Recognizing these significant information gaps, the Population Council organized a three-day workshop entitled "The Quality of

Services in the Indian Family Welfare Programme" in Bangalore, India, in May 1995, with support from the Ford Foundation and the United States Agency for International Development. The workshop brought together for the first time a diverse mix of policymakers, social scientists, public health physicians, members of nongovernmental organizations, and women's health activists to consider a countrywide perspective on the nature and quality of services provided by the Indian family planning program. The collective picture that emerged from the workshop provided an unprecedented ground-level view of quality of care within the national program.[3]

No a priori attempt was made to define the dimension of quality of care for workshop participants. Yet, as is evident from the present volume, the focus of almost all of the studies is upon what Donabedian has defined as the two critical elements of quality of care: technical care and the interpersonal relationship between the practitioner and the client (Donabedian 1988). Many of the studies presented also draw significantly upon the six elements of the quality-of-care framework developed by Judith Bruce specifically for family planning services (Bruce 1990).

The issue of quality of care was evaluated from multiple service delivery levels—clinical services, PHCs, and outreach services—and from multiple perspectives—individual women clients, community outreach workers, medical personnel, and program managers. The studies also employed a range of innovative research methodologies to examine the issue of quality of care—including respondent and workers surveys, client exit interviews, client–provider interaction observations, focus-group discussions with both clients and providers, and situation analysis. The diversity of approaches and methods generated an unprecedented wealth of information on a wide range of quality dimensions of the Indian program, including service access and availability, information provided to clients, choice of methods, interpersonal relations, technical competence, and follow-up and continuity of care.

The present volume consists primarily of selected edited papers from the Bangalore workshop, augmented by several additional studies that were unavailable at the time of the original workshop. The volume is organized into four main sections: (1) evidence from community-based surveys and in-depth, qualitative research on clients;

(2) qualitative and quantitative studies of service provider perspectives on quality of care; (3) studies of clinical quality of care provided in sterilization camps; and (4) programmatic evidence and policy issues associated with improving the quality of care.

In Chapter 2, T. K. Roy and Ravi K. Verma present findings from their four-state study of quality of care in India, which included two North (Bihar and West Bengal) and two South (Karnataka and Tamil Nadu) Indian states. The study highlights the significant differences (frequency of outreach visits, availability of physicians and medicines) that characterize the Indian program, with the program in southern states performing consistently higher in most areas. The study also outlines quality-of-care concerns that appear to cut across almost all programs—including dominant emphasis on sterilization and limited information to clients on method use and side effects—and suggests that the contraceptive choice provided to clients might be no wider, and possibly even more limited, in the South Indian states, which have high contraceptive prevalence.

In Chapter 3, Nirmala Murthy provides further evidence on coverage levels and perceived quality of public sector health and family planning services, based upon detailed analysis of a sample survey of women in the western Indian state of Maharashtra. The study highlights the important role of geography in determining service access, and finds that respondents residing in more remote communities are less likely to have been visited by health workers, to have been visited for adequate lengths of time, and to have received other MCH services. The study also finds that workers may make selective decisions about providing contraceptive choice and information, with women residing in more remote communities and poorer women substantially less likely to have been informed about spacing methods of contraception and method side effects.

In Chapter 4, M. E. Khan, R. B. Gupta, and Bella C. Patel present the results from a large statewide survey of Uttar Pradesh in North India. Their results underscore an important but frequently overlooked point: In difficult settings such as North India, basic access to services by clients may often take precedence over quality concerns. The authors found that only a small minority of respondents reported any recent contact with family planning outreach staff, a level that does not appear to have changed appreciably over the last two dec-

ades in Uttar Pradesh. This minority of women who were visited, however, expressed generally favorable views about the services they received and the further interaction they had with program staff. The study also found that significant numbers of acceptors of sterilization and the intrauterine device (IUD) were unwilling to recommend these methods to others, perhaps not surprising in view of the significant rates of reported method-related complications and low levels of follow-up by program staff after acceptance.

The final three chapters in Part I consider client perspectives on quality of care, based on qualitative evidence. In Chapter 5, T. K. Sundari Ravindran takes an in-depth look at rural women's experiences with the family planning program in Tamil Nadu, widely regarded as a demographic success story, with fertility having reached replacement levels. A series of case studies highlights important gaps in such service dimensions as voluntary and informed contraceptive choice and the technical standards and competence of program personnel; it also points to widespread corruption among program staff and frequent insensitivity to clients' needs. Despite Tamil Nadu's reputation as having a strong and well-run family planning program, the results of this study indicate that considerable scope exists for improving the overall quality and client orientation of public sector services.

In Chapter 6, Sandhya Barge and Lakshmi Ramachandar present findings from an in-depth observational study of service provider–client relations in a rural area of the northern state of Madhya Pradesh. The study provides considerable insight into the nature and importance of interactions between female paramedical staff and women clients. Case studies highlight the systemic problems of access and quality that characterize outreach services in this challenging service environment: nonresidence and abbreviated working hours of female paramedical staff; irregular and infrequent outreach visits, especially to more remote communities; chronic shortages of equipment and supplies; and an overriding programmatic emphasis on sterilization. Yet, despite these systemic problems, the overall picture presented is one of reasonable quality services at the level of the PHC, and generally positive interpersonal relations between female paramedical staff and their clients.

In Chapter 7, Manisha Gupte, Sunita Bandewar, and Hemlata Pisal explore women's perspectives on quality of health and repro-

ductive health care through an innovative ranking approach carried out as part of focus group interviews with a small sample of women in rural Maharashtra. Their study makes the important point that there may be no single fixed perspective on quality of care. Women instead appear to be highly pragmatic, prioritizing quality of care dimensions differently according to specific health care needs and marital situations. The authors find that the aspect of service delivery to which women give priority for general health care is the doctor's full attention. For delivery care, client priorities are availability of support staff to clean up and convenient location and timing. For abortion within marriage, women give priority to the absence of a requirement for the husband's permission. For abortion outside of marriage, the assurance of confidentiality is ranked highest. For abortion services in general, women appear willing to trade safety and quality of care considerations for assured confidentiality, which helps explain why the private sector is the preferred source for this service.

Part II presents results from quantitative and qualitative studies of the service providers' perspectives on quality of care. In Chapter 8, Leela Visaria presents findings from surveys with female paramedical staff, their client populations, and contraceptive acceptors in the western state of Gujarat. Visaria finds that the Gujarat program has the capacity to provide high-quality services: a high proportion of staff resident in the communities in which they work; few shortages of key equipment and supplies; and high levels of staff training and technical competence, outreach and follow-up, and client satisfaction. At the same time, her study highlights the potential drawbacks of a system characterized by undue emphasis on method-specific contraceptive targets. One important consequence is significant discordance in terms of program priorities, with supervisors assigning highest priority to family planning, in contrast to outreach workers who accord highest priority to maternal health needs. The study delineates other detrimental consequences of the target emphasis, including limited contraceptive choices offered to most long-term method acceptors, the entry of non-health personnel into the contraceptive recruitment process, and significant overreporting of acceptance levels for most temporary contraceptive methods.

In Chapter 9, Ravi K. Verma and T. K. Roy present findings from a survey of female paramedical workers in their four-state study of the Indian family planning program. Their findings highlight a num-

ber of service areas where considerable scope exists for improvement in quality of care in contraceptive information and choice, technical competence, and follow-up. They found, for example, that in most of the states, only a minority of workers discussed clients' reproductive goals, how family planning methods are used, or their potential side effects. In all four states, workers reported choosing the contraceptive method for their clients in a vast majority of cases. The study provides considerable insight into program priorities as viewed by the workers. In all states (but especially in Tamil Nadu), workers reported considerable pressure to achieve their assigned sterilization acceptor targets. They were under significant but somewhat less pressure to achieve their assigned targets for spacing methods, and relatively little pressure to provide follow-up care to current users. The study also found, in most states, major gaps in workers' technical knowledge of such topics as reproductive physiology. The study points to the supervisory system as an important contributing factor to these gaps in service quality, with only a minority of workers in all four states indicating that their supervisors provided assistance in improving their performance or addressing clients' needs.

Although they employ different research methodologies, the qualitative study by Jagdish C. Bhatia in Karnataka (Chapter 10) and the analysis of worker survey data by Aditi Iyer and Amar Jesani in Maharashtra (Chapter 11) together provide insight into the barriers that service providers face in providing reasonable standards of care to clients. In two states characterized by considerable success in family planning performance, the studies nonetheless describe a range of factors that constrain effective and high-quality service delivery. These include nonresidence of providers due to inadequate housing or schools, inadequate infrastructure, chronic shortages of key medicines and supplies, limited outreach efforts by female workers due in part to frequent sexual harassment and fears for personal security, and institutionalized corruption. The study by Iyer and Jesani paints a particularly compelling picture of the vulnerability of frontline female workers in rural India in attempting to provide outreach services, and the almost complete absence of institutional support for their work. Both studies highlight the central role that numerical contraceptive targets play in shaping program priorities, the pressure placed upon workers to achieve these targets, and how this emphasis often compromises attention to service quality. Interestingly, the

study also reports that despite widespread dislike among workers of method targets, a significant percentage believe that their removal would have a negative impact upon program performance, a finding that highlights the complexity of the current shift away from the target system.

In Chapter 12, M. E. Khan, Bella C. Patel, and R. B. Gupta present findings from a qualitative study of quality of care within the Uttar Pradesh family planning program, as seen from the perspective of service providers. The study describes a setting characterized by widespread organizational malaise and an overall absence of readiness to provide high-quality services, and identifies a number of specific contributing factors. One important consideration relates to the personal security of female service providers—a serious concern in much of North India—which contributes both to high rates of nonresidence among female paramedical workers in the communities in which they are assigned to work and to a general reluctance to visit remote communities. Inadequate service infrastructure, systemic shortages of equipment and medical and contraceptive supplies, and poor program management that limits outreach efforts are also identified as constraints. The system of contraceptive method targets once again emerges as a major deterrent to better standards of care, with evidence presented on how pressure to achieve method quotas leads to the provision of clinical contraception despite serious contraindications and how access to abortion is linked with sterilization acceptance. In addition, there is competition between health and nonhealth personnel in recruiting family planning cases and widespread overreporting of numbers of temporary contraceptive method acceptors. The finding that outreach workers in Uttar Pradesh are generally required to fulfill only a fraction of their assigned quota of new sterilization cases also raises important questions about the overall demographic efficacy of this approach.

Part III presents evidence on the quality of care provided in sterilization camps, where significant numbers of operative procedures are performed en masse. Sterilization camps remain a primary source of clinical contraceptive services throughout much of rural India today. Chapter 13 by Lakshmi Ramachandar and Sandhya Barge on Madhya Pradesh, Chapter 14 by Dileep Mavalankar and Bharti Sharma on Gujarat, and Chapter 15 by John W. Townsend, M. E. Khan, and R. B. Gupta on Uttar Pradesh provide a broad and remarkably

consistent picture of the quality of care concerns that characterize this service delivery approach. The capacity of such camps to offer high standards of care appears to vary by location, with the quality of care most problematic in outreach settings. Although surgeons appear to be well-trained, the support systems for providing high standards of technical care are generally inadequate. All three studies note routine shortcuts in the sterilization of surgical equipment and instruments and in overall infection control measures, thus raising serious concerns about potential infection transmission. All observe major shortcomings in the extent of client-centered facilities. Running water and toilet facilities are often unavailable, and services are characterized by extended preoperative waiting times, little preoperative instruction or patient counseling, insufficient concern for patient privacy, and inadequate postoperative recovery facilities and recuperation time. While noting the continued importance of this service approach given the absence of infrastructure in much of rural India, the studies identify a number of aspects through which the quality of care in sterilization camps could be significantly improved.

Part IV presents programmatic evidence and policy issues associated with improving quality of care. Of central policy and programmatic importance is the question of how improvements in quality of care affect contraceptive use and demographic behavior. Yet, despite a decade of intensive interest in quality of care within the family planning field, evidence on the impact of quality of care upon contraceptive and fertility behavior remains limited, both in India and in the developing world more generally.[4] The study by Daxa Patel, Anil Patel, and Ambrish Mehta in Chapter 16 presents some of the first empirical evidence from an intervention project demonstrating how improvements in quality of care may contribute to improved patterns of contraceptive use. Analyzing the experience of Action Research in Community Health (ARCH), a volunteer organization in rural Gujarat, the authors document how small improvements in service approach and quality—such as educating clients on reproductive anatomy, demonstrating how IUDs work, addressing women's fears and concerns through counseling, and providing information on method complications—resulted in significant reductions in IUD dropout rates.

In the final chapter, Jay Satia and Sangeeta Subramanian Sokhi (Chapter 17) examine the policy and management options associated with the Indian government's stated policy shift away from contra-

ceptive method targets. The experience gained from six case studies in India, where experiments with alternatives to method-specific contraceptive targets are underway, is initially reviewed. The authors emphasize the critical importance of substituting method-specific targets with other alternative strategic "drivers"—indicators that provide the driving force for the overall program. Potential alternative program drivers include increased client service access and availability, better performance and coverage, and higher quality of care and/or impact indicators. The authors raise a number of unresolved questions relevant to India's ongoing efforts to shift away from method-specific targets: Should different indicators be employed in different geographical areas depending upon their level of development? Should there be a gradual and phased development of alternative indicators? What requisite changes in supervisory and management information systems must accompany this programmatic shift?

Program Implications

The studies included in this volume collectively provide the most comprehensive and up-to-date picture of the Indian family planning program in terms of actual implementation at the field level. In a study of this nature, some degree of repetition and duplication in findings is perhaps inevitable. It is precisely this overlap and congruency in findings, however, that lends credence to the conclusion that many of the quality of care concerns described in this volume are systemic in nature and characteristic of the Indian Family Welfare Programme as a whole.

While many of the findings reported are by no means novel, collectively they provide a compelling and disquieting picture of the realities of family planning service delivery within India's public sector. The general view that emerges is of a program that has, over time, seriously strayed from its initial mandate to improve the health and wellbeing of Indian women and their families. India's Family Welfare Programme remains characterized by an overriding concern for numbers—as measured by the recruitment of sterilization acceptors—frequently at the expense of higher-quality, client-centered service. While such gaps are perhaps most acute in the large, populous North Indian states, many of the same quality of care concerns are also evident within the Central and South Indian states, the latter now widely recognized as emerging demographic success stories.

The studies in this volume also provide insight into the numerous and frequently reinforcing factors that constrain quality of care within the Indian program, and the links between many of these factors and India's low level of socioeconomic development. Despite government commitment to family planning, resource limitations remain a serious impediment to higher quality services at all levels of the delivery system. Basic buildings and infrastructure are underfunded, especially at the peripheral level. Suitable transportation is lacking, and there are chronic shortages of most basic medicines and supplies. A second set of constraints relates to gaps in program management, as reflected in such areas as inadequate staff training, weak supervisory support, the frequent failure to adhere to acceptable clinical standards, limited accountability among program personnel, and widespread corruption. It is also clear from many studies in this volume that basic program philosophy and orientation—as reflected in the prevailing system of worker targets and program performance indicators and the corresponding low priority attached to the needs of individual clients—has played a central role in shaping current standards of care provided within the Indian program.

Despite what might be widely regarded as substandard levels of care, the studies in this volume also highlight the complexity of this issue and the importance of placing findings on quality of care in appropriate perspective. The problems described are clearly not unique to India, but broadly characteristic of health and family planning services in many, if not most, developing-country settings. In many ways, quality of care represents a set of standards and ideals that few programs—including those in more developed, Western settings—have yet to satisfactorily attain.

Moreover, family planning programs function not in isolation but within the broader context of social relations in a particular setting. Within India, these relations are determined largely on the basis of caste, social class, and gender. Within such systems, the poor, especially poor women, have traditionally been accorded few rights—including the right to receive sympathetic and respectful treatment. Many of the constraints and organizational impediments to better quality of care outlined in this volume are thus systemic in nature, and may characterize public sector bureaucracies in India and South Asia as a whole. There is little evidence to suggest that the efficiency or standards of care are significantly poorer within the family plan-

ning program than in other social development programs in South Asia; considerable room for improvement is evident in most sectors.[5]

The results from this volume also highlight the complex and subjective nature of quality of care, and the extent to which this dimension is tied to individual expectations. Despite what could frequently be regarded as substandard levels of care by Western standards, it is striking that significant numbers of clients express satisfaction with existing family planning services, and appear to welcome more, rather than less, contact with program staff. Moreover, the fact that a majority of women in Central and South India have adopted contraception (overwhelmingly female sterilization) may indicate that, under conditions of strong motivation for small families and autonomy among women to make fertility choices, small families may be achieved despite the barriers to fertility regulation presented by poor quality of care.

The findings nevertheless leave the reader with the unequivocal impression that an absence of attention and priority to client needs and poor overall quality of care have played important roles in the disappointing performance of the Indian Family Welfare Programme to date. The potential costs of poor-quality services can also be readily discerned from many of the studies considered—as reflected in lower levels of client satisfaction, a poor image and general distrust of the public sector system, and weak commitment and low esprit de corps among family planning staff. Although, as suggested by Chapter 16, empirical evidence remains extremely limited, poor quality of care may also contribute to high levels of delayed, forgone, or discontinued use of contraception and resulting unwanted pregnancy. Clearly much more attention to this issue is warranted.

The government of India has recently taken the first tentative steps toward addressing many of problems described within this volume, through the reorientation of the current Family Welfare Programme toward greater concern for service quality and clients' broader reproductive health needs. In early 1996, the government abolished the nationwide system of contraceptive method targets, which has dominated the family planning program for much of its existence. In late 1997, the government launched the new Reproductive and Child Health Programme to replace the much narrower programs on MCH and family planning, with the objective of more effectively addressing the broader reproductive health needs of the

family. Given the fact these policy changes were made only recently, their implementation remains uneven and incomplete, and it is too early to assess their impact at the field level.[6]

Nevertheless, the policy shift toward more client-centered services represents a highly significant and positive step, and, if accomplished, is likely to yield substantial dividends—not only in terms of meeting clients' reproductive needs but in terms of India's broader demographic goals. Yet the evidence from this volume attests to the enormity of the task at hand and the uncertainty of success. Progress is likely to be measured more in decades than in years. A clear understanding and recognition of the nature of the problems confronting the Indian Family Welfare Programme represent important first steps toward effectively addressing them. It is hoped that the present volume, by providing a detailed and candid picture of the realities of service delivery at the field level, will make a contribution toward this end.

Notes

1 For an analysis of the demographic situation in the northern states, see Satia and Jejeebhoy 1991.
2 For a review of existing research on quality of care within the Indian program, see Koenig, Foo, and Joshi 1999.
3 For a summary of research findings from the workshop, see Foo 1996.
4 See, for example, Pariani, Heer, and Van Arsdol 1991; Mensch, Arends-Kuenning, and Jain 1996; Mensch et al. 1997; and Koenig, Hossain, and Whittaker 1997.
5 See, for example, Dutta 1996 on local governance, Rahman 1999 on women's savings and credit programs, Saxena 1997 on forest management, and Weiner 1991 on education.
6 For an early attempt at assessment, see Visaria and Visaria 1998.

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Part I.
Client Perspectives on the Quality of Care

2 Women's Perceptions of the Quality of Family Welfare Services in Four Indian States

T. K. ROY & RAVI K. VERMA

One of the important contributions of the quality-of-care framework as suggested by Bruce (1990) is that it has brought the client's perspective into focus. Bruce and others (e.g., Satia and Giridhar 1991) have argued that assessments of the quality of reproductive health services should be based on the recipients' perceptions of services received, rather than on the providers' perceptions of services rendered. Since it is women who constitute the great majority of the clientele of family planning programs, Bruce (1981) has argued that it is important to understand women's experiences of family planning and reproductive health care services before designing client-oriented family welfare programs.

Although detailed, comprehensive information is not available on the quality of the Indian Family Welfare Programme's services, a number of studies have shown that women's reasons for not accepting family planning methods include the fear of side effects, the limited variety of methods available, and lack of knowledge about contraceptives (IIPS 1995; Khan 1988; Misra et al. 1982; Roy et al. 1991). In a recent study based on 20 small focus-group discussions with currently married men and women in Uttar Pradesh, individuals said that they had not adopted family planning because they did not know enough about the methods (Levine et al. 1992). Some respondents also reported that although they were aware of the methods, they had not had this knowledge during the initial years of their married life. The study results indicate that government health personnel often do not

actively involve clients in choosing a particular method. Doctors and others tend to decide on the suitability of a particular method for the client, and in most cases the client is not told of the potential side effects of the method before adopting it. Both men and women in the focus-group discussion felt that this information on side effects had been deliberately withheld from them because program staff feared that the information might act as a deterrent to acceptance.

The quality of family planning care is important at three stages—preacceptance counseling and clinical checkup, acceptance, and postacceptance follow-up. Satia and Giridhar (1991) have pointed out that although postacceptance follow-up has received much attention in the literature, little is documented about the preacceptance phase. It is against this backdrop of limited knowledge of clients' perception and experience that we have undertaken the present study.

The primary objective of this chapter is to describe the experiences and perceptions of eligible women in the rural areas of four Indian states regarding the standards of care offered by the Indian Family Welfare Programme. Our analysis addresses the following dimensions of quality of care: (1) contact with the government program, (2) availability of method choice, (3) types and range of information given to clients, (4) quality of interpersonal relations between providers and clients, and (5) appropriateness of services provided. The study focuses primarily on women's experiences with and perceptions of the program. No attempt is made to demonstrate the effects of those perceptions and experiences on their actual family planning behavior.

Data

Our data come from studies conducted in 1994 at the International Institute for Population Sciences (IIPS) in Mumbai (Verma and Roy 1994; Verma, Roy, and Saxena 1994). Studies on quality of care and services were undertaken in each of four states: Tamil Nadu and Karnataka in the south, and West Bengal and Bihar in the north. The states were chosen on the basis of their family planning performance as measured by the fulfillment of contraceptive targets. According to the National Family Health Survey (NFHS), which canvassed a nationally representative sample of nearly 90,000 ever-married women, the proportion of currently married women aged 13–49 using any con-

traceptive method in 1992–93 was only 22 percent in Bihar, 37 percent in West Bengal, 45 percent in Tamil Nadu, and 47 percent in Karnataka (IIPS 1995). In each state, three districts were also chosen on the basis of their performance in the Family Welfare Programme, as reflected in rates of contraceptive use. Our objective was to capture the range of variation in the quality of services within each state. With this end in view, we selected one district each in the high, medium, and low categories of performance. We then selected six catchment areas from primary health centers (PHCs) in each district. The criterion for PHC selection was similar to that for the selection of districts: two PHCs each were selected from the categories of high, medium, and low performance, for a total of 18 PHCs in each state.

From each selected PHC, we collected data on the perceptions and experiences of three subsets of women. The first subset was selected from the village or community on the basis of a sample survey. Fifty eligible women—that is, currently married women in the reproductive age group of 15–49 years—were selected from villages served by each PHC as follows: The villages were subdivided into three groups according to their distance from the service center. One village from each distance group was chosen. The samples of 50 women were selected systematically from lists of households available from each village *panchayat* (council) and distributed equally among the three villages. The total number of eligible women interviewed in the four states was 3,585. Of these, 894 were interviewed in Bihar, 894 in West Bengal, 899 in Tamil Nadu, and 898 in Karnataka. We refer to these women as "eligible women interviewed in the village or community."

It should be noted that these 50 women may or may not have been recent users of family planning services from the neighboring PHC. Their perceptions of the various dimensions of the quality of care available from the PHC therefore may not have been based on direct personal experience. For that reason we decided also to include in the study some women who had actually used the family planning services of the PHC or subcenter. As it was not always possible to find women who had approached the PHC exclusively for family planning services, we decided to interview 30 eligible women who had used any of the PHC's health services and also those who had come to seek family planning services, immediately after they had

received the services. This group of women forms our second source of data. The total number of such eligible women who were interviewed on the PHC premises ("eligible women interviewed at the clinic") immediately after using these services was 1,855: 302 in Bihar, 523 in West Bengal, 529 in Tamil Nadu, and 501 in Karnataka.

Of these 1,855 women, only 355 had come to the PHC specifically seeking family planning services: 26 in Bihar, 197 in West Bengal, 95 in Tamil Nadu, and 37 in Karnataka. This subgroup of women is referred to as "family planning acceptors." Details of the background characteristics of all three subsets of women are described elsewhere (Verma and Roy 1994; Verma, Roy, and Saxena 1994).

Findings

Respondents were asked a number of questions on their perceptions of the quality of care provided by government PHCs and subcenters in their respective districts. In presenting our findings, we consider the extent of respondents' contact with the government program, the choice of methods, information given to the clients, clients' interpersonal relations with program personnel, and the appropriateness of the constellation of services.

Contact with the Government Program

We assessed the contact with the government program from the responses of the eligible women who were interviewed in their community. Seven of 10 respondents in Tamil Nadu, Karnataka, and Bihar and nearly 6 of 10 respondents in West Bengal had visited a government clinic during the preceding six months (Table 2.1). A majority of women in all four states also reported that they had received a visit from an auxiliary nurse-midwife (ANM) during the preceding three months. The proportions of respondents mentioning a home visit ranged from 93 percent in Karnataka and 89 percent in Tamil Nadu, to 61 percent in West Bengal and 53 percent in Bihar. The findings indicate a clear demarcation between the northern and southern states in the level of contact with the public-sector program. Nevertheless, significant levels of interaction with the government program were evident in all four of the states studied.

TABLE 2.1
Contact between clients and government service providers: Four Indian states, 1994

Type of contact	Percentage of respondents			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Visited government clinic in the last six months	70	58	73	74
Visited by ANM in the last three months	53	61	89	93
(No. of respondents)	(894)	(894)	(899)	(898)

ANM=auxiliary nurse-midwife.

Method Choice

A program that seeks to cater to clients' contraceptive needs is expected to offer a range of methods on a reliable basis. Women who wish to space their births obviously need different methods from those who wish to stop bearing children altogether. Younger women and those who desire to have children in the future would be clearly attracted to spacing rather than terminal methods such as female sterilization. Similarly, it is important to identify those women who cannot tolerate specific methods, such as hormonal contraceptives.

Women's perceptions of the emphasis placed by service providers on sterilization versus spacing methods reflect the range of method choices available to them. According to substantial majorities of respondents interviewed in the villages, providers at government clinics in all four states sometimes or always advocated sterilization (Table 2.2). Emphasis on sterilization appears to have been especially pronounced in Tamil Nadu and Karnataka, where more than half of the women gave this response. In Bihar and West Bengal about a third of the women said that clinic staff always emphasized sterilization. However, in all four states, a majority of respondents also reported that clinic staff always or sometimes suggested spacing methods (ranging from 63 percent in Bihar to 81 percent in Karnataka).

Respondents were also asked what kind of information the ANM gave them during home visits. With the exception of Bihar (42 percent), more than one-half of the respondents reported that the ANM mentioned at least one method (either sterilization only or both sterilization and spacing methods). These results also indicate a strong emphasis on sterilization by ANMs during outreach visits.

TABLE 2.2
Choice of contraceptive methods: Four Indian states, 1994

Measure	Percentage of respondents			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Women interviewed in the villages				
Clinic staff emphasize sterilization				
Always	27	36	58	56
Sometimes	39	34	23	33
Rarely	34	30	19	11
Clinic staff also suggest spacing methods				
Always	21	39	50	49
Sometimes	42	31	23	32
Rarely	38	29	27	19
ANM discusses				
Sterilization only	24	39	28	21
Both sterilization and spacing methods	18	26	26	43
(No. of respondents)	(894)	(894)	(899)	(898)
Family planning acceptors (exit interviews)				
Received desired method	96	96	96	70
(No. of respondents)	(26)	(197)	(95)	(37)

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

We further examined the extent of method choice by interviewing family planning acceptors soon after they had sought the family planning services at their clinic. Nearly all acceptors in Bihar, West Bengal, and Tamil Nadu (96 percent), but only 70 percent of acceptors in Karnataka, said that they had received the method of their choice. The validity of these results may be open to question, however, since in a situation of limited method choice, program personnel may be able to persuade most women to accept a method emphasized by the program, and acceptors tend to believe that they have made a free choice. The pattern of contraceptive use in India as a whole suggests limited contraceptive choice. Although many women might be better served by spacing methods, the NFHS found female sterilization to be the most widely used contraceptive method in India, accounting for 67 percent of current contraceptive prevalence (IIPS 1995).

Information Given to Clients

Another indicator of quality of care is whether sufficient and accurate information is imparted during service contacts to enable clients

TABLE 2.3
Information given to clients: Four Indian states, 1994

Indicator	Percentage of respondents			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Women interviewed in the villages				
ANM discusses side effects				
Always	18	23	52	56
Sometimes	35	30	19	28
Rarely	47	45	29	16
(No. of respondents)	(894)	(894)	(899)	(898)
Family planning acceptors (exit interviews)				
How method works	85	59	59	97
How to use method	65	57	59	81
Possible side effects	58	40	47	89
How to deal with side effects	58	37	40	78
(No. of respondents)	(26)	(197)	(95)	(37)

Note: Percentages may not add to 100 because of rounding.

ANM=auxiliary nurse-midwife.

to make informed choices. Most important is whether clients receive information about contraindications and possible side effects of available contraceptive methods. Ideally, clients should be informed on how each method works, how to use the method, possible side effects, and what to do if side effects occur.

Table 2.3 reveals that slightly more than one-half of the women interviewed in Tamil Nadu (52 percent) and Karnataka (56 percent), but fewer than one-fourth of those in Bihar (18 percent) and West Bengal (23 percent), always received information on contraceptive side effects or contraindications when they were visited by ANMs. Further substantiating the limited information given to clients are the responses from the acceptors of family planning methods during exit interviews at the clinics. Clients were asked about the information that clinic staff had given them concerning the method they were using. More than one-half of all acceptors in West Bengal and Tamil Nadu (57–59 percent) reported that they had been given a description of how the method worked and how to use the method. Less than one-half of the women in those states were told about side effects, and only 37 percent in West Bengal and 40 percent in Tamil Nadu were told what to do in case of side effects. Although small numbers of acceptors were interviewed in Bihar and Karnataka, their responses indicate that a majority were given information about their method, its possible side effects, and what to do in the event of side effects.

Interpersonal Relations

Clients' satisfaction with a government clinic's services and their continued use of those services are likely to depend significantly upon the perceived behavior of clinic doctors and staff. We assessed the quality of interpersonal relations established at the clinics from the viewpoint of both women in the community and those we interviewed at the clinics. We also assessed the quality of interpersonal relations between village women and the ANMs during home visits. Respondents were asked how they had been treated by clinic staff: whether the doctor was cordial, whether he or she paid adequate attention to their family planning and health needs, and whether clinic staff had provided them with privacy.

The distribution of responses, presented in Table 2.4, indicates a marked contrast between the southern and northern Indian states, with Tamil Nadu and Karnataka consistently performing higher. Almost four-fifths of the women in Tamil Nadu and Karnataka reported that the clinic staff were always cordial. High percentages of women also said that they were always paid proper attention, and that the clinic always provided adequate privacy. Fewer than 1 in 10 respondents expressed dissatisfaction with the quality of interpersonal relations.

In Bihar and West Bengal, however, approval ratings were lower and dissatisfaction greater. Only about one-half of women in Bihar and 59 percent in West Bengal stated that the doctor or staff was always cordial; and between 12 and 19 percent of the women believed the staff was rarely cordial, rarely attentive, or the clinic rarely provided adequate privacy. Bihar scored especially low on staff attention, with only a third of women reporting that they always received proper attention. Similarly, Bihar and West Bengal scored particularly low on privacy; only about 4 of 10 women reported that their clinic always provided adequate privacy. It should be noted that clinics in Bihar and West Bengal cater to unusually large populations (about 100,000 each), with consequent crowding, making it more difficult for clinic staff to ensure a high quality of client–provider relations.

We also assessed the quality of village women's interpersonal relations with health workers during home visits. Large majorities of women in Tamil Nadu (82 percent) and Karnataka (76 percent) reported that the ANM always discharged her duties sincerely. Sub-

TABLE 2.4
Interpersonal relations with service providers as perceived by women in the villages: Four Indian states, 1994

Indicator	Percentage of respondents			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Care provided at the clinic				
Clinic staff/doctor cordial				
Always	49	59	79	79
Rarely	14	13	5	5
Staff/doctor gives proper attention				
Always	33	46	70	61
Rarely	19	12	7	7
Clinic provides adequate privacy				
Always	42	39	60	72
Rarely	16	19	6	6
Care provided during outreach visits				
ANM discharges duties sincerely				
Always	36	50	82	76
Rarely	28	14	5	6
ANM pays attention to family planning needs				
Always	25	37	69	59
Rarely	35	22	9	13
ANM generates confidence to accept/ continue contraceptive use				
Always	27	29	59	55
Rarely	38	28	12	16
(No. of respondents)	(894)	(894)	(899)	(898)

ANM=auxiliary nurse-midwife.

stantial majorities of respondents in both states (69 percent and 59 percent, respectively) said that the ANM always paid attention to their family planning needs. Among women in Bihar and West Bengal, however, impressions of health workers were much less positive. The proportions giving the ANMs high marks ranged from 50 percent in West Bengal (those who felt that the ANM was sincere) to only 25 percent in Bihar (those who thought that the ANM paid adequate attention to their family planning needs). Substantial proportions of women in Bihar thought that the ANM rarely discharged her duties sincerely (28 percent), rarely paid attention to their family planning needs (35 percent), and rarely generated confidence to accept or continue contraceptive use (38 percent).

Exit interviews of women interviewed at the clinics revealed a similar pattern (Table 2.5). Karnataka had the best record and Bihar the worst with respect to quality of care. Privacy was considered to be exceptionally low in West Bengal, where only about one-fourth of

TABLE 2.5
Interpersonal relations with service providers as perceived by women during exit interviews: Four Indian states, 1994

Perceived quality	Percentage of respondents			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Doctor was cordial	43	53	66	79
Doctor gave adequate attention	40	45	62	69
Clinic privacy was adequate	45	27	63	74
Language was easy to understand	52	72	71	79
(No. of respondents)	(302)	(523)	(529)	(501)

the women felt that clinic privacy was adequate. This finding is substantiated by the data from interviews in the villages of West Bengal, where only 39 percent of women believed that the clinics had provided adequate privacy. Approximately three-fourths of the respondents in West Bengal, Tamil Nadu, and Karnataka, but only about one-half of those in Bihar, believed that the language used by the doctors was easy to understand.

Appropriate Constellation of Services

Another aspect of the quality of family planning and family health services is the appropriateness of their configuration. An appropriate constellation of services is one that is convenient and acceptable to clients, responds to their health concerns, and meets their health needs. Long travel time to the clinic and long waiting time at the clinic can be major barriers to the continued use of government services. The availability of doctors and medicines, when needed, is an important service-related issue that affects clients' perceptions of services. Doctor availability is hindered, however, by the fact that many are urban-educated and prefer not to practice in rural areas for a variety of reasons, including the lack of modern amenities and educational facilities for their children. If a doctor is perceived to attend a government clinic regularly, use of that facility is likely to increase.

For a large majority of women in the four states, the government clinic was less than half an hour away in travel time (Table 2.6). In all states but West Bengal, waiting time to see the doctor was less than 30 minutes for a high proportion of respondents. In West Bengal, 63 percent of respondents reported average waits of 30 minutes or more,

TABLE 2.6
Appropriate constellation of services: Four Indian states, 1994

Indicator	Percentage of respondents			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Average travel time to clinic				
< 30 minutes	85	90	88	71
Average time taken to see doctor				
< 30 minutes	82	37	91	83
30 minutes –1 hour	14	42	3	13
> 1 hour	4	21	6	4
Clinic office hours convenient	93	88	88	95
Doctor always available	30	41	66	65
Adequate medicines always available	23	14	72	50
(No. of respondents)	(302)	(523)	(529)	(501)

and 21 percent reported delays of more than one hour. Roughly 9 out of 10 women in all four states found the office hours of government clinics to be convenient. About two-thirds of women in Karnataka and Tamil Nadu reported that a doctor was always available in their government clinic. In Bihar and West Bengal, the proportions reporting that the doctor was always available were considerably lower—30 percent and 41 percent, respectively. Similarly, when asked about the availability of medicines, respondents in Bihar and West Bengal provided a much less positive picture than those in Tamil Nadu and Karnataka. While 72 percent of women in Tamil Nadu and 50 percent of women in Karnataka reported that medicines were always available, the percentages in Bihar and West Bengal were only 23 percent and 14 percent, respectively.

Summary and Conclusion

The approach we have used in this chapter—evaluating the quality of care provided by the Indian Family Welfare Programme entirely from the viewpoint of rural women—is not the only way to assess quality of care. There is no dearth of evaluative studies and literature on family planning management in India, and many of those studies have touched upon issues relating to quality, at least indirectly. However, those studies have for the most part not had women clients themselves as their primary focus. Rather, they have tended to concentrate on the quality of program inputs or on outputs in terms of contraceptive adoption. It can be argued that women's perspectives

may be greatly influenced by personal factors that have little bearing on program implementation. We undertook the present analysis to counter this argument and to provide empirical evidence in support of the thesis that to be effective, family planning programs must accord women's perspectives due consideration.

The analysis has revealed wide variations in women's experiences with, and perceptions of, the services offered by government clinic staff and field workers. At the state level, variations followed an expected pattern. Whereas a majority of women in the two southern Indian states perceived that they had received (and presumably had experienced) a reasonably high quality of services, most women in West Bengal and Bihar did not report such positive perceptions or experiences.

In Tamil Nadu, for example, a significant majority of women interviewed reported that a doctor was always available at the PHC, that the doctor's behavior was always cordial, that adequate medicines were always available, that clinic staff always paid attention to their health and family planning needs, and that the clinic always provided privacy to family planning clients. Regarding the performance of health workers, 8 out of 10 women in Tamil Nadu perceived their ANM to be sincere, and two-thirds believed that the ANM paid adequate attention to their family planning and health needs. Slightly more than one-half of the Tamil Nadu women reported that ANMs had discussed the side effects of contraceptives and related issues with them.

In contrast, the quality of services offered in Bihar appears to be the poorest among all the states we have considered. Only about one-third of the women reported that a doctor was always available in the PHC and, if available, was always attentive. Only about one-quarter reported that medicines were always available. Three-fifths found their clinic to lack adequate privacy. Three-quarters felt that ANMs paid inadequate attention to their family planning and family health needs.

In Tamil Nadu and Karnataka, the majority of women reported that government clinics emphasized sterilization. In West Bengal and Bihar, government clinics did not appear to place emphasis on any particular contraceptive method. It could be that the providers, particularly in Bihar, were reluctant to promote family planning, and therefore the decision about whether to accept contraception—and what method to accept—was left entirely to the individual woman. This study is unable to assess the extent to which government health work-

ers allow clients to make informed choices, since it is difficult for many respondents to distinguish between mere provision of information and actual emphasis on a method. It could be argued that by not promoting a particular method that may be inappropriate for some women, the programs in West Bengal and Bihar maintain a higher quality of care than do those in Karnataka and Tamil Nadu. In our view, however, not informing clients about available methods is equivalent to not providing a choice. Our findings suggest that women in all four states need more, not less, information about available methods.

The perception voiced by some respondents—that PHCs had inadequate supplies of medicines and did not provide privacy—is a matter of concern that has serious implications for women's reproductive health. A large number of women in Bihar and West Bengal were particularly concerned about these issues and about the poor quality of services offered by ANMs. A program that caters to the needs of women must address these issues if it is to be highly effective. Clinic personnel need to ensure adequate privacy, attentiveness to patients' problems, and courteous behavior on the part of the doctors. In addition, the services must reach out to all women irrespective of their educational status or caste affiliation.

Acknowledgments

Some of the data presented in this chapter, particularly those related to Tamil Nadu, Karnataka, and West Bengal, are from a larger study entitled Quality of Family Welfare Services and Care in Selected Indian States, which IIPS, Mumbai, undertook in 1994 with financial assistance from the United States Agency for International Development (USAID). The data for Bihar are from a study entitled Quality of Family Welfare Services and Care in Bihar, for which IIPS provided financial support. We are grateful to Michael Koenig for very useful comments on an earlier draft of the chapter. We also thank Sujata Visaria for her meticulous editing and useful insights into the chapter. The help we received from Dr. S. K. Singh, Mr. Praveen, Mr. Mandar, and Mr. Somnath of IIPS while preparing the chapter is gratefully acknowledged.

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3 The Quality of Family Welfare Services in Rural Maharashtra: Insights from a Client Survey

NIRMALA MURTHY

For the last three decades, India's Family Welfare Programme has pursued the goal of reducing fertility as rapidly as possible. Until recently the means used to achieve this goal were method-specific contraceptive targets and cash incentives for acceptors. The Indian government has recognized that this approach has failed to produce the desired reduction in fertility because it has emphasized targets and incentives to the detriment of quality. To remedy the situation, the government has adopted a reproductive health approach for delivering family welfare services and has taken the critical step of removing method-specific contraceptive targets. In addition, the government has decided that the Family Welfare Programme should focus on quality of care, client satisfaction, and service coverage. This chapter presents results from a survey designed to assess the quality of care of, and client satisfaction with, the Family Welfare Programme in a district in rural Maharashtra. The study also identifies specific program elements deemed to be detrimental and client characteristics that influence program quality and client satisfaction.

Bruce (1990) identified six criteria for evaluating the quality of family planning services: (1) method choice, (2) information given to clients, (3) technical competence of the service provider, (4) interpersonal relations between client and service provider, (5) mechanisms to encourage continuity, (6) and appropriate constellation of services. In Bruce's view, a program having these six elements can be assumed to provide good service. Jain (1992) contends there is no firm evidence

that all these elements represent a high quality of services for clients; however, studies we reviewed in India and elsewhere have confirmed that clients' satisfaction is related to most of these elements and that client satisfaction leads to the acceptance of services.

In a study in Santiago, Chile, for example, Vera (1993) found that clients considered the most important elements of service quality to be a clean and hygienic place; prompt service; treatment as an equal by service providers; useful information and the opportunity to learn; enough time to consult with the staff; cordial, likable, and friendly staff; and access to prescribed medicines. In Vera's study, women frequently mentioned how much they appreciated being treated as responsible adults—that is, not scolded or made to feel ignorant. This element of interpersonal relations was more important in their assessment of quality than the competence of staff or effectiveness of treatment.

Several Indian studies have reported that the rude behavior of health staff has been a major reason why women have not liked or used the government health services. A study in the state of Gujarat found that 20 percent of clients were not satisfied with the government services because they had to wait too long for the services and the staff did not treat them properly (Visaria and Visaria 1990). Nearly 60 percent of the respondents in the study reported going to private doctors because those doctors provided better-quality services, even though government hospitals had better diagnostic equipment and better-trained doctors.

Government health functionaries usually blame the lack of equipment and supplies for the poor quality of their services. Ramasundaram (1994), however, has observed that even when equipment and supplies were made available, clients of the government's Family Welfare Programme received poor quality of care. He attributed this to the attitudes of health workers, who showed little respect for clients, especially if they were poor, illiterate, or from lower social strata. Some health workers even believed that because the government provided free services and also gave cash incentives for sterilization operations, the clients had no right to demand good-quality services.

Other factors that can affect service quality include the lack of critical services, such as emergency obstetric care and treatment for reproductive tract infections and sexually transmitted diseases; the lack at some subcenters (SCs) of such routine services as complete

antenatal care (ranging from the administration of tetanus toxoid [TT] to urine examinations); the failure to provide adequate information to acceptors of family planning methods; the failure to check clients for contraindications before inserting intrauterine devices (IUDs) or prescribing oral contraceptives; and the failure to provide adequate follow-up care or counseling (World Bank 1995).

In a study of nine districts in four Indian states, Verma, Roy, and Saxena (1994) found that clients' perceptions of program quality had a significant effect on their acceptance of family planning services. The quality dimensions used in their study were: (1) the quality of doctors (i.e., availability of doctors, attention paid by doctors to clients' concerns, and whether doctors suggested spacing methods); (2) the quality of facilities (i.e., availability of medicines, cleanliness of facilities, and provision of privacy); (3) the quality of workers (their perceived sincerity, attention to clients, and ability to generate confidence); and (4) the time involved in obtaining services (the amount of time required to reach the clinic, waiting time, and time taken for service). The study found a high correlation among the first three dimensions of quality. Clients rated program quality as "very good" when they found all three elements—doctors, facilities, and workers—to be of good quality. Further, the use of family planning methods was significantly higher among those who considered program quality to be very good than among those who did not.

These studies suggest that clients recognize program quality when they encounter it, that higher program quality leads to greater client satisfaction and thus to greater acceptance of services, and that clients possibly assess service quality more on the basis of the quality of the delivery process than upon its technical content. It is therefore important to understand the delivery process and how it can be influenced to improve service quality.

The quality of the service-delivery process is a product of many interactions that take place between service providers and clients. Those interactions are so numerous and occur at so many points—in homes, clinics, and service camps—that program managers who are responsible for program quality can neither standardize them nor directly monitor them (Parasuraman, Zeithaml, and Barry 1988). Managers can try to influence them, however, if they know how clients assess the quality of a delivery process, what factors influence qual-

ity, and how to modify those factors. This chapter focuses on variables that influence the quality of the delivery process.

The Data

Data for this operations research project were collected from Parner Block of Ahmednagar District in Maharashtra. Parner Block has a population of about 200,000, spread over 131 villages. Among these villages there are seven primary health centers (PHCs) and 31 SCs; the remaining 93 villages have no government health facilities. The project was conducted jointly by the Directorate of Health Services of Maharashtra and the Foundation for Research in Health Systems, a nongovernmental organization (NGO). The state government took responsibility for implementing the project, while the NGO provided research support and helped the government think through systemic improvements. A state-level steering committee was set up to guide and monitor the progress.

A baseline survey was conducted in January 1994 to set quantitative benchmarks for project activities. The sample consisted of 1,023 married women of reproductive age (under age 45), chosen from 40 randomly selected villages in the block. Because the probability that a village would be selected was proportional to its population, 7 PHC villages, 17 SC villages, and 16 villages without health facilities ("other villages") were included in the sample. The survey gathered information about local maternal and child health care services from 624 mothers whose children were less than 5 years old and also information about family planning from all 1,023 women in the sample. Information gathered about the women's background characteristics included their education, type of house, household possessions, caste, and type of health services available in the village. Families who lived in *kuccha* houses (houses with thatched roofs) and did not possess such items as a radio, bicycle, or electricity were classified as poor. Families belonging to lower social castes and tribes as defined by the Indian government were classified as scheduled castes or tribes. Finally, auxiliary nurse-midwives (ANMs) and doctors from the Family Welfare Programme were interviewed to obtain information on the technical content of services and on service providers' perspectives on selected service-delivery processes.

TABLE 3.1
Coverage of family welfare services, by clients' background characteristics: Ahmednagar District, Maharashtra, 1994

Characteristic	(No.)	Antenatal care registrations (%)	Fully immunized children (%)	Contraceptive ever-users (%)
Residence				
PHC/SC villages	(673)	85	83	57
Other villages	(350)	69	76	61
Mother's education				
Illiterate	(405)	74	73	64
Literate	(618)	84	85	55
Economic status				
Poor	(689)	78	80	59
Not poor	(334)	83	83	58
Social status				
SC/ST	(328)	82	84	61
Other castes	(695)	79	80	57
Total	(1,023)	80	81	59

PHC/SC=primary health center or subcenter; SC/ST=scheduled caste or scheduled tribe.

Findings

The data were first analyzed to assess the quality and coverage rates of family welfare services in Ahmednagar District. The analysis then focused on whether those rates varied with clients' background characteristics and with the quality of services provided.

Coverage of Family Welfare Services

Coverage rates of family welfare services were found to be fairly high in the study area. More than 80 percent of mothers had registered for antenatal care, 81 percent of children 12–23 months of age had been fully immunized, and about 59 percent of the respondents reported using some method of contraception (Table 3.1). When we examined those coverage rates against the clients' background variables, some interesting differences emerged.

Registration rates for antenatal care were somewhat more, but not consistently, related to clients' background characteristics, whereas child immunization rates were somewhat less so. Antenatal care registration was substantially higher among respondents living in villages with a PHC or SC (85 percent) than among those living in

more remote villages (69 percent); similar differences were evident for full immunization (83 percent versus 76 percent). The next most sensitive relationship was with mother's education, with literate women reporting higher levels of antenatal care registration and full immunization than illiterate women. Economic status and caste, however, showed little effect on registration levels.

In the case of family planning use, the highest rates were found among illiterate women and those living in non-PHC/SC villages. Many literate women reported that they were practicing natural methods, but those methods were not included in the estimation of the coverage rates. Once again, no significant difference was observed in family planning use rates by economic or social status.

The lower antenatal care registration in non-PHC/SC villages was not due entirely to much higher proportions of illiterate women living in those villages (52 percent compared with 33 percent in villages with health facilities). Even after we controlled for education, registration rates for antenatal care in PHC/SC villages were somewhat higher than those in more remote villages.

ANMs reported that they found it difficult to explain the advantages of antenatal care to illiterate women. Although they had a little less difficulty explaining the importance of child immunization, the proportion of children fully immunized was significantly lower among the children of illiterate mothers (73 percent) than among those whose mothers were literate (85 percent).

Quality of the Service-delivery System

We next assessed the quality of the system for delivering family welfare services. During the survey interviews, respondents were asked four questions about the delivery process: (1) Had they been visited by a health worker during the previous three months? (2) If so, were they satisfied with the amount of time the worker spent with them? (3) Had the client been told about spacing methods? and (4) Had the client been informed about the possible side effects of all methods discussed? The percentages of affirmative answers to these questions were used to construct an index of service quality. The overall index of quality assessed in this fashion was found to be less than 50 percent, indicating considerable scope for improvement.

TABLE 3.2
Quality of service delivery, by clients' background characteristics: Ahmednagar District, Maharashtra, 1994

Characteristic	(No.)	ANM visited (%)	ANM spent 5+ minutes (%)	ANM discussed	
				Spacing (%)	Side effects (%)
Residence					
PHC/SC villages	(673)	61	44	49	51
Other villages	(350)	32	18	18	36
Mother's education					
Illiterate	(405)	45	30	37	38
Literate	(618)	56	39	42	51
Economic status					
Poor	(689)	51	34	40	43
Not poor	(334)	53	37	41	50
Social status					
SC/ST	(328)	58	42	48	46
Other castes	(695)	48	32	37	45
Total	(1,023)	51	36	40	45

ANM=auxiliary nurse-midwife; PHC/SC=primary health center or subcenter; SC/ST=scheduled caste or scheduled tribe.

About 51 percent of the respondents reported that an ANM had visited them during the previous three months (Table 3.2). ANMs were expected to visit 50 households per day and to visit all houses within their area once every month. It was possible to complete this task only if they spent less than five minutes at each house. The ANMs were making only one-half of the expected number of visits, but they were not necessarily spending more time in the homes they visited. According to respondent women who had been recently visited, only a minority of visits (36 percent) lasted for more than five minutes. Nevertheless, more than 75 percent of the women who reported ANM visits were satisfied with the amount of time the ANMs had spent with them (data not shown). Women sympathized with the ANMs, and many commented that the ANMs were required to visit too many houses, so it was understandable and acceptable that they did not spend much time in each house, provided that their visits were regular.

Another aspect of the delivery process that the survey explored was whether women were given a choice of contraceptive methods and whether they were told about possible side effects of all methods. The survey of ANMs revealed that most health workers were reluctant to inform women about the possible side effects of contraceptive methods, especially of sterilization. The workers believed that

this information discouraged women from accepting any method. Only a minority of acceptors of all methods (45 percent) reported that they had been told about possible side effects of the method they were adopting; this percentage was notably higher for IUD and pill users (80 percent) than for sterilization acceptors.

When these service variables were analyzed against clients' background characteristics, important differences were evident in all four elements of the delivery process, especially with respect to place of residence (non-PHC/SC villages versus villages with health facilities). ANMs visited the remote villages less frequently, and in only a few homes (18 percent) did they spend more than five minutes because, as they explained to interviewers, they had little time at their disposal. Nearly three times as many women in the PHC/SC villages were told about spacing methods as in more remote villages (49 percent versus 18 percent). The ANMs explained that women living in remote villages could not reach the health centers easily if they experienced side effects from spacing methods. Moreover, the ANMs were not sure that they could maintain a regular supply of oral contraceptives to those women, and therefore they appeared to pursue a deliberate policy of not promoting spacing methods in remote villages.

Another significant finding was that a higher percentage of lower-caste families reported ANM visits than did families from other castes. Interestingly, during the survey some lower-caste respondents voiced complaints that because most ANMs belonged to higher castes, they avoided visiting the houses of scheduled-caste and tribal families. The ANMs, however, denied any such bias on their part, and the data support their contention. Nevertheless, they were more likely both to visit literate women and to inform them about side effects associated with contraceptive methods than to have such contact with illiterate women. Although differences between poor and not-poor women were not evident with respect to visitation, better-off women were more likely than poor women to have received information on side effects.

Technical Quality of Services

To assess the technical quality of family welfare services, we examined six indicators. They were the proportions of clients who (1) had

TABLE 3.3
Selected indicators of the technical quality of family welfare services: Ahmednagar District, Maharashtra, 1994

Indicator	Percentage
Received complete antenatal checkup	46
Delivery attended by trained personnel	51
Child fully immunized	86
Began breastfeeding immediately	22
Experienced side effects from sterilization	39
Side effects treated at government center	47

received complete antenatal checkups; (2) had their deliveries attended by trained personnel; (3) had their children fully immunized; (4) began breastfeeding immediately after delivery; (5) experienced side effects from sterilization; and (6) received treatment for side effects at the government centers. All six indicators were based on the information provided by women during the survey.

For antenatal services, technical quality was defined as receiving a complete range of checkups that included a urine test, blood-pressure check, abdominal examination, TT injection, and treatment for anemia. Delivery by trained persons was another indicator used for assessing the technical quality. Only about one-half of antenatal cases met those two criteria: 46 percent of the women had received a complete antenatal checkup and 51 percent had had their delivery attended by a trained provider (Table 3.3). To assess the technical quality of child immunizations, we examined the proportion of children who were fully immunized against five childhood diseases. This was 86 percent, and only a few dropouts were attributable in part to the health system's failure to supply vaccines (particularly measles vaccine) or to adverse reactions to immunization.

We assessed the technical quality of family planning by the incidence of side effects reported among sterilization acceptors and the percentage of women who had received treatment for side effects at the government health centers. Approximately 39 percent of sterilization acceptors reported side effects. Although the survey did not probe the nature and severity of those side effects, nearly 70 percent of the women who had experienced side effects reported taking medical treatment for them, and almost half of them had gone to a government health center for treatment. The proportion of women re-

TABLE 3.4
Technical quality of MCH and family planning services, by clients' background characteristics: Ahmednagar District, Maharashtra, 1994

Characteristic	(N)	Antenatal checkup (%)	Delivery by trained person (%)	Immuni-zation coverage (%)	Immediate breast-feeding (%)	Steriliz. side effects (%)	Treated at govt. center (%)
Residence							
PHC/SC villages	(673)	53	59	87	27	40	51
Other villages	(350)	28	29	74	10	36	39
Mother's education							
Illiterate	(405)	34	33	75	15	40	45
Literate	(618)	52	60	88	26	38	49
Economic status							
Poor	(689)	40	43	81	18	38	47
Not poor	(334)	56	63	87	29	39	48
Social status							
SC/ST	(328)	52	59	87	24	36	47
Other castes	(695)	43	46	82	21	40	47
Total	(1,023)	46	51	86	22	39	47

MCH=maternal and child health; PHC/SC=primary health center or subcenter; SC/ST=scheduled caste or scheduled tribe.

porting side effects of spacing methods was much lower (18 percent), largely because those who suffered side effects were likely to have already discontinued the method.

During the survey interviews, few respondents complained about the quality of family planning services or about the absence of follow-up care. More than 70 percent of the acceptors said they were willing to recommend their method to friends or relatives, indicating their confidence in the method. Even among those who reported side effects, a majority said they would recommend their method to friends. We interpreted this response to mean that the side effects were generally not too severe.

We next examined the technical quality of services by client characteristics (Table 3.4). For five of the six indicators, the technical quality of services was poor for clients living in remote villages and those with no education. The only exception was sterilization side effects, with somewhat fewer women from remote villages than from PHC/SC villages reporting having experienced them, although this difference was not significant. The coverage levels of antenatal services received by women living in remote villages remained significantly lower, even after controlling for education.

TABLE 3.5
Sources of MCH and family planning services, by village type: Ahmednagar District, Maharashtra, 1994

Services	PHC/SC villages		Other villages	
	Government (%)	Private (%)	Government (%)	Private (%)
Family planning	70	30	74	26
Antenatal care	66	34	63	37
Institutional deliveries	34	66	41	59
Treatment of childhood diarrhea and ARI	20	80	20	80

ARI=acute respiratory infections; MCH=maternal and child health; PHC/SC=primary health center or subcenter.

The ANMs attributed the quality differences between PHC/SC villages and those without health facilities to the failure of illiterate women to come to the health centers for checkups, suggesting that such women did not appreciate the need for the services. However, the ANMs did not mention that antenatal checkups were offered only at the PHC clinics or at SCs with proper facilities. Women living in remote villages had no easy access to these services. In addition, many women from poor households were not able to come to the clinics because they had to work. Therefore, even after controlling for the effects of education, we found that lack of time and access to the clinics appeared to prevent women from receiving the full range of antenatal checkups.

The delivery of immunization services, in contrast, has improved over the years, and these services are now available in each village on a specified day of each month. This improvement was reflected in immunization coverage rates, which showed no differences between PHC/SC and other villages when corrected for the different proportions of educated mothers in those villages (data not shown). This finding suggests that antenatal service providers should consider adopting a delivery strategy similar to that for immunization services.

Satisfaction with Government Services

The survey data showed widespread use of private doctors for such services as deliveries and family planning, in both PHC/SC and more remote villages. The share of private services was also similar in both types of villages (Table 3.5). These findings suggest that women went

TABLE 3.6
Client satisfaction with government and private services: Ahmednagar District, Maharashtra, 1994

Criteria	Percentage satisfied with		Difference[a] (%)
	Government	Private	
Tangibles			
Clinic is neat and clean	81	95	17
Medicines are available	56	82	46
Responsiveness			
Doctors pay attention	69	88	28
Don't have to wait long	74	69	−7
Reliability			
Treatment is effective	62	86	39
Patient is properly examined	68	94	38
Empathy			
Timing is convenient	68	87	28
Staff is friendly	74	90	22
Assurance			
Doctor is available when needed	64	87	36
Questions are answered	75	94	25

[a] $\frac{\text{Private} - \text{Government}}{\text{Government}} \times 100$

to private doctors not because government services were not accessible, but rather because they preferred the private services if they could afford them.

When the women were asked how they had chosen their service provider, the criterion mentioned most frequently (81 percent) was "effective treatment or good experience in the past" (data not shown). Other criteria mentioned were the availability of a doctor (48 percent), proximity to home (35 percent), and affordable cost (15 percent). In the opinion of most respondents (more than 80 percent), private practitioners met these criteria better than government doctors.

Several investigations of the quality of health services have found that regardless of the type of service, clients use similar criteria to evaluate service quality (Parasuraman and Zeithaml 1986). These are tangibles (appearance of facilities, equipment, and personnel), responsiveness (willingness to help and provide prompt service), reliability (dependability and appropriateness of services), empathy (caring attention by service providers), and assurance (trust and confidence in service providers). Although clients can directly assess service quality by using these criteria, their satisfaction with a service depends on how well the service performs as compared with an "ideal" service that the clients have experienced or know about.

Because most village women in our sample looked upon private services as ideal, we compared their perceptions of government and private services to gauge the extent to which they were satisfied with the government services. This exercise was carried out with a standard measurement instrument called SERVQUAL (Parasuraman, Zeithaml, and Barry 1988). It consists of 10 items representing the five criteria of quality mentioned above. Respondents were asked to specify how frequently those items were present in the government and private services. Their tabulated responses are shown in Table 3.6.

On all items but one, the respondents rated the government services as inferior to the private services. The overall score for the government services was 30 percent lower than that for the private services. But on some items the differences were much greater. We infer that those items reflect significant areas of dissatisfaction with government services.

Sources of Dissatisfaction with Government Services

The largest differences in respondents' ratings of the government and private-sector services were in the reliability criteria. Significantly more women thought that private doctors examined them properly and gave more effective treatment than they received from government doctors. The four items on which the difference between private and government ratings was more than 30 percent were availability of medicines (46 percent difference), effective treatment (39 percent difference), proper examination of patients (38 percent difference), and availability of doctors (36 percent difference).

A shortage of doctors was indeed a problem in the study area. Although 14 medical officer positions were sanctioned for the block's PHCs, only seven were filled at the time of the survey. All the PHCs were functioning with one medical officer instead of two. Therefore, the probability that a doctor would not be available to treat a patient seeking care at a PHC was high because the medical officers had administrative duties as well as responsibility for treatment.

Government doctors were able to spend very little time with patients. For example, during a four-hour period in the outpatient department of one PHC, the average number of patients seen was about 50, with the result that the average amount of time available per pa-

TABLE 3.7
Satisfaction with government services, by clients' background characteristics: Ahmednagar District, Maharashtra, 1994

Characteristic	(No.)	Effective treatment (%)	Medicines available (%)	Examined properly (%)	Doctor available (%)
Residence					
PHC/SC villages	(673)	60	58	68	66
Other villages	(350)	50	49	58	54
Mother's education					
Illiterate	(405)	54	58	63	64
Literate	(618)	59	53	67	62
Economic status					
Poor	(689)	54	54	65	62
Not poor	(334)	62	57	67	63
Social status					
SC/ST	(328)	55	56	69	65
Other castes	(695)	57	55	63	61
Total	(1,023)	56	55	65	62

PHC/SC=primary health center or subcenter; SC/ST=scheduled caste or scheduled tribe.

tient was less than five minutes. Most of the PHC doctors did not examine antenatal cases themselves, not even high-risk cases, but instead referred them to the ANMs.

The PHC doctors defended their actions by arguing that because most patients came to the PHCs with only minor ailments, they did not need lengthy examinations. Private doctors spent more time with patients, they said, only to collect higher fees, whereas government doctors provided care that was technically appropriate. But what the PHC doctors considered appropriate treatment, clients often considered inadequate or ineffective. The PHC doctors, they said, did not examine them properly or give them good-quality medicines. Our impression was that whereas private doctors were dispensing excessive and perhaps unnecessary drugs to impress patients, the government doctors were giving patients only a few tablets, usually enough for only one day, to avoid wasting medicines. Thus there were large gaps between what the PHC doctors considered to be appropriate treatment and what the patients expected from the government service.

We were also interested in learning whether clients' perceptions of government services varied by client characteristics. Differences in responses by educational level, economic status, and social status were minor, suggesting that the PHC staff exhibited no systematic

bias toward poor or illiterate clients (Table 3.7). The only background characteristic that showed significant differences was again place of residence: Women from the PHC/SC villages rated all aspects of service more highly than did women from remote villages. It could be that the health staff were more familiar with, and hence more cordial toward, clients from the PHC/SC villages. We know that workers were not able to spend much time in the remote villages because of the distance and difficulty of traveling to them. Similarly, patients who came to the PHCs or SCs from remote villages and did not find a doctor in attendance were more likely to be disappointed with the service than were those who came from nearby localities.

Summary and Conclusion

The data presented in this chapter suggest that the quality of the government's family welfare services, both its technical aspects and service delivery process, need considerable improvement. Greater attention needs to be paid not just to the provision of supplies and equipment, but also to clients' perceptions and constraints.

Service quality is not a tangible product. It is generated at the time of service delivery, through a range of interactions between the client and service provider. The degree of communication between the two largely determines how favorably the client regards the service. Therefore, any barrier to that communication—such as the distance between the client's home and the center, the client's inability to understand the provider's message, or the provider not taking enough time to communicate effectively—are detrimental to service-delivery quality. A strategy aimed at improving service quality needs to take such barriers into account and develop approaches to ensure maximum communication with clients. The strategy adopted for immunization services in the study area, for example, seems to a considerable extent to have achieved this goal. Similar approaches are needed to improve the quality of other services.

The three dimensions of service quality—process quality, technical quality, and client satisfaction—have to be treated as related but distinct entities. A worker spending less than five minutes during a home visit may exhibit poor process quality, but the client may find the length of the visit satisfactory. Similarly, a PHC doctor may pro-

vide technically sound curative care, but patients may not be satisfied with it. Therefore, while deciding on an intervention for improving service quality, program managers must assess its potential impact upon on all three dimensions of quality.

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4 The Quality and Coverage of Family Planning Services in Uttar Pradesh: Client Perspectives

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Experts are increasingly emphasizing the need to assess the quality of family planning services from the users' perspective. It has therefore become necessary to define the concept of quality and identify measurable indicators (Bruce 1990). The conceptual framework proposed by Bruce and Jain (1991) has stimulated worldwide interest in research on the quality of services provided by various cadres of health and family planning providers.

In India researchers have only recently begun to show an interest in the quality of family planning services. As a result, few detailed studies have been undertaken exclusively either to assess the quality of services or to understand its influence upon the acceptance and continuation of contraception. Although many demographic surveys have collected information on the availability of contraceptives, client–provider contact, or the provision of follow-up services to acceptors, the information is generally analyzed superficially within the context of the overall functioning of the Family Welfare Programme. During the past several years, however, a few focused studies have used Bruce's framework, and several of them are included in the present volume (see Chapters 2, 5, 6, 9, 13, and 14).

The government of India has announced several important changes in the strategy of the Family Welfare Programme. The new strategy shifts the policy emphasis from achieving demographic goals to meeting the reproductive needs of individual clients (GOI 1996).

The reproductive health of women has become the principal focus of service delivery. Accordingly, family planning targets have been removed, and district-level planning has been proposed to make the program more effective and client-oriented. These changes have reinforced the importance placed upon the quality of services in the government's new service-delivery strategy. The first step toward improving program services is to document their current quality and to identify major problems that should be addressed. The quality of the Family Welfare Programme varies widely across India's vast and diverse regions. Drawing upon a large data base, this chapter attempts to assess the quality of family planning services provided in the northern Indian state of Uttar Pradesh.

The Setting

In area, Uttar Pradesh is the second largest state in India. It is also the most populous, with a population in 1991 of 139 million, according to the latest Indian census. Demographically it is one of the least advanced states of India, with a high crude birth rate (36 per 1,000), a high crude death rate (12 per 1,000), a high infant mortality rate (92 per 1,000), and a low contraceptive prevalence rate (20 percent). The population of Uttar Pradesh grew by 25.5 percent between 1981 and 1991.

The state also lags behind most other states in social and economic development. In 1984, for example, 45 percent of its population lived below the poverty line, compared with 37 percent in the country as a whole. During fiscal year 1985–86, per capita income was estimated to be Rs598, as compared with a national average of Rs798. Less than 20 percent of its population lived in urban areas, as compared with 26 percent for the country as a whole. Only 21 percent of females aged 6 years old and above could read and write, compared to the national average of 29 percent. These indicators also vary widely within the state.

A number of recent studies reveal that health and family planning services in Uttar Pradesh are of low quality, are poorly managed, and are often inaccessible to poor people (CORT 1997; IIPS 1995; Khan and Gupta 1989; Khan and Patel 1994; ORG 1991; SIFPSA and the Population Council 1994a; SIFPSA, USAID, and The EVALUATION Project 1996).

Data

Data for the present study were drawn from a baseline survey undertaken in 16 districts of Uttar Pradesh by the State Innovations in Family Planning Services Agency (SIFPSA) and the Population Council between September 1993 and January 1994. Nine consultancy organizations were involved in the data collection and preparation of the reports (Gupta and Talwar 1995). The baseline survey covered three to four districts from each of the five geographic regions of the state (Hilly, Western, Central, Eastern, and Bundelkhand). A sample of 2,500 households was drawn from each district, and all ever-married women aged 13–49 years in the selected households were interviewed by means of a structured questionnaire. Details of the sampling procedures are given elsewhere (SIFPSA and the Population Council 1994b). Altogether, 39,710 households were covered and 45,241 women were interviewed. Sixteen published reports from the survey provide detailed information on the maternal and child health (MCH) and family planning programs in each district. They offer a wealth of information and are methodologically comparable with data from the 1992–93 National Family Health Survey. For this chapter we have pooled the data collected in the baseline survey and applied appropriate weights to estimate results at the state level. Although the central focus of the survey was not the quality of family planning services, a limited but informative set of questions addressing clients' perceptions of the quality of family planning services was included and is considered here.

Apart from household interviews, village information schedules were also completed for all the villages in the study. The schedules provide information on the availability of health and family planning services from sources other than primary health centers (PHCs) and subcenters. If the villages included in the study had government health and family planning clinics, those clinics were also visited to assess their facilities and resources, both human and physical. The data provide valuable information on the functioning and accessibility of the facilities. This chapter also draws liberally on data from other studies, such as the PERFORM Survey (SIFPSA, USAID, and The EVALUATION Project 1996).

The Availability of Contraceptives at Subcenters and Other Public Clinics

In rural areas, subcenters are the main source of family planning services. The male and female staff posted at these facilities are expected to conduct outreach by making home visits and providing services to clients at their doorsteps. We sought to learn the extent to which the quality of the facilities conformed to the established norm. Our analysis presents a mixed picture.

In Uttar Pradesh each subcenter served, on average, a population of 4,706, which accords with the government's prescribed norm of one subcenter per 5,000 population in the plains regions; however, the population size varied from 3,000 to 6,500 (Table 4.1). At the time of the study only 86 percent of the subcenters were staffed by auxiliary nurse-midwives (ANMs). In other words, 14 percent of the subcenters were nonfunctional. Only 52 percent of the subcenters had male staff members in position. Most of the physical facilities were in poor condition and had inadequate logistic support. Fewer than 20 percent of the subcenters functioned in their own buildings. The remainder rented space—usually the veranda of a small house or a tiny room—with no electricity or water supply. When a clinic was not in session, the landlord used the room for living space. Providing adequate health care in such facilities presents a serious challenge: Privacy is difficult to maintain, lighting is inadequate, and poor sanitation increases the risk of infection.

Many of the subcenters had no examination table and little equipment. In the subcenters that rented space, the facilities of most consisted merely of a wall cabinet containing some drugs and contraceptives. Any equipment and medicines were generally kept locked in the cabinet and were rarely used during clinic hours.

The monthly rent officially approved by the government for the subcenters is so low (Rs25–80) that subcenter staff cannot afford better facilities. The study found, however, that the subcenters had not received even this small rental subsidy for the past two years. According to one landlord, the subcenters were being allowed to function in the hope that the accumulated rent would eventually be paid. These observations are corroborated by a detailed situation analysis done by the Population Council (1995) in two districts of Uttar Pradesh and a large baseline survey conducted in 18 representative districts of the state (SIFPSA, USAID, and The EVALUATION Project 1996).

TABLE 4.1
Availability of family welfare facilities at the subcenter level: Rural Uttar Pradesh, 1993–94

Indicator	Rural average
Average population per subcenter	4,706
Percentage of subcenters with	
ANMs in position	86
Male health workers	52
Government building	17
IUD kits	57
ANMs trained in IUD insertion	56
Percentage of subcenters reporting regular supply of	
IUDs	50
Oral contraceptives (pills)	67
Condoms	78

ANM=auxiliary nurse-midwife; IUD=intrauterine device.

Substantial percentages of the subcenters reported irregular supplies of contraceptives. Supplies of intrauterine devices (IUDs) were especially unreliable. Only one-half of the subcenters reported a regular supply of IUDs and only 57 percent reported having IUD insertion kits. Although the situation was considerably better in the Hilly and Bundelkhand regions of the state, it was the poorest in the eastern region (data not shown). Several recent studies show that many ANMs lack confidence about their ability to insert IUDs (ICMR 1991; Population Council 1995; see also Chapter 12). When all sources are considered (public, private, nongovernmental organizations), contraceptives are available in 25–30 percent of the villages at most.

A discussion with medical officers-in-charge and other health workers about the availability of other methods revealed that sterilization services (mainly the female method of tubectomy) were available mostly through organized camps and weekly clinics.[1] They were run with the help of doctors from the district headquarters, who had the required equipment and support staff. If these special clinics did not exist, female sterilization services would be largely unavailable at the PHC level. In addition, most doctors posted at PHCs generally have had no experience in performing vasectomies. Those who do generally have not performed them for a long time, so the procedure is rarely offered at camps or on sterilization days at the PHCs. The number of vasectomies at the national level has dropped from 6.1 million in 1976–77 to fewer than 0.3 million in 1995. The availability of IUD services at subcenters was also reported to be limited due to the shortage of IUDs or the lack of IUD insertion kits.

TABLE 4.2
Clients' contact with the Family Welfare Programme during the three months prior to the interview: Rural Uttar Pradesh, 1993–94

Residence	Percentage of women reporting contact during three months prior to interview			Number (in thousands)
	Home visit by health worker	Visit to clinic by respondent or family member	Total contacts	
Urban	4	17	21	(8,041)
Rural	12	14	26	(21,380)
Total	10	15	25	(29,421)

Nearly half (45 percent) of the 2,428 public facilities covered in the 1995 PERFORM Survey reported having run out of contraceptives at least once during the previous year. Only 14 percent of facilities offering sterilization services (PHCs and community health centers) were equipped to provide such services, despite the fact that sterilization is the most commonly used contraceptive method in India (SIFPSA, USAID, and The EVALUATION Project 1996).

Clients' Contact with the Family Welfare Programme

Clients can gain access to the government's Family Welfare Programme through one of two means: by visiting clinics that offer general health, MCH, or family planning services or through home visits made by extension workers. As shown in Table 4.2, the extent of contact between prospective clients and government health or family welfare staff is very low. Only 10 percent of the women reported outreach visits by family welfare staff during the three months prior to the interview. Similarly, only 15 percent of the women reported that either they or a member of their family had sought help from a public-sector clinic during the same period. Thus, only one-quarter of the respondents reported recent contact with the Family Welfare Programme. The level of contact in urban areas was no better than that in rural areas.

District-level analysis of the survey data reveals wide variation in the percentage of households that had recently received visits by workers—from as low as 2 percent to as high as 50 percent. The median value was only 10 percent, meaning that in one-half of the dis-

TABLE 4.3
Findings from studies on clients' contact with ANMs and other health workers to discuss family planning: Rural Uttar Pradesh, 1971–95

Name or description of study	Area covered	Sample size	Percentage of couples ever contacted	Year of study	Source
Kanpur Study	Rural Allahad Division	2,192	13.0 (males) 8.0 (females)	1971	Misra et al. 1982
Family Planning Among Muslims	Urban Kanpur	330	7.8	1975	Khan 1979
Study of maternity and sterilization wings	1 district	1,000	7.0	1980	Kumar and Sharma 1985
Postproject survey of IPP in UP	3 districts	NA	15.0	1983	Population Centre 1984
Endline survey of IPP in UP	3 districts in eastern UP	3,000	23.8	1988	Khan and Gupta 1989
Communication needs assessment in UP	6 districts	3,018	41.6	1990	ORG 1992
UP baseline survey	16 districts	45,241	9.5[a]	1993	SIFPSA and the Population Council 1995
PERFORM Survey	18 districts	45,277	7.0[b]	1995	SIFPSA, USAID, and The EVALUATION Project 1996

IPP=Indian Population Project; NA=data not available; UP=Uttar Pradesh.

[a] Reference period six months; [b] Reference period three months.

tricts of Uttar Pradesh, 10 percent of couples or fewer were visited by the family welfare workers for educational or family planning purposes. The corresponding median value for clients' visits to the clinics was around 15 percent.

Table 4.3 suggests that there has been little improvement in the outreach of health and family planning services in Uttar Pradesh over the past two decades, despite a manifold increase in staff strength and infrastructure. The 1971 Kanpur Study in five districts of eastern Uttar Pradesh was one of the earliest efforts to analyze the functions and outreach of the program (Misra et al. 1982). Of the 2,192 couples interviewed in the study, only 13 percent of husbands and 8 percent of wives reported that workers had ever visited them to discuss family planning. Similarly low levels of client–provider contact were reported in other studies conducted during the 1980s. The Uttar Pradesh Baseline Survey and the PERFORM Survey, conducted in the 1990s,

TABLE 4.4
Percentage of women receiving outreach services during the three months prior to the interview, classified by workers' sex: Rural Uttar Pradesh, 1993–94

Workers	Percentage of all women	Percentage of those visited
Any worker	9.5	100.0
Female worker only	7.1	74.3
Male worker only	0.9	9.5
Male and female worker	1.5	16.2
(Total estimated no., in thousands)	(29,421)	(2,800)

found that the outreach program still served fewer than 10 percent of the eligible couples of Uttar Pradesh on a regular basis. According to the PERFORM Survey, only 7 percent of women were contacted by any provider during the six months prior to the interview (SIFPSA and the Population Council 1994a; SIFPSA, USAID, and The EVALUATION Project 1996).

An analysis of the providers by sex shows that the limited outreach work currently being carried out is done mainly by female workers, or ANMs (Table 4.4). Seven percent of all households were visited by only female workers, 1.5 percent by both male and female workers, and 0.9 percent by only male workers. Among the subsample of women who reported that they had been contacted, 74 percent were contacted by only female workers, nearly 10 percent by only male workers, and 16 percent by both. During the early 1970s male workers were more involved than they are today in promoting family planning, and this was reflected in the prevalence of vasectomy. Male workers now appear to play only a marginal role in the Family Welfare Programme.

There are several reasons for the shift from male to female workers:

- A shift in program emphasis from vasectomy to tubectomy meant that women with three or more children became the main target for counseling and motivational efforts. In the cultural setting of Uttar Pradesh, it is difficult for male workers to talk to rural women about family planning. Male workers have therefore been shifted from family planning activities to health program activities such as malaria control, chlorinization of wells, school health programs, and epidemic prevention.

- With the increasing emphasis of the Family Welfare Programme on female clients, the utility of male workers for family planning work, as perceived by program managers, has declined. As a result, positions for male workers that have fallen vacant due to workers' retirement or for other reasons have generally remained unfilled. Today almost half of the male workers' positions are vacant, and the number of male workers is almost one-half of the prescribed ratio of one male worker per 5,000 population.
- Earlier, each male worker was expected to organize small meetings of male opinion leaders at the village level to educate them about contraception and available family planning methods. However, with the increasing emphasis on women as the target of the program, these orientation sessions have ceased, and in the process an opportunity to educate and involve men in the program has been lost.

Today most male workers are at least 45 years of age. A recent in-depth study of 73 male workers from two districts of Uttar Pradesh found that most believed that vasectomy could not become as prevalent as it used to be (Gupta et al. 1997). Further, because of their greater age, they found it embarrassing to contact and motivate young couples to use condoms. As some of them put it, "They are as old as my sons. Our *sanskriti* [culture] does not allow free discussion on such issues with youths and young couples."

Selectivity in Outreach Visits

Within this context of extremely low levels of outreach, we found evidence of considerable selectivity in outreach visits by female workers (Table 4.5). Although there was little difference among respondents of different religious or caste affiliations in the probability of having been recently visited by a worker, other associations were slightly more pronounced. Women with no living children or sons were less likely than others to have been recently contacted. Similarly, women with no formal education were more likely than highly educated women (those with 11 or more years of schooling) to have reported a recent contact. Lastly, women residing in villages where the PHC or subcenter was located were more likely to receive visits

TABLE 4.5
Percentage of women receiving outreach services during the three months prior to the interview, classified by client characteristics: Rural Uttar Pradesh, 1993–94

Characteristic	Percentage of women	Estimated no. (in thousands)
Religion		
Hindu	10	24,558
Muslim	9	4,474
Other	14	389
Caste		
Scheduled caste/tribe	10	6,677
Lower caste	11	8,849
High-caste Hindu	9	9,070
Non-Hindu	9	4,825
Parity		
0	6	3,448
1	10	3,684
2	9	4,292
3+	11	17,997
No. of living sons		
0	8	5,355
1	10	9,002
2+	10	15,064
Wife's education		
No education	11	20,746
Up to primary (1–5 years)	10	2,930
Middle (6–8 years)	9	2,209
Matriculated (9–10 years)	8	1,477
11+	7	2,059
Residence		
Village with PHC/SC	13	9,503
Remote village	9	19,918

PHC/SC=primary health center or subcenter.

from the ANM than were women who lived in more remote villages. These results suggest that, in their efforts to motivate couples for sterilization, workers tended to focus on illiterate and presumably poorer women, who often had larger families and were more likely to be easily influenced by sterilization incentives than were women with more education. It should be emphasized, however, that the level of outreach visitation by female providers was extremely low for all clients, regardless of client characteristics or place of residence.

It is noteworthy that many of the women surveyed did not believe that workers concentrated their efforts, at least in providing antenatal care, on poor and lower-caste women. About half (45 percent) of all women believed that high-caste ANMs did not like to attend

TABLE 4.6
Purpose of health worker's last visit, as perceived by women receiving outreach services during the three months prior to the interview: Rural Uttar Pradesh, 1993–94

Purpose	Type of health worker (%)		
	ANM or LHV	Male worker	All workers
Child immunization	54	37	53
Antenatal care	18	10	17
Motivation for sterilization	12	11	12
Malaria/blood collection	6	29	9
Follow-up	6	3	6
Postnatal care	6	3	6
Delivery assistance	5	2	5
Motivation for spacing method	4	5	4
Contraceptive supply or resupply	2	4	2
Unknown	3	4	3
Other	10	11	10
(Estimated no. of eligible women contacted by workers in last 3 months, in thousands)	(2,485)	(315)	(2,800)

Note: Percentages may exceed 100 because of multiple responses.
ANM=auxiliary nurse-midwife; LHV=lady health visitor.

the deliveries of scheduled-caste women. The same percentage of women believed that workers favored rich families and neglected poor ones. Conversely, one-third of all women believed that high-caste women preferred not to receive antenatal and postnatal care from lower-caste ANMs.

A survey question about the purpose for which the workers contacted the women revealed that, in the case of female workers, a majority of respondents (54 percent) thought the main purpose was to immunize children (Table 4.6). Eighteen percent and 6 percent, respectively, thought it was to provide antenatal or postnatal care. Only about one-fourth of visited women believed female workers focused primarily upon family planning services such as motivation for sterilization (12 percent), motivation for nonpermanent methods (4 percent), contraceptive supply or resupply (2 percent), or follow-up of sterilized clients (6 percent). In the case of male workers, apart from immunizing children (mentioned by 37 percent of contacted women), the perceived main purpose of contacting clients was to collect malaria slides (29 percent). In fact, malaria blood collection was the only

area in which male workers were considered to be much more active than female workers. As with perceptions of female workers' main purpose, only about a quarter of respondents thought that family planning services (motivation for sterilization, motivation for spacing methods, supply of contraceptives, or follow-up) were male workers' main purpose. It would appear from these responses that all workers, male and female, place less emphasis on family planning work than on other duties, and that low family planning service levels by male workers are in part a function of the low level of male worker outreach contact.

The differences in perceived purposes of contact with clients made by male and female workers reflect actual differences in job responsibilities between the two types of workers. Given that female workers are responsible for most MCH and family planning outreach work, the data in the subsequent tables of this chapter (with the exception of one item in Table 4.12) refer only to contact with female workers.

Quality of Services Provided

The Family Welfare Programme is expected to provide a variety of contraceptives, information about the contraceptives, checkups of prospective acceptors before offering them a method, and follow-up visits by paramedical staff. We analyzed respondents' answers to the survey questions in an effort to evaluate these aspects of the program.

Family Planning Information and Method Choice

As we have already noted, few of the women contacted by family welfare workers were given information on contraceptives. Further, the Family Welfare Programme, with its primary emphasis upon sterilization, has clearly skewed workers' focus in favor of female sterilization. Most women (78 percent) were informed about female sterilization, whereas only 33–42 percent were informed about other contraceptive methods (Table 4.7). These findings are corroborated by a number of other studies (CORT 1992, 1995a, 1995b, 1995c, 1996a, 1996b; ICMR 1988, 1991; IIPS 1995; Khan and Ghosh 1985; Khan and Patel 1994; SRI 1992). In the 1991 ICMR study, only 18 percent of the ANMs observed in clinics provided information about oral contra-

TABLE 4.7
Quality of information and counseling given to prospective clients about specific methods: Rural Uttar Pradesh, 1993–94

Information or counseling	Vasectomy	Tubectomy	IUD	Pills	Condoms
Percentage informed about method[a]	33	78	35	42	36
Percentage given information about method[b]					
Advantages only	71	67	56	61	68
Disadvantages only	2	3	3	3	2
Both	17	22	28	26	20
Neither	10	8	13	13	10
Total	100	100	100	100	100
Percentage told how to use method	88	87	85	91	86

IUD=intrauterine device.

[a] Percentage is based upon those who were informed about a family planning method (estimated no.= 2,757,000); [b] Percentage is based upon those who were informed about the method.

ceptives and only 27 percent mentioned condoms, whereas 62 percent mentioned sterilization and 57 percent provided information on the IUD. A separate study from Orissa, Bihar, and Gujarat found that out of 1,197 acceptors from various government clinics, only 12 percent were informed about more than one method, only 16 percent were informed about the effectiveness of the contraceptive, and less than 1 percent were informed about possible side effects (Khan, Patel, and Chandrasekhar 1993; see also Chapter 12).

Similarly, even those who were informed about specific family planning methods were often not given complete information. This is evident from our finding that regardless of the method, only about one of four women with whom a method was discussed was told about the method's advantages and disadvantages (Table 4.7). For instance, only about 22 percent of the women who were told about tubectomy were informed about both the advantages and the disadvantages of the method. Only the advantages of the methods were mentioned in 56–71 percent of the cases. The reason could be that the workers themselves possessed limited knowledge about the methods (Population Council 1995), or that they feared that once clients were informed about possible side effects of a method, they would not accept it. Although a majority of workers understand the desirability of disclosing the disadvantages as well as the advantages to their prospective clients, the pressure they feel to achieve their family planning targets may discourage them from being candid about

TABLE 4.8
Percentage of clients reporting that workers insisted upon a particular method: Rural Uttar Pradesh, 1993–94

Measure	Vasectomy	Tubectomy	IUD	Pills	Condoms	Number (in thousands)
Of those who were contacted by a worker, percentage reporting insistence upon a specific method	2	45	7	5	4	(2,757)
Of those reporting insistence upon a specific method, percentage mentioning recommended method	3	71	11	8	6	(1,737)

Note: Percentages in second row do not add to 100 because of rounding.
IUD=intrauterine device.

the disadvantages of the various methods (see Chapter 12). Even so, although about 10 percent of the clients were merely told of a method without being given any details (either its advantages or disadvantages), a few (2–3 percent) were told only about the disadvantages of a particular method. It is possible that workers described the disadvantages of one method to persuade the client to accept another. Most of the women (85–91 percent) who were informed about a specific method were also told how to use it.

According to the women we surveyed, in addition to the limited information that workers gave clients about most contraceptives, some workers insisted that their clients adopt sterilization, another sign that workers felt pressured to achieve sterilization targets (Table 4.8). For example, 63 percent of the women reported that service providers insisted they adopt a particular method, and a majority of them reported that this pressure was to adopt sterilization (45 percent of all women contacted by the workers and 71 percent of those who reported insistence by the workers for a particular method). Elsewhere we show that workers, under pressure to achieve their sterilization targets, tend to approach those women who have several children and at least one son, considering them the best prospects for sterilization (see Chapter 12). Among the women we surveyed, young women, those with two or fewer children, and recently married couples were rarely encouraged by workers to use contraception. This indicates that outreach visitation efforts are skewed toward high-parity couples. Other studies have found a similar lack of interest by work-

TABLE 4.9
Quality of client–provider interactions during last visit: Rural Uttar Pradesh, 1993–94

Measure	Percentage
Amount of time spent by worker during last visit	
Not enough	46
As needed	54
Was client satisfied with assistance provided during the visit?	
Yes	67
Somewhat	25
No	8
Were client's questions answered?	
Yes	69
Only partially	17
No	14
Would client like the worker to revisit?	
Very much	66
Somewhat	29
Not at all	5
(Estimated no. of women, in thousands)	(2,425)

ers in counseling young or newly married couples about family planning (SIFPSA and the Population Council 1994b).

The women we surveyed had a generally positive assessment of the outreach visits by female field workers. More than two-thirds (69 percent) reported that their queries were fully answered, and 67 percent reported being satisfied with the services they had received (Table 4.9). Nevertheless, only 54 percent of the subsample of women who were visited by female workers were satisfied with the amount of time the workers had spent with them. Two-thirds expressed a strong desire to have the workers revisit them.

Quality of Care for Method Acceptors

The satisfaction of family planning acceptors seems to depend upon the quality of services they receive at the time of acceptance and the follow-up care they receive if they experience complications. To assess the technical quality of services provided to clients, our survey asked each sterilization or IUD acceptor questions related to the physical examinations and tests they had received before accepting the method.

Among current users of contraception, 8 out of every 10 women electing sterilization were asked about their medical history prior to undergoing the procedure, but only 7 out of 10 had their blood pres-

TABLE 4.10
Examinations and tests received by tubectomy and IUD acceptors prior to acceptance: Rural Uttar Pradesh, 1993–94

Measure	Sterilization	IUD
Percentage of acceptors in sample	14.9	1.5
Type of examination or test (%)		
Medical history taken before sterilization	81	66
Blood-pressure test	70	40
Vaginal examination	49	38
Breast examination	46	24
Menstruation status ascertained	70	63
(No. of current users, in thousands)	(4,377)	(453)

IUD=intrauterine device.

Source: SIFPSA and The Population Council 1994a.

TABLE 4.11
Percentage of sterilized women and IUD acceptors willing to recommend the method to others: Rural Uttar Pradesh, 1993–94

Method accepted	Rural	Urban	Total
Sterilization	42	51	45
IUD	39	37	38

IUD=intrauterine device.

sure measured and only 15 percent were subject to any examination (Table 4.10). Seven out of 10 were asked for the details of their menstrual cycle. Vaginal and breast examinations were carried out in slightly less than one-half of the cases. The survey did not include questions about urine and blood tests, but observations made during sterilization camps and clinic days indicated that both these tests were generally carried out on each woman. However, the observers also noticed that even if the women had hemoglobin levels lower than required, they were marked "normal" and were approved for a tubectomy. These findings indicate that complete screening was not conducted before sterilization. Other studies on the quality of services provided in sterilization camps in Uttar Pradesh, as well as in other states, have reached the same conclusion (Parveen 1995; see also Chapters 13, 14, and 15). Only 1.5 percent of IUD acceptors were examined or tested before accepting the device. The most common examinations were medical history, followed by ascertainment of menstruation status, and then blood-pressure test.

To assess the extent of the satisfaction with the services provided, each sterilization or IUD acceptor was asked whether she was will-

TABLE 4.12
Postacceptance follow-up and incidence of complications: Rural Uttar Pradesh, 1993–94

Measure	Vasectomy	Tubectomy	IUD
Percentage of acceptors receiving follow-up visit(s) within one month	6	18	3
Visits from male workers	6	4	0
Visits from female workers	1	14	3
Percentage experiencing postacceptance complications[a]	36	47	30
Sepsis	5	3	1
Pain in groin	24	—	—
Abdominal pain	—	20	5
Backache	—	23	11
Weakness	21	21	8
Excessive bleeding	—	—	17
White discharge	—	5	6
Loss of sexual desire	1	—	—
Other	3	6	4
Percentage of those reporting problems who received help from any worker	26	25	29
Number of acceptors (in thousands)	330	4,377	453

IUD=intrauterine device.

[a] Multiple complications were reported.

ing to recommend the method to other women. Only 45 percent of sterilized women and only 38 percent of IUD acceptors expressed a willingness to recommend the method to other potential clients (Table 4.11). This indicates that more than one-half of the sterilization and IUD acceptors were dissatisfied with the method or the services they had received.

Postacceptance Follow-up and Complications

Information on follow-up assistance received from providers and postacceptance complications faced by the acceptors also indicates significant gaps in the quality and continuity of services. For instance, only 6 percent of the men and 18 percent of the women who had undergone sterilization received a follow-up visit by health workers within a month of the procedure (Table 4.12). This percentage was even lower in the case of IUD acceptors (3 percent). These findings assume added significance in light of the fact that a substantial proportion of the acceptors of vasectomy (36 percent), tubectomy (47 percent), and the IUD (30 percent) reported that they developed

postacceptance complications. Pain at the site of the operation, backache, weakness, and excessive bleeding were the most frequently mentioned postacceptance complications. The study also shows that only about one-fourth (25–29 percent) of those who reported complications received assistance from any health worker.

Ninety-five percent of those IUD acceptors who suffered from postinsertion problems had the IUD removed within a month (data not shown). In the absence of detailed data on screening procedures or technical competence of the workers who inserted the device, it is difficult to comment on the quality of services provided. However, the finding that about one-third of all IUD acceptors developed complications and had the device removed within a month of insertion reflects poorly on the quality of services. Qualitative studies show that a majority of ANMs lack the confidence to insert an IUD. Moreover, most ANMs do not screen clients for possible reproductive tract infections because they are more interested in meeting their IUD targets (see Chapter 12). In a recent study conducted in the districts of Sitapur and Jhansi in Uttar Pradesh, several ANMs expressed a need for practical training in the screening of IUD cases and IUD insertion (CORT 1997).

Summary and Conclusion

The current study reveals that access to family planning services, particularly in remote villages, is a major problem in Uttar Pradesh. Despite a manifold increase in the number of field workers during the past two decades, the coverage of the Family Welfare Programme remains extremely low. With increasing emphasis on women as targets of the program, the role of male workers as family planning extension workers has been almost eliminated. With no new appointments, almost half of the male workers' positions are vacant. This trend needs to be reversed if the recent interest of program administrators in involving men in reproductive health and contraception is to be vigorously pursued.

Our findings indicate that during their extension work the ANMs concentrate mainly on female sterilization. The quality of counseling is generally poor. Workers provide incomplete information about most methods, and the positive aspects of the method suggested are emphasized to motivate the couples to accept it. Postacceptance fol-

low-up is also poor. Given the high level of postacceptance complications, the lack of proper follow-up contributes to negative perceptions of the program. These perceptions are reflected in the finding that less than one-half of the acceptors of sterilization and IUDs said that they would recommend their method to other potential users.

Despite these shortcomings, the limited number of women who received visits from the ANMs held a generally positive view of the workers, were satisfied with the amount of time the ANMs had spent with them, and wished that the ANMs would visit them again. This encouraging result suggests that the program should increase its outreach efforts.

Observations from the field and other studies indicate a number of programmatic constraints that have a direct bearing on outreach activities and the quality of services provided by the Family Welfare Programme. The prime ones include inadequate resource allocation, which leads to poor logistic support; lack of supervision and accountability; lack of attention to the quality of services by those monitoring the program; and lack of competence among the workers, particularly in screening cases, inserting IUDs, and counseling clients. An inadequate communication network also contributes to the poor mobility and outreach of ANMs.

Various studies show that many program managers are well aware of these limitations but are unable to address them effectively. This is partly because of the bureaucratic inertia and hurdles they face when trying to change the system and partly because of the lack of resources from which the public clinics perpetually suffer. Unless both these aspects are openly discussed and seriously addressed, it will be difficult to institutionalize quality maintenance within the present public health system.

Note

1 These camps and clinics are usually organized during the months of October through March so as to achieve family planning targets in time for the annual assessment by higher authorities.

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5 Rural Women's Experiences with Family Welfare Services in Tamil Nadu

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The quality of care in family planning service delivery and, more recently, in the delivery of reproductive health services, has come to be recognized as one of the major issues facing program planners, managers, and policymakers. A major portion of the growing body of literature on this subject focuses on users' perspectives, which are known to affect significantly the demand for family planning services. Methods used to gather information on this aspect of the quality of care include structured interviews (usually in the form of client exit surveys), focus-group discussions, and the "mystery client" technique.

One of three approaches is usually employed to involve users in the assessment process. Each has conceptual and methodological difficulties.

The first is to begin with a set of indicators of the benefits that clients should receive from a service provider (e.g., complete information, privacy, and follow-up care) and to ascertain from clients' responses whether the clients have received them. For example, the international nongovernmental organization CARE, which provides family planning services in India, involves clients in assessing its services. It asks each client:

- whether she received a family planning method, whether she wanted it, whether she is satisfied with it, and whether she can explain how to use the method;
- whether the location was convenient, clean, and affordable; whether it had adequate privacy; and whether the waiting time was acceptable; and

- whether the provider was polite, allowed her to ask questions, and allowed her adequate consulting time; and whether she felt comfortable during the procedure (McGinn 1993).

The limitation of using a set of predetermined indicators is that they may not tell us what clients themselves consider to be important aspects of service delivery or what, in their view, constitutes the difference between poor service quality and good or high quality.

A second approach asks clients open-ended questions to ascertain whether they perceive the services received to be satisfactory. Interpreting answers to such questions is difficult because each client may have a different yardstick for measuring the service. The same package of services found unacceptable by one client may be perfectly acceptable to another. We have no way of knowing whether differences in responses are due to differences in service quality per se or to differences in client characteristics. Ratings of satisfaction or dissatisfaction may result from low or unrealistically high expectations on the part of clients rather than from an objective assessment of the services.

Clients' expectations are likely to be influenced by their socioeconomic and educational status, self-image, prior experience with health services, and knowledge of and attitude toward various contraceptive methods. For example, some clients may demand to be served only by doctors, not paramedics, or insist upon having unnecessary laboratory tests, based upon experiences they have had in other service-delivery outlets. At the other extreme, we found that clients in one family planning clinic were being asked to remove their blouses, in full view of other clients, in order to receive shots of Depo-Provera in their upper arms. When questioned about their satisfaction with the services, the women expressed a high level of satisfaction, mentioning as reasons the length of time spent by the family planning worker with them, the kindness shown, and the promptness of the service. Clients with a greater concern about privacy would have been extremely uncomfortable and might have decided not to avail themselves of the clinic's services.

Users' assessments may also be based on incomplete information. Many clients may not know what the service-delivery package ought to consist of. If they know about only one contraceptive method, they will not complain if they do not receive information on all methods.

The third approach entails developing indicators of the quality of services on the basis of how users view those services. This approach was used in a study conducted at a family planning and maternal and infant care clinic in Santiago, Chile (Vera 1993). Clients at the clinic defined high-quality care as "being treated like a human being." Other desirable elements of care they identified were cleanliness, promptness, availability of service, time made available for consultation, learning opportunities for themselves and their partners, and cordial treatment. Here again we run into the issue of subjectivity: The list may have been different if the women had belonged to a socioeconomic stratum in which cordial treatment was taken for granted. The mention of learning opportunities for themselves and their partners implies that the clients had been exposed to the idea that such an outcome was possible in a service-delivery outlet.

These differences in the yardsticks used to measure the same entity, which lead to different results, as well as differing perceptions of what constitutes "quality" among individuals, raise questions about how researchers and policymakers should interpret the information about users' perspectives on quality and how program managers should apply such information. Moreover, relying upon the perspective of service users overlooks the perceptions of those who stay away. We need also to know about nonusers' perspectives, especially if we are interested in improving the accessibility and use of family planning services. Clearly, users' and nonusers' assessments of quality should be considered in conjunction with an objective assessment of such aspects as adherence to minimal standards of infection control, adoption of appropriate therapeutic procedures, and the technical competence of counselors and medical personnel. Furthermore, users' and nonusers' assessments are useful only if viewed within context: We need to know who the clients were and where they came from, what the facility was like, and who the service providers were, so that we can better understand and interpret what clients say.

As for using information obtained from quality assessments to effect changes in service delivery, one frustration for service providers may be that some elements requiring change are beyond their control. For example, they cannot reduce a clinic's distance from the nearest bus stop or improve roads, and they may not be able to prevent the erratic delivery of supplies or the absence of personnel due to budget cuts, nor can they control the high cost of supplies.

Despite these limitations, asking clients open-ended questions about their experiences with a service facility is still a valuable exercise. It often throws open a new range of concerns that do not form part of our framework because of who we are and what we take for granted. Clients' accounts of their experiences when seeking contraceptive services sensitize us to the realities of their lives and enable us to examine programmatic issues with a better understanding of their circumstances and difficulties.

This chapter describes the experiences of rural, poor women with the maternal and child health (MCH) and family planning services provided by the public health system in four districts in Tamil Nadu. The following sections profile the demographic features and MCH and family planning services in Tamil Nadu, describe the sources and limitations of the data, present the women's experiences as reported by them, discuss the findings, and present an agenda for change based in part on the women's perceptions.

The Study Area

The state of Tamil Nadu has been in the limelight in recent years because of its impressive decline in fertility. Today it has a near-replacement level of fertility, with a total fertility rate of 2.2 children per woman as of 1991 (RGI 1991). The state's birth rate fell from 27.9 births per 1,000 population in 1981 to 20.8 per 1,000 in 1991 (RGI 1994). The contraceptive prevalence rate in Tamil Nadu was 57.3 percent of reproductive-age couples in 1991, ranking third highest in the country, after the Punjab (75.8 percent) and Gujarat (57.8 percent) (GOI, MOHFW, Department of Family Welfare 1992).

What makes Tamil Nadu's fertility decline unusual is that its infant mortality rate is still relatively high, at 68 infant deaths per 1,000 live births. In Kerala, which has the lowest total fertility rate in India (2.0 births per woman), the infant mortality rate is far lower, only 21 per 1,000 live births. Tamil Nadu also has a high proportion of its population, 32.8 percent, living below the poverty line, ranking fifth among the 17 major states in 1987–88. In 1991 its per capita income at current prices was Rs4,428, below the income levels of eight other states and just above those of Kerala, Orissa, Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh (GOI, MOHFW, Department of Family Welfare 1992). Tamil Nadu has a female literacy rate of 52.3 percent,

the second highest in the country but far below that of Kerala, with 86.9 percent (RGI 1992). Thus, except for its female literacy rate, Tamil Nadu's development indicators are nowhere among the best in the country.

For these reasons, it has often been argued that Tamil Nadu's fertility decline is due to the effectiveness of its Family Welfare Programme (Antony 1992; Bose 1994; Sen 1995). Tamil Nadu has a reasonably good network of primary health centers (PHCs) and subcenters, which cater to the rural population. In 1994 the state ranked fifth in population size served per subcenter (4,236 persons) and also in population size served per PHC (25,614). Each subcenter and PHC serves an area within a radial distance of 2.13 kilometers and 5.25 kilometers, respectively (GOI, MOHFW, Rural Health Division 1994). Overall, the health and family welfare services in Tamil Nadu are better distributed than in most other major states of India.

A recent study of the factors underlying Tamil Nadu's fertility decline cites the efficient management of family welfare services as the main factor (Padmanabah 1995). According to the study, a concerted effort was made in the 1980s to fill all field-level posts in the Family Welfare Programme, and staff strength has been maintained since then. Moreover, senior officers, including the chief secretary of the state administration, have taken an actively interventionist interest in the program for several decades. The interest of senior officials evoked a response from the functional hierarchies, resulting in a tradition of supervision and monitoring.

In 1991 Tamil Nadu had a ratio of one doctor per 1,230 persons, ranking third after Kerala (1:760) and Karnataka (1:1,020). The state's per capita expenditure on health of Rs86.10 per annum is exceeded only by that in Punjab (Rs106.28) and Kerala (Rs95.79) (CMIE 1994).

The program's performance in antenatal care is also exemplary. Ninety-two percent of rural mothers and 97 percent of urban mothers are immunized against tetanus during pregnancy. More than 80 percent of all pregnant women receive iron and folic acid tablets; and in 1992–93, 60 percent or more had an antenatal checkup by a doctor. Forty-nine percent of the deliveries in rural areas and 90 percent in urban areas take place in a health facility (IIPS 1995).

These data indicate very high levels of coverage and access to family planning and MCH services provided by the public-sector pro-

gram in Tamil Nadu. The central question addressed in this chapter is whether Tamil Nadu's considerable achievements in the areas of MCH and family planning are, in fact, indicative of high standards of care within the public-sector program.

Sources of Data and Methodology

The assessment of family welfare services presented in this chapter draws upon information from three sources of data, none of which had the explicit purpose of examining client perspectives on the quality of care in such services. The first source is a 1992 study of barriers to access to family planning services among rural, poor women in Chengalpattu and Thanjavur, Tamil Nadu, which I conducted for the Centre for Development Studies, Trivandrum. The second source consists of findings from three workshops conducted by the Rural Women's Social Education Centre in districts of Tamil Nadu in late 1994 to identify major reproductive health concerns of women and make recommendations on how to respond to them. The workshops also produced a list of demands for changes in MCH and family planning services offered by PHCs and subcenters and district hospitals. The methods used to gather information for these two sources included in-depth interviews, sharing of personal experiences in a group, reports from group discussions within the workshops, and role-plays depicting real-life incidents. The third source is an informal survey of 16 health facilities catering to rural areas, which was conducted in 1994 by three grassroots organizations in Tamil Nadu: the Rural Women's Social Education Centre, World Vision, and Women's Resource Centre. The purpose of the survey was to observe the range of reproductive health services being provided, especially at the PHC level. Information was collected by community workers from the organizations carrying out research, and workers used a checklist for observation. Data collection was carried out when the workers accompanied women from their community to the local health centers, as they often did. Of the 16 health facilities they observed, two each were in Madurai and Tiruchy Districts, one was in South Arcot, and the remaining 11 were in various *talukas* (subdistricts) of Chengalpattu District. The health facilities consisted of one district hospital (a teaching hospital), five PHCs, and 10 subcenters.

A brief description of the background of the women whose views are expressed here is in order. Practically all the women belong to the *dalit* caste groups, who rank lowest in the Indian caste hierarchy and have been for the most part economically and socially marginalized. Most are agricultural wage laborers who own little or no land, but those from Thanjavur belong to the fishing community and do not work outside their homes. All the women are illiterate or semiliterate. Various age groups are represented. In short, all are poor women from resource-poor settings. However, given Tamil Nadu's good network of roads and public transport, and the fact that health facilities are functioning there, they have greater physical access to the services than do women in many other Indian states. In addition, the women enjoy a reasonable degree of freedom to move about and are able to travel to nearby towns without a male escort. They are also exposed to the mass media through television and radio programs and movies made available to the public by their *panchayats* (village councils).

In the following sections I attempt to piece together various experiences and perceptions showing how the poor quality of services compounds difficulties faced by women in controlling their fertility. For this reason, the picture I present is more pessimistic than one that would result from surveying a representative sample of users and potential users. In a sense, it is an inventory of all the problems that poor women face in seeking to access family planning services and hence represents only one side of the story. Despite these limitations, it is among the very few studies focusing on the quality of MCH and family planning services in Tamil Nadu, particularly from the perspectives of women affected.

Women's Experiences with the Family Welfare Programme's Services

To give some coherence to the information drawn from disparate sources on women's perceptions, I have used here the extended quality-of-care framework developed by the Pan-American Health Organization and Family Health International within a broader context of reproductive health care (Finger and Hardee 1993). I have also used the quality-of-care framework developed by Judith Bruce (1990). The following program elements are used to assess the quality of care received by clients in this framework:

- accessibility and availability of services;
- availability of basic facilities and essential supplies (because this affects client choice);
- choice of methods;
- information to users;
- technical competence;
- client–provider interaction;
- continuity of services; and
- appropriate constellation of services, including treatment for sexually transmitted diseases and MCH care.

Accessibility and Availability of Services

Although health facilities are physically accessible in most instances, problems arise from inconvenient hours of operation and nonavailability of personnel. For instance, the outpatient department of district hospitals is open only between 7:00 and 9:00 in the morning, when women would have their hands full performing household chores. The PHCs are open all morning long. According to one informant, however,

> We have to wait in a long queue. Not everyone is given an OP [outpatient] slip, and if we plead, saying we have come a long way, they chase us off like we were dogs. If you are dressed decently, you get a different treatment. They should not treat people so unequally.

Of the 16 health facilities visited, only eight remained open during the specified hours (all morning); the hours of the rest were unpredictable. As for the presence of medical personnel, in only three of those eight were doctors available throughout the clinic period. Doctors were usually available for clinic patients two or three hours in the morning, whereas they devoted afternoons to private practice. Women doctors, who were especially in demand, drew patients to their private practices from surrounding areas that did not have a female doctor posted in the local PHC. Five facilities had no female physicians in attendance.

Availability of Basic Facilities and Essential Supplies

Health centers lack basic facilities such as a water supply, toilets, and electricity. Three of the subcenters surveyed had no electricity. The

situation was worse with respect to toilet facilities and water. Only five had toilets, and at one the toilet was filthy to the point of being unusable. Even facilities that conducted medical terminations of pregnancy and deliveries were found to be without toilets, the women having to use the backyard or alleyways. None of the facilities had running water. Nine had access to drinking water either from a public hand pump or a public well, but there was an acute shortage in five of these. In the remaining seven facilities, water had to be fetched from long distances. Some women brought 18-liter cans of water with them when admitted to the hospital because of the water scarcity.

The shortage of furniture, such as beds for deliveries and sterilization procedures, is another problem. None of the 16 facilities had adequate space or benches for patients to wait in the outpatient section.

> After the operation, they made me lie down. It was filthy; not even a mat was provided. I had to spread my own sari. I lay there for a week like this.

The health centers also had an acute shortage of drugs and essential supplies. Although all 16 dispensed drugs, these were only for the most common complaints, such as colds and coughs, fever, diarrhea, and aches and pains. For all other complaints, patients were issued prescriptions and had to buy drugs from the pharmacy.

Women undergoing sterilization had to pay for blood and saline transfusions, and even for cotton and gauze in some cases, a situation they found unacceptable. Even fresh sanitary towels were in short supply, and some women going for delivery used the home delivery kits supplied by the auxiliary nurse-midwives (ANMs) for their institutional deliveries.

Choice of Methods

As is well known, the choice of contraceptive methods is limited almost exclusively to female sterilization and intrauterine devices (IUDs). Contrary to popular belief, some women wanted male methods and complained that those methods were not available.

> Why can't government insist on male methods? Always women have to take the burden for family planning as well. The nurse, *balwadi* [preschool] teacher, BDO [block development officer], everyone comes and pesters only women.

Pressure to accept a particular method, the epitome of lack of choice, was common. This was especially true in the case of IUD insertions.

Padma had a cesarian section for her second delivery. After returning home, she continued to have a slight but persistent uneasiness and pain in the lower abdomen. When her menstrual periods resumed, the bleeding was heavy and the pain intensified. She went back to the hospital and was told nothing was wrong. She was given some tablets and sent home again. Her menstrual cramps became unbearable, and she discovered something that looked like a wire protruding from her vagina. It was from an IUD, which had been inserted without her knowledge or consent.

Vijayalakshmi, who had pain and heavy menstrual bleeding following the insertion of an IUD without her knowledge after her first delivery, went to a private doctor, who charged Rs50 to remove it.

> After some days, I had unbearable pain; the whole genital area felt sore. One day my cousin took me to Madras for a checkup by a doctor she knew well. The doctor said that the T part of the IUD was stuck in the cervical canal, and advised me to get admitted in hospital to have it surgically removed. I was terrified and didn't seek help immediately. Only after three months, and considerable coaxing by my husband, did I dare to go. I did not feel I could trust anyone.

In another instance, a woman admitted for a complicated delivery was sterilized without her knowledge.

> I have three sons. For the third delivery, labor pains were prolonged, and the *dai* [birth attendant] advised hospital delivery. I had a c-section. They did not tell me or my mother-in-law, who came along, that they were performing a tubectomy. On the seventh day, when I was returning home, they gave me 130 rupees. When asked why, they said it was for the tubectomy. My husband and I returned home with a heavy heart. We were really keen on having a daughter. What is to be done now?

Even more common than the instances described above is the denial of abortion to women unless they agree to undergo a tubectomy.

> I have three daughters, and after a long gap became pregnant for the fourth time. My daughter's wedding had been fixed, and I was desperate to have my pregnancy terminated. I could not afford to have a sterilization done simultaneously, since I was going to be very busy and would have no rest. The PHC refused me an MTP [medi-

> cal termination of pregnancy] without sterilization. I went to a traditional abortionist because a private doctor was unaffordable, what with all the expenses to come. I became sick after that and went back to the PHC. The doctor said that my uterus was perforated. But he refused treatment, and told me to go back to where I had had the abortion. No amount of pleading by me and my husband helped. He said they did not have the facilities to deal with such cases.

Information to Users

The women reported that their main sources of information were the village health nurse (VHN), the balwadi teacher, the *mukhya sevika* (women's development program organizer), and the block development officer. The only methods mentioned by these personnel were female sterilization and IUDs, although the women also knew of Mala-D (an oral contraceptive brand) and Nirodh (a condom brand) from television advertisements. The information that health personnel impart to their clients about a specific method appears to be limited to recommending that method. For example, a VHN or health visitor will ask a woman, "Can you or your relatives give me a case?"—a "case" being a potential sterilization client. Or she will urge her client to "have the operation; it will cause you no problems." Women who are unable to be surgically sterilized for health reasons are not given information about other methods.

Chinnammal has given birth to eight daughters and two sons. Of these, six daughters and one son remain alive. She has been pregnant three times since her tenth birth. All three pregnancies were terminated by a traditional abortionist, using a stick from the *erukkam* tree. Because she is in very poor health, no one will employ her. Consequently, she seldom has more than one meal a day, consisting of leftover rice soaked in water, which is often provided by others. She sought "the operation" (sterilization) twice, but the doctor sent her home each time, saying she was too weak for surgery. She wonders how many more pregnancies and abortions are in store for her.

Lalita, who suffers from epilepsy, is also concerned about avoiding further pregnancies. Nevertheless, she has been denied sterilization.

Particularly disconcerting is the following case, in which the VHN failed to inform the client about the correct use of the pill.

> It is three years since the second baby was born that I have been using the pill. I asked the *nursamma* [VHN] for it. She gave it to

> me. My husband is in Bangalore. He comes home once in two or three months; I use the pill whenever he comes, and stop it afterwards.

According to another woman,

> I take five tablets, one every day, and wait for my periods. If the periods come, no need of taking the pill after that.

In none of the 16 health facilities studied was a specific day, person, or place assigned for family planning counseling and information-giving. There was no place to go if a woman or man wanted to get information about contraception but not necessarily become an immediate contraceptive acceptor. Women who came to these facilities were already "motivated" to accept sterilization, or in rare instances, the IUD. At the subcenters the ANM usually selected the contraceptive method, convincing her clients to become acceptors.

Many women also mentioned the lack of information provided on how to use the medicine dispensed to them. According to some, if the mother and child are both given medicine, the pharmacist does not explain which is for whom, but just puts them all together. When the women ask for clarification, they are told, "Go ask someone who has nothing to do. This is not my job."

Technical Competence

Several instances reported by women indicate a lack of adequate technical competence on the part of health personnel. For example, more than one woman talked of feeling pain during the sterilization procedure, probably because she had not received enough anesthetic.

> When they wheeled me into the operation theatre, I saw the many instruments, and felt scared. They gave me an injection in my back, and my lower limbs became numb. I lay with my eyes closed, but was aware of what was going on around me. Even while the operation was going on, I kept feeling the pain. I literally screamed through the whole process. What a nightmare it was! Even now I cannot bear to think about it.

Complaints of postoperative complications were common.

> When removing the stitches, the nurse just pulled at the sutures. There was bleeding; they did not even have cotton to wipe it. After

> some days, I started getting a pricking pain in the surgical wound. I consulted the ANM, and she said it was nothing; this is how it would be for three months. I then went to the PHC. They gave me two tablets and sent me back. The pain became unbearable, and pus started oozing out. I pressed the wound to remove the pus, and something came out, which looked like small staple pins. I got treated by a private clinic.
>
> I had a swelling in the surgical wound following a sterilization operation, and the whole area became hard. I went back to the PHC, and they gave me some tablets. I did not get any better. When I went to a private clinic, they said that there were air bubbles and I needed surgery again. I am afraid to undergo surgery again. I can't afford it either. Do you think the private doctor was telling the truth? Or could it be another moneymaking gimmick?

There was a general perception that laparoscopy was associated with high failure rates. Among the group of women we met, four had experienced a sterilization failure.

> I didn't know it was a "current" operation [laparoscopic sterilization] till after it was done. After one year my periods stopped, but I didn't realize I was pregnant. I could meet the ANM only in the third month of pregnancy. She took good care of me, and I had a hospital delivery and tubectomy. How many times do they want to cut open our stomachs?

A number of women reported having white discharge and pain during urination after a medical termination of pregnancy. These may be symptoms of reproductive tract infections (RTIs) caused by health care providers' failure to observe adequate standards of hygiene.

Client–Provider Interaction

Some of the more shocking experiences described by women relate to the treatment they received at the hands of support staff and even nurses at the health facilities. Corruption, in particular the demand for money, lay behind most of these incidents.

> When my stitches were removed [following a tubectomy], the nurse asked for money. I said I didn't have any. Soon after this, she hit me hard on my thighs, saying I was not lying down properly. I was already in so much pain. After I came home, there was pus formation on the surgical wound, but I did not feel like going back there. I went to a private doctor and had to spend up to 500 rupees.

> I took my daughter for delivery to the district hospital. The delivery was normal; she bore a boy. The *ayah* [attendant] who gave me the good news asked for 50 rupees. But I had no money with me, so I said I'd give it when my son came. They abused me and called me a miserly peasant woman. I was very agitated, so I went immediately to the pawn shop round the corner from the hospital, pawned my nose ring, and paid them.

The money given to women as "compensation" for accepting sterilization is barely adequate even to meet the transportation cost, let alone the demands of the hospital staff.

> First they took 5 rupees for the enema. When the baby girl was born, they took 40 rupees [50 rupees if it was a boy]. I paid 20 rupees for those bringing me to the recovery area on the stretcher after the operation. If I hadn't, they would have made me walk back. Five rupees to the sweeper to bring the bed pan, 5 rupees for the hot water to bathe the baby. I had to pay for changing the bandage every day and buy medicines from the pharmacy. Add to this the food expenses for my mother, who was staying with me. What would I have left from the 160 rupees they gave me? I would not even have money to go home, unless I spent out of my own pocket.

In one instance following a complicated delivery of a stillborn baby, the nurse demanded 15 rupees for cutting the umbilical cord.

Although most of these incidents involved demands for money, there were other instances of unwarranted cruelty.

> When I said my three-day-old baby had not cried at all, the nurse said, "Give him a whack with a cane; then he will scream and cry to your heart's content." It was my first delivery. I was in labor for more than a day. The nurse shouted at me, "Did you scream like this when you lay in bed beside your husband and got yourself pregnant?" I started to cry and said I wanted to go home even if I were to die there. The nurse got so angry that she came back and slapped me on my face and told me to shut up.

Such complaints were not voiced about doctors. However, our informants reported that doctors did not listen to the women's complaints, had no time for the women, and treated them as if they were ignorant and incapable of making decisions. The doctors did not explain what was wrong or what treatment was being proposed, nor did they answer questions or reassure the patients or their family members. With few exceptions, they were aloof and distant, unconcerned, and disinterested.

Continuity of Services

The lack of follow-up care provided to women who adopt a method of contraception is a well-known problem. Whatever the reasons for this on the part of the ANM, women see this as a letdown at a time when they are most in need of support. For those women who have to overcome considerable opposition at home in order to undergo sterilization, the ANM's frequent visits until she "gets the case" and her disappearance from the scene immediately afterward are like a slap in the face. Her failure to provide follow-up care means that women have to seek help from private practitioners and incur considerable expense.

Appropriate Constellation of Services

To a poor, rural woman, having access to a health subcenter and a health functionary, such as the VHN, who is unable to meet her common health needs seems pointless.

> She [the VHN] has no medicines for headache, cannot treat children with severe diarrhea, is not able to attend to emergencies like poisoning.

That the VHN is not even available to conduct deliveries causes considerable discontent.

> The nursamma is never there to conduct delivery. The dai has to be called, and has to be paid 50 rupees and 2 *marakkals* [a local measure equivalent to about 15 kilograms] of paddy. Do they [the government health services] expect us to deliver only between 10:00 and 5:00? What a waste of a salary!

A common complaint is that women with symptoms of an RTI, including those who develop the symptoms after a surgical procedure or an IUD insertion, do not receive help at the subcenter or even at the PHC. Often they must to go to a private practitioner, or to the private clinic of the PHC doctor. The study of the 16 health facilities confirms this perception. Services for most gynecological problems were available in only one district hospital. In all other health facilities, not even a pelvic examination was done on women with gynecological complaints. Staff there either treated only the women's symptoms or referred the women to the district hospital.

Evidence from Other Studies

How representative are the experiences described above? Do not the increasing acceptance of contraception in Tamil Nadu, and the state's success in controlling population growth, imply that the quality of services is good? Only a few published studies have examined the quality of care in MCH and family planning services in Tamil Nadu. Reports of the Surveillance System for Sterilization Project, funded by the United Nations Population Fund (UNFPA), suggest that all is not well with the Tamil Nadu program.

One of these reports, on the quality of care in 51 facilities performing sterilizations in Tiruchy District between 1990–91 and 1992–93, noted the high rate of mortality following tubectomies—4.3 per 10,000 procedures, as compared with 1.0 per 10,000 reported from other parts of India (GIRHFW 1994). Another report found that mortality rates following tubectomies in North Arcot (Ambedkar) District for the period 1989–90 to 1993–94 were similar, at 4.4 per 10,000 (Abraham and Joseph 1994). Both studies observe that most of the deaths could have been prevented had there been adequate screening, adherence to asepsis, and appropriate postoperative care.

For example, 48 percent of sterilization deaths in North Arcot were due to infections, mainly septicemia and meningitis. Most of these clients had delivered at home and reported later to the hospital for sterilization. The screening of patients prior to surgery was cursory, and because of this the presence of puerperal infection may very likely have been missed. Some 19 percent of the deaths were associated with severe anemia. Although the Indian government's standards recommend the exclusion of women whose hemoglobin levels fall below eight g/dL, staff at some of the hospitals in the district were unaware of this standard and had used seven g/dL as the lower limit. Complications of anesthesia were reported to be the cause of death in six cases (Abraham and Joseph 1994).

Failure rates for laparoscopic sterilizations were as high as 29.6 per 1,000 in Tiruchy District (GIRHFW 1994). Women's perception that this is not a reliable procedure therefore has some basis.

The reports' descriptions of the way clients were treated read very much like the women's accounts described in the previous section. In Tiruchy, for example, the operation theater complex in nine out of the 11 government hospitals and in all eight main PHCs lacked

adequate facilities, including such basics as running water and supplies for emergency cases. In four of the eight main PHCs and four government hospitals, there was no running water and the water-carriage system was not functioning. This meant that clients could not bathe on the day of their surgery. Women undergoing sterilization in the laparoscopic camps conducted once a week in the nine government hospitals had to face many unpleasant experiences. Most had to go without food or water for about 16 hours, from the morning of the surgery until that evening. The facilities were overcrowded, and there was not enough fresh linen. The doctors performing surgery could not even wash their hands between procedures, and the instruments could not be sterilized properly (GIRHFW 1994). In North Arcot, preoperative examination of mothers in eight of 14 hospitals consisted of merely looking for pallor, unless a woman voluntarily gave a history. The hospitals used antibiotics liberally, both pre- and postoperatively, even when there was no indication of need. Surgical technique varied from center to center. Patient counseling and advice at the time of discharge were totally neglected (Abraham and Joseph 1994).

In Tiruchy a small sample of clients was followed-up within six months after surgery as part of the monitoring and surveillance program. Postoperative complications were reported for 15 percent of tubectomy clients and 32 percent of laparoscopy clients. A quarter of the tubectomy clients had developed wound infections, and 13 percent had white discharge. The corresponding figures for those who had undergone laparoscopic sterilizations were 3 percent and 15 percent, respectively. Thirty-three percent of tubectomy clients and 22 percent of laparoscopic sterilization clients complained of abdominal pain, which in some cases could have been associated with pelvic inflammatory disease; this possibility was not investigated further, however. Most of the women who had sought treatment from government facilities for postoperative problems (84 percent) said that they were not satisfied with the services received. The surveillance team observed that the VHN did not visit women in their homes in the immediate postoperative period (GIRHFW 1994).

Discussion and Recommendations

All these findings indicate that Tamil Nadu has a long way to go before high-quality family planning services are available as part of a

comprehensive client-centered reproductive health care package. Lack of facilities and resources, the pressures of a target-driven approach to family planning, and a pervasive class and status consciousness have created a culture of apathy and high-handedness that is very disconcerting. The corruption and lack of accountability on the part of service providers described by the women we interviewed, even if we were to assume that such incidents are not widespread, reveal a deep malaise in the system. The private sector benefits from the weaknesses in the public system. Private practice by practitioners who also work in the public sector helps those who can afford to pay for better services, even in the government facilities, while the poor lose out.

Unfortunately, Tamil Nadu's success in achieving lower fertility has detracted attention from the limitations of its MCH and family planning services. Some may argue that the high levels of family planning acceptance in the state are sufficient evidence of good service quality. The following statement by one of the women interviewed reveals that there are other reasons women seek family planning services:

> We do not have enough to make ends meet, not even a decent hut to sit in or a pair of oxen to work with. With a drunkard husband, low wages, and high prices, we can't give our children two decent meals a day and bring them up. Out of such dejection, we women come forward for family planning.

In the workshops conducted in the three study districts, women clients proposed a number of suggestions for improvement and change. These suggestions are by no means exhaustive, but they do reflect what the women felt to be most important. The proposals fall into four broad areas: (1) basic facilities; (2) comprehensive services provided with sensitivity and civility; (3) family planning services; and (4) other reproductive health services.

Basic Facilities

- PHCs and hospitals should have electricity, drinking water, clean toilets, and water.
- Beds should be available for all surgery and delivery cases.
- Proper facilities should be available for surgery; for example, surgical tables should replace ordinary benches, and properly

equipped surgical units should replace makeshift operation theaters.

- Hospitals should be made convenient and helpful to patients and clients. There should be greater sensitivity to the difficulties faced by illiterate users. At present the consulting room, pharmacy, injection room, and dressing room are located in different places, and there are no clear instructions for finding them, especially for clients who are illiterate. At times clients have to return home without using a service because they cannot find the room in which it is located or anyone sympathetic enough to help them.
- There should be an adequate supply of essentials, such as cotton, gauze, sanitary towels, and clean sheets.
- Each PHC should have an ambulance. It should also have a telephone so that clients can contact it and so that the PHC can contact other referral facilities.

Comprehensive Services Provided with Sensitivity and Civility

- The outpatient department should be open at least all morning long.
- Doctors should be available during the specified outpatient hours.
- Outpatient slips should be given to everyone who has come for medical help, and no one should be turned away without being given attention.
- Poor and lower-caste patients and clients should be treated courteously and should not be abused.
- Doctors should be well trained, provide appropriate treatment, and clearly explain to patients and clients what their symptoms indicate and what the PHC is doing to help them.

Family Planning Services

- The advantages and disadvantages of all available methods should be explained to clients, who should then be given the option of choosing—or not choosing—from among them.

- Male family planning doctors and workers should promote male methods of contraception.
- Women who choose sterilization should be told whether they are having laparoscopy or tubectomy.
- No procedure should be carried out without the client's knowledge and consent.
- Every effort should be made to minimize the risk of sterilization failure.
- Service providers should not delay or deny medical terminations of pregnancy.
- Complications such as pus formation after sterilization should be taken seriously. PHC staff should give women proper instructions on how to take care of themselves after surgery instead of telling them, when they return with a complaint, that it is their fault.

Other Reproductive Health Services

- The VHN should always be available at the subcenter for delivery cases. She should not be frequently transferred. The local dai should be trained, appointed as her assistant, and paid by the government.
- Subcenters should be more than service points for MCH and family planning services; they should provide first-level help for any health problem.
- There should be proper guidance, treatment, and referral for gynecologic problems.

In addition, the workshop participants called for an end to corruption and greater accountability and responsible behavior on the part of health service providers. Specifically, they recommended the following changes:

- The VHN, instead of vanishing from the scene when faced with a breach or difficult delivery, should take responsibility for ensuring that the woman is admitted to the referral center.
- The PHC should also not let the woman down. If faced with a complicated delivery that they are unable to deal with, PHC staff should arrange to transport the woman to a referral facility, accompanied by someone who can supply her case history.

- Problems following a woman's adoption of a contraceptive method should be attended to by the VHN and the PHC or hospital where the service was provided.

To bring about the changes demanded by the women requires not so much money as something far more difficult: a fundamental change in values and attitudes; a move toward more caring, people-centered, sensitive, and responsible service delivery. A good beginning has been made with the recent discontinuation of family planning targets. The new reproductive and child health approach that is on its way to implementation in Tamil Nadu brings the promise of precisely such a change. There is no doubt that the managerial and administrative skills of the program personnel, which have made Tamil Nadu's family planning program among the most effective in the country, could now serve to transform it into one with a high quality of care as well.

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6 Provider–Client Interactions in Primary Health Care: A Case Study from Madhya Pradesh

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During the past 10 years there has been increased interest in the effective provision or supply side of primary health care and family planning services. Earlier frameworks for the adoption of family planning put greatest emphasis on prospective clients' knowledge and attitudes toward contraceptive technology—that is, on the "demand side" of family planning programs. In examining family planning programs and other health services, many researchers have posited that the effective provision of services can greatly increase contraceptive use (Cleland et al. 1994; Khan, Patel, and Gupta 1996; Phillips et al. 1993; Simmons et al. 1988; Simmons and Elias 1994). Simmons and colleagues (1988) in particular have shown the important and complex roles that female health workers (FHWs) play in affecting the "supply–demand interaction" in family planning and other services. They noted that health workers reduce the fear of contraceptive technology, counter religious barriers, and dispel other common objections to family planning. Many of the same factors apply to maternal and child health (MCH) care and to other primary health services, which are often included among the responsibilities of community health workers.

Bruce (1990) has analyzed some of the important elements in the presentation of family planning services in her framework for evaluating family planning programs. Seidman and Horn (1991) provide a useful set of discussions on the applications of field research to the development of effective programs.

In this chapter we present data from qualitative observations of provider–client interactions that took place between October and December 1994 in two primary health centers (PHCs) in the state of Madhya Pradesh. Our study seeks to highlight some of the special features of the interactions between primary care providers and their clients in the Indian health care system.

Objectives

The general objectives of the study are to assess provider–client interactions in a selected rural region of Madhya Pradesh in order to identify possible means of improving services. More specifically, we address the following issues:

- How clients and providers interact in specific types of settings;
- Possible differences in the quality of interactions in diverse clinical and community settings;
- Differences in clients' access to the services being provided, and the reasons for those differences; and
- Special features of the health care system and other factors influencing the performance of service providers.

Methodology

The data for this study consist of observations made at the two PHCs, followed by day-long observations of six auxiliary nurse-midwives (ANMs) connected with the two centers. Each ANM was observed in her activities for six consecutive days. These observations included two days in the PHC and four days in the village area, where the ANMs had meetings with clients in the subcenters as well as during home visits. Our team witnessed interactions with 55 clients at the PHCs (Table 6.1) and with 210 clients in the villages.

The interactions in the two PHCs were observed by separate research groups, each consisting of three trained observers. When the researchers moved to observing the ANMs at the subcenters, the two teams were recombined into pairs. One member of the team went with the ANM to observe her interactions with clients, while the other team member visited other households in the community. We are aware that the presence of the observers may have affected the be-

TABLE 6.1
Activities in two PHCs during four days of observation (two days at each PHC): Vidisha District, Madhya Pradesh, 1994

Day	No. of hours of operation (FP/MCH clinics)	No. of clients	Type of clients		
			FP	MCH	Curative
1	3.5	14	1	2	11
2	3.0	18	3	2	13
3	4.0	12	2	2	8
4	3.5	11	4	3	4
Total	14.0	55	10	9	36

FP=family planning; MCH=maternal and child health; PHC=primary health center.

havior of the ANMs, particularly at the beginning of the observations. The observed staff member may have been self-conscious and unnatural in her actions, possibly changing her behavior to conform more closely to "ideal performance." However, we believe that our continuous observation of each ANM over a period of six days greatly reduced any potential observer effects.

Of the six ANMs we observed, only one lived in the work area. This was because of the extremely shabby condition of most of the government quarters allotted to these workers. The subcenters in which they were supposed to reside and work were dilapidated and had no water, electricity, or toilet facilities. The buildings did not have locks or latches. Therefore the ANMs commuted by bus from the district headquarters, 30–50 kilometers away. Their average time spent in commuting was more than one hour in each direction. One of the ANMs stayed at her subcenter because it was a new, well-built *pukka* house (constructed of brick and cement). She had completed more than two years of service at that location and had received awards in recognition of her high degree of service to the communities under her jurisdiction.

All the ANMs had at least a tenth-grade education and had received the standard three-month ANM training course. They were all upper-caste women, ranging in age from 30 to 50 years. All of them had served as ANMs for at least five years, although not necessarily in their current post.

Because two observers accompanied each ANM on her visits to the villages, one member of each team was able to go about the village, engaging household members in informal conversations about

clients' perceptions of the family planning and MCH programs, while the other stayed to observe the ANM in her visits. The researchers talked with a dozen or more women in each village. They were instructed to find current family planning users, pregnant women, laparoscopy acceptors, and MCH cases. They were also told to pay attention to any cases of "unmet need"—that is, women who wanted to regulate their fertility but were not currently using any contraceptive method. The researchers held informal group discussions with some of the village women, as well as with groups of ANMs. They also visited villages on the periphery of the areas served by the subcenters. The researchers did not take notes during the informal discussions with the villagers, but they were instructed to write down important observations immediately after the encounters.

Observations in Two PHCs

The two PHCs selected for the study are each located at crossroads approximately 3.5 kilometers from the nearest village. One PHC is located in a small rural bazaar with a dozen or more shops that sell clothing, miscellaneous supplies, and foodstuffs. One of the PHC buildings is a standard government structure with eight rooms, including a small operation theater. The doctor's residence is a three-room brick and concrete building, situated near the PHC. The other PHC was originally a subcenter and was later upgraded to a PHC; it has only two rooms.

The medical officer, paramedics, multipurpose workers (MPWs), block extension educators, lady health visitors (LHVs), and ANMs were all present during the four days of observation (two days each at two clinics). Also present were the technicians, drivers, and attendants. The clinics and the surrounding areas were quite clean when we observed them. Individual rooms were swept and mopped with phenyl, a disinfectant. The examination tables and chairs in the medical officers' rooms were clean and free of dust. However, clients were observed littering and creating unsanitary conditions. Some clients spat tobacco or betel leaves on the ground near the building and scattered groundnut shells about the premises.

All the clients were registered in the outpatient department by either an LHV or an MPW. After registering, the clients were re-

ferred either to the family planning and MCH clinic or to curative rooms, depending on the purpose of their visit. Registration was conducted on the open veranda of the PHC. The PHC's outpatient department functioned from 10:30 a.m. to 1:00 p.m. The PHC functioned only three to four hours a day, on average. We observed that there was no place where the clients could sit comfortably while waiting for service. The veranda did not have any benches, stools, or chairs. As a result, clients sat on the floor or wherever they could find space.

The health providers were assigned specific tasks in discharging their day-to-day work. The medical officer treated all the curative cases. An MPW or LHV registered the clients. These personnel replaced each other intermittently. The LHV and the ANMs conducted the family planning and MCH clinics. In general the clinic staff carried out these activities systematically, without confusion or duplication of effort.

The doctors performed at least a minimal medical examination of all their clients. This included checking the client's blood pressure (BP) and pulse rate; giving a chest examination using a stethoscope; and examining the client's tongue, nostrils, eyelids, and skin. In conditions of poor visibility they used a flashlight.

One of the PHC doctors had an especially friendly and engaging style of interacting with clients. He asked about their crops, their children, and other domestic matters. The other doctor was also friendly toward the clients and had good interaction. Both seemed to be patient and unhurried. They showed none of the abrupt unfriendliness that is so often noted in observations of rural health centers. The doctors spent an average of at least seven or eight minutes with each client.

Most curative cases were referred to the medical officers in the PHCs. Because our study focused on family planning and MCH clients, there was not much opportunity to observe curative care, which was conducted in a different room. Nonetheless, we did observe a limited number of curative cases as well. This was possible when the family planning and MCH clinic activities were closed but the curative services were still functioning.

The department had more curative cases than family planning and MCH cases. Medical officers were present in each PHC on all

four days during the outpatient department's hours. It could therefore be inferred that their presence ensured services to the clients. Their behavior toward all the clients was polite and sympathetic, irrespective of whether they were curative, family planning, or MCH cases. In both PHCs, clients could gain access to medical officers during emergencies before and after the outpatient department's hours, as the medical officers resided on the premises.

Interactions at the Family Planning and MCH Clinics

Four clients had come to receive their oral contraceptive pills. They were 22–25 years old and had been using pills for the past one to two years. All four had two living children, the youngest child's age ranging from 6 months to 18 months. Two of the clients had come with their husbands, the third had come with her husband and a brother-in-law, and the fourth was accompanied by a female friend. In addition to these four "routine cases," the following vignettes illustrate some of the situations and problems handled at the clinics.

Case 1: Motivating for Sterilization

When the client entered, the following conversation took place with the ANM:

ANM: How are you?

Client: I am fine.

ANM: What problem do you have now?

Client: I have finished my tablets. I am going to my relatives' house in the next village. I thought I should take more tablets.

ANM (giving the client pills): How old is your last child?

Client: He is 1 year and 6 months now.

ANM: I think you have two children.

Client: Yes.

ANM: Why don't you stop taking these oral pills and go for an operation?

Client: My mother-in-law says we should have one more child.

ANM: What does your husband say?

Client: He does not say anything; he only listens to his mother.

ANM: You make up your mind. Already you have two children. We are holding a laparoscopic camp in the PHC. The best surgeon is coming from Bhopal. You can get operated. Make up your mind.

Client: Yes, I will try, but nothing is in my hands.

The client said nothing further.

ANM: From your silence, can I take it that you have agreed?

Client (nodding and smiling): No, I have to get permission from the elders in the family.

ANM: Who has accompanied you?

Client: My friend.

ANM: Please talk to your elders and decide soon. It is only for your good that I am giving this advice.

With this the dialogue ended.

Case 2: Seeking Medical Termination of Pregnancy

Ramkhali was 22 years old and had come to ask for medical termination of her pregnancy (MTP). She was accompanied by an elderly woman. As she entered the family planning clinic, the following exchange took place between the LHV, the ANM, and Ramkhali (client):

LHV (knitting a sweater): How are you?

Client: I am fine.

LHV: Who is this old lady? Is she your mother?

Client: No, she is my aunt. She has come from another village. She has had severe pain in her knee for six months. So I brought her here.

ANM (addressing the older woman): Did you register your name outside?

Woman: No, I did not know I had to register.

ANM: Get your name registered outside on that veranda and go inside and wait. Our doctor will come and examine you.

Woman (leaving and addressing the client): You discuss your problem.

ANM (to client): What is your problem?

The client remained silent, lowering her head shyly and rubbing the floor with her toe.

ANM (observing her silence and addressing the LHV): I think she has conceived.

ANM (to client in a friendly tone): Other clients are waiting for me. Already it is 12:15 p.m. Now please tell me what you want.

The client remained silent.

ANM: What, have you become pregnant?

Client blushed and nodded her head.

ANM: When did you have your last periods?

Client: I don't remember exactly, but two months before our village festival time I had my last periods.

ANM and the LHV (addressing the researchers out of the client's hearing): See, Madam, the villagers do not even remember when they had their periods. You were asking us what problems we are facing, [and now] you are seeing it yourself. This lady is upper-caste and [even] she does not know. Scheduled-caste women have an even greater difficulty in narrating important information.

LHV (to client): How old is your child?

Client: We celebrated his first year birthday last month.

ANM: Were you not following any method?

The client was silent and did not lift her head. At this point the researchers sensed that they were interfering with the sensitive counselor–client interaction. To allow a spontaneous and free flow of responses, they moved out of the room and stood at the doorstep behind a screen. They could still observe the interaction and overhear the dialogue, but the client could not see the researchers. The client seemed more relaxed and willing to continue the discussion.

Client: My first child is frequently falling sick, and I am also not keeping well. I do not know what to do now. I am not interested in this pregnancy.

ANM: You people always have late regrets. When we advise you, you do not take our advice and now, when you have a problem you come to us. What is best for you now is, you continue with pregnancy this time and get operated after the second child, or if you want to have one more child you can go in for a loop.

Client: I wanted to terminate my pregnancy.

ANM: We do not have termination facilities. Already you are two months pregnant. You must go to either Basoda or Vidisha District

Hospital. But why do you want to go for termination? You can have this child and get operated after the second child.

The interaction ended here, and the ANM signaled for the next client to come inside. The ANM wrote a referral for MTP on a separate slip of paper, giving it to the client to take with her to the district hospital.

The ANM and the LHV had interacted with this client for nearly 10 minutes. Most of the time the client had remained silent. Despite her silence the health providers were courteous to her, at least as compared with many health providers we have observed in similar situations.

Case 3: Tubectomy Failure

Chandnibai was an upper-caste woman, 35 years old, with four children (two boys and two girls). Seven months earlier she had undergone a tubectomy. After the operation she had her period for three consecutive months, but after the third month she began missing her periods. As she entered the clinic she was received by the ANM.

ANM: I have not met you before, and by the way what is your name?

Client: Chandnibai.

ANM: Which place do you belong to?

Client: Actually our native place is Sironj. Now we are staying in Basoda.

ANM: Are you coming all the way from Basoda?

Client: Yes, my husband had some work on this side. He has also come with me.

ANM: What is your problem?

Client: I underwent tubectomy in Basoda Government Hospital, and now after three months I have not had my periods.

ANM: When did you undergo operation?

Client: Seven months ago.

ANM: Who operated—was it a male or a lady doctor?

Client: Male doctor operated.

ANM: How many children do you have?

Client: Four children, two boys and two girls.

ANM: Did you get your periods after the surgery?

Client: Yes, for three months I got them, and now it has stopped.

ANM: Did you go back to the same hospital and consult?

Client: Yes, I have been there several times, but the sister avoids me and keeps telling me that the doctor who operated is not there and they cannot do anything now.

ANM: Since how many months have you missed your periods?

Client: More than three months.

ANM: Once you had missed your periods, why did you delay the matter? What were you doing all this time?

Client: I went as soon as my period stopped. I have gone to several places. Everybody said you go to the place where you got operated. The hospital [staff] where I got operated are not giving any solution. Meanwhile, I lost time.

ANM: We are equally helpless here. The only alternative for you is to go to Vidisha District Hospital and get this pregnancy terminated, and again you must undergo sterilization.

Client: I have been already operated. Why should I undergo surgery again?

ANM: The operation has failed. That's why you have become pregnant.

Client: But that is not my fault.

ANM: We understand it is not your fault; it is totally the fault of the surgeon who operated on you. Sometimes, though very rarely, it happens, and it is your bad luck [that] it has happened to you. [The] best [solution] is to allow the pregnancy and get laparoscopic sterilization done [afterward].

Client: I will be losing my health.

ANM: There is no other alternative. Would you please go now.

Dissatisfied, anxious, and angry, the client walked outside to her husband. The failure had been in the surgery conducted in Basoda District Hospital. Even so, the ANM spent more than 10 minutes with this client. She could only direct her to Vidisha for a medical termination of her pregnancy. The ANM had reviewed her whole history in order to understand the problem. Both the ANM and her supervising LHV were sympathetic to this client.

Case 4: Laparoscopic Complication

Another client entered who had undergone laparoscopic sterilization in the PHC two weeks before. Now she had severe pain and swelling surrounding the operated site. As soon as she came inside she was

recognized by the ANM and LHV, who greeted her and offered her a seat.

ANM: What, do you have any problem?

Client: Yes, I have very much problem, and I have pain and it is unbearable.

ANM (holding the client's hand): Please lie down on this bench.

The door that led outside was closed. The ANM examined the client's wound, which was infected and bleeding.

ANM: Don't worry, I will give you medicine and take you to the doctor.

The ANM gave the client antibiotics and led her to the medical officer. The medical officer (MO) examined her.

MO: Has anybody accompanied you?

Client: Yes, my mother and brother.

MO: You please wait. At 3:00 p.m. I am going to Vidisha Hospital. I have a meeting. I will take you and you will be examined there.

The ANM was polite and examined the client. Upon seeing the complication, she personally took the client to the medical officer and also gave her antibiotics to control the infection. The medical officer also examined the client and agreed to take her, along with the client's mother and brother, to Vidisha District Hospital for treatment. Instead of allowing the complication to worsen, the clinic's staff offered an immediate solution to the client. They felt obliged to take her to the hospital because she had undergone surgery at this PHC.

Cases 5 and 6: IUD Clients

Two women came to the PHC for intrauterine device (IUD) services. One of them came for removal of an IUD, the other to accept one.

The first client was 27 years old and had two girls. She had been using an IUD for two and a half years. She wanted to have it removed so that she could have a boy.

ANM: I am removing this now, but after the childbirth, whether you have a boy or a girl, you must undergo sterilization.

The ANM asked the researchers to go outside and closed the door. A few minutes later, when the door was opened, she was removing her gloves, after which she washed her hands, using soap. The client's privacy was thus maintained during the removal of the IUD, and the ANM used gloves for the procedure.

The second client was 24 years old and had an 18-month-old child. She had been urged earlier by the ANM to accept an IUD and at last had made up her mind to do so. In this case also the researchers were asked to leave the room during the procedure. Within five minutes the client came out. As she was leaving,

> *ANM:* If you have any problems, like bleeding or back pain, come back immediately.

The ANM had inserted the IUD under the supervision of the LHV. It is difficult to interpret why the ANM had requested the presence of the LHV. Perhaps the ANM had wanted to be doubly sure that she was inserting the IUD correctly. As a general observation, the dependency of ANMs on LHVs for oversight during such procedures could be eliminated if the ANMs were given more practical training, particularly in IUD insertions.

Cases 7 and 8: Antenatal Checkups

Two clients came for antenatal checkups. Both were accompanied by elderly female relatives.

The ANM received the first client and offered her a seat. The woman was in an advanced stage of pregnancy. The ANM removed a needle and syringe from the steaming container (pressure cooker), which was kept closed, and administered a first dose of tetanus toxoid (TT). The ANM asked the client to lie down. As instructed, the client lay down on the bench. The researchers wanted to leave during the examination but were asked to remain and observe.

Both antenatal clients received physical examinations, which included pressing the upper portion of their feet to check the level of edema, examining the lower portion of their eyelids to check for anemia, noting their weight, checking their BP, and examining the elevation of the uterus fundus to estimate fetal growth. One client was given 100 iron and folic acid tablets for anemia. She was nearing her third trimester of pregnancy.

Both clients appeared to be comfortable during the physical examination. Both were asked to return in a month. The clients were then given small bottles and referred to the laboratory for urine and blood tests.

Cases 9 and 10: Postnatal Problems

Two clients were having abdominal pains in their postdelivery period. Hence they had returned to the clinic to meet with the ANM.

ANM: Place of delivery?

Client: Home.

ANM: Who conducted?

Client: Dai [traditional birth attendant].

ANM: Did you have any complications during delivery?

Client: I had three days of labor pain.

After noting this information, the ANM asked the client to leave. She collected more or less the same information from the other postnatal client. The ANM thus spent about eight minutes with each client but gave them no medication or advice concerning their abdominal pain. She did no family planning counseling, nor did she ask about their lactation status.

Case 11: A Problem of Privacy for MTP Clients

The case of Geeta, a 24-year-old upper-caste woman seeking an abortion, illustrates the problem of maintaining privacy at the registration desk. She approached the desk, which was then attended by the male health worker. A number of other people were sitting and standing near the registration desk. Consequently Geeta was unwilling to state her problem at the registration desk. She was admitted to the family planning clinic, where she was able to confide her problem to the ANM. Lack of privacy could easily be avoided by curtaining off the registration area. This case also indicates that FHWs should always handle intake registration.

Other Clinical Activities

Five clients brought their children to the PHC for immunizations. All the children received DPT (diphtheria, pertussis, tetanus) and OPV

(oral polio vaccine) inoculations. Sterilized needles and syringes were used for the injections. The ANM changed the needles for each new client. During these encounters she encouraged some of the mothers to accept sterilization.

Four women came to the PHC for a new supply of oral contraceptive pills (OCPs), and all were provided with services. The ANM encouraged two of them to undergo laparoscopic sterilization; in both cases the last child was more than a year old and both clients already had two sons. The ANM did not try to motivate the other two OCP clients, who had two daughters each. She was well aware that rural women would not accept sterilization unless they had at least one son. The ANM spent five or six minutes trying to persuade the two clients with sons to come to the sterilization camp, but only about one minute attempting to persuade the other two clients, who were simply provided with a fresh supply of OCPs. The ANM was cordial and courteous in her interactions with the clients. She offered them seats during their sessions with her.

Observation at Subcenters

The observers spent two days observing client–provider interactions at two subcenters. On both days the attending ANMs conducted clinics for only one to one-and-a-half hours. The total number of clients was 14; 11 were curative cases and three were family planning clients.

The team reached the first subcenter at 10:00 a.m. Upon arriving, they learned that the ANM was taking a bath and getting ready. The team waited outside for nearly one-and-a-half hours. At 11:30 a.m. the ANM came outside and greeted the team. She told them that the subcenter had only one room. As the observation team entered the room, they saw some mattresses and cots piled up in one corner. A few utensils were kept on the floor, and there was no table, chair, mat, or shelves for storing the clinic's articles.

> *ANM (in a tone of frustration):* There is no furniture or mat to treat the visitors. There is no examination table, and how can I conduct my clinic here? And even if I remain here for a long time, clients do not come here, and even if they come I am unable to provide the services.
>
> *Researcher:* What kind of facilities, if given, would improve your work?
>
> *ANM:* First of all, I do not have a BP [blood-pressure instrument], and this weighing scale is out of order. Without these two instru-

ments how can I treat the ANC [antenatal care] cases, or any clients for that matter? I have brought my personal stove. I have to keep a stock of kerosene. PHC does not supply me all these things. Immunization and physical examinations and IUD insertions cannot be done in this place. First of all, this building does not even have the looks of a clinic, nor the atmosphere. It is now 11:45 a.m. You please wait till 1:00 p.m. and see how many clients come.

Case 1: Diarrhea and Vomiting

Even before the above conversation had ended, an old man and a young mother carrying an infant entered the clinic. The ANM addressed the man.

ANM: Ram Ram, Dada! [Greetings, elderly person!] What is wrong? You seem to have come with your granddaughter and great grandson.

Man: My great grandson is continuously vomiting and having loose bowel movements since last night. So we have come here.

Examining the child's eyes, skin, and stomach and checking his pulse, the ANM asked how many times he had vomited and how many times he had had a loose bowel movement.

Man: Many times, maybe seven or eight times.

ANM: Did you take him anywhere [else] for treatment?

Man: No, we thought it was indigestion and it would stop on its own. This morning the child looked weak and inactive, and therefore we came to you.

ANM: Why did you not come early? You are coming at 12:00 noon. What were you doing all this time?

Man: These children who were playing said your clinic had not opened.

ANM: I was very much here, I had bolted the door from inside. See, I have visitors *(pointing to the researchers)*, and where will I go leaving them? What have you been giving the child?

Man: Only milk.

ANM (addressing the mother): You boil and cool water. You take a small cup and add one spoon of sugar and a little salt, mix it well, and start giving that to the child.

Man: We will not give all that because the child is vomiting. Every time he vomits, he is having so much exertion. Give some medicines.

ANM: I do not have medicines. You please try what I have said. After your son-in-law comes, better take the child to the PHC. The big doctor will examine him and give him medicines.

Man: Why do you say that? Is he in danger?

ANM: No, no, not dangerous. It is always better to show him to a doctor.

The man and woman left the subcenter.

ANM (with an expression of relief): The child is suffering from dehydration. I do not have ORS [oral rehydration solution] packets. The child needs intravenous [rehydration].

Case 2: Stomach and Skin Problems

Soon afterward a mother came into the subcenter with three small children.

ANM: What problems do you have?

Client: I do not have any problems, but my children have.

ANM: What are their problems?

Client: This child is my eldest son. He is not eating and is complaining of stomachache, and the other two children have skin problems.

The ANM pressed the child's abdomen.

ANM: Your son has worms in his stomach. You give this medicine tonight, [and] he will become all right.

She gave the other two children some ointment in a piece of paper.

ANM (to the mother): You please apply this ointment after taking food, and see that they don't put their fingers inside their mouth. You apply this for three days and come back and show them to me again.

After giving this advice and the medicine, she sent the client home. By then it was almost 1:00 p.m. The ANM told the observers that she did not think anyone else would come.

ANM: I will close down the clinic and we will go around the village. I have a few cases for motivation and follow-up as well. Are you interested in accompanying me?

ANMs and Home Visits

As mentioned at the outset, the team observed a total of 210 home visits, or approximately 35 visits with each of the six ANMs. In general the ANMs appeared to have good relations with the villagers, although there was likely some degree of selection in terms of whom the ANMs chose for interaction. The following cases illustrate some of those encounters.

Case 1: Motivating for Sterilization

An ANM stopped near a house and called to her client from outside.

ANM: Tulsibai! Oh, Tulsibai!

Tulsibai came out and stood near the door, smiling at the ANM.

ANM: Okay, please listen. I came to tell you there is a family planning operation camp on the 20th. The vehicle will come at 10:00 a.m. at the main entrance, near my subcenter. You must come. I have come to inform you.

Client: I know about it.

ANM: Did my colleague come and tell you?

Client: Yesterday doctor sir [the MPW] came to give immunization. He told me about this.

ANM: Are Savitribai and Ramadevi around here?

Client: They were here, but they have gone out somewhere.

ANM: If you meet them, inform them about the date. I will once again come personally.

Case 2: Laparoscopy Complications

The ANM proceeded to another house for a follow-up visit of a laparoscopic case. On reaching the client's doorstep, the ANM knocked loudly on the door and shouted the client's name.

ANM: Oh, Krishnabai!

An old woman opened the door.

ANM: Ram Ram, Masi! [Greetings, aunty!] How is your daughter-in-law?

Woman: She is running temperature and is complaining of severe pains. Good thing you came. Are they doctors? *(indicating the observers)* Ask them to come in and examine her.

ANM: No, no, they are not. I will come and examine her.

The ANM went inside to examine the woman's daughter-in-law, who had had a laparoscopic procedure two days earlier. The daughter-in-law was running a fever and had severe pain.

ANM (to client): Since when are you having the pain and fever?

Client: Soon after the operation I vomited, but I was discharged on the same night. I am having temperature and severe stomach pain.

The ANM touched the woman's forehead, checked her pulse, and examined the wound.

ANM: I will right now give you medicines for fever and pain, but tomorrow morning, if you still have pains, I will come and take you to the PHC or Vidisha Hospital.

The ANM left the team and rushed back to the subcenter. She soon returned with paracetamol and ibuprofen tablets.

ANM: You please take these two tablets in the night after dinner and again two in the morning after breakfast. There is no need to worry. Take rest and I will come and see you again. *(Turning to the old woman)* Please don't give her any spicy or solid food because she is having fever. Give her only bread and milk or tea.

The ANM then left the house with the researchers.

ANM: I have two more houses, but I have to go back to Vidisha. If you don't mind, could you please drop me off in your jeep?

The team obliged her and gave her a lift. The visit had come to a close at 4:00 p.m., and the team headed out of the village, with the ANM, toward Bhopal.

A Visit to a Peripheral Village

ANMs have great difficulty in visiting all of their assigned households, mostly because of the significant amounts of time lost in commuting and other activities. They are particularly likely to neglect the more distant, peripheral villages of their areas. One of the ANMs took

the observers to a remote village to demonstrate the difficulty of providing services there. The following episode exemplifies the problems that arise with clients in such villages.

The road leading to the outreach area was full of ups and downs in this very hilly region. The ANM told the observers that the vehicle would not be able to go all the way to the village because the road was too narrow and heavy rains had made it impassable. The party trudged 3.5 kilometers through thick jungle to reach the village.

As the team entered the village, some women were collecting water at a public tap. Smiling, they left their pots and approached the team. One of the women pointed to the ANM.

> *Woman:* You have not come since a long time, and the doctor [male worker] has not come either.
>
> *ANM:* I had gone on leave for two months, so I could not come.
>
> *Woman:* No, no. It is not since two months—since six months—you have not come. Your colleague [male worker] also did not come. What, both of you applied for leave together?
>
> *ANM:* No, I will tell you later. These are our guests and they have come from Bhopal, and why don't you give us some tea for the guests instead of complaining against me?
>
> *Woman:* With pleasure. Why only tea? They can have lunch with us.

The observers were aware that the ANM was trying to shift the focus of the discussion by requesting the women to make tea. The ANM had deliberately chosen this village to show the team how difficult it was to reach some villages. In the process, she found that she was exposing herself to criticism by the villagers. With frustration showing on her face, she turned to the observers.

> *ANM:* We made a mistake in coming to this village. I should have taken you to another village.

Nonetheless, she referred to her notebook to check on her list of clients. She then proceeded to one of the houses. A child was standing outside, and so she instructed the girl to go tell her mother that "Sister has come." The client, Chandanbai, came out carrying a baby boy in her arms. The ANM greeted her.

> *ANM:* My colleague has inserted Copper-T for you last month. How do you feel now? Are you having any problems?

Client (obviously angry): Yes, I have very much problem. I have severe backache and profuse bleeding, and I don't want this Copper-T. Only after this insertion did all these problems start. I did not have back pain or bleeding previously. You please remove it now!

ANM: If this is your problem, you please come to the PHC and get it removed.

Client: Why should I come to the PHC just for this? You can remove it now.

ANM: No. Some instruments are needed to remove it. I don't have them now. I did not insert it, so I cannot remove it.

The team walked away from the client's house. The observers later learned that the IUD had been inserted by the LHV a month earlier. When they inquired why the ANM had not inserted it, she said that she did not feel confident with the procedure. Her lack of confidence was due to two failures that had occurred earlier in one of her villages. She had therefore asked the client to go to the PHC for the IUD. Otherwise she would not have promoted the IUD at all.

At the house of the next client the ANM stopped for only a minute. The client was seated outside her house. The house was small, with mud walls and a thatched roof, suggesting that the woman was of lower socioeconomic status.

ANM: How are you?

The client did not respond.

ANM: [At the] end of this month I will come with my colleagues and immunize your child. Now I am going.

Client: If you say the end of this month, I assume it is next year that you will come.

The client was visibly upset and evidently wanted to say something more as the ANM was walking away. On seeing this, the researcher approached her.

Client: This sister does not come at all to the village. She always says she was on leave. Even if she does come, she does not come to my place.

At this point the ANM pointed to her watch and told the observers that it was time to head back to the main road, as it was already 4:30 p.m. As the team started back toward the road, the ANM hurried over to another house and addressed the woman inside.

ANM: Next month we are having laparoscopic sterilization camp. I will let you know the exact date. You come and get operated. At the end of this month I am coming here. At that time you must take TT injection.

Despite the difficulty of reaching this remote village, it was clear from the negative comments of the clients about the irregularity of the ANM's visits that she had indeed visited this village in the past. The villagers had received some medical services, although at very irregular intervals.

One of the other ANMs also took the observers to another remote village. On the way she became lost and was unable to find the village. After some time she asked some schoolchildren on the road to direct her to the village. Upon entering the village she was met with hostility from a group of men. One of the men pointed to her figure (she was overweight).

Man: See that. If you would come out to our village sometimes, you would not be fat like that. You would be slim as we are.

Discussions with the Clients and the ANMs

Our direct observations of provider–client interactions gave us useful information about the quality of care delivered by the ANMs during their home visits and other activities. Our discussions with clients (without ANMs being present) gave us further insight into the actions of ANMs. Having these two different types of data strengthened our conclusions. Clients' statements, made during individual interviews and group discussions, can be summarized as follows:

- Many of the women in the communities expressed satisfaction with the services received from the ANMs. This was particularly so in the case of women in the more affluent households of the most accessible villages.
- On the other hand, many women of lower socioeconomic status stated that the ANMs' services were few and irregular. In one group discussion, two upper-caste women defended the ANMs and their work, while six women from lower-caste households disagreed.
- Many women felt that their ANM should inform them in advance of her schedule and be much more regular in her visits.

A typical comment was, "She doesn't inform us about her next visit. She doesn't seem to have any schedule."

- In one group, the women said they knew all about family planning from television and other sources, and that they were not motivated by the ANM.
- The great majority of the villagers said that their subcenter was almost always closed, so that it was largely useless as a health care resource.
- Many women said that follow-up was very poor and that the ANM told them nothing about the possible side effects of contraceptive methods, such as the IUD and sterilization. One ANM told a researcher that they did not talk about side effects because it would impair their chances of achieving the method target quotas.
- Some women objected to their ANM's using the home of the *thakur* [upper-caste, wealthy landlord] for immunizations. Some said that the ANM should go from house to house. Others suggested that the ANM rotate her visits among selected houses. A typical complaint was, "Why is she sitting in one house? She is very lazy."
- Despite their complaints about the ANMs' failure to provide adequate services, the villagers did not appear to be concerned that the ANMs were "outsiders." They did not suggest that the ANM should be a member of their community. Nor did the villagers question the ANMs' overall qualifications, although they pointed out specific gaps in the ANMs' knowledge (or willingness to impart knowledge). The main reason for their dissatisfaction was the ANMs' failure to provide regular services.

Work Schedules of the ANMs

The schedules of the ANMs were severely affected by the fact that five of the six lived in towns located a considerable distance from the PHC areas they served. As shown in Table 6.2, the ANMs spent about three hours a day traveling by bus from their homes to their work locations and back again. They were supposed to maintain clinic hours at the subcenters from 10:00 a.m. to 1:00 p.m. but did not strictly adhere to those hours. During our observations they often arrived at the subcenters at around 11:00 a.m. On days when they did not have

TABLE 6.2
Commuting and work schedules of six ANMs: Vidisha District, Madhya Pradesh, 1994

ANM	No. of days worked per week	Approximate commuting time between home and PHC per day (hours)	Approximate commuting time from PHC to SC and villages per day (hours)	Approximate time spent working in villages per day (hours)
A	5	1.5	2.1	4.6
B	4	1.0	2.4	4.5
C	4	1.0	1.6	4.4
D	5	1.0	1.3	3.9
E	5	1.5	1.7	4.6
F	4	0.0	2.1	4.7

ANM=auxiliary nurse-midwife; PHC=primary health center; SC=subcenter.

subcenter clinic activities, they made home visits in the villages. The ANMs also had a number of other responsibilities at the PHC. Home visits were usually made in the morning, extending into the afternoon if the ANMs did not go to the PHC. We found that the ANMs had very few hours per week available for the home visits.

Conclusion

The observations described in this chapter were carried out in situations that represent some of the best-case examples of primary health care in rural India. The two PHCs included in the study had doctors in residence, and all the ANMs had 10 years of education and at least five years of experience. Thus this study has not reported on the typical quality of care. Nevertheless, it has identified several factors that prevent the system from delivering optimal services.

The quality of care we observed ranged from good quality and good availability in the PHCs themselves to low quality and poor availability in more remote villages. Between those two extremes was the quality of care provided by the subcenters, which appeared to be inadequate and irregular, except at two subcenters that were located in somewhat better facilities. The wide range of quality and availability of services in the subcenters demonstrates the central importance of basic accommodations—the buildings in which the services are provided. It is impossible to maintain even minimal standards of quality of care without adequate facilities.

A major feature of the ANMs' activities was the heavy emphasis on motivating selected women for sterilization and other family planning services. The ANMs concentrated mostly on sterilization, in part because they receive a direct cash reward for each acceptance, but also because of the constant pressure at the PHC level to achieve their targets. The program also had targets for immunizations, but these seemed to receive less emphasis, and ANMs receive no cash incentives for immunization acceptors.

The interactions between the ANMs and their clients that our team observed provided strong evidence of the emphasis on sterilization and, to a lesser extent, on other family planning methods in the PHCs' work. All the ANMs expressed the view that their services would improve if targets were eliminated. The low quality and infrequent provision of services in the peripheral villages are especially troublesome. They receive practically no MCH services and are often neglected entirely during immunization campaigns. The few visits they receive appear to be mainly for achieving sterilization and family planning targets. It is difficult to blame the ANMs for neglecting the peripheral villages. During monsoon seasons they are practically impossible to reach. Even during the dry seasons travel to many of the villages is extremely difficult and time-consuming.

Caste appears to have played a major role in the differential quality of service we observed during the study. Centrally located households and those belonging to members of upper castes appeared to receive greater attention and service than other households. They were able to offer the ANMs greater hospitality in the form of tea, sweets, and other foods, such as fresh fruits and vegetables. The effect of caste is thus closely intertwined with the effects of socioeconomic status.

We believe that the ANMs we observed were sincerely trying to serve their assigned communities. These women came to their work sites and performed their duties according to their understanding of their responsibilities. Unfortunately, the strong focus on achieving sterilization and other specific family planning targets had a distorting effect on their performance. The complaints of the women in the peripheral village we visited illustrate how the emphasis on targets leads to the neglect of some clients.

Considering the ANMs' performance in the light of Bruce's categories for assessing quality of care, on the one hand we found that the ANMs' interactions with clients were, for the most part, friendly

and effective. On the other hand, the amount of information that the ANMs gave to their clients, particularly about the side effects of contraceptive methods, was seriously deficient. The follow-up services were also deficient, mainly because of the irregular home visit schedules kept.

The greatest problem our study has identified is the limited amount of time available to the ANMs for client care. Each day they spend several hours commuting to and from the PHCs. They must then spend another one to two hours traveling to the outlying villages. This schedule leaves only two or three hours at most for actual client contact. During those hours they are able to contact only about seven or eight clients. There is no way they can provide regular services to the large numbers of clients in their assigned areas, given such time constraints. It is no wonder, then, that the ANMs neglect the peripheral villages in their areas. They do not even have time to serve adequately the people in the more accessible villages.

The quality of care at the PHCs we observed is quite good. Doctors are available during and after clinic hours, and the ANMs seem to report to work regularly. In other areas, particularly where the doctors attend the PHCs irregularly, the ANMs too are likely to spend fewer days in their work areas. In such cases the coverage and quality of care are likely to be much worse than the conditions described in this study.

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7 Women's Perspectives on the Quality of General and Reproductive Health Care: Evidence from Rural Maharashtra

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There is a need to document women's perceptions regarding the quality of their health care, including abortion services, since most studies to date have approached this issue from the viewpoint of service providers, policymakers, or the state (Jesani and Iyer 1995). Basic maternal and child health (MCH) care, from both public and private sources, has been grossly neglected in India. MCH services, which are practically the only special program for women, receive a mere 2 percent of the national health budget. In fact, with less than 1 percent of the gross domestic product currently allocated for health services, there is a large gap between health needs in India and the public infrastructure intended to serve them. The number of health workers and the infrastructure available for even the existing limited services are inadequate and of poor quality. Added to this deficiency is a bias favoring urban areas in health care delivery (Duggal 1995).

Whereas most government-run primary health centers (PHCs) lack functional equipment and trained personnel to carry out medical terminations of pregnancy (MTPs), the private sector, which is often characterized by inadequate equipment and insufficient facilities for such procedures, engages in profit-making through unstandardized treatment and charging practices (Nandraj 1994). In fact, the use of unnecessary and even hazardous procedures and drugs has been found to be far more common in private clinics than in government clinics (Phadke 1994).

Implementation of the statutes of the MTP Act[1] has been geographically uneven. Women not only find the services inaccessible, but are also reluctant to use them because of the lack of confidentiality and anonymity (UN, Population Division 1993). The ratio of illegal to legal abortions is estimated to be anywhere between 3:1 (Karkal 1991) and 8:1 (Jesani and Iyer 1993). Numerous recommendations have been made in the recent past for improving women's access to safe abortions; they include upgrading the health infrastructure, training providers, and increasing public awareness and information dissemination (Parivar Seva Sanstha 1994).

Women's access to all health services is extremely limited in the region of Pune District, Maharashtra, the area of our study. Women have been found to suffer more than men from chronic ailments, on which their households have been reluctant to spend money for treatment. Neither landowners nor the state has been willing to compensate women for health problems related to employment in the landowners' fields or on government sites for drought relief. Vaginal white discharge, prolapsed uterus, backache, and problems resulting from the Copper-T intrauterine device (IUD) and sterilization have generally gone unheeded (Gupte and Borkar 1987). Women use PHCs mainly during their reproductive years; the health care needs of girls are largely neglected. PHCs' hours of operation frequently conflict with women's work schedules, and the inconvenient location of PHCs have made them inaccessible to many villages in rural areas (Awasthi et al. 1993).

The concept of quality of health care (QHC) has been developed as a tool for identifying health needs and assessing health services. In the late 1980s Donabedian advanced the QHC concept (Donabedian 1988), and Simmons, Koblinsky, and Phillips (1986) and Bruce (1990) applied it to the assessment of how clients are treated in family planning programs. Protocols have been developed to assess whether quality has been considered—along with quantity, accessibility, and the distribution of health care delivery—in evaluations of health services (Roemer and Montoya-Aguilar 1988). In the study reported here, we have used the QHC concept to understand women's needs in a variety of situations in which they seek health services, including abortion services. The study documents their choice of providers in those situations and women's feelings about both public and private health services. The study took place in a rural area of Pune District, Maharashtra, between April 1994 and March 1996.

Methodology and Sample

As part of a larger qualitative study on rural women's perceptions and experiences related to abortion, participants in our focus groups were interviewed about their desired QHC, choice of providers, and their views about public versus private abortion services. We used rank-ordering and a semistructured questionnaire to collect this information. We selected six villages on the basis of their access to health services, their size (ranging from 1,500 to 3,500 inhabitants), and access by transport to nearby towns. The intention was not to do a comparative analysis, but rather to record the qualitative nuances in the narration of women in differing situations when asked to consider their specific health needs. Collecting information about a sensitive issue such as abortion was not difficult because we had established rapport with women in the region over a period of eight years. We identified as contact persons women with whom we had long-standing relationships; they helped to authenticate the collected data and served as a voice of conscience to us as we went about collecting information.

During monthly meetings with the focus groups, which took place over eight months, we documented women's needs for health care delivery. On the basis of those discussions, we drew up a list of 21 QHC indicators based on the women's expressed concerns. The list was field-tested with the women and subsequently refined. As we spoke with the women, we realized that the QHC they desired was not a fixed entity, but instead depended on their social circumstances and specific health needs. Our respondents wanted situation-specific services for general health care, for deliveries, and for abortions. Among women seeking abortions, the needs of those who were married differed somewhat from those who were not.

We believed that the QHC for abortion, if considered in a vacuum, would give an inaccurate picture of women's needs. When women choose a few indicators as a priority for abortion services, they may do so at the cost of omitting other indicators that they also feel are important. To correct any artifacts in our data that rank-ordering might create, and to understand women's needs related to abortion in real-life situations, we decided to ask them not just about their needs related to abortion services but also about their needs for general health care and obstetrical care, both of which are considered socially acceptable needs. Our assumption was that in the latter

two areas they were freer, at least theoretically, to choose good QHC. By introducing the topic of abortion within this broader context, we hypothesized that women would feel more comfortable expressing their underlying feelings when they talked about abortion services.

From the focus-group discussions, we learned that when seeking any kind of health service, all women had concerns about cost and affordability. Some of them spoke of the distance and time involved in seeking health care, mentioning the amount of money they would have to pay for transport or how much they would lose in wages if they spent too much time on medical treatment. We therefore decided to treat opportunity costs and affordability as separate and important concerns, rather than as merely one indicator of QHC.

In the survey that followed the focus-group discussions, we asked our respondents several sorts of questions: To understand women's preferred choice of providers when seeking health care for various needs, we asked which services they used, or preferred to use, for minor illnesses, chronic ailments, health emergencies, antenatal and postnatal care, delivery, sex-determination during pregnancy, gynecological problems, intramarital abortion, and extramarital abortion (defined as abortion by a nonmarried woman, whether deserted, widowed, or never married). To understand the linkage between the accessibility of services and choice of provider, we asked them about public and private services that were available in their villages, at the *taluka* (subdistrict) level or in the neighboring towns, and in the district headquarters. We also recorded the women's reasons for choosing public or private health services. Cost and affordability were better understood in this context.

For the survey portion of the study, 61 of the 67 ever-married women who had regularly been part of our focus-group meetings were interviewed about QHC, 49 were interviewed about their choice of providers, and all 67 women were interviewed about their choice between public and private abortion services. The interview processes are described in detail in the findings section.

Care was taken to include both cohabiting and noncohabiting women from various caste, class, and age groups. About half (49 percent) of the respondents were Maratha women, the dominant caste (numerically, economically, politically, and culturally) in the region; but the sample also included significant numbers of women from scheduled castes and resettled nomadic tribes. Muslims and Jains were

also included in the sample. The majority of women were between 20 and 40 years of age. The youngest respondent was 17 years old, the oldest 60 years.

Because the first two instruments involved the use of cards for rank-ordering preferences, we had to select literate women from among our focus groups. The respondents were selected from all six villages of the research project. The 49 women who were interviewed about their choice of providers participated in all three sections. Because the three interviews were lengthy, it proved impossible to interview all 67 women for all three sets of data. In all three sections, the respondents freely expressed their feelings and opinions. Their narratives have been classified by content, and representative narratives are presented in the following sections at appropriate places. In recording and translating their comments, we have taken care to preserve the idiom of their language.

Perceptions of QHC

The 61 ever-married women whom we interviewed about QHC were each given a set of 21 cards in random order, each of which spelled out one indicator of service quality. The respondents were asked to identify and rank-order the three most important indicators of service quality for each of four types of health care need: general health care, obstetric care, medical abortions within marriage, and medical abortions outside of marriage. Respondents were asked to consider each type of health care need, regardless of whether they had ever used this service themselves. The three highest-ranked indicators were recorded for all four situations for each respondent. After the woman had chosen the three indicators, she was asked to place them in order of priority. To confirm her selection and to understand the logic of her choice, the respondent was then asked to explain why she had chosen those indicators.

Because abortion is a sensitive subject and extramarital abortions are difficult to obtain in India, we did not ask respondents whether they had ever had an extramarital abortion. For the sake of simplification, we classified all conceptions of single women—whether unmarried, widowed, or deserted—as extramarital and all conceptions of currently married, cohabiting women as intramarital. Our reason for doing so was that women who cohabit with their husbands have

easier access to abortion than single women. Cohabiting married women who become pregnant as the result of an extramarital relationship can, in all probability, pass off the pregnancy as resulting from intramarital intercourse.

Table 7.1 presents the results of the rankings, cross-tabulated by the four situations. For each situation, the first column gives the added score (ranks 1 + 2 + 3) for each indicator. The "ranked first" column shows the number of women who ranked each indicator as the most important factor in QHC for that particular situation. Together the two columns reveal which indicators the respondents considered to be most important in a particular situation, as well as the placement of other indicators in the rankings. The highest score in each column is in bold type.

The rankings indicate that the women's priorities for QHC varied according to the situation in which they might seek health care. Two indicators, presence of a woman doctor and empathy or concern of doctor, received high cumulative scores in three situations, whereas many others (e.g., easy access, safety and reliability, round-the-clock service, and equipment and machinery) received high cumulative scores in two situations each. Another interesting pattern revealed by Table 7.1 is that in three of the four situations (general health care, delivery care, and abortion outside marriage), the first-ranked indicator received that ranking from substantial numbers of women, whereas in the case of intramarital abortion the first-ranked indicator was so ranked by only seven women. The contrast between some of the QHC indicators for abortion and nonabortion services helps one to understand the complex social milieu in which women's sexuality and their decisionmaking (or lack of it) about abortion take place.

General Health Care

Among women seeking general care, the indicators receiving the highest cumulative scores were, in descending order, the attention and concentration of a doctor when examining and treating a patient, round-the-clock service to deal with emergencies, easy access and conveniently located service, and—receiving equal scores—the doctor's respect for the patient and readiness to listen to her description of symptoms, the doctor's empathy for the patient, and the cleanliness

TABLE 7.1
Importance of indicators of quality of care in four health-care-seeking situations: Six villages of Pune District, Maharashtra, 1994–96

	Rankings of quality of care indicators in specified situations[a]							
	General health care		Obstetric care		Abortion within marriage		Abortion outside marriage	
Indicator	Top 3	First	Top 3	First	Top 3	First	Top 3	First
Easy access, nearby services	15	7	18	**11**	4	1	1	0
Short waiting period	6	2	4	0	5	1	12	2
Quick service, quick return	2	0	5	1	17	4	8	0
One visit, no repeated visits	3	1	4	2	11	4	11	2
Doctor's attention, concentration	**29**	**16**	6	1	5	3	2	1
Presence of woman doctor	9	2	11	5	5	1	11	7
Sex of doctor immaterial	3	1	3	1	3	1	3	1
Respect for client/listens	13	7	5	1	7	1	3	0
Safety, reliability	8	1	11	6	17	5	9	4
Effective treatment, quick relief	10	2	2	1	7	3	1	0
Doctor's empathy, concern, counseling	13	3	5	0	10	6	12	6
Boarding facilities	11	0	11	1	4	0	3	1
Cleanliness	13	8	10	4	0	0	1	0
Courteous behavior from staff	4	0	11	2	13	5	5	2
Adequate staff to clean up	1	0	**27**	7	1	0	0	0
Round-the-clock service	18	6	18	7	7	3	6	4
Drugs available	6	0	6	1	7	2	10	3
Equipment and machinery	8	2	11	3	15	5	3	0
Confidentiality	4	0	1	1	2	1	**35**	**13**
Discreet location	0	0	1	0	7	3	27	8
Husband's signature not required	5	3	6	4	**21**	**7**	14	5
No response	2	0	7	2	15	5	6	2
Total no. of responses	183	61	183	61	183	61	183	61

[a] For the "ranked in top 3" columns, numbers represent the number of respondents who considered each specified indicator to be one of the three most important QHC indicators. For "ranked first" scores, numbers represent the number of respondents who ranked each specified indicator as the single most important. Numbers in bold type represent the choice of the largest number of women in each column.

of the facility. Other indicators receiving somewhat lower but still high cumulative scores were the availability of boarding facilities, effective treatment and quick relief, and the presence of a woman doctor. The quality indicator for general health care that was ranked first in importance by the largest number of women was the attention and concentration of the doctor. Much smaller numbers of women ranked cleanliness, easy access, respect for the client, and round-the-clock service as the single most important indicator.

The following comments are representative of those made by respondents when they were asked to describe their concerns about general health care:

> How will the doctor know about our illness if he isn't paying attention? Nothing will get into his head. He won't even know which injection he's giving. In case we don't get better, we'll keep thinking that it was because he wasn't concentrating. We'll feel that maybe he cheated us out of our money.
>
> A doctor may have his timings [schedule], but does an illness come that way? It's their duty to attend to us at all times. An urban patient can go to another doctor, but a villager doesn't have transport. Doctors don't pay attention to poor patients. They're not social workers any more; they've become businessmen.
>
> If the doctor doesn't listen to our complaints, we feel all tensed up. It further adds to our illness. We're already so tired waiting in the queue. If he listens, it soothes us.
>
> At least the patient should get food in the hospital. Attendants can stay hungry. What if the patient's anesthesia wears off in the middle of the night and she asks for food? Sometimes there's no food available within a mile of the hospital.

Obstetric Care

The indicator for obstetric care that received by far the highest cumulative score was adequate staff to clean up the labor room. Other indicators given high cumulative rankings for this health situation were easy access and convenient location, round-the-clock service, presence of a woman doctor, safety and reliability of treatment, boarding facilities, courteous behavior from staff, adequate equipment and machinery, and cleanliness. The indicator considered to be most important by the largest number of respondents was easy access and convenient location of the delivery service. Ranked first in importance by smaller

numbers of women were adequate staff to clean up, round-the-clock service, safety and reliability, and the presence of a woman doctor.

Respondents made the following comments:

> Heart attacks and childbirth can happen at any time. We must have a clinic close by. Someone can die just because of this.
>
> They make us clean up the labor room after our daughters deliver. What do they charge us for? What's the use of the nurses and *ayahs* [helpers]?
>
> The first childbirth hurts, doesn't it? If we scream, they shout and slap us. They say, "You didn't feel any shame when you got the thing in there. Why are you shouting when it's coming out now?" They don't give us any information. If they don't pay any attention, we're forced to keep quiet and stop asking.

Abortion Within Marriage

When women seek abortions within marriage, they have legal access to the service. Nevertheless, they may experience feelings of guilt and be bothered by the fact that staff at public services ask for the husband's approval and exert pressure on the woman to use contraception after the abortion. The quality-of-care indicators that our respondents chose in this situation were quite telling. The indicator receiving the highest cumulative score was that a husband's permission not be required. Other indicators receiving high cumulative scores were quick service enabling a quick return to the home; safety and reliability; adequate equipment and machinery; courteous behavior from staff; only one visit required; and empathy, concern, and counseling from the doctor. Not requiring the husband's signature received the highest individual score.

Characteristic comments on this situation were:

> If a husband refuses to sign, what is the woman to do? Your husband may turn back and say, "Whose bundle of sin were you carrying? You dropped [aborted] it because it wasn't mine." Or he may say, "Why are you dropping my child? I want it to stay." Who knows what he will say! Often husbands don't use a contraceptive and don't let the wife use it either. He says, "You will sleep with others if you are free." Sometimes you don't tell your husband that you're emptying it out. The doctors shouldn't hold us back for his [the husband's] signature.
>
> We should be able to go back [home] immediately. The family won't send us if the travel and stay takes many days. The housework has

> to be done, and they won't like to spend much on my needs. Besides, if I haven't told my mother-in-law, she will begin to suspect.
>
> The staff abuses us. They insult us for not using a Copper-T. If we get pregnant soon after delivery, they say dirty things [about us].
>
> The doctor should explain to the woman that repeated episodes of dropping [abortion] are not good. Sometimes young girls get pregnant because they are ignorant or rebellious. Sometimes there is force. Someone may have done it [had sex] for money, because of her poverty. She can become weak. A doctor knows these things. He should explain [them] to her.

Abortion Outside of Marriage

Given the social circumstances under which an unmarried, widowed, or deserted woman seeks an abortion, it is not surprising that respondents to our survey gave secrecy precedence over all other considerations when asked which indicators were important for women seeking extramarital abortion care. Confidentiality on the part of the doctor received the highest cumulative score and was the first-ranked score among the indicators of quality. Also receiving high cumulative scores were a discreet and distant location for the abortion service, not having to obtain a husband's permission, a short waiting period, empathy and concern from the doctor, only one visit being necessary, the presence of a woman doctor, and the availability of drugs.

Characteristic of comments about this situation were the following:

> The woman is already so harassed. If the doctor talks about her problem to others, she won't get a husband later on. She may even be driven to suicide. The whole family, [including] her brothers, will lose face. If the doctor keeps the confidence, she may have the courage to come back to him for other illnesses. Sometimes a woman gets weak and ill after the emptying out. She may have to stay indoors for a while. In such a case, the doctor should find excuses on her behalf.
>
> Why should a doctor betray the woman? Hasn't he earned his food and drink from her? It's his need too. He frees her from her problem only after she has paid his fees.
>
> No one should know that we went to the doctor. Then there won't be any gossip about the woman. Our relatives mustn't get to know anything [about this]. The hospital should be at a place where we won't meet them. Everything must be done in the utmost secrecy.
>
> A male doctor deliberately asks embarrassing questions. We feel shy with a male in such a situation. If there's a lady doctor, we can talk freely and find an early solution. It's so necessary in this case.

> If she [a single woman seeking an abortion] has to wait for long, she may meet people she knows. Then the news will be all over the place. People will say, "She was perfectly all right. Then why has she been taken to the hospital? Why hasn't the family taken anyone else along?" The story will sprout too many branches. If the woman returns [home] quickly, nobody will get suspicious.
>
> If we go to the chemist for the drugs, he will know what they are used for. He may talk around. There are barely one or two medical stores, even in the taluka place, and everyone knows everyone. If we move around for medicines, we're bound to run into our relatives and villagers. Then the news will be out. So all the drugs must be available with the doctor.
>
> If she doesn't have a husband, from where can she get one to sign [the permission form]? Doctors shouldn't ask these questions.

Choice of Provider

For the section of the survey on women's preferences with regard to a provider, we gave the 49 respondents a set of 10 cards in random order. Each card mentioned one kind of provider, either a person or an institution. At one end of the spectrum were a traditional healer and self- or folk-remedies; at the other end, public and private hospitals. The respondents were asked to select their first choice of provider for nine situations in which women typically seek health care. Because the category of general health care was too broad to be useful, we divided it into three subcategories: minor health problems, chronic health problems, and emergencies. Likewise, we divided reproductive health concerns into six subcategories: antenatal and postnatal care, delivery care, gynecologic disorders, sex-determination tests, intramarital abortion, and extramarital abortion. After choosing their preferred provider for each type of care, the women were asked to explain their choices and the answers were recorded.

Table 7.2 presents the participants' responses regarding the type of provider they would prefer in each situation. Numbers in bold type represent the choice of the largest number of respondents in each situation.

Minor Illnesses

For minor illnesses the first choice of provider for the largest number of women (39 percent) was self-medication. Twenty-four percent said they preferred the public health services, either their own PHC or PHC

TABLE 7.2
Choice of provider in nine health-care-seeking situations: Six villages of Pune District, Maharashtra, 1994–96

	Number of respondents choosing provider in a specified situation								
Provider	Minor illness	Chron. illness	Emer-gency	ANC/ PNC	Deliv-ery	Gyn. disorder	Sex deter.	Abort. within marr.	Abort. outside marr.
Self-medication/ treatment	**19**	0	0	0	3	2	0	1	0
Folk/traditional remedies	4	0	0	0	0	6	0	1	0
Rituals	0	0	0	0	0	0	0	0	0
Nonqualified village doctors	9	4	3	2	0	0	0	0	0
Qualified private doctors (towns)	5	5	**17**	7	9	**20**	7	**23**	**30**
PHC (own)	4	2	5	**14**	**18**	6	0	5	3
PHC staff (ANM/nurse)	8	0	3	**14**	8	5	0	3	0
PHC, *taluka*	0	3	2	5	7	3	0	8	8
Govt. hosp., Pune	0	**32**	2	0	1	4	2	4	3
Private hosp., Pune/Bombay	0	3	16	1	2	3	**33**	3	1
Do not know/ not sure	0	0	0	3	1	0	5	0	1
Would not seek service	0	0	0	1	0	0	0	1	0
No response	0	0	1	2	0	0	2	0	3
Total number of women	49	49	49	49	49	49	49	49	49

Note: Numbers in bold type represent the choice of the largest number of respondents in each situation.
ANC/PNC=antenatal care or postnatal care; ANM=auxiliary nurse-midwife; PHC=primary health center.

staff. Eighteen percent would go to a nonqualified village "doctor"—normally a visiting registered medical practitioner of allopathy, ayurvedic medicine, homeopathy, or another speciality, but not necessarily a person with a medical degree—whereas 10 percent preferred a qualified private doctor in a nearby town. Only 8 percent said they preferred to use traditional folk remedies for curing minor illnesses.

Representative of respondents' comments were the following:

> I'll buy a pill and take it myself. Where's the money to go to a doctor? Just look at me; my back keeps paining. I give it hot fomentation. If it gets too bad, they'll have to take me to the doctor, won't they?

> Inhaling steam is good for colds. For colds, we use the leaves of the *saatap* plant.
>
> We take medicines from that *Laal Topdya* [Red Helmet, a private, nonqualified practitioner]. He comes to the village every week on the bazaar day.
>
> If the fever is infectious, we'll go to the PHC. They have good immunization services. Not to the private doctor. They are out there to loot our money.

Chronic Illnesses

Respondents regarded tuberculosis, arthritis, and asthma, among other illnesses, as chronic. When asked about their preferred choice of provider for chronic illnesses, 65 percent selected the government hospitals in Pune. Much smaller proportions chose other providers ranging from qualified private doctors in nearby towns to private hospitals in Pune and Bombay.

Typical comments were the following:

> We'll go to Sassoon [the district civil hospital]. You don't have to spend there, except for the case paper [an official document]. There aren't enough facilities in the PHC. But in the big government hospitals, there's everything you need.
>
> When you see symptoms of TB [tuberculosis], you shouldn't waste time on home remedies. You must go to Sassoon or to the Chest Hospital in Pune. Why go to private doctors and waste money when we'll surely get cured here?

Emergencies

In response to a question about their provider preferences in case of emergencies, two-thirds of the respondents selected qualified private doctors in nearby towns or private hospitals in Pune or Bombay as their first choice. One-fifth chose local public health services, including their own PHC and its staff.

The following comment was characteristic:

> When there's a heart attack, we should find whoever is available first. After that, one shouldn't hesitate to go to a good private doctor who has all the facilities. If we go close by [to a nearby facility], they will anyway ask us to take the patient to a bigger place. Better not to waste any time.

Antenatal and Postnatal Care

Fifty-seven percent of the respondents preferred public health services, either their own PHC or PHC nurses or auxiliary nurse-midwives (ANMs), for antenatal and postnatal care. Fourteen percent chose qualified doctors in nearby towns, and 10 percent preferred the taluka PHC.

One woman stated:

> The PHC staff come to the village every month and check us up. Then they give tablets and TT [tetanus toxoid] injections. We don't have to go anywhere else.

Others suggested that the government facilities were fine for normal pregnancies and postnatal care, but if there were complications they would want to have a private doctor:

> If one has no problems in pregnancy, we can go to the PHC. But if there's pain or any other problem, then we have to go to the private doctor.

Deliveries

Sixty-nine percent of our sample preferred the public health services for their deliveries, most of them choosing their own PHC. Twenty-two percent preferred to have their deliveries attended by a qualified doctor in a nearby town or to deliver at a private hospital in Pune or Bombay.

> After trying to deliver her with a local *dai* [traditional midwife], we go to the rural hospital. Time is very important in this case. It's an unnecessary waste of money going to a private hospital. If you can get a good service in the PHC, why go around?
>
> The PHC doesn't have equipments for cesarians. We then go to a private hospital without wasting time.

Gynecological Disorders

For gynecological disorders, 47 percent of the women said they would prefer going to a private doctor in a nearby town or in Pune or Bombay, whereas 37 percent would go to public health services ranging from their own PHC and its staff to the government hospital in Pune. Sixteen percent said that they would use folk or traditional remedies or treat themselves.

> We'll go to a gynecologist in the town or in Pune. They don't pay any attention to you in the PHC.
>
> There are good remedies with leaves and herbs for these problems. A woman from a nearby village can also treat a prolapsed uterus.

Sex-determination Tests

Prediagnostic tests for the purpose of determining the sex of a fetus are banned in India. When a doctor passes on information about the sex of a fetus to a pregnant woman or her family, he or she is engaging in an illegal act. Nevertheless, sex-determination tests are available to people through private, illegal channels at high cost. Son preference is deeply rooted in India's patriarchal social structure, and it is so strong that couples are willing to incur heavy debt to pay for sex-determination tests, followed by a second-trimester abortion in the event the fetus is female. Four-fifths of the respondents in our sample said they would go to a private hospital in Pune or Bombay or to a qualified private doctor in a nearby town to obtain a sex-determination test during a pregnancy. Equipment required for prenatal diagnostics might be available in government hospitals, but sex-determination tests would not be conducted there. None of our respondents had availed herself of sex-determination facilities in the public sector. Five respondents did not know whether sex-determination tests were available, and one woman said that such tests were banned.

> My sister went to Kolhapur. In Lonand, Pune, and Bombay also you can get these tests. The results are 99 percent right in Kolhapur, where they use a TV [sonar-scanning device]. They don't perform these tests in government hospitals.

Abortion Within Marriage

For nearly one-half of the sample (47 percent), the first choice of provider for an abortion within marriage was a qualified private doctor in a nearby town. One-third would prefer their PHC, PHC staff (ANM or nurse), or the taluka PHC. Eight percent said they would go to the government hospital in Pune, and 6 percent would choose a private hospital in Pune or Bombay. Two women (4 percent) preferred a local abortionist. One woman said that she would never have an abortion, and so the question of choosing a provider was not relevant to her.

> We'll go to a private doctor. There you can get what you want. In the government hospitals they ask too many questions. In a private hospital, you get the service immediately.
>
> If you eat Anacin or malaria tablets, the pains start and you can drop it [abort the fetus] at home.
>
> She [an abortionist using a folk method] uses a root which is still wet with its sap, which she puts inside you. After a few hours, the bleeding starts and the root comes out with the whole thing.

Abortion Outside of Marriage

When asked what kind of provider they would choose if they were seeking an abortion outside marriage, a sizable majority (61 percent) said they would prefer a qualified private doctor in a town, whereas 22 percent would prefer going to a PHC, especially one at some distance. Few (only 8 percent) would go to a government or private hospital in Pune or Bombay.

> They ask for the husband's signature in the government hospital. That's why it's difficult to go there.
>
> It's the question of the girl's future. Who will answer all those questions? In the government hospital, they take down your name and address. Even if we have to sell our fields, we'll go to the private doctor and then get her married off.

Views About Public Versus Private Abortion Services

Using questions from a knowledge, attitude, and practice (KAP) survey questionnaire on the MTP Act, we asked 67 women who had been part of the focus groups about their preference regarding public or private services for abortion care and problems of obtaining abortions from both types of service. Forty-nine of the women who took part in this section of the study had also participated in the quality of care and choice-of-provider rank-ordering.

Forty-four women (66 percent) wanted abortions to be available from the public sector, 6 (9 percent) preferred the private sector, and 17 (25 percent) wanted the service to be available in both sectors.

> It [abortion] should be available in government services. How much money they ask for in the private hospitals! The PHCs must become

> more friendly to women. Private doctors will build tall houses with our money. Do they care if the poor die? Medicines from the PHC also go to the doctor's house for private practice. Just look at our doctor—he didn't own a bicycle when he came. Now he has two motorbikes and he's built a house in the taluka place.
>
> Let it [an abortion] be available in both places. In the PHC, they keep sending us back all the time. The pregnancy keeps advancing. If you can pay, you'll get quick service in the private hospital. The rich can go there. The poor will go to the government. Nobody cares if they live or die.

As the following attests, public-sector providers also frequently make access to abortion conditional upon a woman's accepting a long-term contraceptive method:

> The doctor insisted that I should use a Copper-T, but my husband was adamant that I shouldn't. I finally agreed to use pills, but the doctor wouldn't trust me to take them regularly. The junior doctors asked their boss, and she said that I had to use the Copper-T after all. Since I wanted to drop the thing [abort the pregnancy], I then accepted the Copper-T, hoping that my husband would never find out.

Asked whether the husband's signature was demanded when a woman sought an abortion, 37 women (55 percent) replied in the affirmative. Twenty-eight women (42 percent) said that private as well as public services demanded the husband's signature. In fact, some women reported that private doctors were more demanding because they feared a legal threat from women's husbands. The demand for the husband's signature was a source of great discontent among the respondents.

Twenty-seven women said that only married women would use abortion facilities if they were made available at the village level. Another 27 said that all women, irrespective of their marital status, would use village-level facilities.

> Married women will use the benefit in the village because it will save time and money. Even the others will go there secretly. They'll pretend that their stomach is aching or something.
>
> Once women trust the village-level service they will start going there. Women from this village may go outside, but others can come here. Sometimes a woman doesn't tell the mother-in-law. So she will have to go somewhere outside.

Discussion

The findings indicate that women's major concerns about the quality of general health care services reflect the needs of any rural population: the services must be nearby and easily accessible, and a doctor should be available for handling emergencies at any time. The distance and time involved in seeking services often determine how much cost a household will incur. Most poor households cannot afford to spend money for women's medical services, and a woman's access to health care is further reduced if the treatment is going to be very costly—either in direct expenses or in lost wages or housework lost due to her absence from the household.

Women expect a doctor to pay attention when he examines and treats them. Many of the women we interviewed told us that their doctor did not listen to their complaints, that instead he would interrupt them and try to get rid of them, especially if they were poor. Women want doctors to treat them with more respect. Treatment by a female physician was a consistently mentioned quality indicator, irrespective of the type of treatment a woman was seeking. Respondents felt that they could discuss their symptoms more easily with a woman doctor, and that they felt more secure in her presence than with a male, especially when discussing sexual matters.

Most women consider empathy, concern, and counseling from the doctor to be very important, especially in abortion care. Because women are rarely attended by physicians during labor, however, those attributes are not considered so important for delivery care. In normal deliveries, women are supervised by other hospital or PHC staff, about whom our respondents voiced many grievances. Women thus consider courteous and respectful behavior from clinic or hospital staff to be an important aspect of health care during deliveries and medically terminated pregnancies.

Cleanliness is an important criterion for general health care and deliveries. Some respondents complained that they had been made to clean up the labor room when they accompanied a woman admitted for a delivery. They thought that hospitals and PHCs should be adequately staffed with support staff to perform that function.

Women consider 24-hour service to be important for general health care and during labor, but not for induced abortions, which

can be scheduled during normal hours. When they have to stay at a hospital overnight or for a few days, as in cases of serious illness or during childbirth, they wish to have food facilities in the hospital premises. Because women who seek abortions generally return home the same day, food and lodging facilities are not an important issue for them.

In fact, women seeking induced abortions do not want to stay overnight, mainly for social reasons and to maintain secrecy. In contrast with their desire to have an easily accessible health service for other types of health care, women in need of abortion services want those services to be located at a discreet distance from their communities—even though in the focus-group meetings respondents said they wanted abortion services to be available in every PHC and as nearby as possible. For most women in the six villages we surveyed, abortion services were not available within a radius of 10 kilometers.

While the desire exists to have such services as close to home as possible, social attitudes toward abortion make it extremely difficult for a rural woman, especially if she is not married or living with her husband, to obtain an abortion in her neighborhood clinic. The desire for secrecy and confidentiality overwhelms all other concerns when single women seek abortions. Effective treatment, the availability of equipment and machinery, safety and reliability, the doctor's attention and respect for the client—none of these criteria for quality care has as high a priority in such situations. Women want a short waiting period so that they are not seen sitting outside the doctor's office. They want the procedure to require a single visit so that they can terminate an unwanted pregnancy quickly and not have to return to the same doctor. They want the physician who performs the procedure to dispense any drugs they may require for follow-up care, not as a convenience, but because they do not want to be seen acquiring medicine in the town or to arouse the pharmacist's suspicions. Thus women who seek an abortion may overlook many of the considerations of good health care that they would normally regard as important. For single women, the problem is magnified. Although their first concern is confidentiality, women who undergo extramarital abortions want to receive empathy, concern, and counseling from the doctor. Perhaps for that reason, having a female doctor is particularly important to single women in such situations.

Among married and cohabiting women, the major impediment to obtaining an abortion is the doctor's insistence that the husband approve the procedure by signing a permission form. This requirement is more common at public health services than at private facilities, but many private doctors also resort to this defensive practice to avoid having the husband create a scene or threaten to file a lawsuit after an abortion has taken place. Being able to obtain an abortion without the approval of their husbands has the highest priority for married women who wish to terminate a pregnancy.

Single women who request an abortion also face impediments from the health system. If they claim to be married, they may be required to produce a husband's signature. If they admit that the pregnancy was conceived outside marriage, they have to say that they were raped or that they are under physical or mental stress, the only other conditions for induced abortion permitted by the MTP Act. For a single woman to acknowledge her sexuality openly and, if pregnant, obtain an abortion is to incur social censure. Single women who are sexually active therefore are made to feel as though they are engaging in an illegal activity, as well as ashamed and immoral. Their situation is made worse by their limited access to good reproductive health care.

As we move from a consideration of how rural women in Maharashtra perceive general health care to how they perceive the provision of abortion services to women outside marriage, we find that their perceived bargaining power is gradually reduced. Women trade safety and good health care for confidentiality. Noticeable in the women's narrations is that the word "abortion" does not appear at all—it is taboo. One can thus begin to understand the plight of a single woman seeking an abortion. Such a woman is a victim of society's double standard of morality, and it is unfair that she must risk her health to terminate an unwanted pregnancy.

Women choose providers pragmatically, using self-medication and unqualified doctors for minor illnesses. In one of the narrations quoted, the traveling practitioner is referred to as "Red Helmet," obviously because he wears a red helmet when he comes to a village on his motorbike. Women are aware that he is not a doctor, but his services suffice because their health problems are not severe. In contrast, women will turn to government services for chronic—that is, more serious—ailments, believing they will get reliable cures. For women

with long-term diseases such as tuberculosis, itself an indicator of poverty and malnutrition, private services are unaffordable. In emergencies, women will go to any provider who is immediately available; but after receiving first aid they will go to someone more competent, usually a private doctor, who is available day or night. They will do so even if it means traveling to the city, which may be as far as 60 kilometers away.

For care during pregnancy, which usually involves simply taking iron and folic acid tablets and receiving TT shots, women prefer public health services. Most pregnant women in the area do not "register" with a doctor, and so the only services that are easily accessible to them and free of charge are those of the PHC. Public health services are also the first choice of women if they have to choose an institutional delivery, in spite of the fact that they do not regard themselves as being well treated by the staff. Their logic is that unless their labor is difficult, there is no need to spend money on a private doctor.

Because sex-determination tests are available only in the private sector, women choose to go there as the first choice. Sonography is the more popular method, and it is often followed by second-trimester abortions. For gynecological ailments, women's first choice is a private doctor, followed by the public health service. This preference reflects poorly on the latter, which does not address women's health needs beyond their need for maternity care and family planning.

The first choice of married women seeking abortions is the private sector, favored by slightly more than half of our respondents. Because the government program asks for the husband's signature and puts pressure on women to use contraception after obtaining an abortion, some women consider the services hostile. For women seeking extramarital abortions, the clear-cut first choice is the private sector because it is less rigorous in observing the provisions of the MTP Act. Single women are made uneasy by being asked many questions, having to tell lies, and knowing that their names are kept on record. It is easier for them to go to a private doctor and have an abortion quickly, without much fuss. Their primary concern is to guard the family honor or, in the case of a mother with an unmarried pregnant daughter, to ensure that the girl remains marriageable at any cost.

In conclusion, our findings suggest that women are critical of the existing health services, including abortion services. They are upset

that doctors demand their husbands' approval before performing an abortion and that government services pressure them to accept an IUD after an abortion. They are also upset that private doctors take advantage of their situation and charge them unreasonably high fees. They resent having to pay for health services in the private sector because a PHC's staff is callous or its facilities are inadequate. Nevertheless, the women feel neither defeated nor cynical. They would like their choices of care to be increased by having abortion services located nearby, and even within their villages, thereby enhancing their physical and economic access to safe abortion.

Acknowledgments

We are grateful to the Ford Foundation for funding the study reported here and to the women who participated in the study as respondents and contact persons.

Note

1 The Medical Termination of Pregnancy (MTP) Act came into effect in April 1972. According to the Act, a pregnancy may be terminated by a registered medical practitioner at a government-recognized venue: (1) as a health measure when there is danger to the life or risk to the physical or mental health of the woman (such as when a pregnancy results from the sex crime of rape); (2) if pregnancy occurs as a result of failure of any device used by a married woman or her husband; (3) on eugenic grounds where there is substantial risk that the child, if born, would suffer from abnormalities and disease.

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Part II.
Provider Perspectives on the Quality of Care

8 The Quality of Reproductive Health Care in Gujarat: Perspectives of Female Health Workers and Their Clients

LEELA VISARIA

In recent years there has been a growing concern in many countries, including India, that public health and family planning programs have placed insufficient emphasis on the quality of their services (Ickis 1992; Khan et al. 1994; Mensch 1993; Miller et al. 1991). The emphasis has too often been on the nominal fulfillment of quantitative targets. In countries such as India, poor service quality and inadequacies in the array of services are believed to be largely responsible for low levels of program use (Bruce 1990; Visaria and Visaria 1992). Poor service quality is also held responsible for low continuity of contraceptive use. Thus the constraint is not in the supply of contraceptives, but rather in the provision of services to people. An improvement in the quality of services is expected to result in a greater and sustained use of family planning.

Quality of care has several dimensions or components (Bruce 1990; Jain, Bruce, and Kumar 1992). One of the most crucial quality-of-care elements in the provision of reproductive health services is the auxiliary nurse-midwife (ANM), or female health worker (FHW) as she is now known in many parts of India.[1] As service providers, ANMs come into direct contact with the service users, yet the role and functions of these service providers and their interactions with clients have been a neglected area of research (Simmons et al. 1988; Simmons and Elias 1994). We do not adequately understand the hindrances they face from all quarters—superiors, other health staff, the

community, and clients—in discharging their duties or providing services with a satisfactory quality of care. In spite of their considerable experience, their views on the kinds of services, priorities, and needs of the people are not taken into consideration by those who design programs and assign their duties. This chapter discusses the role and functions of ANMs as perceived mainly by the workers themselves, but also by their clients, and suggests ways to improve the health care delivery system.

Data Sources

Four interrelated data sets, collected from surveys conducted under the auspices of the Gujarat Institute of Development Research, Ahmedabad, in rural areas of Gujarat State between 1989–90 and 1995, form the basis of the profile of the ANMs presented here. They are analyzed to develop a perspective on the nature of the ANMs' work, the constraints they face, and their perceived priorities.

The first data source is a survey of a random sample of 9,600 rural households from 192 villages drawn from four districts of Gujarat in 1989. The respondents were asked questions about their contact with ANMs for antenatal care, curative care, and family planning services; the quality of services provided by the health workers; and the respondents' satisfaction with the services. The data indicate the extent to which the health workers were accessible and responsive to the rural people.

The second source is a survey, also conducted in 1989, of 173 ANMs linked to the 192 villages. As a part of the study that produced the first data source, we sought information from the health workers about the problems they faced in delivering health services, their perceptions of the problems, and possible ways to overcome the difficulties. Data were also collected on the socioeconomic background of the workers, their workload, the type and extent of logistic support available to them, their knowledge and understanding of their tasks, and the record-keeping system maintained by them.

On the basis of the records of acceptors maintained by the ANMs working in the villages surveyed in 1989, in 1991 we selected 1,035 current acceptors of family planning methods. These were women whose names had been recorded on the registers of ANMs as recipients of family planning services during the two calendar years 1989

and 1990. This additional survey was undertaken to ascertain the users' satisfaction with the services and service providers; it incorporated a detailed set of questions on the quality of care provided to the users of various methods of family planning. The survey of users was conducted in 22 villages from two of the four districts surveyed earlier. Of the 1,035 women selected for interviews, only 692, or 67 percent, could be contacted. The remaining 33 percent could not be interviewed because they were away from their village at the time of the interviews, could not be traced, or their names were shown against more than one family planning method. Only five women refused to be interviewed (Visaria, Visaria, and Jain 1994).

The fourth data source is qualitative and is based on group discussions with both ANMs and multipurpose male health workers in 1994 and early 1995 in some of the same villages that had been surveyed in 1989 and 1991. Focus-group discussions and in-depth interviews were also conducted and tape recorded with acceptors of sterilization. They provide a perspective on the extent to which family planning activities receive priority over the other health care activities in the program. This qualitative information is partly anecdotal, but it reflects the perceptions of women clients and health workers and has helped us to interpret the quantitative data.

In profiling ANMs and their perspectives on the health and family planning program, I shall first examine the data on the sociodemographic characteristics of the workers, the logistic support received by them, their job responsibilities, and the support they received from the community. Next I shall examine their interactions or contacts with the clients and present data on the service users' perceptions of the quality of care provided by the health workers. These various perspectives are expected to broaden our understanding of the crucial role of the health workers in service delivery in rural India.

A Profile of the ANM

The task of contacting all ANMs in the 192 villages included in the 1989 study proved challenging.[2] A significant number of the ANMs could be contacted only after a second or even a third visit. The information presented here pertains to 173 ANMs. We contacted them at their subcenters or at their place of residence, rather than at the primary health centers (PHCs) during their monthly meetings. The

TABLE 8.1
Demographic and socioeconomic profile of ANMs: Four rural districts of Gujarat, 1989–90

Characteristic	Average, all districts	Range
Age in years		
Mean age	30	27–33
<25 (%)	17	9–25
25–34 (%)	48	39–52
35+ (%)	35	22–41
Marital status (%)		
Never married	16	8–19
Currently married	77	70–85
Widowed, divorced, or separated	8	5–11
Years of service		
Mean no.	8	6–9
<3 (%)	16	10–27
4–5 (%)	35	23–58
6–10 (%)	29	18–42
11+ (%)	20	10–25
Caste or religion (%)		
Upper Hindu castes	24	7–40
Lower Hindu castes	45	12–84
Scheduled castes	5	0–15
Scheduled tribes	13	0–31
Muslim	6	0–12
Christian or others	6	2–14
Residential pattern (%)		
Living in subcenter village	71	48–93
Not provided government accommodation	35	12–73
Provided government accommodation and live in it	30	18–52
Provided government accommodation but do not live in it	6	2–12
Living outside subcenter village	29	7–52
Not provided government accommodation	20	7–37
Provided government accommodation	9	5–20
No. of hamlets or villages in jurisdiction (%)		
Subcenter village only	26	19–42
2–3 villages	41	27–61
4+ villages	33	18–54
Mode of transport used to visit villages (%)		
Walking	69	65–73
Public transport	28	24–34
Others	4	2–9

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

rationale was that at the PHCs they were generally busy attending meetings and were with other health staff and therefore may not have had the time or may not have been willing to talk freely.

As shown in Table 8.1, four-fifths of the health workers were above age 25. In two districts, however, nearly a quarter of the work-

ers were under age 25 and presumably less experienced (data not shown). Three-fourths were currently married, although every district had some unmarried health workers. If such women were not "daughters of the village," ensuring their safety and security in the subcenter villages appears to have been a serious problem. Overall, more than four-fifths of the health workers had been working as ANMs for four or more years.

The caste composition of the health workers was, by and large, similar to the composition of the population in each district. In the nontribal districts, most workers were drawn from the low Hindu castes. In the tribal districts, nearly half of the ANMs were tribal or belonged to scheduled or low Hindu castes. Interestingly, nearly a quarter of the health workers belonged to the upper castes. The prospect of a regular and relatively attractive salary, as well as the need to supplement the family income, seemed to have prompted high-caste Hindu women to enter this profession, which until recently was pursued mainly by Christians or low-caste Hindus. All but one of the health workers were fluent in Gujarati, although a few of them had come from outside Gujarat. While interacting with people living in rural areas who had little knowledge of any other Indian language, these workers had acquired adequate knowledge of written and spoken Gujarati.

A major issue relating to the efficacy of health care delivery is whether the ANM resides in the subcenter village and is easily accessible to the people. This is often said to be a necessary condition for effective delivery of health services. Overall, more than 70 percent of the ANMs in our sample resided in the subcenter villages to which they had been assigned.[3] An additional 13 percent of the ANMs lived within three kilometers of their subcenters. Eleven of the 173 ANMs lived more than 12 kilometers away from their subcenters. For those ANMs who stayed in villages or towns removed from their subcenters or in other villages under the subcenters' jurisdiction, their accessibility to the population appeared problematic. There were, however, significant differences in living arrangements between districts. Nearly 85 percent of the health workers in the tribal district of Bharuch lived in the subcenter village, but only 48 percent of those in the other tribal district of Panchmahals did so. The difference between the other two districts was also striking. In Rajkot District, 41 of the 44 ANMs

interviewed lived in the subcenter village, whereas in Kheda District more than a third of the ANMs lived outside their area of jurisdiction and commuted to their subcenter area.

Some of the health workers who were provided accommodation chose not to stay there and instead either rented houses within the village or stayed in their own homes, if they owned a house in the subcenter village. Among the reported reasons for not staying in the subcenter building were its dilapidated condition and its location outside the village proper. The nonoccupancy contributed to a further deterioration of the buildings in most cases; some of them were even vandalized. Given the paucity of maintenance funds, these buildings cannot easily be made usable.

In the villages that did not have a subcenter building, the health workers had to find a dwelling either within the subcenter village or elsewhere. In Rajkot District most of the subcenters did not have their own building; nevertheless, nearly 73 percent of the health workers were reported to be staying in the subcenter villages, either renting accommodations or living in their own houses. (It is not clear whether the health workers in Rajkot were recruited locally or an effort was made to place them in their places of origin.) Otherwise, the willingness of the health workers to find accommodation in the subcenter villages and to live there is commendable. The situation in Panchmahals and Kheda Districts, with a high percentage of the health workers living outside the subcenter villages, posed a problem for residents, who had limited access to the workers.

Throughout the Family Welfare Programme, health workers are assigned the task of providing services to a population of about 5,000 in nontribal areas and about 3,000 in the tribal areas. In areas or districts where the average size of villages is small, this norm often implies that the health workers must provide services to more than one village. In large villages, such as those in Kheda District, more than one health worker is assigned to a single village. Among the health workers we surveyed, each was assigned an average of 2.8 villages, but 26 percent of the ANMs had to cover only the village in which their subcenter was located. Most of the other villages were near the subcenter village and situated at an average distance of 3.5 kilometers from the subcenter.

Among the four districts, variations in village size led to differences in the number of villages to be covered by the ANMs and in

TABLE 8.2
Logistic support received by ANMs: Four rural districts of Gujarat, 1989–90

Type of support	Average, all districts	Range
Physical facilities (% of subcenters)		
Subcenter's own building	58	33–81
Rented by or donated to subcenter	30	10–46
None—functioning from ANM's residence	12	3–37
Equipment in working condition (% of subcenters)		
Examination table	60	50–75
Blood-pressure instrument	34	22–52
Stethoscope	38	27–65
Weighing machine for adults	58	38–90
Delivery kit	81	65–92
Delivery pack	33	12–50
Basic supplies in stock (% of subcenters)		
Basic curative medicines	57	42–82
Iron and folic acid tablets	95	88–100
ORS packets	82	58–98
Cotton	83	70–91
Kerosene, fuel oil	36	18–65
Chemicals for hemoglobin test	52	10–82

ANM=auxiliary nurse-midwife; ORS=oral rehydration solution.

the distance to be traveled to reach them. Given the relatively large size of villages in Kheda District, about 41 percent of the health workers there served only their subcenter village; in the other districts, the corresponding figure was only about 20 to 25 percent. The tribal villages tend to have small populations; therefore, in spite of being assigned smaller populations, almost four-fifths of the health workers were required to provide services to two or more villages. The somewhat difficult terrain, inclement weather, and inconvenient public transportation facilities posed problems of effective coverage. A majority of the health workers reported that they generally walked to the villages under their jurisdiction, and only about a quarter of them used public transportation.

Logistic Support Received by Health Workers

To assess the availability of support services to the health workers, we asked them questions about the physical facilities and equipment they had been provided. As Table 8.2 indicates, nearly nine-tenths of the workers functioned from buildings provided to them. An exception was in Rajkot District, where more than a third of the health work-

ers operated from their own homes. Typically, a health worker is provided with certain equipment and supplies; she also requires some privacy when meeting with clients. Having to function from her own home poses serious problems for her in taking care of the equipment and providing adequate and private access to clientele.

When we asked the health workers whether their equipment was in usable condition, a majority reported that vaccine carriers, stoves, test tubes, and similar items were generally in working order. However, we observed that in most of the subcenters, those items were lying idle or unused, often in the cartons in which they had been delivered. The immunization program, as it is being implemented, does not require the ANM to be equipped with a vaccine carrier or related equipment. Lady health visitors (LHVs), assisted by male health workers, bring the vials of vaccines from the PHCs directly to the ANMs in the villages.

With the exception of Bharuch District, however, fewer than 30 percent of the ANMs reported that the equipment they used on a regular basis to provide antenatal care was in working order. That equipment included blood-pressure instruments, stethoscopes, and weighing machines for adults. The family planning program has provided basic equipment to most subcenters but has not been able to provide small maintenance budgets or regular supplies such as chemicals or kerosene, which are needed to operate some of the equipment. We found, for example, that even if a hemoglobin meter was in working condition, the lack of basic chemicals prevented health workers from using the equipment to check for anemia in pregnant women. Consequently, antenatal care consisted of giving pregnant women iron and folic acid tablets, which were available in adequate quantities most of the time, and providing them with verbal reassurance. Most of the health workers also reported having adequate stocks of oral rehydration solution, intended for treating diarrhea among infants and children, although the workers indicated that they rarely used them.[4] However, 43 percent of the ANMs said they were not provided adequate quantities of basic curative medicines. The situation with regard to the availability of drugs was much better in Rajkot District than in the other three districts.

The shortage of basic medicines was due in part to villagers' demands for remedies for minor ailments, such as stomachache and diarrhea. The health workers could not easily deny them the medicines for fear of losing support for the Family Welfare Programme. Some

TABLE 8.3
Indicators of the availability of IUDs and oral contraceptives from ANMs: Four rural districts of Gujarat, 1989–90

Method and indicator	Average, all districts	Range
IUDs		
ANMs reporting having been trained in IUD insertion (%)	95	92–100
ANMs reporting the ability to insert IUD themselves (%)	87	64–98
Average no. of IUD insertions in the year preceding survey	25	16–38
ANMs reporting having a stock of IUDs (%)	94	87–100
OPs		
ANMs having an OP checklist and able to produce it (%)	54	32–100
ANMs having an OP checklist but not able to produce it (%)	41	34–67
ANMs not having an OP checklist (%)	5	3–15
ANMs reporting that pills could be given to all women who want to delay pregnancy (%)	37	5–72
ANMs reporting specified contraindications for pills (%)		
Woman's age >35 years	17	10–30
Woman is pregnant	14	4–32
Woman has high blood pressure	57	44–72
Woman suffers from any disease	19	6–35

ANM=auxiliary nurse-midwife; IUD=intrauterine device; OP=oral pill.

workers even reported to us that they used their own money to buy basic drugs for the villagers.

Family Planning Activities

It is well known that health workers spend a major portion of their time on activities associated with meeting the family planning targets assigned to them. The health workers are trained in intrauterine device (IUD) insertion and in advising women about the advantages and risks associated with oral contraceptives. Practically all the ANMs surveyed by us reported that they had received training in IUD insertions; a large majority of them said they could actually insert IUDs without assistance from the LHVs (Table 8.3). Only in Kheda District had some of the recent recruits not received the necessary training. The average number of IUDs that the ANMs reported having inserted in the year prior to the survey, if accurate, was quite impressive, ranging from a low of 16 in Panchmahals District to a high of 38 in Rajkot. We subsequently learned that the average of 25 IUD insertions reported by the ANMs corresponded to the yearly targets assigned to them.[5]

Until recently, the Indian government did not make oral contraceptives available on a large scale. Consequently the targets for them

TABLE 8.4
Average number of family planning clients per ANM reported for the year preceding survey, by method accepted: Four rural districts of Gujarat, 1989–90

Method	Average, all districts	Range
Condom	37	21–59
IUD	26	16–39
Female sterilization	12	7–17
Pills	12	6–20
Vasectomy	0	0–1
All methods	87	56–120

ANM=auxiliary nurse-midwife; IUD=intrauterine device.

have not been as high as those for other methods, such as IUDs and condoms. Almost all the health workers we surveyed reported that they prescribed the pills only after examining prospective users. The ANMs were provided with a checklist of conditions under which pills should or should not be prescribed. In Bharuch and Panchmahals Districts, we attempted to verify whether health workers had the checklist with them and could produce it. In Panchmahals District, only about a third of them could show it to us. When asked about the specific conditions when oral pills should not be given, nearly 20 percent gave vague responses such as "when a woman suffers from any disease." A sizable proportion of the ANMs reported that pills were contraindicated when a woman suffered from hypertension. While the checklist prescribed that women above the age of 35 should not take oral pills, only 17 percent reported that factor as contraindicative for oral pills.

Table 8.4 indicates an impressive level of achievement by the health workers in fulfilling their method-specific family planning targets. Having to persuade more than 80 new couples every year to adopt a family planning method is no small task. However, elsewhere it has been demonstrated that the fulfillment of targets with regard to reversible methods is largely exaggerated in Gujarat (Visaria, Visaria, and Jain 1994). The monitoring system is such that if the health workers do not report an acceptable level of performance, they are reprimanded at their monthly meetings and threatened with the withholding of an annual salary increase or even a transfer to a new location (which is usually seen as a punishment). They all get the message and learn to report "correct" numbers.

Another facet of the targets for the health workers relates to the government's system of compensating for poorly performing PHCs by assigning higher targets to the better performing PHCs within the same districts. A similar process of compensation with better performing districts presumably occurs at the state level. The interdistrict variations can be quite large, as is evident in Table 8.4. During our discussions with health workers, we learned that the health workers of the better performing PHCs in Bharuch District resented having been given 20 percent higher targets because other PHCs in their district were not up to the mark. This issue is not a serious one in reality, except that the incremental targets are also method-specific and imply that the ANMs have to persuade a few additional couples to accept sterilization. Compared with other methods, sterilization records are difficult to forge. It is our observation that official figures on sterilization acceptors correspond closely to the actual numbers of acceptors of this method (see Visaria, Visaria, and Jain 1994). As far as the other methods are concerned, it is an open secret that their fulfillment exists only on paper.

Prioritization of Activities

In Bharuch and Panchmahals, we asked health workers to rank their main tasks, or activities, according to their own priorities and the priorities of their supervisors. (This question was not posed in the other two districts.) The activities listed were maternal health, immunization of children, family planning, and maintenance of registers. Almost none of the health workers thought that the maintenance of registers was an activity that could be compared with the other three, and therefore most did not rank it. In response to several questions about record-keeping, a majority of them stated that the task was tedious and took up a lot of their time, but that they managed to maintain up-to-date records with the help of the LHVs, their supervisors. In fact, the major function of the supervisors is to assist health workers in preparing information sheets for the monthly meetings at the PHCs.

The health workers ranked their supervisors' priorities on the basis of the emphasis placed on various activities at the monthly meetings attended by the ANMs at the PHCs. On the one hand, according

TABLE 8.5
ANMs' ranking of their tasks according to the priorities of their supervisors and their own priorities: Bharuch and Panchmahals Districts, Gujarat, 1989–90

Source of priority and task	Percentage of ANMs ascribing specified rank (both districts)		
	1st rank	2nd rank	3rd rank
Supervisors			
Maternal health	15	27	58
Immunization	20	56	24
Family planning	69	17	14
ANMs			
Maternal health	76	20	4
Immunization	22	63	16
Family planning	7	15	78

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

to the health workers, 69 percent of the supervisors (80 percent in Bharuch District and 57 percent in Panchmahals District) placed top priority on family planning work, and only 15 percent of them assigned first rank to maternal health (Table 8.5). On the other hand, 76 percent of the ANMs themselves felt that maternal health should receive top priority, and only 7 percent felt that family planning should receive top priority. Many of them even stated that if mothers and children received good health care, there would be no need to emphasize family planning because women would seek family planning services on their own.

Health workers' perspectives on their supervisors, their views about their own responsibilities, and the quality of care provided to the service users can be better understood in the context of the views and opinions of the service users themselves. The next two sections address those issues by reviewing the responses of clients.

Clients' Contacts with Health Workers and Subcenters

In the survey of village women conducted in the four districts of Gujarat in 1989, we asked respondents whether workers had visited them to offer various services. Their responses were affected by their ability and willingness to recall events that had occurred up to six months preceding the survey. Even so, the responses indicate the extent of contact between the health workers and the rural

TABLE 8.6
Contact of respondent households with health workers and utilization of health services: Four rural districts of Gujarat, 1989–90

Type of contact	Percentage of women reporting contact	
	Average, all districts	Range
Households reporting visit in six months preceding survey, by type of worker		
ANM	73	61–93
Male health worker	72	61–85
LHV	2	0–4
(No. of households)	(9,471)	(2,329–2,399)
Women reporting contact with ANM during current[a] or last pregnancy		
Last pregnancy registered with ANM	48	29–66
Current pregnancy registered with ANM	38	26–48
Tetanus toxoid injections received during last pregnancy	45	25–60
Tetanus toxoid injections received during current pregnancy	13	10–16
Hemoglobin checked during last pregnancy	31	20–47
Iron and folic acid tablets received during last pregnancy	42	26–58
Assistance by ANM during delivery at home	5	1–12
(No. of women)	(8,461)	(1,823–2,449)

ANM=auxiliary nurse-midwife; LHV=lady health visitor.

[a] At the time of the survey.

population and the availability of various health services to rural women.

Table 8.6 summarizes the responses to questions about whether the health functionaries had offered respondents antenatal and natal care. Overall, nearly three-fourths of the respondent women indicated that they had been visited by a FHW or a male health worker during the six months prior to the survey. Health workers making regular visits to the villages have become a familiar sight in Gujarat, and most respondents said they were able to recognize the ANM.[6] We found some interdistrict variations in the reported visits of the ANMs, however. In the tribal district of Bharuch, where a relatively high proportion of respondents (55 percent) reported using contraception, 61 percent said they had been recently visited by a female or male worker. In Panchmahals District (which has a contraceptive use rate of 36 percent), despite the dispersion of villages over a large area, the scattered housing pattern within villages, and the fact that many of the surveyed villages did not have a health worker living within their borders, nearly 70 percent of the respondent women reported a re-

cent visit by a health worker. We had expected the respondents from that district to report low contact with the health staff. It is quite likely, however, that the lower acceptance of family planning in Panchmahals has led health staff to make more frequent visits there. Although direct evidence is not available on this issue, other data presented in Table 8.6 corroborate this hypothesis.

In spite of regular visits to the villages by the ANMs, fewer than 30 percent of the women of Panchmahals District reported having received tetanus toxoid (TT) injections or iron and folic acid tablets, while the corresponding figure was more than 40 percent in the other three districts (data not shown). Evidently the visits of the health workers in Panchmahals were not related to the provision of antenatal care. It is probable that the ANMs sought to recruit family planning "cases," even though they believed that maternal health should receive top priority in the list of their activities.

For natal care, most women in rural areas seek the help of a local *dai* (traditional birth attendant) if they anticipate no complications during delivery, or go to a private doctor or nursing home or to a government hospital in a nearby town if they or the dai anticipate complications. A majority of the respondent women in the four Gujarat districts were not even aware that their ANM could be contacted to assist in deliveries. In Rajkot District, 12 percent of respondents who had delivered their children at home had called upon an ANM for assistance at the time of delivery, but in the other three districts fewer than 3 percent of the women reporting a birth said they had received assistance from an ANM during delivery. Many respondents felt that a nurse who did not stay in the village could not be called or put to inconvenience and would not come even if called.

A high proportion of ANMs, when asked about the number of deliveries they had assisted, reported having a much greater role in natal care than was suggested by the respondents. During our focus-group discussions, however, the health workers mentioned concerns about their personal safety when called at night, the antagonism of some villagers or communities directed toward them, and the risks involved when called to attend a complicated delivery. The health workers preferred not to attend deliveries and believed that the local dais were best suited for the task. Perhaps they mentioned assisting at deliveries because it was one of the tasks assigned to them, and mentioning it improved their service record.

Quality of Care Provided to Women Sterilization Acceptors

A major responsibility of health workers is to motivate couples to adopt a family planning method and provide the necessary services, which range from taking women to the sterilization camps at PHCs or government hospitals to bringing them back and providing follow-up care. For users of reversible methods, the health workers are expected to provide supplies (condoms and oral pills) and services (e.g., IUD insertions).

Our information on the dimensions of quality of care provided to sterilized women is derived from the 1989 survey of women in the four Gujarat districts and from the follow-up survey of acceptors in the two tribal districts of Bharuch and Panchmahals during 1991. The latter group had accepted family planning methods in the calendar years 1989 and 1990 and were reported to be using either the accepted methods or some other method at the time of the survey. Some questions were similar in the two surveys, but the later survey included additional questions. Table 8.7 presents data based on the four-district survey, and Table 8.8 presents data from the follow-up survey in two tribal districts.

As shown in Table 8.7, only 10 percent of sterilized women from the four districts reported having been informed about other family planning methods by the health workers. In tribal districts this percentage was even lower, at 3 percent (data not shown). At the time of sterilization, almost all women were given a TT injection to minimize the risk of infection. About half of all sterilized women were sterilized at the PHC or at the weekly camps organized by the PHCs. An additional 45 percent were sterilized at government hospitals.

Interestingly, 41 percent of the sterilized women said they had been self-motivated to adopt the method, and only 29 percent had been motivated by a FHW. The role of nonhealth staff, such as school teachers, village revenue functionaries, and village heads, in motivating women to accept sterilization was substantial, accounting for 16 percent of all sterilization cases. The roles of health and nonhealth personnel varied according to the district.

Although proper follow-up is an essential component of the quality of service, overall only about one-half of the women reported a follow-up visit by the health worker. Admittedly, our sample includes

TABLE 8.7
Contact of sterilized women with health workers and services received: Four rural districts of Gujarat, 1989–90

Type of contact or service	Percentage of sterilized women reporting contact or service	
	Average, all districts	Range
Informed about other family planning methods by health workers	10	3–18
Received TT injection prior to sterilization	96	94–98
Surgery performed at		
PHC or PHC camp	49	37–60
Government hospital	45	35–60
Private hospital or other	6	4–10
Motivated to accept sterilization by		
Self	41	36–50
Female health worker	29	20–39
Other health worker (male health worker, PHC doctor, or other)	14	12–18
Other (teacher or revenue official)	16	13–21
Received follow-up care from ANM according to who motivated respondent to accept sterilization		
Self	41	36–57
ANM	60	50–80
Other health worker (male health worker, PHC doctor, or other)	55	35–74
Other (teacher or revenue official)	49	40–64
All motivators	49	42–67
(No. of sterilized women)	(4,084)	(707–1,247)

ANM=auxiliary nurse-midwife; PHC=primary health center; TT=tetanus toxoid.

some older women who must have been sterilized several years prior to the interview and therefore may have had problems of recall. Nevertheless, one of the major complaints we heard against the ANMs was that they were interested primarily in recruiting sterilization acceptors. According to many respondents, once a woman was sterilized, the ANM rarely visited her after the first checkup.

When we examined the incidence of follow-up care according to who had motivated the women to accept sterilization, it became evident that proportionately fewer women who had been either self-motivated or motivated by nonhealth staff received follow-up care than did women who had been motivated by health workers; the difference was statistically significant. During the in-depth interviews and in focus-group discussions with contraceptive users, it was suggested that health workers were denying follow-up services to women who had not been motivated by them. Many of our informants reported that although health workers worked hard to motivate their

"cases" so as to meet their annual sterilization targets, other local functionaries—*talati* (revenue officials), school teachers, or *anganwadi* workers (women in charge of the centers under the Integrated Child Development Scheme)—who were not connected with the health sector were able to "snatch away the cases" and take credit for motivating them. The nonhealth functionaries, they asserted, were able to do so by promising the acceptors a higher incentive in cash or kind. The health workers then retaliated by refusing to provide follow-up services to those acceptors. Some of the health workers themselves confirmed this during a group discussion. Women who had been denied follow-up services often regretted having been lured by the promises of nonhealth staff, which were almost never fulfilled.

On the basis of acceptor records maintained by the FHWs for calendar years 1989 and 1990, we attempted in early 1991 to trace the acceptors of various methods in 22 villages of the districts of Bharuch and Panchmahals. Of the 259 sterilized women we contacted, almost all (254) confirmed that they had indeed been sterilized in the previous two years. As shown in Table 8.8, their average age at the time of sterilization was 26 years. They had an average of nearly four children at the time they were sterilized, ranging from 3.4 children in Bharuch to 3.9 children in Panchmahals.

When asked whether they had used any other method of family-size limitation before accepting a permanent method, 92 percent of the women reported that sterilization was the first and only method they had used. Only 12 percent of the women (5 percent in Panchmahals and 20 percent in Bharuch) had been offered a choice of other contraceptive methods. The literature on quality of care may emphasize choice as an important dimension of quality, but women in rural areas of India appear to enjoy little choice in real life. It appears that women may even reject choice on their own because sterilization, in one stroke, takes care of their contraceptive needs. In this survey, 41 percent of sterilized women also reportedly had been self-motivated. About the same proportion (43 percent) of women had been motivated by health workers (including male health workers, who also had to meet family planning targets), and the rest had been motivated by the other village functionaries.

At the sterilization camp or clinic, care provided to the women consists of a health checkup, a TT injection, and the operative procedure performed under general anesthesia. As shown in Table 8.9, how-

TABLE 8.8
Profile of women sterilized during 1989–90: Bharuch and Panchmahals Districts, Gujarat (based on 1991 retrospective survey)

Characteristic	Average, both districts
Mean age at the time of sterilization (years)	26
Mean number of children	3.7
Percentage for whom sterilization was the only method of family planning used	92
Percentage offered a choice of other methods (excluding self-motivated)	12
Percentage motivated to accept sterilization by	
Self	41
ANM	34
Male health worker	9
Teacher, revenue official, or other village functionary	16
(No. of sterilized women)	(254)

ANM=auxiliary nurse-midwife.

ever, about 59 percent of the women reported suffering pain or discomfort during the procedure. It is quite likely that in those cases the effect of anesthesia had worn off before the procedure was completed. Only about a quarter of the women reported having been given snacks and coffee after the operation. The provision of this prescribed postoperative stimulant was reported to be much lower in Bharuch (15 percent) than in Panchmahals (41 percent). The reasons for such large differences between districts in the provision of snacks are unclear because the money for such services is earmarked on a uniform basis.

Women who agree to accept sterilization are "highly prized" human beings until the time they are sterilized. The health workers accompany their cases to the place of sterilization, partly out of fear that they may lose them to other functionaries, or that the women themselves may change their minds and decide not to undergo sterilization. By accompanying the women, the health workers are able to hold on to their cases. The functionaries who take their clients to the venue of sterilization also undertake the responsibility of bringing them back to their homes.

As shown in Table 8.9, nearly one-half of the women we surveyed reported that they had traveled in state transport buses to the venue of sterilization. In about one-fifth of the cases, a PHC vehicle was provided. After the sterilization, nearly three-fourths of the women were brought back in the PHC vehicle, and for one-fifth of the women a private vehicle was hired.

TABLE 8.9
Care received at the time of sterilization by women sterilized in 1989–90: Bharuch and Panchmahals Districts, Gujarat (based on 1991 retrospective survey)

Place of sterilization and care received	Average, both districts (%)	
Place of sterilization		
PHC camp	61	
Government hospital	24	
PHC	8	
Private hospital	8	
Care received during sterilization		
Health check up	89	
TT injection	100	
General anesthesia	97	
Pain suffered during operation	59	
Snacks after sterilization	28	
Accompanied by	While being taken to sterilization site	After sterilization
ANM	62	57
Anganwadi worker	12	14
Teacher or other functionary	12	14
Male health worker	8	10
Dai	6	5
Mode of transport		
State vehicle	49	5
PHC vehicle	21	74
Private vehicle	20	20
Walking	10	1

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife; PHC=primary health center; TT=tetanus toxoid.

The PHC jeeps are used extensively to transport sterilized women to their homes, even if only one woman has to be transported over some distance. The transportation provided to women is one service that compensates for several shortcomings of the sterilization process, including the occasional highhanded behavior of the health functionaries. Women rarely report dissatisfaction with the quality of services provided to them. In fact, many express a sense of gratitude because, in spite of the unpaved road, a jeep is sent even at night to drop a sterilized woman right at her doorstep.

After the sterilization operation, 84 percent of the women we surveyed reported being visited by a health worker for a checkup (Table 8.10). The women who underwent a laparoscopy were generally visited at home for removal of the bandage. Tubectomy patients were apparently advised to consult the doctor postoperatively and were therefore instructed to visit the PHC. About a quarter of the steril-

TABLE 8.10
Poststerilization follow-up care received by women and complications experienced: Bharuch and Panchmahals Districts, Gujarat, 1989–90 (based on 1991 retrospective survey)

Follow-up care and complications	Average, both districts (%)
Visited and checked up by health worker	84
Instructed to return for checkup	55
Place suggested for checkup (among those instructed to return)	
PHC	84
ANM's residence	7
Subcenter	3
Other	6
Experienced complications after sterilization	26
Type of complication (among those reporting complications)	
Weakness	22
Backache	11
Bleeding	8
White discharge	5
Other	55
Experienced continuing complications	68
Satisfied with sterilization	93

ANM=auxiliary nurse-midwife; PHC=primary health center.

ized women complained of heavy bleeding, backache, weakness, or other discomforts after the operation. Those women felt that their complaints were generally ignored or brushed aside by the health workers. On the other hand, health workers felt that clients' complaints were often vague and in most cases probably due to the poor health of the women, rather than to the surgery itself. Two-thirds of the sterilized women continued to experience discomfort up to the time of the survey. Responding to questions about their health status, they typically reported that their body had never regained full vitality after the operation. Nevertheless, 93 percent of the women did not regret having undergone sterilization and would even recommend it to others. A majority of those who regretted the sterilization had experienced the loss of a child since the procedure.

Users of Temporary Methods

For the users of temporary methods, our survey had an extensive set of questions to determine the quality of care received by them. However, of the 530 women listed as current acceptors of IUDs, condoms, and orals whom we interviewed in 1991, only 73 women (14 percent)

reported that they were currently using a temporary method. An additional 39 women (7 percent) indicated that although they were not using a temporary method at the time of the survey, they had used it in the recent past. The pressure to meet method-specific targets prompts many health workers to include among the acceptors some individuals who are not eligible because of their marital or pregnancy status, to report the same person as having accepted two methods, or to list fictitious names of acceptors who cannot be traced. We found that many of the 86 percent of current nonusers who had been listed as current acceptors were fictitious or duplicated names or nontraceable or noneligible acceptors. We sought to ascertain the reasons for discontinuing use by questioning actual acceptors whom we could contact and learned that such factors as a current or recent pregnancy, desire for more children, and husband's opposition to contraceptive use were the main reasons (see Visaria, Visaria, and Jain 1994).

Among the listed acceptors of the various reversible methods, more than 50 percent were classified as condom acceptors; the figures for acceptance of this method corresponded closely with the mandated method-specific targets. However, actual users of this male method formed an insignificant proportion of the acceptors (12 couples, or 4.5 percent of the 265 acceptors of condoms). Clearly, health workers distribute large quantities of condoms (or distribute them on paper), and distribution is equated to use with some numerical adjustment. The data suggest an enormous waste of scarce resources.

About a third (180) of the 530 reported current acceptors of reversible methods were classified as IUD acceptors. However, at the time of the January 1991 survey only 52 women (29 percent) reported themselves as current users of IUDs and an additional 14 (8 percent) indicated that they had used an IUD in the recent past but discontinued its use after some time. The current users of IUDs accounted for more than 70 percent of the total of 73 current users of the three temporary methods of the program. Among the temporary methods offered by the Family Welfare Programme, the IUD appears to be much more acceptable than any other method. Oral pills have played an insignificant role in the program, possibly because a small target has been established for them.

Of the 66 confirmed ever-users of IUDs, 62 percent had the device inserted at a PHC or government hospital and about one-fourth went to a private clinic for the insertion (Table 8.11). Only about 15

TABLE 8.11
Quality of care provided to ever-users of IUDs, as reported by users: Bharuch and Panchmahals Districts, Gujarat, 1989–90 (based on 1991 retrospective survey)

Circumstance	Average, both districts (%)
Place where IUD was inserted	
PHC	49
Government hospital	13
Private clinic	24
Subcenter	15
Person who inserted IUD	
"Nurse"	86
Doctor	14
Acceptors informed about other methods	12
Reason(s) for preferring IUD	
Other methods not convenient	55
Found it convenient in the past	21
Did not know about other methods	14
Other	10
Received a checkup before IUD insertion	49
Care taken by provider before insertion	
Washed hands	41
Put on gloves	41
Boiled instruments	4
Don't know	14
Experienced pain during insertion	25
Among those who experienced pain	
Complained about pain to provider	93
Was given painkillers	77
Received a follow-up visit at home	67
Did not regret the IUD insertion	98
(No. of ever-users of IUDs)	(66)

IUD=intrauterine device; PHC=primary health center.

percent were provided the device at their subcenter, probably because of the lack of adequate facilities at the subcenters. A "nurse" attached to the PHC or hospital provided the service in 86 percent of the cases. Only 12 percent of the IUD acceptors received any information about other methods of family planning. They accepted an IUD because they felt that other reversible methods might not be convenient, they did not know about the other methods, or their past experience with an IUD had been satisfactory and therefore they wanted to use it again.

Nearly one-half of the IUD users reported receiving a checkup before the device was inserted. A little over 40 percent of the users indicated that the provider washed his or her hands and wore gloves before inserting the device. (It is possible that others may not have been

very observant.) A quarter of the women experienced pain during the insertion, and nearly all of these women complained to the provider. In three-quarters of such cases, some painkiller was dispensed. About two-thirds of the women reported a follow-up visit by a health worker at home. Very few women (2 percent) regretted having accepted the IUD.

Conclusion

The data presented above offer several important lessons for the Family Welfare Programme. When our studies were conducted in rural areas of Gujarat during 1989–91, the concept of reproductive health was not as well crystallized as it has become since the United Nations Conference on Population and Development, held in Cairo in 1994. As a signatory to the conference's Programme of Action, India needs to review its Family Welfare Programme in the context of the commitments made in Cairo to promote reproductive health among women. The concerns voiced by the health workers in Gujarat in 1989 are, in a sense, echoed in the Cairo document. If we are able to provide good health care to women before, during, and after childbirth, and to instill confidence in them that their children will receive good health care, the program's emphasis (misplaced, in my view) on attaining method-specific quantitative targets should not be necessary. The health workers understand this point very well. Their priorities are therefore quite different from those of their superiors.

The training that health workers receive in the provision of antenatal, natal, and postnatal care is an asset. With some reorientation and additional training, the ANMs can use their skills to offer reproductive health care to women with a modicum of additional resources, provided that their goals are correctly defined. This shift in emphasis would be beneficial to women and would boost the morale of the health care providers.

The analysis also brings home a point that has been reiterated many times in recent years: the Indian program has placed too much emphasis on method-specific contraceptive targets. From the perspective of health workers, this overemphasis has had an adverse effect on their performance and their reputation. They feel deeply hurt when they are rebuked in the presence of other workers for not having fulfilled some of their targets. They also believe that the other good work

they are doing is undervalued. This narrow focus leads to a neglect of other health care services. The oft-repeated policy of integrating maternal and child health care with family planning has not been implemented because of the program managers' obsession with the fulfillment of numerical targets.

With respect to the question of the quality of care received by the Indian populace, and by rural women in particular, the narration of a recent experience in a remote district is instructive. During our focus-group discussion with village women, we learned that they seemed reasonably satisfied with the services they had received from the health workers. The ANMs we met in a meeting at a PHC also indicated their overall satisfaction with the supervisors, targets, and infrastructural facilities at their PHC or community health center (CHC). The discussion took place in the presence of the PHC medical officer. After the doctor left, however, the ANMs reported to us that the borewell in the neighboring CHC had been out of order for several weeks, and that without water it was impossible to maintain the expected levels of sanitation and hygiene at the CHC. The entire place exuded a foul odor, and it was an ordeal to have to work there. We therefore decided to visit the CHC. When we arrived and tried to talk to the doctor in charge, we found him uncommunicative. Instead of talking to us directly, he instructed his clerk to answer our questions. The clerk explained that the prescribed procedures for getting the borewell repaired were an obstacle to improving the conditions at the CHC. Sterilizations continued to be performed in the CHC on the appointed day of the week with a tanker of water commissioned from the neighborhood. But the limited water supply prevented the staff from maintaining hygienic conditions, and one of the two wards had to be shut down, with men and women placed together in one ward. In this situation, as in others at the sterilization camps, PHCs, and subcenters, the grassroots health workers expressed concern about the quality of services provided to their "cases," but they had virtually no control over the substandard conditions.

The poor in rural areas are so vulnerable that when they seek help or care, they are generally not knowledgeable about standards of care, or even the types of assistance they are entitled to receive, and are grateful for whatever services are rendered to them. It is the better-informed who must lead in enforcing the appropriate norms

of behavior for the relatively privileged health care providers, many of whom seem to observe the Hippocratic oath more in breach than in practice. Perhaps, if the devolution of powers envisaged under the recently enacted Seventy-third and Seventy-fourth Constitutional Amendments becomes effective in India, and the panchayats begin to monitor and supervise the activities of doctors and other health functionaries, the bureaucratic malaise that currently characterizes the public-sector program might begin to be challenged and effectively addressed.

Acknowledgments

This chapter has benefited from comments on an earlier draft by participants in the Workshop on Quality of Care in the Indian Family Welfare Programme. I am especially grateful to Michael Koenig and Pravin Visaria for their comments and suggestions. Thanks are also due to the field investigators, especially Ila Mehta and Rita Dave, who helped me collect the data analyzed here; to Jignasu Yagnik for data management and processing; to Arti Dave for computational assistance; and to Sheela Devadas, V. A. Vasanthi, and Girija Balakrishnan for word processing. The responsibility for any errors of fact or interpretation rests with me alone.

Notes

1 The terms "auxiliary nurse-midwife" and "female health worker" are used interchangeably, although there is a minor difference between the two. The ANMs, who received their training earlier than the FHWs, underwent more intensive training and for a longer period than is now required for the FHWs. The ANMs surveyed for the current study often mentioned this distinction during their conversations with my colleagues and me, and we agree that the ANMs are generally better trained and qualified.

2 Of the 100 ANMs from two of the districts (four villages had two ANMs each), we were able to contact 88. Six of the 12 nonavailable ANMs were on maternity leave; the position of the ANM was vacant at the time of the survey in three villages; and the remaining three workers were reported to be on leave and could not be contacted. The survey of the health workers in the other two districts was conducted by another organization, the Operations Research Group, in Baroda, under a subcontract. We were provided data for 85 ANMs; the reasons for the nonavailability of 11 or more ANMs are not known.

3 More than two-thirds of the villages in the two tribal districts had subcenter buildings with living quarters for the ANMs. Various donors had provided the financial resources, and in most cases the village *panchayats* (councils) had donated the land.

4 The distribution of ORS packets to health workers is only a symbolic gesture, and their use has not been promoted with any seriousness. Virtually

none of the village women we interviewed indicated that they had obtained ORS packets from the health workers.

5 In another study in Gujarat, reported IUD insertions were found to reflect only a nominal fulfillment of the targets assigned to the health workers (Visaria, Visaria, and Jain 1994). The health workers themselves admitted this to be the case and indicated that they had simply to maintain their records "properly."

6 Apparently this is not always the case in some other states of India. Khan et al. (1994, p. 6) have reported that in Bihar only about 36 percent of the women surveyed reported having been visited by workers from their PHC or subcenter.

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9 Assessing the Quality of Family Planning Service Providers in Four Indian States

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The quality of care received by women in rural areas depends largely upon the providers' technical competence and motivation, and upon how well they are supported by the health system's infrastructure and logistics. In addition, the personal dimension of services, reflected in relations between providers and their clients, is crucial to a high standard of care. According to the quality-of-care framework proposed by Bruce (1990), a number of factors strongly influence interpersonal relations; these include program management style, resource allocation, the ratio of workers to clients, and supervisory structure.

In India the government provides rural health and family welfare services mainly through a chain of community health centers (CHCs), primary health centers (PHCs), and subcenters. The present infrastructure plan has as its goal one subcenter for every 5,000 inhabitants, one PHC for every 30,000 inhabitants, and one CHC for every 100,000–120,000 inhabitants. In tribal and hilly areas, one PHC is planned for every 20,000 inhabitants and one subcenter for every 3,000 inhabitants. Currently there are about 30,000 PHCs and about 131,000 subcenters throughout the rural areas of the country. This network of centers offers a host of preventive, promotive, and curative services to the rural population. In this network, the subcenter staff, particularly the female outreach workers known as auxiliary nurse-midwives (ANMs), play a crucial role, providing an important link between the national Family Welfare Programme and its clients. The

competence of these workers and their level of involvement in their work are critical to the effective implementation of the program.

Although several factors affect the utilization of primary health care services and the acceptance of family planning methods, the involvement of personnel, especially of ANMs, is one of the major determinants. Poor working conditions and inadequate facilities in rural areas have produced dissatisfaction among health functionaries, including doctors, which has adversely affected their involvement (Jagdish 1981). Varying levels of job satisfaction among personnel have been demonstrated even in relatively well-off states such as Kerala (Baburajan and Verma 1991). Recent studies using the quality-of-care framework underscore the need for a comprehensive study of the quality of service providers and their perceptions of key aspects of service delivery (Cernada et al. 1992; Koenig, Hossain, and Whittaker 1997; Visaria and Visaria 1992). This chapter addresses that need by describing the dimensions of service provided by ANMs that can have a profound influence on the quality of family welfare care delivered to rural Indian women.

Data and Methodology

Our analysis is based upon data from four states: Tamil Nadu and Karnataka in the south, and West Bengal and Bihar in the north. The data come from two studies conducted under the auspices of the International Institute for Population Sciences (IIPS), Mumbai (Verma and Roy 1994; Verma, Roy, and Saxena 1994).[1] Given the available resources for the two studies, we selected three districts in each of the four states, with districts chosen primarily on the basis of their family planning performance. Aiming to capture the range of service quality in those states, we selected one district each from the high, medium, and low categories of performance. After ranking all PHCs in each district according to their performance, we chose two PHCs in the high, medium, and low categories of performance from each district, for a total of 18 PHCs per state. At each PHC, we interviewed the medical officer-in-charge, all supervisors, and at least three ANMs out of an average total of six. Altogether, 292 ANMs were interviewed—68 in Bihar, 92 in West Bengal, 72 in Tamil Nadu, and 60 in Karnataka.

TABLE 9.1
Selected characteristics of ANMs: Four Indian states, 1994

Characteristic	Bihar	West Bengal	Tamil Nadu	Karnataka
Age (years) (%)				
<25	11	8	14	5
25–34	47	34	50	47
35–44	26	36	20	33
44+	17	23	17	16
Average age (years)	38	37	35	36
Marital status (%)				
Unmarried	0	20	28	12
Married	100	80	72	88
(No. of ANMs)	(68)	(92)	(72)	(60)

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

Findings

The analysis compares by state the respondents' answers to questions about program facilities, support for their work, and the other elements of quality of care, based primarily on the perceptions of the ANMs.

Worker Characteristics

As Table 9.1 indicates, slightly more ANMs in Tamil Nadu than in the other three states were under age 25. In all states, the mean age of ANMs was in the mid-30s. Unmarried workers constituted 28 percent of the sample in Tamil Nadu, 20 percent in West Bengal, and 12 percent in Karnataka; in Bihar, all interviewed workers were married.

Population Served and Facilities and Support Available to ANMs

The average population served by a PHC in Tamil Nadu was around 30,000, conforming to the prevailing norm (Table 9.2). In Karnataka the average population size per PHC was slightly higher (38,000). In both Bihar and West Bengal, PHCs were serving much larger average populations—141,000 and 166,000, respectively. As a result, an average PHC in Bihar was catering to slightly more than three times the number of villages served by an average PHC in Tamil Nadu. As villages tend to be more remotely situated in Bihar and West Bengal

TABLE 9.2
Populations served and types of facilities and support at 72 PHCs: Four Indian states, 1994

Population served and types of support available at PHC	Bihar	West Bengal	Tamil Nadu	Karnataka
Average population served by PHC	141,000	166,000	30,000	38,000
Average no. of villages served by PHC	136	133	41	63
Percentage of PHCs with:				
Adequate number of personnel	50	6	50	50
Operation theater	83	83	33	56
Roadworthy vehicle	83	83	50	61
Toilet	33	38	38	38
Drinking water	22	27	50	55
(No. of PHCs)	(18)	(18)	(18)	(18)

PHC=public health center.

than in Tamil Nadu and Karnataka, the logistical demands on workers in the former states were considerably higher.

According to the current norm, a PHC covering a population of 30,000 should have a minimum of three medical officers, one block extension educator, and two ANMs. The availability of personnel, both medical and paramedical, was problematic in all four states. In Bihar, Tamil Nadu, and Karnataka, only one-half of the PHCs were adequately staffed, and in West Bengal just one PHC (6 percent) was at the minimal staffing level. In Tamil Nadu, only a third of the PHCs had an operation theater (OT) and only half of them had a roadworthy vehicle. A majority of the PHCs in Karnataka had an OT and a functioning vehicle, but a significant minority had neither. Although PHCs in Bihar and West Bengal were somewhat better off in this respect, in both states the PHCs serve much larger populations than their counterparts in the other two states.

In addition to medical facilities, we explored the availability of other service-related facilities at the PHCs. Service-related facilities include seating for staff and clients, a private examination room, a private consulting room, a toilet, and drinking water. Of these, the availability of toilet and drinking water facilities are most basic and essential. A majority (62–67 percent) of the PHCs in all four states lacked toilet facilities. The situation with respect to drinking water was somewhat better in Tamil Nadu and Karnataka, where 50 and 55 percent of PHCs, respectively, had this amenity. In Bihar and West Bengal, however, only 22 and 27 percent of PHCs had drinking water.

TABLE 9.3
Information given to oral contraceptive clients during initial meeting: Four Indian states, 1994

Type of information provided by ANMs	Percentage of ANMs			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Discuss client's reproductive goals	21	17	36	55
Explain how to use pill	22	40	32	37
Discuss side effects	18	37	38	58
Advise about subsequent checkup	28	24	14	32
(No. of ANMs)	(68)	(92)	(72)	(60)

ANM=auxiliary nurse-midwife.

The Quality of Family Planning Services Provided by ANMs

To assess the quality of family planning services provided by ANMs, we asked questions designed to measure the following dimensions of quality: (1) the information that ANMs provided to their clients; (2) the choice of contraceptive methods available to clients; (3) ANMs' knowledge and technical competence; and (4) mechanisms used to ensure follow-up. We also explored whether an appropriate constellation of services was present and the extent of support ANMs received from their supervisors and their job commitment.

Information to clients. The information imparted by providers during interactions with clients can be a crucial element of the overall quality of care provided. For example, it is important that while suggesting a family planning method, the provider inform the client about its possible side effects and the measures to be taken in case the client experiences a reaction to it. We queried ANMs about the type of advice they would give clients who showed a willingness to use pills for the first time. Their responses suggest that the range of information given to clients leaves considerable room for improvement (Table 9.3).

Only in Karnataka did a majority of ANMs (55 percent) indicate that they discussed the client's reproductive goals. In Tamil Nadu one-third said they did so, and in Bihar and West Bengal the proportions were one-fifth or less. With the exception of West Bengal, even fewer respondents said they gave detailed instructions to a client on how to use the pill. Karnataka was the only state where a majority of workers (58 percent) seemed to be concerned about the possible side effects of the pill. In the other three states fewer than two in five ANMs

indicated they discussed side effects with a prospective pill acceptor. Few ANMs mentioned that they advised clients to have a checkup within a month, the proportions ranging from 32 percent in Karnataka to 14 percent in Tamil Nadu. These findings suggest that the need to impart such information was not uppermost in the minds of the ANMs; in fact, they appeared to be largely unconcerned about this aspect of services.

Choice of methods. The Family Welfare Programme offers male and female sterilization, the Copper-T intrauterine device (IUD), oral contraceptives (pills), and condoms. In 1961 it adopted a cafeteria approach to enable clients to select contraceptive methods suited to their needs. In theory, the approach provides Indian couples with a wide choice of methods. In practice, however, a client, particularly if illiterate, may not be able to exercise his or her own preference in selecting a method. The choice of method will be limited if the provider suggests a particular method and especially if the provider actively promotes one method and fails to mention others. To understand the extent to which clients in our study areas were free to choose a method, we sought the views of the ANMs regarding the degree of method choice—whether they informed their clients of all available methods and encouraged them to choose a method on their own, or instead recommended a specific method. Most ANMs in the four states reported that they normally chose the method for the client (Table 9.4). This response was most common in Karnataka (93 percent), but in the other three states roughly three-quarters of the ANMs said they generally chose the method for their clients.

Workers indicated that they were most likely to recommend female sterilization, the IUD, and, to a lesser extent, the pill. In Karnataka three-fourths or more of the ANMs mentioned that they were likely to offer those three methods, whereas fewer than half (45 percent) suggested condoms and only 15 percent included male sterilization in the list of methods generally suggested. In West Bengal more ANMs (about two-thirds) said they offered spacing methods (the IUD and pills) than female sterilization or condoms (about half). If their replies accurately reflect their actions, then method choice appears to be greater in West Bengal than in the other three states, especially Tamil Nadu. In Tamil Nadu the workers seem to have promoted only two methods, female sterilization and the IUD. Only a

TABLE 9.4
Contraceptive method choice: Four Indian states, 1994

Method choice indicated by ANMs	Percentage of ANMs			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Who chooses family planning method?				
Provider	75	74	73	93
Client	25	26	27	7
Method generally recommended				
Female sterilization	68	53	69	82
IUD	66	67	61	88
Oral contraceptives	53	64	33	75
Condoms	41	50	7	45
Male sterilization	15	11	3	15
Periodic abstinence (rhythm)	0	0	0	0
Pressure on ANMs to achieve method targets				
Female sterilization				
High	53	49	94	40
Moderate	37	29	6	44
None	11	22	0	16
Spacing methods				
High	43	32	52	34
Moderate	23	57	42	51
None	34	11	6	15
(No. of ANMs)	(68)	(92)	(72)	(60)

ANM=auxiliary nurse-midwife; IUD=intrauterine device.

third of them suggested the pill, and few if any workers suggested other methods such as condoms or rhythm.

How aggressively ANMs promote a method depends largely upon the amount of pressure they perceive to attain program targets for that method. The third panel of Table 9.4 shows that substantial majorities of workers in all four states felt themselves to be under at least some pressure to recruit targeted numbers of female sterilization acceptors. Nearly all workers in Tamil Nadu (94 percent) reported the existence of high pressure. In the remaining three states approximately one-half of the workers perceived the pressure to be high. Most workers in all the states felt less, but still substantial (high or moderate), pressure to achieve the government's targets for spacing methods as well.

Not surprisingly, contraceptive use in the four states follows a pattern similar to this program influence. According to the 1992–93 National Family Health Survey, the proportion of women contraceptive acceptors who were using either female sterilization or the IUD

TABLE 9.5
Technical knowledge and competence of ANMs: Four Indian states, 1994

Technical knowledge and competence indicators	Percentage of ANMs			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Responded correctly				
When are the chances of conception highest?	56	39	86	64
What is a tubectomy?	69	80	90	68
When to recommend medical termination of a pregnancy?	79	73	94	93
Attended refresher course	46	65	72	57
Found training to be adequate	68	57	98	47
(No. of ANMs)	(68)	(92)	(72)	(60)

ANM=auxiliary nurse-midwife.

(mostly the former) was 90 percent in Karnataka, 82 percent in Tamil Nadu, 77 percent in Bihar, and 48 percent in West Bengal (IIPS 1995).

Technical knowledge and competence. Our study also assessed ANMs' technical competence by asking a set of questions about such topics as the time in the menstrual cycle when conception was most likely to occur, female sterilization (tubectomy), and when to recommend the medical termination of a pregnancy (Table 9.5). Rather disappointingly, substantial proportions of workers in West Bengal (61 percent), Bihar (44 percent), and Karnataka (36 percent) did not know the point in the menstrual cycle when a woman faced the greatest risk of becoming pregnant. In Tamil Nadu the proportion of workers with incorrect knowledge on this issue was low (14 percent). Higher, but still far from universal, percentages of ANMs had accurate knowledge about tubectomy or when to recommend an abortion. Given the Family Welfare Programme's recent emphasis on promoting spacing methods of contraception, the workers' lack of knowledge about basic reproductive physiology is a matter of serious concern.

Contributing to their knowledge gap is a lack of follow-up training. Only 46 percent of ANMs in Bihar, 57 percent in Karnataka, and 65 percent in West Bengal had undergone a refresher training course; in Tamil Nadu the proportion was higher, at 72 percent. The perceived usefulness of refresher courses also varied widely across states. In Tamil Nadu almost all the workers who had attended a course (98 percent) found that the training had been adequate, and in Bihar two-

thirds were satisfied with the refresher course. In Karnataka fewer than one-half of such workers thought that the course had been adequate, and in West Bengal only 57 percent held this view.

Mechanisms for follow-up. Client follow-up and efforts to promote continued contraceptive use are vital to maintaining a high quality of care. Proper follow-up begins with systematic record-keeping and inculcating among health workers a concern and responsibility for this activity. While interviewing the ANMs, investigators also attempted to assess whether the addresses of clients in their eligible-couple registers were adequate to allow follow-up. We also asked ANMs questions designed to measure the extent to which they felt pressure to attain their follow-up targets and whether they provided follow-up to clients during home visits. To assess their actual practices regarding continuity of care, we asked them how many clients with problems had contacted them during the previous month (Table 9.6).

Although about one-half of the workers in Karnataka and West Bengal maintained their registers to permit client follow-up, in Bihar and Tamil Nadu only about a third of the workers were doing so. The proportions of workers who reported providing follow-up during home visits were much lower, especially in Bihar (15 percent) and Tamil Nadu (18 percent). In West Bengal and Karnataka, 41 and 50 percent of the workers, respectively, reported providing follow-up. Fewer workers in each state felt pressure to provide follow-up care than to achieve sterilization targets (compare Table 9.6 with Table 9.4). Only 16 percent of workers in Bihar, 26 percent in West Bengal, 32 percent in Tamil Nadu, and 40 percent in Karnataka felt such pressure. Nearly one-half of the ANMs in Bihar, West Bengal, and Tamil Nadu reported that clients having problems with their family planning method had contacted them during the previous month; but in Karnataka only 12 percent of the workers reported such contact. Of those who had been contacted by family planning clients during the previous month, most reported seeing only one or two clients. Only in West Bengal did a substantial percentage of ANMs report having been contacted by three or more clients.

Appropriate constellation of services. One determinant of the quality of family planning services is the location of an appropriate constellation of services for clients. We attempted to gauge the constellation of services by asking the workers where they had referred clients

TABLE 9.6
Mechanisms for follow-up: Four Indian states, 1994

Mechanism	Percentage of ANMs			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Maintains detailed addresses in register for follow-up of couples	32	48	39	53
Provides follow-up during home visits	15	41	18	50
Feels pressure to provide follow-up care	16	26	32	40
Number of family planning clients with problems contacting ANM during previous month				
None	53	53	51	88
1–2	39	23	36	6
3–4	8	10	10	3
5+	0	15	3	3
(No. of ANMs)	(68)	(92)	(72)	(60)

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

with problems who had contacted them during the previous month. We also asked about the location of each worker's residence—whether she lived within the village to which she was assigned (in staff quarters or other quarters) or outside the village. The location of an ANM's residence has a direct bearing on her ability to provide effective and accessible care.

Housing accommodations for the workers were found to be poorer in the northern than in the southern Indian states (Table 9.7). In West Bengal only 11 percent of the workers reported that they were residing in staff quarters, and another 30 percent were living in the village where their PHC was located; most (59 percent) were living outside the village. In Tamil Nadu, by contrast, 91 percent of the workers were residing within the PHC village, and a third were living in staff quarters. Similarly, in Karnataka 38 percent of the workers were housed in government quarters, and 80 percent were residing within the PHC village.

Poor availability of services is also evidenced by the finding that during the month before they were interviewed, most of the workers in the study area had referred clients with problems to the PHC and did not revisit them. In all of the states, only a small minority of ANMs (9–19 percent) reported that they themselves had revisited clients having problems.

TABLE 9.7
Measure of constellation of services: Four Indian states, 1994

Measure	Percentage of ANMs			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Place of residence				
Village staff quarters	15	11	33	38
Other quarters in PHC village	53	30	58	42
Outside village	32	59	8	20
Referrals				
Referred clients with problems to PHC	72	65	80	86
Revisited clients having a problem	16	19	9	14
Neither referred nor revisited clients having a problem	12	16	11	0
(No. of ANMs)	(68)	(92)	(72)	(60)

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife; PHC=primary health center.

Supervisory support and job commitment. Effective supervision is essential for supporting ANMs and helping them to improve their work performance. We were therefore interested in learning how regularly supervisors made contact with the ANMs and how the workers perceived the activities of their supervisors during visits to the field. According to the ANMs, their work was supervised in most cases, although the percentage reporting supervision varied from a high of 87 percent in Tamil Nadu to a low of 60 percent in Bihar (Table 9.8). Only one-fourth of the workers in Tamil Nadu mentioned that their supervisors gave them guidance for improving their performance, and only about one-tenth of them reported that their supervisors attended to clients' problems. Supervisors in Karnataka and West Bengal appear to have been more effective than those in Bihar or Tamil Nadu. About one-half of the workers in Karnataka reported that supervisors gave them advice on improving their performance and also attended to their clients' problems. In Bihar only 15 percent of the workers reported that the supervisors guided them to perform better, and only three in 10 reported that their supervisors attended to clients' problems.

To gauge ANMs' levels of motivation and job commitment, we also inquired about their willingness to continue working in the Family Welfare Programme and in the same PHC area. Their responses suggest that a majority of ANMs in all four states were motivated to

TABLE 9.8
Supervisory support and job commitment: Four Indian states, 1994

Supervisory support and job commitment	Percentage of ANMs			
	Bihar	West Bengal	Tamil Nadu	Karnataka
Type of supervisory support (as reported by ANMs)				
Superior supervises work	60	71	87	75
Gives guidance on performing better	15	37	25	53
Attends to clients' problems	29	47	13	48
ANM's job commitment				
Prefer not to switch to another government job	68	54	66	65
Prefer not to switch to another PHC	59	74	57	57
(No. of ANMs)	(68)	(92)	(72)	(60)

ANM=auxiliary nurse-midwife; PHC=primary health center.

remain in their jobs. Two-thirds of those in Bihar, Tamil Nadu, and Karnataka and slightly more than one-half in West Bengal said they would not want to switch to another job even if such an opportunity came their way. Substantial majorities of ANMs in all four states said they were not willing to switch to another PHC area. Nevertheless, about two-fifths of the workers in Bihar, Tamil Nadu, and Karnataka and one-fourth in West Bengal were in favor of changing their work location.

Summary and Conclusion

This chapter has examined, from the perspective of service providers, a number of elements of service delivery that have a direct bearing on the overall quality of family welfare services. The analysis has provided insights into the quality of family planning services and care available in four states of India. We found considerable variation among the four states in these quality-of-care variables. Overall, the coverage of services in Tamil Nadu and Karnataka appeared to be better than those in Bihar and West Bengal, as judged by the average size of the populations served, the ratio of personnel to population, the availability of living quarters for the workers, and the adequacy of the PHCs' medical and service facilities. Workers in those two states also appeared to be more knowledgeable and technically more competent than those in West Bengal and Bihar.

However, in all four states the quality of services and care provided appears to fall far below desired levels. Instead of informing

clients about all available family planning methods, most ANMs focused on one or two methods, notably female sterilization and the IUD. The quality of care as reflected by the type of information provided to clients was also low. When asked what kinds of information or advice they would give to a pill acceptor, most workers failed to mention side effects or returning for a checkup. In fact, for most of the workers, follow-up care does not appear to have been a priority, possibly because they felt pressure to concentrate on meeting targets for new acceptors. The apparent widespread gaps in many aspects of quality of care in all four states suggests that program managers need to place increased emphasis on the training and support of this key cadre of workers who have direct contact with, and responsibility for, the population that the program is intended to serve.

Acknowledgments

Thanks are due to the International Institute for Population Sciences and the United States Agency for International Development for their support of the research reported here. We are grateful to Michael Koenig for his useful comments on an earlier version of this chapter and to Dr. S. K. Singh, Mr. S. Praveen, Mr. Somnath, and Mr. M. Mainkar for their assistance on this project.

Note

1 Data for Tamil Nadu, Karnataka, and West Bengal are from a study entitled *Quality of Family Welfare Services and Care in Selected Indian States,* which IIPS undertook in 1994 with financial assistance from the United States Agency for International Development (USAID). The data for Bihar are from a 1995 IIPS study entitled *Quality of Family Welfare Services and Care in Bihar.* (See Verma and Roy 1994; Verma, Roy, and Saxena 1994.)

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10 Constraints to the Quality of Primary Health Services in Rural Karnataka

JAGDISH C. BHATIA

Primary health centers (PHCs) are the focal points for the delivery of comprehensive health and family welfare services to the rural population of India. PHCs were established in 1952 as part of a national community development program. Their incorporation into the program was aimed at ensuring community participation and intersectoral coordination needed to bring about improvements in the health status of the people. These functions were broadly categorized as medical relief, control of communicable diseases, environmental sanitation, maternal and child health (MCH), family planning (now called family welfare), school health, health education, and vital statistics (Dutt 1965). Later additions to their activities and the expansion of many vertical health programs resulted in a substantial increase in staff numbers, from an initial 10–12 staff to 40–50 staff.

Although PHCs have been in existence for more than four decades, they have had only limited success in achieving their objectives. The utilization of their services by communities has frequently been poor. Several studies indicate that only 10–20 percent of rural inhabitants use PHCs' medical facilities (Chuttani et al. 1976; Johns Hopkins University, Department of International Health 1976; Khan 1989). Effective coverage by PHCs is restricted largely to villages within a distance of five kilometers (Udupa 1991). The utilization of MCH services provided by the PHC has also been poor (Bhatia 1993; Kanitkar and Sinha 1989; Ramachandran 1989). The environmental education, health education, school health, and vital statistics components of PHC

services receive hardly any attention from PHC staff (Chuttani et al. 1976; Ghosh 1992; Parker, Murthy, and Bhatia 1972). The only function to which workers devote significant time is family welfare, primarily because of the enforcement of family planning targets and the availability of monetary incentives for family planning. But even the quality of family planning services at the PHC level has been found to be poor (ICMR 1991). Several studies have attributed the poor quality of PHC services to logistical problems, and especially to personnel problems, such as poor involvement and low morale of peripheral workers.

PHCs have a poor image or are unknown in many communities. Studies have shown that awareness and use of PHC and subcenter facilities are limited to the villages where services are located. People living in peripheral villages either are unaware of the services or find it difficult to reach them because of poor transport facilities and distance. Apart from doctors, the PHC system has a battery of health workers, both male and female, who are supposed to make domiciliary visits regularly in all villages in their respective areas. A large proportion of the people in the rural areas, however, have been found to be unaware of their existence (Bhatia 1986; Chuttani et al. 1973).

Even among the small proportion of villagers who have used the facilities, a majority have expressed dissatisfaction with the services, mainly because of the nonavailability of medicines and the rude and impersonal behavior of the doctors (Chuttani et al. 1973). Consequently villagers patronize traditional medical practitioners, who are not necessarily using traditional herbs, oils, and incantations; on the contrary, they are increasingly using modern medicines (Bhatia et al. 1975; Neumann et al. 1971). They also provide family planning and abortion services to their clients (Bhatia 1973; Bhatia et al. 1974; Neumann and Bhatia 1973). They are popular among rural communities, and their numbers are growing rapidly. People willingly pay for their services rather than seek the free services provided by the PHC system.

Previous Research on the Indian Primary Health Care System

Misra and colleagues (1982) carried out an empirical study of PHC health providers in several districts of Uttar Pradesh. The systematic organizational diagnosis of the Family Welfare Programme's imple-

mentation at the PHC and higher organizational level used primary data collected from the users of services in rural areas, service providers at the PHC level, and personnel at higher administrative levels. The study found that poor motivational levels of staff for rural work, lack of effort by field staff, and inadequate systems for inducing work effort were the main causes for the PHCs' poor performance. The study also found that strategies to meet clients' needs could not be developed because of weak links between the various levels of health care administration.

Another study, conducted in two subdistricts of Karnataka, analyzed organizational aspects of family planning at the PHC level as part of a broader investigation of the organization of rural development (Ray 1976). Such factors as coordination and communication between field staff and higher echelons of administration were found to be significant determinants of performance effectiveness. In addition, the autonomy and participation of field staff in the decisionmaking process were found to be major factors in the success of the Family Planning Programme (the name of which was changed to Family Welfare Programme in 1977).

A recent study examined the qualitative aspects of family planning and MCH inputs in four districts of Gujarat, using focus-group interview techniques (Shariff and Visaria 1991). The selection of PHCs and subcenters within the districts was based on couple-protection rates and target-achievement levels. The study found a positive association between the quality of inputs and the performance of PHCs. Poorly performing PHCs were badly maintained and lacked infrastructural facilities. A large number of female health workers in those PHCs were not residing at their headquarters, even in districts where living quarters were provided. Follow-up services were ineffective, and many of the PHCs charged clients for their services.

The relationship between job satisfaction and organizational problems of PHC personnel was examined in a study conducted in five districts of the India Population Project in Karnataka (Narayana and Reddy 1980). The results indicate that the workers' level of job satisfaction depended on the frequency of their interactions with, and guidance from, supervisory personnel.

A study of auxiliary nurse-midwives (ANMs) at PHCs and staff nurses in rural hospitals of Maharashtra found that the ANMs had a poor social image within their communities and experienced many

problems in their day-to-day work (Jesani 1990). While studying the work priorities and preferences of the ANMs, the investigator found that those functionaries had to take extra measures to achieve their family planning targets. They took special care of the clients' families, provided transport to the clients and their relatives, and gave extra money to clients. About one-half of the respondent ANMs wanted their work to be more holistic than merely seeking to achieve family planning targets, which was (and despite official policy, largely remains) the current practice.

A study conducted in several states of India investigated the level of job satisfaction among PHC personnel (Gupta et al. 1987). Most respondents expressed dissatisfaction with their housing, educational facilities for their children, and opportunities for career development. Although older and male respondents expressed higher levels of satisfaction than did younger and female personnel, most respondents expressed dissatisfaction with their opportunities for promotion and professional growth. A large proportion objected to the use of "unreasonable pressure" to achieve their targets within a stipulated period of time, "[lack of] freedom to make mistakes and learn from them," and inequitable compensation for work.

Other studies have reported on the job satisfaction of primary health care personnel (Paliwal and Sawhney 1982; Rastogi 1978; Satia 1976). A more recent study compared levels of job satisfaction among health and family welfare personnel at two PHCs in Kerala (Baburajan and Verma 1991). The PHCs were selected on the basis of their performance (one having high performance, the other low), and 88 workers were interviewed. The study revealed differences between the two PHCs in the leadership qualities and style of their medical officers. Those in the high-performing PHC were more democratic in their outlook and tended to delegate responsibilities to achieve organizational objectives. The level of employee satisfaction was also found to be higher. The results of a multivariate analysis indicated that having confidence about receiving a promotion was the single most important variable accounting for job satisfaction.

An evaluation of a pilot primary health care project in Punjab in 1979 revealed that the project placed too much emphasis on clinical aspects and too little emphasis on preventive and promotive aspects of its work (Bose and Desai 1983). Project personnel lacked an orientation in community health and were not able to use their skills fully.

The level of frustration among the staff was found to be high. The time and energy of multipurpose workers was largely wasted on the collection, compilation, and maintenance of data rather than spent on providing direct services to the community.

A nationwide study evaluating family planning services at the PHC level found an inadequate supply of drugs (particularly at the subcenters) and supplies (ICMR 1991). The study also found that the coverage and quality of care administered by ANMs in the field were inadequate and limited to administration of tetanus toxoid injections and distribution of folic acid tablets.

Data

As the studies reviewed above indicate, numerous factors influence the quality of health services. To ensure a satisfactory quality of primary health care, it is essential to identify the constraints in a particular setting as a prerequisite to improving the quality of services. This chapter aims to identify and understand constraints to high-quality family welfare services in rural Karnataka, from the perspective of service providers. The data on service providers included in this chapter originate from two studies in rural Karnataka, conducted by the author under the auspices of the Indian Institute of Management during 1994–95.

The first source of data is a time-utilization study of service providers. This study was conducted in a rural PHC in Kolar District of Karnataka that served 70 villages having a combined population of about 30,000. The time utilization of PHC staff was studied by work-sampling and continuous-observation techniques. The activities of the headquarters staff were observed by a researcher using work-sampling techniques, whereas the workers at the grassroots level were continuously observed by graduate interviewers who were intensively trained. The observers accompanied the workers on their field visits. The observations continued for a period of 45 working days.

The second data source consists of focus-group discussions with key staff at the PHC and subcenters, including medical officers, lady health visitors (LHVs), and ANMs. The research team prepared a list of topics and compiled a list of staff in each of the two districts. These lists were used to randomly select four focus groups from each district—two consisting of ANMs and one each composed of LHVs and

medical officers. Each discussion group had approximately 10 participants. The topics selected for discussion were presented as questions and thoroughly pretested to ensure that the wording of the questions was clear and appropriate, and that the questions elicited discussion. The focus-group discussions, which the author led with the help of two moderators, took place at the main hospital in Kolar District and at the Population Centre in Bangalore. All have had extensive experience carrying out in-depth and anthropological investigations and are conversant with health systems research. The discussions with the ANMs and LHVs were conducted in the local language, whereas those with the medical officers were conducted in English. All discussions were tape-recorded and later transcribed, translated into English, and analyzed for content.

Results

The results of our study identify a number of significant impediments to improved quality of health and family welfare services in the public sector in Karnataka. Evidence on each of these issues is considered separately.

Staff Residential Quarters

The most common problem mentioned by providers was the lack or inadequacy of living quarters at the villages served by the PHCs and subcenters. This problem has forced many of them to reside outside their assigned PHC headquarters. Most workers commute to their places of work by public transport, which is often irregular, expensive, and time-consuming. The problem is acute for ANMs. Some subcenters have no buildings, but instead are located in rented single-room accommodations that have no basic facilities, such as water, sanitation, or electricity. ANMs' living quarters, where provided, also lack these facilities. Consequently most of the quarters remain unoccupied, and the ANMs live in nearby towns. A few workers mentioned that they did not reside near their headquarters because the villages in which the headquarters were located lacked an adequate school for their children. Another reason for living elsewhere was that the workers did not want to be separated from their husbands.

ANMs who do not reside at the PHC headquarters are able to spend only limited time in the villages covered by them and are not able to visit all priority households. Moreover, they spend an average of two hours a day traveling between their residences and workplaces and approximately Rs100 per month on transportation. They are not usually available to attend deliveries, which take place at odd hours. Their nonresidence acts as a barrier to building confidence and establishing rapport with the community. Focus group discussions reached the conclusion that ANMs who do reside at their respective headquarters provide better services than those who must commute to their jobs.

In contrast to the ANMs, most LHVs who took part in the study reported residing at their PHC headquarters, either in the quarters provided by the government or in rented houses. Most live in the villages where the PHCs are headquartered, which are larger than surrounding villages and have better facilities. Those who stay in rented accommodations outnumber those who stay in the PHC quarters. Their rent averages Rs200 per month.

Most medical officers also do not reside at their headquarters, and this adversely affects their work routines. Because they spend considerable time commuting, they are able to spend little time at the PHC and rarely make outreach visits. Several medical officers told us that, although they had strict instructions from their superiors to stay at the headquarters, they were unable to do so because of the lack of adequate living facilities or schools for their children. They were therefore forced to rent houses in the *taluka* (subdistrict) town, pay high rents, and commute daily to the PHC headquarters. As one female medical officer reported:

> I am posted to a remote PHC located 76 kilometers from the city of Bangalore, where I stay. The PHC does not have any quarters and there are no suitable houses available in the village for rent. I usually leave home at about 6:30 in the morning and take a train for the taluka town, which is 60 kilometers away. Thereafter I board a bus and cover a distance of 26 kilometers to my PHC headquarters. It takes about two and a half hours to reach my workplace. This PHC does not have a jeep, and I do not have any other transport facility to visit villages covered by the PHC. The PHC covers about 40 villages, and the farthest village is located about 15 kilometers from PHC headquarters. Thus I rarely step out of the PHC village. On a

> few occasions I have requested my health inspector to take me to some nearby villages in order to show at least a few outreach visits in my records. The patient load at the PHC is very low, and most people from the outlying villages [who need medical attention] go either to the taluka headquarters or to private practitioners practicing in the roadside villages. I spend about two to three hours at the PHC and leave for home in the afternoon immediately after lunch.

Another participant medical officer also spoke candidly:

> I cannot make visits to villages since I do not have any transport and spend lot of time in traveling from my residence to [the] PHC. To be frank, I have not visited any village covered by my PHC for the past two years.

Equipment and Supplies

All the ANMs who participated in the group discussions reported an acute shortage of drugs. In fact, they identified this as one of the most pressing problems they faced, telling us that it resulted in client dissatisfaction and hindered not only their curative practice but also their preventive, promotive, and family planning motivational work.

In principle, each subcenter has a budget for drugs. In 1994–95, when this study was conducted, it was Rs5,000 per annum. ANMs are also supposed to receive drugs needed for sterilized women who are not able to reach the PHC or hospital for follow-up treatment. In practice, however, the supplies of drugs that the ANMs receive are inadequate to meet their requirements, and some of the drugs that are made available are inappropriate or are past their expiration dates. Moreover, according to our informants, the drug distribution system at the PHC is haphazard. Whenever the ANMs need drugs they approach the medical officer, who dispenses small quantities on an ad hoc basis.

Some ANMs complained not only that they do not receive needed drugs in required amounts, but also that large quantities of drugs they do not need are often dumped on them. Basic drugs such as paracetamol and some analgesics, which are most needed, are either supplied in inadequate quantities or not supplied at all. Several participants told us that they were given a huge quantity of folic acid tablets and were compelled to dispense them to villagers for all ailments. The villagers have become aware of this practice and now

refuse to accept the tablets, demanding other drugs for their illnesses. Our informants also reported that although a large proportion of the drugs they received had expired efficacy dates, they continued to dispense them to their patients because drugs with active dates were not available to them.

The following comment reflects the frustration felt by many ANMs:

> Whenever people see us, they demand medicines, preferably injections. If we say we do not have any, we are invariably accused of not providing good service to the people and they get angry with us. If we had an adequate and timely supply of required drugs, it would greatly facilitate people's cooperation, and this would also help us provide effective and efficient service to them. We spend a great proportion of our time in the villages, and several villagers come to us for treatment of minor ailments such as headache, cold, cough, fever, etc. If we do not dispense drugs for these conditions, they question the utility of our being there. How can we enlist their cooperation in the implementation of various programs?

To maintain good relations with their communities, many ANMs buy drugs with money they receive from families for attending deliveries. Summing up the views of several participants, one ANM stated:

> Just because we do not get drugs from the department, we cannot always tell our clients about our inability to treat them. After all, we have to maintain a cordial relationship with people in order to carry out our other tasks, such as family planning motivation and immunizations. In order to satisfy the people and enlist their cooperation in other programs for which we have targets that must be achieved, we have to provide them drugs and other treatment they require. The drugs provided by the department will not last for even a few months, and so we have to buy drugs from private medical shops and dispense them to our patients.

There was a consensus among LHVs who took part in the focus-group discussions that to be effective, ANMs needed to receive essential drugs in a timely manner and in adequate quantities.

The medical officers who participated in the discussions confirmed that the inadequate drug supply undermined their credibility and seriously hampered the work of the PHCs and subcenters. Their complaints included the following: (1) drugs are rarely supplied according to the medical officers' requisitions, which are based on the morbidity pattern in their respective areas; (2) drugs that are not needed are dumped on them, while lifesaving and essential drugs

are supplied irregularly and in quantities far below actual requirements; (3) some of the vaccines and drugs they receive have lost their potency or are close to the date of expiration; (4) some drugs, purchased from local pharmaceutical companies, are of inferior quality; (5) the PHCs do not receive cleaning agents, such as phenyl, needed for keeping the premises clean and sterile; (6) equipment lies idle because money is not available even for minor repairs; and (7) although on paper each PHC has a budget of Rs30,000 for drugs, actual supply is based on availability; on a first-come, first-served basis; and at the whim of superior officers. As one medical officer stated:

> My PHC has an annual budget of Rs30,000 for drugs. We normally prepare an indent [requisition] for the required drugs, based on the disease statistics of the PHC's area, and send it to the district office. The government medical store is supposed to supply a portion of the drugs indented, while the district health authorities are to supply the balance. But we hardly ever get the drugs indented. The reasons for this are never explained to us. Irrespective of what we indicate in the indent, unnecessary drugs are dumped on us and we find it difficult to use them. Sometimes one drug is supplied and the drug complementary to it is not supplied; for example, penicillin is supplied but not the distilled-water ampules. We have often had to destroy the medicines because their shelf life has expired. Never during my 10 years' service have I received all the drugs listed in my indent. The drugs are also of substandard quality, and we do not get essential lifesaving drugs at all. Moreover, we have to pay the suppliers Rs200–300 as a bribe to ensure that whatever drugs are supplied are properly packed. If we do not pay, a proportion of the drugs will be pilfered before reaching the PHC.

While being interviewed, a medical officer held up an ampule of ephedrine and told the interviewer it was nearly 10 years old. Although it had lost its potency long ago, he was forced to use it because fresh supplies of the drug were not available.

Another medical officer in a similar situation was more fortunate:

> Sometime back I had to attend to an abnormal delivery. The woman had a breech presentation. We did not have the correct scissors to attempt an episiotomy. There was not even a single vial of Methergine, which is used to arrest bleeding. There were no IV [intravenous] fluids either, and there was no nursing or any other kind of assistance available to me. I had to attend to the case singlehandedly. The PHC is in a remote area, and the taluka hospital also does not have any facilities to handle such cases. I conducted the de-

> livery with the resources available to me, and luckily everything went well. If something [bad] had happened, I would have been blamed.

Transportation

The Department of Health and Family Welfare Services does not provide transport facilities to enable the ANMs to carry out the tasks assigned to them. This was a source of great dissatisfaction to almost all the workers who participated in the focus-group discussions. Nearly all those who work in the field have to cover several villages, which are scattered, and in the absence of adequate transport, a substantial amount of time is spent on travel. The ANMs have difficulty carrying registers, equipment, drugs, and other materials they need to their villages. Because many remote villages are not accessible by public transport, the workers have to walk these distances, carrying heavy loads. All ANMs expressed a need for an attendant who could help them carry the materials to the villages. Currently the ANMs are authorized to engage local help for this purpose and to pay an attendant Rs50 per month, but this amount is so meager that no one is willing to provide such help. As a consequence, the ANMs have to carry the loads themselves.

This problem is felt acutely during the outreach immunization program, when the ANMs have to carry a vaccine box and a pressure cooker in addition to their register, drugs, and contraceptive supplies. ANMs who walk with such heavy loads become exhausted and are forced to cover only nearby villages. The remote villages thus do not receive adequate attention from health workers. A case narrated by an ANM vividly illustrates this problem:

> I cover six villages with a total population of 3,015. This population consists of 498 target couples, 138 eligible couples, 324 children in the 1–4 year age group, and 81 infants. The farthest village under my jurisdiction is situated 12 kilometers from the subcenter headquarters, and it takes about 30 minutes to reach that village by bus. I stay at the taluka town because there are no quarters at the subcenter village and because it is difficult to rent suitable accommodation in the village. I leave my house for work at 7:00 in the morning and catch a bus. If I miss that bus, I have to wait for nearly two hours to get the next bus. I very much feel the need for financial help from the department to purchase a motorbike or motor scooter. This would certainly be a great help in my work.

Some PHCs have vehicles in working condition that are sometimes made available to ANMs for immunization outreach, and this greatly facilitates their work. Without transport or an attendant, however, several ANMs said that they were often forced to reduce the frequency of their visits to remote villages or to drop those villages from their rounds altogether. Having to rely on public transport, which is infrequent and often irregular, forces ANMs to take bus schedules into account when planning their field work. For example, many health workers reported planning their immunization work schedules to occur continuously for a week, generally the last week of the month, during which period they did immunization work and nothing else.

The difficulty of commuting to outlying areas caused one ANM to seek a transfer:

> I cover 11 villages having a total population of 6,504. In this population there are 885 target couples, 421 eligible couples, 123 children in the 0–1 age group, and 442 children under five years of age. There is no male worker or block extension educator in the PHC, and I have to shoulder their responsibilities too. It takes about 15 minutes to reach the farthest roadside village by bus, and from there I have to walk to other villages within my area. I often get exhausted and am unable to complete the work assigned to me. Such a heavy workload and the absence of adequate transport facilities are adversely affecting my health and family relationships. I want to get out of this situation and am therefore trying for a transfer and seriously looking for a person who could help me do this.

All ANMs suggested that this problem would be greatly eased if the department were to issue them motorcycles. The vehicles would improve their efficiency and result in a substantial improvement in the coverage and quality of care.

The LHVs also have to cover large areas to supervise the work of the ANMs. In addition, they are required to visit the *anganwadi* (preschool) centers in their district to provide support and guidance to anganwadi workers. In the absence of official transport or a reliable public transport system, their supervising responsibilities are often neglected. Several of them suggested that their mobility would be improved if transport facilities were provided.

Likewise, medical officers are prevented from making scheduled visits to the subcenters or performing their other responsibilities, such

as overseeing the school health program or Integrated Child Development Scheme (ICDS) activities, due to the nonavailability of official transport. One medical officer vividly described these problems:

> I cover a population of about 32,000. We do not have any official transport at our PHC. . . . At my PHC I also spend lot of time on attending to patients, postmortems, and medico-legal cases. I am therefore not able to follow the advanced tour program of visiting the subcenters and other villages covered by my PHC. The unavailability of official transport makes these visits difficult, or rather impossible. I can review the work of my staff only at the monthly conference, which is held at the PHC on the last working day of every month. During these meetings I discuss the performance of each worker in terms of targets assigned and achieved, and give appropriate instructions. I mostly leave the general supervision of ANMs to the LHVs, who are asked to report to me on a regular basis about the problem workers and those who lag behind in their work. In cases where there are serious complaints from the community about a worker, I try to visit the village and inquire from the villagers about the problems and then take action to remedy the situation. This, however, happens only once in a while. . . . Let me be frank. It is just not possible for me to visit the villages without adequate transport facility. I know that supervision work suffers due to this. But what can I do?

Staffing

The delivery of health and family welfare services at the PHC is further hindered by several vacant staff positions. Almost all medical officers mentioned that it was very difficult to provide adequate coverage or improve the quality of services without a full complement of sanctioned staff. Even when all positions are filled, fieldworkers are overburdened. Having vacant positions worsens the situation. According to one medical officer:

> I cover a population of 38,000, spread out in 80 villages. There are eight subcenters under the PHC. Though all the ANM positions are filled, there is not even a single male worker in the entire PHC area. The position of LHV has also been vacant for quite some time. The senior health inspector is responsible for supervising the work of the ANMs; but because I do not stay at the PHC, he is more interested in practicing medicine, mainly in the PHC village, rather than providing supervision and guidance to ANMs. Thus the ANMs are left on their own and hardly receive any support and guidance in their work.

All medical officers reported making several personal, as well as formal written, requests to the higher authorities for personnel to fill the vacant positions, but to no effect. Another problem that our informants repeatedly mentioned was that of "punitive" or "stopgap" postings due to political interference. The personnel posted in this fashion are hardly motivated to do any work and instead are a negative influence on those who are performing satisfactorily. A medical officer described the effect of this as follows:

> I have recently been posted to the present PHC. My predecessor had a lot of problems with the people, and with the interference of the health minister he was transferred to another PHC. I hear that he is idling away his time there and is not doing anything worthwhile. The clerk at this PHC who is supposed to assist me in administrative work has been sent here by the director on a "punishment" transfer. He does not listen to me and behaves insultingly toward the other staff members. The LHV too is on a punishment transfer. She stays in Bangalore and neither comes to the PHC regularly nor visits the subcenters. These persons have been with the department for several years and are not amenable to any discipline. What can I do in this situation?

Another participant observed:

> I cover a population of 37,000. In my PHC the post of pharmacist has been vacant for the past two years, that of block health educator for one year, three male workers' posts have been vacant for a long time, and there has been no laboratory technician for quite some time. I rely upon the assistance of the ANM at headquarters to dispense medicines and do other office work. The blood slides are sent to the taluka hospital for examination. All this disrupts the work routines.

Whenever there is a vacancy at a subcenter, the ANM from the adjoining center has to cover that area. This adversely affects her performance. Moreover, the vacancy of an LHV position makes the situation worse because all ANMs in the PHC remain unsupervised. Most medical officers who participated in the discussion considered this problem to be very serious.

In addition to chronic staffing vacancies, the ineffective and inefficient utilization of available manpower adversely affects the coverage and quality of health and family planning services. This conclusion is based on the continuous observation of selected providers over a period of approximately 45 working days. The following time-utilization patterns emerged from the observations.

ANMs. Seven ANMs were observed. Each observation started when the ANM began her workday and ended when she announced she had finished her day's work. Throughout this period a female observer accompanied her wherever she went. A total of 249 ANM-days were observed, and the average duration of work for each ANM was 247 minutes per day. The seven ANMs spent approximately 65 percent of that time providing services, 19 percent on travel, and about 16 percent on personal activities (Table 10.1). Thus the ANMs' average workday was only slightly more than 4 hours long, and their effective working time averaged under 3 hours. That is hardly enough time to provide good coverage and quality services to the population served by a subcenter (see also Koblinsky et al. 1989).

LHVs. The study team observed one LHV for 45 working days. Her average workday was slightly less than 4 hours (236 minutes). During an average day she spent 160 minutes, or 68 percent of her time, on productive activities; 27 minutes, or 11 percent of the total time observed, on travel; and 49 minutes, or 21 percent of her time, on personal work or activities (Table 10.2).

Also shown in Table 10.2 is a more detailed breakdown of how the LHV's service-related time was spent. Although a major responsibility of LHVs is to provide supervision and guidance to ANMs, our data indicate that the LHV spent an average of only 41 minutes a day, or 26 percent of her total productive time, on supervisory work. Other activities that consumed a sizable proportion of her productive time were maintaining records (16 percent), office work (12 percent), and Child Survival and Safe Motherhood (CSSM) training (11 percent). Meetings at district headquarters, ICDS work, and interaction with workers also received a share of her attention.

Medical officers. Charged with overall management of the PHC included in the observation study was an administrative medical officer. The PHC had two other medical officers, a male and a female. During the absence of the administrative medical officer, the male medical officer assumed management responsibility. In the event that both of those medical officers were absent, the responsibility for day-to-day operations of the PHC was entrusted to the female medical officer.

To assess the work pattern and the time utilization of the three medical officers, the observation team adopted a work-sampling method. The work of the medical officers was sampled about three

TABLE 10.1
Time utilization pattern of ANMs at a rural PHC: Kolar District, Karnataka, 1994–95

Activity	Average number of minutes spent per ANM per day	Percentage of total work time spent per day
Service	161	65
Travel	47	19
Personal	39	16
All activities	247	100
(No. of ANMs observed)	(7)	
(No. of ANM-days observed)	(249)	

ANM=auxiliary nurse-midwife; PHC=public health center.

TABLE 10.2
Time utilization pattern of an LHV at a rural PHC: Kolar District, Karnataka, 1994–95

Activity	Average number of minutes spent per day	Percentage of total work time spent per day
Service/productive	160	68
Supervision	41	26
Record maintenance	25	16
Office work	19	12
CSSM training	18	11
Meeting at district headquarters	15	9
ICDS work	12	8
Interaction with workers	11	7
Participation in camps	11	7
Other	8	5
Travel	27	11
Personal	49	21
All activities	236	100
(No. of LHV-days observed)	(45)	

CSSM=Child Survival and Safe Motherhood Programme; ICDS=Integrated Child Development Scheme; LHV=lady health visitor; PHC=primary health center.

days a week, or 25 days during the entire observation period. In all, there were about 50 rounds of observation for each of the three medical officers. Their activities during those rounds are summarized in Table 10.3.

In addition to being in charge of the PHC, the administrative medical officer included in the study looked after another PHC in the subdistrict. He therefore had to spend considerable time traveling from one PHC to the other. He was trained in conducting tubectomies and was deputized by his superiors to several tubectomy

TABLE 10.3
Observed activities of medical officers at a rural PHC: Kolar District, Karnataka, 1994–95

Activity	Percentage of time, by type of medical officer		
	Administrative medical officer	Male medical officer	Female medical officer
Attending to patients	36	36	30
Interacting with other medical officers	—	—	2
Interacting with others	—	—	4
Away on official work	44	2	—
Personal work	10	4	—
Attending meeting at PHC	2	2	2
Administration	4	2	—
Conducting tubectomy at PHC	4	—	—
Resting	6	34	34
Not yet arrived at PHC	28	6	8
Just arrived at PHC	—	2	2
Absent or on leave	8	12	16
Other	2	—	2
(No. of workdays sampled)	(25)	(25)	(25)
(No. of observations)	(50)	(50)	(50)

PHC=primary health center.

camps in other PHCs to perform sterilization operations. Because he had received CSSM training, he was also asked by his superiors to provide similar training for LHVs and ANMs at the subdistrict headquarters. He was therefore absent from his PHC on official duty during 44 percent of the observation period, and was absent on personal work for another 10 percent of the time. This medical officer was observed attending to patients or conducting tubectomies for 40 percent of the time. Thus he spent less than 10 percent of the observation time on the management of the PHC, which was one of his primary responsibilities. The other two medical officers attended to patients between 30 and 36 percent of the observation rounds and were observed not to be engaged in any official duty during 34 percent of the rounds. These medical officers spent little or no time on activities related to overall administration or management of the PHC, even during the absence of the administrative medical officer.

Several medical officers who participated in our discussions had postgraduate qualifications and specialist training. Those specialists

were posted to PHCs where facilities to practice their specializations do not exist. While the specialist positions at community health centers and taluka hospitals remain vacant, a large number of specialists are posted to lower-level institutions. A female medical officer with specialist training in obstetrics/gynecology made the following comments during the discussions:

> I am posted to a remote PHC where there are no facilities whatsoever for conducting even normal deliveries. I can never handle obstetric emergencies or complicated deliveries here. The outpatient department has about 80 cases a day, the majority of them women and children. However, for most of the gynecological problems and obstetric complications, women go to taluka headquarters and consult a private gynecologist/obstetrician. Ironically, while I am rotting at the remote PHC, the taluka hospital does not have a qualified gynecologist. Furthermore, my PHC is not well connected to all the villagers in my jurisdiction. The people therefore prefer private doctors at the taluka headquarters.

An anesthesiologist stated that because he had been working in various PHCs for more than 10 years, he had lost touch with his area of specialization. Despite the existence of vacancies for anesthetists in several hospitals in the state, he had not been posted there. A similar account was given by a specialist in ears, nose, and throat. Most of the participants blamed corruption and nepotism for this problem. They charged that specialists who could pull strings with politicians and influential persons were posted to major hospitals in the cities and towns, whereas others had to waste their talents and expertise at rural primary health units.

Training

The type of training received by providers determines their proficiency and technical competence, which in turn affect the quality of services. Several workers reported that they were performing tasks for which they had not been adequately trained. When asked if they needed further training to improve the efficiency of their work, an overwhelming majority of the ANMs answered in the affirmative. The aspects in which they wanted to improve their competence were motivational aspects of family planning, insertion of intrauterine devices (IUDs), diagnosis and treatment of gynecological and reproductive

health problems, community organization, and treatment of common illnesses. Several LHVs said they would be interested in receiving advanced training, especially in community organization and curative aspects of health care.

In order to diagnose management problems, a questionnaire was administered to all the medical officers who participated in the focus-group discussions. The completed questionnaires revealed that most of the medical officers lacked capabilities in planning, supervision, direction, organization, and evaluation. Thus a need clearly exists for management training for the medical officers.

Supervision

The technical competence and performance of workers also depends upon the type of support and guidance they receive from their supervisors. ANMs are supervised by LHVs, who are supposed to make regular field visits and observe the quantity and quality of services delivered by them. An LHV supervises on average the work of six ANMs. During the focus-group discussions the ANMs reported that the LHV visited them in the field two or three times per month. Although the supervisory styles of LHVs varied considerably, almost all the ANMs perceived that the supervisory efforts of LHVs were directed mainly toward seeing that the ANMs achieved the targets assigned to them. Some of the ANMs mentioned that their supervisors were not interested in their problems or the quality of services. As one participant noted:

> The HV sister [a respectful way of addressing an immediate female superior] does not bother about how I carry out my activities so long as I complete my targets. If I talk about any field problems with her, the stock reply is: "Don't tell me all these things. You are supposed to achieve these targets. Have you done this? I am not interested about knowing how you do this—whom you contact and the like. What I want are results. Just deliver them and I will never bother you. If you don't, then I am not responsible for whatever happens."

Almost all the participants reported receiving little guidance from the medical officers, except during the monthly meetings, when the medical officers reprimanded them for not achieving their targets. In addition, the medical officers seldom visited them in the field. The

discussions revealed that although a majority of the ANMs appeared to discharge their duties conscientiously, the lack of close supervision by medical officers encouraged complacency, and many tended to visit outlying villages for only short periods—say, an hour—to meet their tour requirements.

The assessment of the amount of work performed by an ANM is usually based on the number of pregnant women she registers (three per 1,000 population a month is the norm), the number of antenatal visits she makes, and the number of blood slides she collects. Questions about the quality of MCH and other care she provides are rarely asked. For example, there is no mechanism for checking whether blood slides are actually collected from clients reporting fever or whether more than one slide is collected from the same person.

The LHVs who participated in the focus-group discussions reported that the medical officers never accompanied them on field visits. They also cited numerous instances in which the medical officers had not acted on LHVs' complaints about ANMs who, despite repeated warnings, showed no improvement. By not taking appropriate action (e.g., by issuing written warnings or show-cause notices) the medical officers caused LHVs embarrassment. The LHVs also complained that the medical officers showed no concern about the quality of services.

The LHVs offered a number of suggestions for making their own supervision more effective. Those suggestions included (1) improving the LHVs' mobility by providing transport facilities; (2) reducing the number of ANMs to be supervised by each LHV to about four, with a total population of roughly 20,000; (3) providing loans at subsidized interest rates to LHVs for the purchase of motorcycles; (4) avoiding frequent transfers of LHVs by retaining them in an area for at least four to five years; and (5) providing incentives to good workers by instituting rewards, and giving the rewards on the recommendation of the LHVs.

The medical officers described various mechanisms—such as monthly meetings, perusal of reports, routine and surprise visits—that they use for overseeing the work of their subordinates. However, the medical officers rarely visit the subcenters and outlying villages. They gave several reasons for their inability to undertake such visits on a regular basis. First, they have to spend most of their time at the PHC

outpatient department, seeing patients. If they fail to discharge their curative responsibilities, community members lodge complaints against them and bring political pressure to bear for their transfer. The villagers, according to them, are least interested in other preventive and promotive services. Other duties (postmortems, medico-legal cases, and general administrative work) leave them little time for outreach visits. Second, many PHCs do not have official jeeps for making field inspections. Vehicles in working condition are shared by many PHCs for immunization and family planning work. For these reasons the medical officers are not able to supervise all the PHC staff and must concentrate their efforts on those who are not able to achieve their targets.

Although an overwhelming majority of the medical officers we interviewed were not making field visits, there were a few exceptions. Several reported using their personal vehicles to visit subcenters near the PHC:

> My PHC covers a total population of 26,000 with nine subcenters. Almost all the ANMs stay in Bangalore and commute daily to their workplaces. There is no vehicle in our PHC, so I use my personal scooter to visit villages.

A female medical officer told us that she spent about four days per month supervising workers in the field:

> I normally make surprise visits. During my visits I find that about half the ANMs in my PHC do not make visits as per their advanced tour program. When I visit the village I usually contact the women in the household and inquire about the worker. I check the stencils on the wall [the workers are supposed to record the dates of their visits to the household on the stencil]. I also visit a few pregnant women and ask them about their antenatal checkup by the ANM. Whenever I receive complaints, I personally warn the concerned worker, and in some rare cases in which the worker continues to be insolent I report her behavior to the assistant district health officer.

All the medical officers remarked on the difficulty of motivating male workers to fulfill their duties. If the medical officers inquired about their activities, the male workers misbehaved and complained about the medical officers to their superiors. Because those workers are largely a nuisance, the medical officers ignore them.

As far as supervision of the medical officers by their superiors is concerned, although the assistant district health officer and district

health officer are supposed to visit the PHCs on a regular basis, such visits are rare and occur only during emergency situations, such as epidemics, or for inquiries into specific cases, such as maternal deaths. By and large, the performance of the medical officers is assessed during monthly meetings at the district headquarters.

Family Planning Targets

Workers are assigned targets for the acceptance of specific contraceptive methods. Those who participated in the discussions, irrespective of their level, were not sure what the basis was for these targets—whether it was the total population or the number of eligible couples in the catchment area of a subcenter. Workers voiced divergent views about the desirability of having targets. Most ANMs were opposed to targets. However, most supervisory personnel (LHVs and medical officers) felt that targets were essential for good performance, as they kept the workers on their toes.

The focus of review meetings is the achievement of targets. Fifty percent of all targets are now reserved for spacing methods. The achievement of those targets is judged by the number of condoms or cycles of oral pills distributed, not by the number of couple-months of protection. Workers often give an inflated account of their achievements, and it is difficult to find out whether the contraceptives have actually been distributed or used. According to the LHVs and medical officers, ANMs concentrate mainly on female sterilization because most women are favorably disposed toward tubectomy, saying that they want to have two children and then be sterilized. Given this preference, the achieved targets reported by the workers for spacing methods are probably greatly exaggerated.

With the Family Welfare Programme's primary emphasis upon female sterilization, little attempt was made by the workers to motivate males for vasectomy. However, in recent months the Department of Health and Family Welfare Services has issued directives to recruit cases for vasectomy. The supervisory staff are therefore insisting that each ANM should motivate at least one person for vasectomy each month.

Most of the LHVs felt that targets should be determined on the basis of remaining eligible couples, not on the basis of total population. In an area where most couples are already protected from unwanted pregnancies, it is difficult to achieve targets. Targets also tend

to reduce the quality of sterilization services, as illustrated by the following incident related by a medical officer:

> Yesterday I conducted a total of 44 tubectomies at a camp about 10 kilometers from our hospital. Can you imagine that during the entire duration of operations there was no electricity? Women who had been brought from distant villages by our staff had to wait for hours at the campsite. There was a complete blackout in the entire camp area, and in the makeshift operation theater a nurse held a flashlight overhead for five hours while I operated. Many times I shuddered at the prospect of mistakenly cutting a urethra or some other organ because I could not see very clearly what I was incising. But to whom do I tell all this? We have to somehow do these operations and achieve the targets, you see. That is an order from above. I am often amazed at the way tubectomized patients recover from complications, such as sepsis, that might have been due to our lack of drugs or even to errors during surgery. How long will I continue doing this against my conscience?

Incentives in the form of cash payments are still offered to those undergoing sterilization. These incentives are in kind and cash and are periodically revised. Even though the PHCs have adequate budgets for paying the incentives, several participants mentioned that some of the money was withheld by hospital staff and the balance was taken by the patients' husbands. In fact, the women undergoing sterilization do not receive any money. The ANMs receive no monetary reward when they succeed in motivating acceptors, but those who motivate the largest number of acceptors receive recognition by having their names published in the departmental newsletter.

Corruption

During the in-depth interviews and focus-group discussions, all categories of workers cited the issue of widespread corruption. The ANMs complained that their travel bills, arrears, and other claims were inordinately delayed unless they agreed to pay a portion of their claims as "speed money." A medical officer made the following comment:

> There is corruption at all levels in our department. We have to bribe at each and every stage, from clerk to higher officers, to get our salary and other claims passed. We are not supplied with stationery or registers and have to purchase them locally, spending from our own pockets. The expenditures incurred by us are never reimbursed.

Similarly, an LHV with more than two decades of experience recounted:

> In the past, although we had much less manpower, logistic support, service prerequisites, housing, etc., you will be surprised to learn that we used to work well. The main reasons for this are that there was a high level of motivation to work due to much less corruption, dedicated workers and officers, and proper material handling and accounting. Family planning targets were strictly adhered to, and efforts were made to promote all types of contraceptive methods, such as cervical caps [diaphragms], jelly/cream, oral pills, Gold Coin [condoms], IUDs, and sterilization. Though people had apprehensions about family planning, the health staff used to convince them to accept it and motivated them with so much zeal so that I remember people used to drop into our office and inquire about some method or the other and even advise others to have small families.
>
> However, over time the working standards deteriorated with the gradual erosion in the ethical standards of immediate supervisors and higher officials, which paved the way to the institutionalization of corruption affecting the Health Department. Today, to be corrupt is no longer considered reprehensible. Drugs and equipment in the health facilities are misused without any hesitation. The doctors are interested only in private practice and amassing wealth. Charging poor villagers money for services at the PHC is no more a taboo. The nexus between government doctors, drugstores, private practitioners, and other top officials is very strong. In this situation people have lost confidence in the government health care system. As a consequence, influential people in the rural areas have developed an aversion toward the health staff and hence avoid them. On their part, the health workers, in order to achieve their targets, promise impossible things and even spend money from their pockets to woo their clients for sterilization. No sooner is the client sterilized then the worker leaves her at her mercy and looks for another case for sterilization.

Discussion

Several studies have shown that an overwhelming majority of people use private sources of curative health care, and are willing to pay for the services rather than seek care available from government health facilities, which remain underutilized. A principal reason is the poor quality of care provided in much of the public sector. As a first step toward addressing this issue, it is important to identify the specific factors that contribute to the poor quality of services.

The quality of health and family planning services depends to a large extent upon the technical competency and motivation levels of their work force. These are in turn determined by how skillfully this human resource is managed and supported. This study, which has focused upon the perceptions and experience of grassroots and clinical health care providers in rural Karnataka, has highlighted a range of operational barriers that constrain the provision of high-quality services within the public sector. The analysis indicates that not only is there a shortage of key staff, but that existing staff are not optimally utilized. A primary contributing factor is low morale, a consequence of the inadequate availability of staff housing, drugs, equipment and supplies, and transportation, as well as lack of supervision and support from senior staff. A further contributing factor is widespread corruption in the department, which deters improvements in the coverage and quality of care.

The discussions revealed that although some ANMs found their job of providing health care to populations in need rewarding, many others were dissatisfied. Even those ANMs who were generally positive about their work felt frustrated at times because of the problems they faced. A primary indicator of low morale was the fact that a majority regretted having joined the governmental health sector. Many of the same problems mentioned by the ANMs were also found to be major sources of frustration among the LHVs and medical officers. Many staff believed that their abysmal working conditions prevented them from delivering their services in an effective and efficient manner.

The following statement by an ANM perhaps most aptly summarizes the constraints that clients and grassroots service providers face, respectively, in seeking and providing a high quality of services within the public sector's primary health system:

> I joined the department about three years ago and have been working in this area since then. During this period I have come to understand most of the problems of the people in my area. I find that the people, though poor, are nice. Their health needs are very basic. But we are unable to satisfy the needs of the people even in the villages I cover. I treat minor ailments such as headache, fever, and the like, and provide them with a few basic drugs. But the drug supply is utterly inadequate. Basic drugs such as chloroquine, paracetamol, and some analgesics are not available to me. With no medicines at hand, I have no recourse but to refer the patients to the PHC.

At the PHC, the story is no different. The patients who go there return complaining that they were not treated well and had a very bad experience with the staff members there. In this situation what can I do? What authority do I have to advise them on health and family planning matters? Even if I try to motivate couples to use family planning methods, they will not listen to me and I lose my credibility among the community. I feel sad to say that almost all the patients who were referred by me have had the same experience at the PHC. I urgently need an adequate supply of drugs because I cannot just talk with people, but must do something practical to earn their respect. If I approach my superiors with my problems, I am reprimanded and threatened with disciplinary action. So I suffer silently. My superiors are not at all bothered by my predicament. When there is any lapse, they pass the buck, and ultimately I am admonished for the faults of others.

Acknowledgments

I am extremely grateful to Dr. N. S. N. Rao and Mr. N. S. Sanath Kumar for their valuable assistance in moderating the discussions and for skillfully transcribing the audio recordings and translating them into English. Mr. Kumar also collected data from the providers under the Dynamics of Contraceptive Use Study, a part of which is included in this chapter. I am also grateful for the intelligent and diligent data processing and analysis by Mr. S. Ramaswamy.

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11 Barriers to the Quality of Care: The Experience of Auxiliary Nurse-Midwives in Rural Maharashtra

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The notion of quality in the public health system is becoming increasingly an issue for policymakers and planners in India. The Eighth Five-Year Plan identified the poor quality of family welfare services as one of the factors hindering the achievement of a lower birth rate (GOI, Planning Commission 1992, p. 333). More recently, the Indian government has outlined elements of a quality-oriented, or quality-focused, approach in the Reproductive and Child Health Programme (GOI, MOHFW 1996).

As a concept, quality is attuned to the needs and satisfaction of the users of health services. By that token, a quality approach lends itself easily to the fulfillment of desired outcomes, whether these are measured by better health status or improved demographic indicators. Such a result is possible only when quality efforts are sufficiently backed up by adequate and rationally distributed infrastructure and material resources. The relationship between quantity and quality is best expressed at the ground level. This chapter reflects these ground realities from the perspective of auxiliary nurse-midwives (ANMs) in Maharashtra.

ANMs are auxiliary workers employed by the district administration to occupy the lowest rung of the public health bureaucracy. The World Health Organization has broadly defined auxiliary workers as technical workers in a particular field who have less than full

qualifications (WHO 1961, p. 4). India's Second Five-Year Plan described the role of auxiliary health workers as supplementing the contributions made by doctors and other highly trained personnel for promoting preventive and curative health activities (GOI, Planning Commission 1956, p. 540). In their capacity as technicians, vaccinators, and assistant midwives, auxiliary workers support both the medical and the nursing professions. Therefore, auxiliary workers derive their legitimacy from their interactive relationship with professionally trained personnel, and they derive their effectiveness from the network of physical and professional support structures to which they belong.

The role of ANMs in India has changed markedly over the past four decades. ANMs were initially seen as assistants to midwives in maternal and child health (MCH) centers. All of this changed during the 1960s and 1970s. Family planning was integrated with MCH activities and projected as a program deserving the highest priority (GOI, Planning Commission 1968). The committee appointed to review the staffing pattern and financial provision of the Family Planning Programme, now called the Family Welfare Programme, recommended a system of targets and incentives and identified ANMs and other village-level workers as agents for the popularization of the program (Mukherjee Committee 1966).

Further discussions on integrating the functions of the primary health centers (PHCs) and of village-level health workers led to the formation of a full-fledged Committee on Multipurpose Workers in 1972 at the initiative of the Executive Committee of the Central Family Planning Council. The committee transformed ANMs and the host of malaria workers into multipurpose workers (MPWs). ANMs were now required to provide child health services and primary curative care to villagers. Thus ANMs have long ceased to play the peripheral role conceived for them at the time of national independence. Their heightened accountability and increasing visibility in the community have transformed them into key workers at the interface of health services and the community. The realization of this potential, however, is dependent upon support systems such as preparatory training, ongoing professional and interpersonal support, facilities, and equipment. This chapter reviews and evaluates the adequacy and quality of these systems.

According to national norms, a PHC should serve a population numbering 30,000 under the leadership of a medical officer (doctor). Even if a PHC has two medical officers, it still has only one doctor for 15,000 people. In view of the demands of their work, these doctors are hardly in a position to provide constant supervision to ANMs and male health workers posted at the subcenters. The problem is exacerbated by vacancies in the post of medical officer. This absence of a team leader effectively forces the ANMs to carry out the day-to-day work of the subcenter in an independent fashion. Thus, contrary to their status as auxiliaries, ANMs become de facto independent workers—quasi doctors—with neither the recognition nor the wherewithal necessary to play such a role in the health service and the community.

The situation of ANMs is rendered more complex because it incorporates a social dimension. Although both ANMs and male workers work under the jurisdiction of the district health administration, ANMs have several inherent disadvantages. First, although they are registered with the Nursing Council and their affiliation with the nursing profession provides them with a better legal status than male workers (who are unregistered), ANMs are only paraprofessionals by training. Therefore they do not enjoy the same status as fully trained nurses and find themselves marginalized within the council. Second, the cadre of ANMs is composed exclusively of women, unlike the nursing profession, which allows the participation of males, however marginal that participation might be (in 1990, only 4 percent of nurses registered with the Maharashtra Nursing Council were men). The inequalities rooted in ANMs' gender thus add another dimension to their subordinate status. Their affiliation to nursing carries a negative social image, in view of the specific requirements of their work. ANMs bear the additional burden of a reputation—a stereotype—that portrays them as immoral women, and this represents a major handicap when they work with rural communities (Jesani 1990).

The gender differential is also manifested in a division of labor between male and female workers. Whereas male workers are expected to assume an active role in controlling malaria, tuberculosis, and other communicable diseases, ANMs are principally responsible for MCH activities. One reason for this division of labor is undoubtedly the carryover effect of their previous functions. Its outcome, which draws its ultimate justification from the "natural functions" argument, is striking. On the one hand, the sex of the male health

worker and his use of laboratory slides and other "clinical" devices conspire to project his image in the community as a malaria "doctor" (Jesani 1990); on the other hand, the female worker is regarded merely as a "nurse *bai*" (*bai* being a common form of addressing women in the area). The difference is not merely a matter of semantics; the associations suggest that the male worker is more competent than his female counterpart.

In addition, unlike her male counterpart, an ANM is expected to maintain the subcenter. In fact, the female worker's responsibility with regard to the subcenter goes beyond hygiene. She is expected to stay there and run it on a day-to-day basis. This responsibility, however, which is not entrusted to the male worker, is not matched with administrative authority over the subcenter. As a result, the male worker does not report his activities to the female worker or even necessarily feel accountable to the subcenter.

We recognize that the axes around which ANMs' experiences revolve are the quality of their relationship with the community, their positioning in the occupational hierarchy of the health services, the nature and location of their health work (whether in a PHC or subcenter, a developed or underdeveloped district, an accessible or remote area), and their support mechanisms (professional, infrastructural, and personal). An examination of how these diverse elements interact with one another and how they influence the quality of care rendered by ANMs forms the core of this chapter.

Methodology and Sample

Our study is designed to generate an understanding of the socioeconomic background of ANMs, their role expectations, performance, satisfaction, and problems from the health system and the community. It focuses on ANMs not as an operational category, but as women in the hierarchical structure of the health services, and attempts to document the many ways in which the health system affects their lives and experiences.

The study is set in the four districts of Maharashtra that represent its major geographic divisions: Ratnagiri District in Konkan, Pune District in western Maharashtra, Beed District in Marathwada, and Wardha District in Vidarbha. These districts are also representative of particular levels of socioeconomic development as measured by

the Centre for Monitoring the Indian Economy's (CMIE's) index of socioeconomic development.[1] In the mid-1980s, Pune District, with an above-average index of 175, was considered to be an industrially advanced district; Wardha and Beed Districts, with average figures of 85 and 50, respectively, were moderately developed; and Ratnagiri District, with a below-average index of 35, was classified as a backward district (CMIE 1987).

With the purposive selection of three *talukas* (subdistricts) in each of these districts and two talukas in the tribal belt of Pune, and with the random selection of two PHCs per taluka from a list provided by the Directorate of Health Services, we identified 27 PHCs for participation in the study. Using an open-ended interview schedule, we interviewed all ANMs working at the PHC and each of the subcenters. The interview schedule was designed to generate qualitative data and to provide respondents with the opportunity to express themselves freely. In addition, we selected five ANMs in each district for in-depth interaction over a maximum period of three days. This enabled the female researcher, who accompanied ANMs on their rounds, to engage in lengthy discussions and witness health activities undertaken at the village level. She was aided by an interview guidebook designed to help generate the same range of information as the interview schedule but in greater depth. Data collection commenced in the winter of 1990 and lasted until midsummer of the following year.

The total sample listing consisted of 210 ANMs; however, only 183 ANMs could be interviewed. The remaining 27 were on leave (maternity or extended leave), in training, simply unavailable, or their posts were vacant. Among the 183 respondents, 68 were from Pune (42 from six PHCs in nontribal areas and 26 from three PHCs in tribal areas), 50 from six PHCs in Wardha, 36 from six PHCs in Beed, and 29 from six PHCs in Ratnagiri. Of these 183 ANMs, 41 were posted at their PHCs, 140 were in subcenters, and two were enrolled in training courses at the district headquarters.

Findings

Our analysis focuses first on the social and economic backgrounds of the ANMs, their training as health providers, and their professional and interpersonal support within the health care system. Subsequent sections examine the political and social conditions at the PHCs and

TABLE 11.1
Profile of ANMs: Rural Maharashtra, 1990–91

Socioeconomic indicators	
Mean age at beginning of training (years)	20.5
Mean age at first posting (years)	22.7
Marital status at first posting (%)	
Unmarried	69
Married	25
Separated, deserted, or divorced, widowed	6
Location of current posting (%)	
In native district	72
Outside native district	28
Rural versus urban background (%)	
Rural	66
Semiurban or urban	34
Community of origin (%)	
High caste	34
Middle caste	38
Scheduled caste or tribe	19
Christian or Muslim	9
Education (%)	
Some secondary or high school	10
Matriculation	67
Intermediate license, junior college, or graduation	24
(No. of ANMs)	(183)

Note: Percentages may not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

subcenters, the quality of their facilities, deficiencies in the performance of the ANMs, and problems caused by family planning targets.

Socioeconomic Background of the ANMs

ANMs are accepted into training schools at a young age (an average of only 20.5 years in our study) (Table 11.1). By the time they graduate from the training schools and receive their first posting in PHCs and subcenters, they are two years older (the mean age in our study was 22.7 years). More than two-thirds of all ANMs in our sample were single when they began working in the rural health system. Instead of using place of birth as the sole criterion for determining their backgrounds, we sought information on the places where they had studied to understand their exposure to rural or urban life. Accordingly, we classified ANMs who were born in rural areas and had their primary and secondary education in rural areas as having rural backgrounds. The rest, by default, were considered to have urban back-

grounds. Two-thirds of the ANMs had rural backgrounds, and a third were from semiurban or urban areas. The one-third of ANMs with urban backgrounds—mainly Christians and Muslims—had had little exposure to rural life before their recruitment. Therefore, the ANMs brought with them youth and inexperience, which made working in conservative and patriarchal social settings an especially daunting challenge.

To be effective, ANMs must establish a strong, credible presence in the community. Because they are seldom posted in their native villages (although nearly three-fourths of those in our sample were posted within their native districts), they are expected to build rapport with strangers. Nor is this a one-time expectation. Transfers, which occur every four years on average, ensure that ANMs spend a large part of their career attempting to establish amicable relations with largely unfamiliar communities.

Nearly three-fourths of the ANMs in our sample belonged to upper and middle castes, nearly one-fifth belonged to lower castes (scheduled castes and tribes), and fewer than one-tenth were Christian or Muslim. Middle-caste Hindus dominated our sample, accounting for 38 percent. Scheduled castes were overrepresented (nearly 18 percent as compared with 11 percent in the state, according to the 1991 census), and scheduled tribes were underrepresented (at nearly 2 percent as against 9 percent in the state). Similarly, within the group of minorities, Muslims were underrepresented (nearly 2 percent as against the 1981 census figure of 9 percent) and Christians overrepresented (nearly 8 percent as against the 1981 census figure of 1 percent). The representation of lower castes (chiefly scheduled castes) and upper castes, as evidenced by the caste variation among ANMs of different ages, has increased since 1980; the percentages of minorities (Christians and Muslims) and middle castes has correspondingly declined.

Two-thirds of the ANMs in our sample had completed their secondary education, a fourth had earned an intermediate certificate or attended a junior college, and the remainder had received some secondary education. Nearly a third of the sample had acquired additional training, mostly in clerical skills such as typing and stenography.

Although a majority of the ANMs came from middle- and upper-caste families, many came from somewhat precarious socioeconomic situations. At the time of recruitment, 64 percent of the ANMs

TABLE 11.2
ANMs' current economic role: Rural Maharashtra, 1990–91

Role	Unmarried ANMs		Ever-married ANMs		All ANMs	
	%	(No.)	%	(No.)	%	(No.)
Sole earner	8	(3)	22	(32)	19	(35)
One of two earners						
Earning more than husband or father	37	(14)	32	(46)	33	(60)
Earning as much as husband or father	3	(1)	7	(10)	6	(11)
Earning less than husband or father	16	(6)	26	(37)	24	(43)
No knowledge or cash income not earned	37	(14)	14	(20)	19	(34)
(No. of ANMs)	100	(38)	100	(145)	100	(183)

Notes: Percentages do not add to 100 because of rounding. Brother's income considered if father had died.
ANM=auxiliary nurse-midwife.

from rural areas belonged to landless and poor peasant families. Further, the monthly cash income of the ANMs' fathers averaged Rs738, the amount varying only slightly across the four study sites. Worsening the precarious financial position of the family were economic dependencies in the household at the time of the ANMs' recruitment: on average, three to four dependents per earner or productive family member. This was due in part to the fact that at the time of recruitment, one in four of the ANMs came from households in which the father either had died or was economically inactive.

Consequently, the ANMs' wages contributed important economic stability to their households. One-fifth were the sole earners in their families, and one-third of all ANMs commanded higher wages than their husbands, fathers, or brothers (in the absence of a father) (Table 11.2). The ability to alleviate the economic hardship of their households motivated many of these women to join the government service. Over time, the ANMs encountered numerous obstacles in their work but could not dare to contemplate a job switch. Their dependence on their current employers was heightened by a realization that avenues of alternative employment were limited.

ANMs did not find many options in the labor market prior to their employment in the Family Welfare Programme. Indeed, the role of choice in their decision to work as ANMs was small. The most favored occupation—one with fixed hours of duty, an attractive salary, job permanence, and a reassuringly large female representation—was teaching, which nearly three out of four perceived as a concrete

option after their matriculation but were unable to achieve. Moreover, four-fifths would have liked to pursue higher studies but were prevented from doing so by the fragile economies of their households. All these factors contributed to the vulnerability of ANMs and, consequently, their bargaining power vis-à-vis the health bureaucracy and the community.

Training

In the 1950s and 1960s, training courses for ANMs focused on midwifery and MCH, with 9 out of 24 months earmarked for those subjects. In 1973 the government integrated the various functions of the health services, changing the ANMs' role (Kartar Singh Committee 1973). Two years later, a government committee called for an expansion of their training to prepare them for multipurpose health work (Srivastava Committee 1975). In response, the Indian Nursing Council approved an expanded syllabus in 1977 (Indian Nursing Council 1977). However, the expansion in training requirements was not matched by a longer period of training. On the contrary, with the new syllabus came the decision to reduce the training period from 24 to 18 months, which some nurse trainers consider inadequate to prepare ANMs for work at the village level (Deodhar 1994). Compromises in the length and quality of training affect recruits' confidence and efficiency (Prakasamma 1989).

In Maharashtra the training standards received another setback in the 1980s, when vacancies in the public health system in rural areas generated an urgent demand for ANMs there. A frenzied attempt to recruit women for the job ensued. By the end of the decade, with 7,471 additional ANMs pressed into service, the cadre had swollen to twice its earlier size. This came about not by a redistribution of the 3,797 fully trained ANMs from the nongovernmental sector (who represented nearly one-half of all registered ANMs), but rather by expanded enrollments in training schools and by the induction of unregistered personnel. The unregistered ANMs accounted for 71 percent of all recruits during the 1980s (Iyer and Jesani 1995). This trend is reflected in our data. Three out of four ANMs currently employed were recruited during the period 1981–91. Among that group, 42 percent were still unregistered with the Nursing Council at the time of our interviews.

The chief architect of this trend was the state government. In 1982 it introduced a so-called Step Ladder Course, which further reduced the training period from 18 to 12 months and located nearly all its instruction in the field instead of the training school. Given the reduced standards of this course, it failed to win the immediate approval of the Maharashtra Nursing Council. Eventually the Nursing Council and the state government worked out a compromise: the Council agreed to register probationary workers provided they were put through another six months of training and examinations at the end of it, and the state instituted Step Ladder Promotional Courses at several training centers and began sending its workers to them.

This reduction in minimal training standards and its subsequent legitimization has had several far-reaching implications. First, by not providing enough time for students to assimilate the course material, it inadequately prepares young and inexperienced women for their jobs. Most ANMs trained under the Step Ladder Course complained to us that too much information had been imparted in too short a time. Second, ANMs' registration is now controlled by two agencies, the state bureaucracy and the Nursing Council. For ANMs, who are considered to be temporary workers until they are registered, the politics surrounding their formal acceptance by the health system only intensifies the insecurity that their deficient training has engendered. Their temporary status prevents them from receiving wages commensurate with their full-time work, and their eligibility for basic employee benefits is subject to the whims of the district-level administration.

Although the 18-month MPW course is superior to the Step Ladder Course, it places an unwarranted emphasis on hospital-based and nonnursing activities, even though ANMs' role requires an orientation to outreach work. A radical reorientation of the content and pedagogy of training is needed not only in the Step Ladder Course but also in the 18-month MPW course.

In sum, young and vulnerable women who aspire to become ANMs receive an unrealistic preview of their future career in the training schools. In shielding them from responsibilities, nursing schools fail to build trainees' confidence, a vital asset in unassisted health work, which requires independent decisionmaking. Moreover, their cloistered existence in the school does little to prepare them for work in unfamiliar, often uninviting, village communities. The threat of sexual harassment and abuse mars the careers of most ANMs, but

trainees are not informed of their legal rights or channels of redress. In the end, ANMs learn their lessons of village-level health work not in training schools, but while negotiating the numerous hurdles they encounter in everyday life.

Professional and Supervisory Support

Once ANMs are out of training schools, they need professional support to help them carry out the tasks assigned to them. This need is particularly acute in subcenters, where ANMs are deprived of the reassuring environment of a health campus. ANMs need to go through periodic retraining programs and ongoing, continuous supervision.

In the PHC setup, the medical officer and health assistants (male and female) are responsible for supervising ANMs as well as male MPWs, *dais* (traditional birth attendants), and community health volunteers (CHVs). Lady health visitors (LHVs), the female supervisors of ANMs, are no more than experienced paramedical staff who are given additional training for six months. Besides supervising ANMs, their duties include providing guidance to ANMs, strengthening their knowledge and skills, helping them to plan and organize their activities, making weekly visits to subcenters, and making home visits to observe and guide them in their day-to-day activities. Medical officers are also expected to make weekly visits to the subcenters and attend clinics organized there to examine and treat difficult cases. They are also expected to hold monthly staff meetings at the PHC to evaluate workers' progress and suggest improvements. During those meetings, they convey information from their meetings with the district health officer, inform staff about campaigns and surveys proposed by the district-level administration, monitor existing activities, and outline work schedules for the next month. Sometimes they accompany this with a short lecture on a health activity of their PHC.

Supervision should consist not merely of technical guidance but also of moral support and encouragement. In reality, this does not happen. In one of the PHCs, for example, ANMs belonging to the same caste as the medical officer were given preferential treatment; in another, the medical officer's wife, who was an ANM, did no work, but was not reprimanded. An ANM in Wardha was convinced that her medical officer was penalizing her for her assertiveness by refusing to cooperate with her. Once, she told us, he kept putting off per-

forming a tubectomy for a woman she had recruited. Another time, when there were no empty beds in the ward, he ordered her to bring a cot from home for one of her sterilization cases and after the operation refused to let her take it back home in the PHC's jeep. His behavior made her job especially difficult.

The hierarchical relationship between medical officers and ANMs erects barriers between the two functionaries that reduce whatever bargaining power ANMs might otherwise muster. An authoritarian medical officer in Wardha required his staff to stand at attention while addressing him. He discouraged staff unity by inviting tattling, which created an atmosphere of mistrust. ANMs were sometimes expected to help the medical officer in his private practice or to manage the clinic for outpatients with the compounder (medicine dispenser) in the medical officer's absence. An ANM who was separated from her husband reported the medical officer made sexual advances toward her, suggesting that they "have fun" at a lodge in the town. When she refused, he retaliated by issuing a memorandum critical of her performance. Countering these reports of harassment, however, were reports by other ANMs who gratefully acknowledged interventions by their medical officers that helped resolve difficult confrontations with community leaders. One of the medical officers even reduced an ANM's work load when she was undergoing a personal crisis.

Another criticism voiced by our informants was that their supervision consisted of little more than monitoring contraceptive-acceptor targets and making perfunctory inspections. Their supervisors treated the achievement of targets as the only indicators of performance, zealously emphasizing them in individual interactions and in monthly meetings at the PHC. This finding is echoed in other studies (Durgaprasad et al. 1989; IIHMR 1991; Nichter 1986). Indeed, monthly meetings often became trials at which ANMs were publicly reprimanded for not completing targets assigned to them. This pressure intensified toward the end of the fiscal year (in March). As a result, the ANMs were sometimes driven to falsifying their records to exaggerate their accomplishments. They expected to gain little useful information from the monthly meetings; in fact, few looked forward to them, and many set aside their routine health activities for one or two days before those encounters to complete their records.

The content of supervision ranged from active encouragement to indifference, non-cooperation, and even antagonism, depending

on the medical officer's attitude to nurses in general and individual ANMs in particular. Most medical officers issued reprimands more often than praise. Some ANMs received no supervision at all. Those in the more remote subcenters complained that the LHVs rarely visited them because they were put off by the prospect of walking long distances on their own. We came across some instances in which ANMs worked in close association with their health assistants, but these were the exception. In general, the intent, consistency, and quality of supervision left much to be desired.

Social Conditions and Vulnerability of ANMs

ANMs are posted either at a PHC or at any of the subcenters under its jurisdiction. Some 77 percent of the ANMs in our study were posted at subcenters, while 23 percent were working in PHCs, a distribution not markedly different from the average for the state of Maharashtra as a whole. PHCs tend to be located in more developed villages, whereas subcenters are located in remote villages or in outlying areas of larger villages. At the PHCs, ANMs work within the structure of a health campus or at least have a visible backdrop for their work in the community. This includes the presence of the health team, headed by a doctor, and health infrastructure with facilities for a daily outpatient department. In contrast, ANMs posted to subcenters work unassisted, receiving only transient professional guidance from the medical officer or female health assistant. The presence of a medical officer at a weekly clinic organized by the ANM at the subcenter, though mandatory, is a rarity. Therefore, rather than operate clinics at the subcenter building, ANMs tend to deliver health care to their communities through house-to-house visits. While taking stock of the activities conducted by ANMs on the day of our interview and the time spent on each activity, we found that slightly more than one-half (55 percent) of the ANMs posted at subcenters made home visits, compared with only one-quarter of those posted at PHCs (Table 11.3). Both groups of workers spent an average of four hours, or three-fifths of their working day, on house-to-house visits.

The mandated population size of an ANM's territory is 5,000 (3,000 in tribal and hilly areas). Among the ANMs in our study it was 4,565, somewhat less than the average of 5,168 for the state in 1991. However, most ANMs were without transport and had to walk long

TABLE 11.3
Time utilization of ANMs on the last working day prior to interview: Rural Maharashtra, 1990–91

Location and activity	ANMs %	ANMs (No.)	Average duration of activity (hours:minutes)	Percentage of average workday
PHCs				
Home visits	24	(10)	3:47	52
Travel	10	(4)	1:49	25
Outpatient departments or clinics	73	(30)	4:56	68
Record writing	22	(9)	1:40	23
Universal Immunization Programme camps	12	(5)	3:18	46
Deliveries	20	(8)	3:11	44
Meetings	7	(3)	4:50	67
Transporting family planning cases	—	(0)	—	—
Other activities	15	(6)	4:00	55
Not applicable or on leave	2	(1)	—	—
(No. of ANMs) and average workday		(41)	7:13	
Subcenters				
Home visits	55	(77)	4:10	62
Travel	41	(57)	2:03	31
Outpatient departments or clinics	15	(21)	4:05	61
Record writing	30	(42)	2:21	35
Universal Immunization Programme camps	16	(22)	3:58	60
Deliveries	6	(8)	4:09	62
Meetings	9	(13)	5:01	75
Transporting family planning cases	3	(4)	2:45	41
Other activities	17	(24)	2:34	38
Not applicable or on leave	5	(7)	—	—
No response	1	(1)	—	—
(No. of ANMs) and average workday		(140)	6:40	
All locations				
Home visits	48	(87)	4:08	60
Travel	34	(61)	2:02	30
Outpatient departments or clinics	28	(51)	4:35	67
Record writing	28	(51)	2:17	33
Universal Immunization Programme camps	15	(27)	3:51	56
Deliveries	9	(16)	3:40	54
Meetings	9	(16)	4:59	73
Transporting family planning cases	2	(4)	2:45	40
Other activities	17	(30)	2:51	42
Not applicable or on leave	4	(8)	—	
No response	1	(1)	—	
(No. of ANMs) and average workday		(181)	6:50	

Notes: Numbers of ANMs exclude those in training. The average duration of individual activities in each of the subgroups does not add up to the average work day because of multiple responses.

ANM=auxiliary nurse-midwife; PHC=primary health center.

TABLE 11.4
Provision of government accommodation: Rural Maharshtra, 1990–91

Type of accommodation	PHC ANMs	Subcenter ANMs	All ANMs
Government quarters	58	17	26
No government quarters	42	83	74
Total	100	100	100
(No. of ANMs)	(41)	(140)	(181)

ANM=auxiliary nurse-midwife; PHC=primary health center.

distances under the blazing sun, sometimes through desolate and dangerous terrain. One-third of all ANMs spent an average of two hours, or a third of their workday, commuting between their workplace and the villages under their charge. Among those assigned to subcenters, 41 percent spent that much time commuting, as compared with 10 percent among those posted at PHCs. This travel time was in addition to the time it took ANMs who lived outside the village where they were posted to reach the subcenter.

ANMs have numerous reasons for preferring not to live in their subcenters. Personal safety is a major concern, especially for unmarried and separated women, who are most vulnerable to sexual harassment. All ANMs, particularly those living in subcenter villages, require secure living quarters. However, a distinct bias favors ANMs posted at PHCs: 58 percent of ANMs posted at PHCs, as compared with only 17 percent of those posted at subcenters, were provided with government quarters, whether they occupied them or not (Table 11.4). Despite the shortage of living quarters, 59 percent of all subcenter ANMs were residing in the villages to which they were posted (data not shown), and three out of four of them were doing so without being provided with quarters.

In the course of their health work, ANMs are exposed to community politics and prejudices. As we have mentioned, the disadvantages already imposed on women by a patriarchal and caste-based social system are compounded in their case by the association, in many Indians' minds, of the nursing profession with pollution and disrepute. Because ANMs' work requires them to speak openly about contraceptives, to interact with men as well as with women, and to keep itinerant schedules, they are viewed as women of loose morals. This negative social image and their low status within the health system

make them easy prey to sexual harassment—a prospect that plagues them throughout their careers.

Unmarried or maritally disrupted women, who are believed to be unspoken for or who do not visibly display the protection of their families, are particularly vulnerable to sexual harassment. A number of the ANMs in our sample recalled how their social position in the community changed after their marriage. The lewd propositions and taunts that came their way before marriage stopped as soon as they had the protection of their husbands. This was particularly the case in Wardha District, where social relationships tended to be more feudal. One of the ANMs in Pune District, a young divorcee, also recalled an unpleasant incident involving a man who approached her late one evening for a medical certificate. It soon became apparent that he had an ulterior motive; had she not slammed the door shut against him, she believed he would have molested her.

Another kind of harassment emanates from village leaders, who demand special services, such as immunizations, at their homes. In one village, a *sarpanch* (elected village head person) kept a close eye on the ANM; another insisted that he be allowed to inspect her records; yet a third badgered the ANM because she did not dispense vitamin tablets (a difficult task since she had no supplies); and a fourth made unjustified complaints to the district health officer before ordering the ANM to leave the village and never return.

A third pretext for mistreating ANMs is their caste affiliation. In Wardha several ANMs from lower castes mentioned that they faced overt discrimination. One of them, a 36-year-old neo-Buddhist, reported that higher-caste groups who were dominant in the area gave her tea in broken cups, made her sit on a sack on the floor, did not allow her to touch them, and before her own eyes would throw away the medicines she gave them. Conversely, a few of the ANMs from higher castes in Ratnagiri were visibly uncomfortable dealing when people of lower castes.

When an ANM arrives in a new village, she usually undergoes a period of testing by certain groups in the community (often youths), who accost, tease, or even sexually harass her. One of the older ANMs in Ratnagiri recalled the problems she had in her first posting. Her clients would become agitated over the onset of fever after an immunization. When she approached them with family planning information and contraceptives, they would say: "Why are you bringing us

what you have left over?" or "Why don't you use them yourself?" An ANM in Wardha described the early days of her stay in the subcenter village to which she was currently posted. People would stone her house in a bid to drive her out, so that the previous ANM would return. Young boys would drive to the steps of the subcenter on their bicycles and frighten her and her young daughter. The harassment lasted for a year and a half.

The Quality of PHC and Subcenter Facilities

Ideally, PHCs should be staffed with two ANMs, one handling work within the PHC itself, and the other conducting outreach activities in the community. Disguised understaffing exists, however, the magnitude of which can be gauged from state-level statistics compiled by the Directorate General of Health Services. In 1991, Maharashtra's 1,650 PHCs, which should have had 3,300 ANMs, had a shortfall of 1,376, a figure more than 14 times higher than the number of vacancies reported in official statistics that year. Under such circumstances, ANMs, many of whom are forced to handle the jobs of two individuals, naturally feel overburdened.

Despite an increase in the number of PHCs during the 1980s, the provision of buildings to house the new centers came only later. In 1987 fewer than one-half of the PHCs had regular buildings, but by late 1993 nearly all of them did (GOI, CBHI 1988–94; GOI, DGHS 1988–94; GOI, MOHFW 1988–94). In contrast, only about one-half of the state's subcenters had regular buildings by late 1993. The PHCs and subcenters remain inadequately equipped and supplied. These problems affect the system's capacity to provide health care services of satisfactory quality, and ANMs bear the brunt of those problems.

To perform their work, the ANMs assigned to subcenters require not only secure living quarters but also a well-constructed building and essential equipment and supplies. Their physical working conditions fall far short of that ideal. Fewer than one-fourth (24 percent) of the ANMs posted at subcenters in our study had a specially constructed building. Thirty percent either had no subcenter space at all or had to conduct health activities from their homes, and the remainder worked in a rented room or in space provided by the *panchayat* (village council) or local government (Table 11.5). Of the 118 structures used for subcenter activities, one-third were poorly constructed.

TABLE 11.5
Subcenter facilities, essential furniture, and basic equipment: Rural Maharashtra, 1990–91

Facilities and equipment	Percentage of ANMs reporting
Facilities	
Rented room/other government premises	46
Specially constructed building	24
No subcenter space	16
No separate building; run from ANM's house	14
Basic equipment or furniture	
Stove	79
Fetoscope	64
Weighing machine	64
Chair/stools	45
Table	39
Autoclave	35
Cupboard	32
Delivery/examination table	31
Bench	29
Stethoscope	21
Blood-pressure instrument	16
(No. of ANMs posted at subcenter villages) (140)	

Note: Percentages do not add to 100 because of multiple responses.
ANM=auxiliary nurse-midwife.

More than a quarter of them lacked electricity, and as many as 70 percent did not have a piped water supply (data not shown).

Although subcenters constructed by the government were better than makeshift rental arrangements, they were usually located at the village periphery or outside the protection of the main village cluster. ANMs were afraid to live in those structures unless they had their families with them. Rented rooms that served as subcenters were located within the villages but were often dark and dingy, and most offered no privacy to the ANM or her patients.

The subcenters were not adequately or uniformly equipped. For example, a common item is the stove, because it has many general as well as health uses. Yet, out of the 140 ANMs posted at the subcenters, one in five lacked this basic amenity. Apart from the stove, the only other instruments we found in most of the subcenters were a fetoscope, either as part or independent of a delivery kit (64 percent), and a weighing machine (64 percent). Certain essential instruments for preventive and curative care were found in fewer than half of subcenters. These included the autoclave (35 percent), stethoscope (21 percent), and instrument for measuring blood pressure (16 percent).

Essential items of furniture such as chairs or stools (45 percent), cupboards (32 percent), a delivery/examination table (31 percent), and a bench (29 percent) were also found in a minority of instances.

These inadequacies affected the ability of ANMs to work with any degree of confidence in the community. Three-fourths of all ANMs in our study had multiple complaints about their working conditions. Besides being overburdened, they cited the inadequacy of facilities, equipment, and medicine stocks. They also complained about the lack of proper accommodation and inadequate transport facilities.

ANMs are expected to conduct at least half of the deliveries in their areas; but, by our estimates, ANMs based at PHCs and subcenters conducted no more than 19 and 13 percent of deliveries, respectively. They attributed their inability not only to their sense of inadequacy, due in part to their deficient training in this area, but also to the limited facilities available to them and their having to function in isolation. That is why two-thirds of the deliveries they attended took place in the women's homes, in most cases under far from ideal conditions.

Having to leave their subcenters for this work exposed them to sexual harassment. Stories of the experiences of ANMs who had been drawn out of their homes at night under false pretenses, only to be molested or raped, spread among ANMs and were lodged in their collective experience. As a result, the ANMs tended either to shun health work after 8:00 p.m. or to live outside their assigned villages so that they would not be expected to make night visits. Many ANMs refused to budge after dark unless their attendants or CHVs could accompany them.

Divergent Health Priorities

The ANMs in our study, including those posted at PHCs, conducted an estimated 15 percent of all deliveries in their areas, fulfilled 64 percent of their targets for sterilization and 65 percent of their targets for intrauterine device insertions, and reported that they were providing curative services to 68 percent of all those who approached them. If ANMs could do all the work expected of them, they would indeed be regarded as important workers at the village level. The reasons why they cannot do this lie in their assigned priorities, their resulting allocation of time, and the highly deficient support mechanisms available to them.

The Family Welfare Programme has steadily overshadowed all other programs and services of the primary health care system. Changes in health policy affect ANMs directly. They are expected to implement health policies through their activities at the village level. By virtue of their position in the community, however, ANMs are faced also with demands for other health services by the people they are supposed to help. The government and villagers do not always share the same priorities, and, in trying to accommodate both, ANMs often end up caught in the middle.

We asked the ANMs we surveyed to rank eight health activities from the perspective of the government and the people. Their combined ranking reveals a conflict between the community members, whose highest priority is curative services, and the government, whose perceived priority remains family planning.

Government priorities directly affect budgetary and financial allocations, which in turn affect the provision of equipment and supplies. As a result, PHCs may experience gross deficiencies in essential drugs but are invariably well-stocked with contraceptives (ICMR 1991). This deficiency not only limits the ANMs' ability to provide tangible services at the point of contact with the community but also reduces their credibility. "You don't give us medicines when we need them; why should we listen to you when you tell us about family planning?" was a refrain that the ANMs in our study were obliged to hear over and over again. To rectify the communities' perception of their role as superfluous and self-serving, they placed great emphasis on their curative work and less emphasis on their function as midwives.

ANMs attempted to honor as many requests for medicines as possible in an effort to gain acceptance in the community, a practice that has also been documented elsewhere (Paul, Singh, and Sharma 1988). Every year subcenters in Maharashtra receive an annual provision of drugs and supplies valued at only Rs3,000. Despite that inadequate level of support, ANMs posted at subcenters and PHCs in our study reported that they were able to provide curative care to an average of two-thirds of all clients who approached them.

Pressed for medications, the ANMs referred patients to the PHC, rationed their stocks by giving patients medicines in smaller doses than indicated, or simply turned them down. A few were driven to dispensing innocuous drugs or placebos to satisfy clients. Others pur-

chased and dispensed medicines in a private capacity. Inadequacies in drug provision—and ANMs' deficient training in drug use—thus threaten the rationality and quality of health care available from PHCs and especially from subcenters. This conclusion is reinforced by findings reported by Phadke and colleagues (1995) in Maharashtra and by Paul, Singh, and Sharma (1988) in Uttar Pradesh.

ANMs told us they hoped that their curative activities would have a positive effect on their family planning performance. To increase their credibility, most (64 percent) conducted antenatal care, deliveries, postnatal care, and immunizations (Table 11.6). And through all of this, ANMs continued to promote the economic benefits of small families (mentioned by 52 percent of the ANMs) or the health benefits to the women and their children of limiting their family size (mentioned by 39 percent). Accompanying these strategies were a host of monetary and material incentives they offered clients, including the provision of meals and snacks to the women and the relatives who accompanied them to the PHC, medicines and injections during and after sterilization, and a personal monetary contribution to augment the government's monetary incentive of Rs130 for each sterilization.

Interestingly, ANMs were reluctant to admit that they relied on incentives; a mere 16 percent did so at first. It was only when we asked them to outline the motivational strategy they had employed in their last case that they admitted having offered incentives. Nearly two-thirds had given their last client food, 57 percent had bought her medicine or an injection, 37 percent had topped up the regular motivation fee offered by the government with their own contribution of approximately Rs200, and nearly a third had reimbursed the woman for her travel expenses.

The Burden of Family Planning Targets

Since their institution, family planning targets have become yardsticks by which ANMs are judged and accordingly rewarded or punished. The rewards consist of praise at monthly meetings of PHC staff, a cash prize, or a certificate from the district health officer. Punishment includes the withholding of an ANM's salary (sometimes for three months at a stretch), a reprimand in the presence of other staff at a monthly PHC meeting, a memorandum criticizing the worker's per-

TABLE 11.6
Strategies and material incentives employed by ANMs to motivate women to use family planning methods: Rural Maharashtra, 1990–91

Strategies and incentives	PHC ANMs	Subcenter ANMs	All ANMs
Motivational strategy (% of ANMs using)			
Building credibility through other health services	63	64	64
Promoting the ideal of a small family for nation's development	46	54	52
Advising women to have fewer children to protect their health	37	39	39
Building rapport, explaining things in identifiable terms	42	34	35
Providing monetary and other material incentives	7	19	16
Promoting the ideal of gender equality	5	9	8
Excluding men, targeting only women for motivation	5	5	5
Other methods	2	1	1
Motivation not required	5	0	1
Not stated	7	0	2
Incentives given for sterilization (% of ANMs offering)			
Meals or snacks for patient and relatives during stay	62	66	65
Medicines or tonics before, during, or after acceptance	57	57	57
Augmentation of sterilization incentive fee	29	39	37
Reimbursement of travel expenses	33	30	30
Other	10	7	7
(No. of ANMs offering incentives)	(21)	(74)	(95)
(Total no. of ANMs)	(41)	(140)	(181)

Note: Percentages do not add to 100 because of multiple responses.
ANM=auxiliary nurse-midwife; PHC=primary health center.

formance, and on rare occasions, termination of employment. ANMs tend to receive more punishments than rewards.

Targets, we were informed, worked wonders for some workers in more remote districts. Recruitment of one or two family planning acceptors often resulted in a desired transfer or extraordinary favor from the district administration. This saw several government servants—teachers, *gram sevaks* (village clerks), and *talatis* (revenue settlement officers) joining the fray and competing with ANMs for clients. Because they had no quotas to fulfill, however, they could afford to be extravagant. Some offered women as much as Rs400 to agree to have a tubectomy. This set up a market economy at the village level, and women began demanding a proper price for their impending sterilization. ANMs were now expected to make more out-of-pocket payments. They offered travel expenses for the women and their accompanying relatives in addition to food during the women's stay at the PHC. Some offered a six-month course of vitamin B complex injections following the operation. The most extraordinary request came

from one woman's husband, who asked the ANM to take his wife's place while she was away at the PHC.

Targets distort what might otherwise become mutually beneficial relationships between ANMs and women in the community. This problem is particularly acute in areas ridden with competition for family planning acceptors. Many of the ANMs in our study inculcated a narrow perspective on women's health, regarding women primarily as reproducers and targets for acceptance. This view often contributed to the alienation of ANMs from the community.

Male leaders and youths used the ANMs' anxiety about meeting targets as leverage to establish political control over them or as a pretext for sexual exploitation. In one area, a gram sevak promised to recruit acceptors for an ANM if she would accompany him to a lodge in town. In another instance, the police *patil* (village official appointed to oversee law and order) wanted her to provide his sexual partner, an unmarried woman who had no children, with a Copper-T. When the ANM refused, he complained about her to the district health officer. An unmarried ANM recounted how the village sarpanch had approached her for an injection that would cause his pregnant sexual partner to abort the fetus. Since ANMs were not supposed to conduct abortions, she refused. He then complained to her supervisor. Instead of supporting her, the supervisor explained her behavior by saying that because she was unmarried, she did not know about such an injection. The supervisor even offered to administer the injection herself. The sarpanch decided that the village should henceforth have a married ANM and demanded that the ANM who had refused his request be transferred.

Despite many negative experiences, caused in part by their association with family planning targets, many ANMs were unwilling to denounce the system of targets. One-third of them believed that removing targets would harm other aspects of their work (Table 11.7). An equal proportion, however, favored the removal of targets, and one-fifth thought that the removal of targets would have no effect, either negative or positive, on their work.

The reason mentioned by most of those who took a negative view of removing targets was that workers would be tempted to neglect other health-related duties, because many ANMs tend to carry out non–family-planning tasks with the expectation that they will have a positive impact on their family-planning performance (that is, target

TABLE 11.7
ANMs' views on the effect of removing family planning targets: Rural Maharashtra, 1990–91

Effect of target removal	Percentage having specified view
Positive effect	33
Negative effect	33
No effect	20
Positive and negative	7
Cannot say	2
Other response	1
Not applicable (targets not given)	2
No response	3
Total	100
(No. of ANMs)	(181)

Note: Percentages do not add to 100 because of rounding.
ANM=auxiliary nurse-midwife.

TABLE 11.8
ANMs' views on the hypothesized effects on health work of the removal of targets, Rural Maharashtra, 1990–91

Hypothesized effects	Percentage of ANMs having specified view
Negative	
Other health activities will suffer	44
ANMs will suffer from a lack of direction	30
Family planning work will suffer or population will increase	18
There will be no substantial difference	23
Positive	
Quality of family planning work will improve	21
Harassment, tension, expenses will diminish	20
Other health activities will improve	17
Relationship with community will improve	10
Relationship with colleagues will improve	2
Not applicable or no response	5
(No. of ANMs)	(181)

Note: Percentages do not add to 100 because of multiple responses.
ANM=auxiliary nurse-midwife.

fulfillment); 44 percent of the ANMs gave this reason (Table 11.8). This argument found ideological resonance among 30 percent who believed that they would lose a sense of purpose and direction. About 18 percent thought that the removal of targets would lead to large increases in the population. One-fifth of the ANMs, on the other hand, felt that the quality of their family planning work would improve. Nearly as many

believed that the removal of targets would reduce the harassment aimed at them, alleviate their tension, or lower their expenses. Seventeen percent felt optimistic that their other work would improve. One in 10 mentioned that their relationship with the community would improve.

Thus, although activities related to family planning were an onerous burden for many ANMs, not all of them were willing to criticize the program. Nor were all of them willing to discard acceptor targets, despite the problems they created in their working lives. Their induction and subsequent socialization into the existing health service program had given them a narrow view of their role and responsibilities in the health of rural communities.

Conclusion

The achievement of a high standard of care presupposes a concern for quality assurance. Integral to quality assurance is the setting of optimal standards for service delivery and outcomes. These concerns have never been adequately emphasized in India's public health system. Instead, the achievement of targets has, until recently, been an obsession at all levels of the health bureaucracy. The removal of targets may be seen as a first step in the establishment of a quality framework. However, this will have to be backed up by uniformly available and accessible health institutions and practitioners. Some of these preconditions have not been achieved in India.

First, the quantitative expansion of the health system has been a bureaucratic exercise; it has been created on paper and only later provided with personnel and infrastructure. By the time the expanded infrastructure attains an optimal level of performance, it is thoroughly discredited among the people whom it is meant to benefit. Health workers then require years to change people's negative opinion about the services provided.

Second, selective health care has been the single most important cause of the low utilization and negative image of the health care services. In rural areas, where people have few alternatives, selective health care has meant ignoring people's basic health needs. The Indian program's overemphasis on family planning, coupled with the neglect of basic curative care, has created the impression among the populace that the government is interested in little more than meet-

ing its family planning targets. Paradoxically, the extremely high priority assigned to those targets has worked to the detriment of the public health system as a whole.

Third, it is difficult, if not impossible, to achieve a high quality of health care without having basic facilities for delivering it. Unfortunately, the government's rural health care system is woefully deficient in basic physical standards of care, even though its own departments and agencies have laid out guidelines for them. This is one of the reasons why the government has no moral authority to enforce minimal standards of care in the unregulated and often irrational private sector. The deplorable conditions that exist in many PHCs and subcenters require tremendous effort on the part of the health workers to provide even minimal care.

A fallout of poor public health services has been the increasing dependence on home-based care. In contrast with the situation in developed countries, home-based care in India does not complement high-quality institutional services that can be relied upon in emergencies. Rather, those who are driven to home-based care have hardly any support systems—such as transport and communication—that they can call upon in emergencies or when they need specialized referral care.

Fourth, ANMs are currently expected to function without close and continuous supervision from medical and nursing professionals. It is ironic that whereas institution-based paramedical workers and auxiliaries in urban areas are precluded from an independent role in health care delivery, rural auxiliaries, with virtually no medical supervision, hospital facilities, or means for transporting patients during emergencies, are expected to perform above their level of training and without the assistance of medical professionals. The role of auxiliary workers in health care and the quality of care expected from them need to be carefully reconsidered and possibly redefined.

Finally, no health worker, let alone an ANM, can meet work expectations in an atmosphere ridden with insecurity and anxiety. The fact that the health care system is insensitive to concerns about their security, and that some superiors contribute immeasurably to such insecurity, undermines their ability to perform at optimal levels. An unsafe and inhospitable workplace does little to promote quality assurance.

The emerging concern among policymakers about the quality of health care at PHCs and subcenters, though welcome, is belated.

Health workers have complained in various ways about the problems they face in the workplace. The present concern for quality must now be translated into practical programs to alleviate their problems. Otherwise, the objective of making quality an integral part of the public system is likely to remain a distant goal rather than become a concrete reality.

Acknowledgments

The study on which this chapter is based was conducted at the Foundation for Research in Community Health, Mumbai, with financial assistance from the Danish International Development Agency (DANIDA). We are grateful to Audrey Fernandes, Seema Hirani, and Sandeep Khanvilkar, fellow researchers, not just for participating in the study but for shaping its contours. We are also thankful to our colleague Sunil Nandraj at the Centre for Enquiry into Health and Allied Themes (CEHAT) and to Michael Koenig for their valuable comments on an earlier draft of the chapter.

Note

1 The CMIE index, which is a rough proxy indicator of the gross national product, is a weighted average of indicators for three sectors of the economy: the agricultural sector (per capita value of output of 26 major crops and per capita bank credit for agriculture); the mining and manufacturing sector (number of mining and factory workers per *lakh* [100,000] population, number of household manufacturing workers per lakh population, and per capita bank credit for the manufacturing sector); and the service sector (per capita bank deposit, per capita bank credit to services, percentage of the population literate, and percentage of the population urban).

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12 The Quality of Family Planning Services in Uttar Pradesh from the Perspective of Service Providers

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There is a growing realization in India that unless the quality of services in the public sector is improved, acceptance and continuation of contraception to the desired levels may not be achieved.

It is important to understand the social, physical, and administrative environment in which the grassroots components of a health program function and provide services. Bruce (1990) created a framework that conceptualizes this environment as program effort consisting of policy and political support to the family planning program, resource allocation, and family planning program management and structure. Given the shortage of essential resources and the problems with facilities in many areas of India, providing a high quality of services is a challenging task. In a complex and bureaucratic system like the Indian Family Welfare Programme, workers at the grassroots level have limited opportunities to discuss and resolve their problems. They often neglect their duties by not visiting field areas, not attending clinics, providing only a limited range of services, or meeting only some of the goals set by higher officials. Foremost among these goals has been the achievement of method-specific targets, particularly for sterilization. To improve the program's services, program managers must take into account not only the perspectives of users, but also the perspectives of providers.

In this chapter we present health workers' perspectives on the quality of program services, specifically the readiness of health facilities to provide high-quality services and the obstacles that work-

TABLE 12.1
Study coverage: Sitapur District, Uttar Pradesh, 1995

Qualitative approaches used to collect information from different levels of staff	Number
Focus-group discussions	
Medical officers (doctors)	2
LHV	1
ANMs	2
In-depth interviews (ANMs)	54
Informal discussions	
Chief medical officer	1
Deputy chief medical officers	2
Medical officers (doctors)	8
Observations	
PPC	1
CHCs	2
PHCs	10
Subcenters	16
Camps	3

ANM=auxiliary nurse-midwife; CHC=community health center; LHV=lady health visitor; PHC=primary health center; PPC=postpartum center.

ers face in performing their jobs. We discuss providers' views on the need to offer a range of services, to inform clients about available contraceptives, and to follow up acceptors. We also examine, from the providers' perspective, the consequences of over-emphasizing family planning targets, particularly sterilization targets, for the quality of services.

Data and Methodology

In 1995, using a brief guideline, we conducted a series of focus-group discussions, in-depth interviews, and informal discussions with 70 health providers in Sitapur District, Uttar Pradesh. The research team also visited a number of primary health centers (PHCs) and subcenters to assess their facilities, logistics, equipment, and staffing levels. During those visits we observed interactions between clients and providers, and, wherever possible, tape-recorded the observations. Each member of the research team—an anthropologist, a gynecologist, and a sociologist—conducted about two months (January to March) of intensive fieldwork collecting data for the study. Table 12.1 lists the groups who provided our quality-of-care data.

Sitapur District is located in central Uttar Pradesh, at a distance of 66 kilometers from Lucknow, the state capital. The total popula-

tion of the district, as enumerated by the latest census, was 2.6 million in 1991, comprising 2 percent of the state's population. Only 12 percent of the district was urban, compared with 20 percent for the state as a whole. One-third of the district's population is scheduled castes. Only 17 percent of adult women were literate, compared with 25 percent for all of Uttar Pradesh. Sitapur District is characterized by very high fertility (a total fertility rate of 5.6 children per woman) and low contraceptive use (15 percent of married couples). Unmet need for contraception is estimated to be as high as 42 percent of all couples (SIFPSA and the Population Council 1994).

The public health facilities in rural areas of the district consist of 19 block-level PHCs and community health centers (CHCs), 41 additional PHCs, and 396 subcenters. Included in the present study are five block-level PHCs, five new PHCs, and 54 subcenters that fall under the administrative jurisdiction of a deputy chief medical officer.

Findings

In the sections that follow, we quote extensively from our informants. In translating their comments into English, we have attempted to preserve the flavor of their speech, editing their statements only for clarification or brevity.

Problems of Covering Assigned Work Areas

Of the 54 auxiliary nurse-midwives (ANMs) interviewed, only 24 (44 percent) were residing in subcenter villages. The rest were staying either in larger villages outside their work areas or in nearby towns or cities. Many were living in the town of Sitapur, the district headquarters. The distance between nonresident ANMs' homes and their subcenter clinics ranged from 5 to 26 kilometers. Most of them commuted from home to their subcenters by bus, motor scooter, bicycle, horse cart, or truck. Most traveled by foot from the subcenter to other villages in their work areas, but in cases where the villages were located in remote areas, the ANMs used a bicycle, motor scooter, or cart to reach them. Several ANMs reported hiring local boys to take them by bicycle to the remote villages.

During the focus-group discussions and individual interviews, the ANMs said they preferred to reside in nearby towns or large vil-

lages because of the lack of educational facilities for their children in the smaller villages, and also for security reasons. The lack of adequate transportation and their meager travel allowance made it difficult for them to cover all the villages in their work areas. Covering each village on foot was difficult and time-consuming, and spending their own limited resources for official work was also problematic. Although many ANMs maintained that they tried to visit all the villages in their work areas, our observations and discussions with villagers indicated that most of the ANMs covered only a few of the more accessible villages. More distant villages were either completely neglected or visited only during the months of December through March, when the search for sterilization cases was in high gear. As one of the ANMs admitted:

> Only during camp I visited my entire work area once, along with my husband, on motorcycle.

Two other ANMs commented:

> Out of 24 villages in my work area, I am hardly able to visit eight to 10 villages every month, 10 to 12 villages once in two months, and the remaining three to four villages are visited less often (once in three or four months).
>
> Two to three villages are very far (five or six kilometers) [away] and also not safe enough to go [there] alone. During family planning camps I told the doctor that I was not able to visit those areas. He put two more ANMs on duty to help me so I could cover those areas with them.

A lady health visitor (LHV), who supervised some of the ANMs, stressed the problems of distance, mobility, and safety faced by the ANMs in covering their work areas:

> Villages are scattered at a distance of four to five kilometers. All the burden is on her [the ANM] alone. There is absolutely no security for a female health worker. Even the *gram pradhan* [elected village leader] cannot be trusted. There has been a case of rape by him. Under such circumstances even if an ANM fails to do her duty at times or loses interest in her work, I personally do not blame her.

Nearly one-fifth of the ANMs we interviewed had responsibility for 6,000 or more inhabitants (Table 12.2), as compared with the prescribed norm of 5,000 per subcenter. A majority (61 percent) were responsible for six to 15 villages, but nearly one-fourth had to cover

TABLE 12.2
Number of villages and combined populations in areas assigned to ANMs: Sitapur District, Uttar Pradesh, 1995

Coverage	Percentage
Number of villages assigned per ANM	
1–5	17
6–10	24
11–15	37
16–20	9
21+	13
Total population size of assigned work areas	
≤5,000	54
5,001–6,000	26
6,001+	18
Don't know	2
(No. of ANMs interviewed) (54)	

ANM=auxiliary nurse-midwife.

16 or more villages spread over a radius of at least five to six kilometers. Given the inadequate transportation and other field problems facing the workers, covering all the villages in their assigned areas appears to have been a difficult task. Most of the ANMs confessed during their interviews that they did not visit remote villages.

The health workers also hesitated to work in certain areas because of the difficulty of working with some caste or religious groups. Such groups, they explained, did not approve of family planning and therefore did not want to listen to or cooperate with the workers. According to the ANMs, however, the situation is changing and the ANMs have started gaining acceptance in those areas. As one of the medical officers put it:

> We will have to touch these pockets through our workers. We are also trying our best. [The] situation is changing now. Earlier, water was also not offered to workers in these pockets, so they were not willing to go [there] in summer. But now TV, radio, and media communication are changing their [the villagers'] views. We are also trying to reach them. Besides, we have started a link person's scheme for every 20 households. These link workers help ANMs in their various activities.

Both the ANMs themselves and the doctors we interviewed mentioned the fear of theft, robbery, and sexual violence as a reason for the ANMs' unwillingness to live in their work areas and for not covering all the villages assigned to them. According to the respondents,

each ANM had one or two hamlets where she would not dare to go without a male escort, even during daylight hours. As one medical officer-in-charge told us:

> [The] feeling of insecurity among ANMs is tremendous. So she [an ANM] always wants [a] companion. This further hinders the work, as she is dependent on the other person and has to work at his convenience. During [the] sterilization drive, often they take their husbands or someone else to escort them and cover all the areas.

Talking about the widespread insecurity in the area where he worked, one medical officer described his own situation:

> I came here from a district hospital about one and a half years back. I wanted to do things in a better way, [to] understand problems, and [to] solve them. So when I was posted here, I came along with all my luggage and [my] family. Once, when I went to Lucknow for training, my wife was alone at home. Our house was looted in the night. Now my wife is not willing to stay here. But if I do not stay here, how can I expect my junior staff to stay here? So I am staying here with my family despite their opposition.

He added:

> I met the district magistrate, police superintendent, etc., and appealed to them for a license for a rifle. I said, "If you get me a license for a rifle, then I will stay here." They have agreed to give me a license. But who [else] will take all these risks? My children are all terrorized in the evening. Even though the staff is local, they themselves are afraid.

Conditions of the Public Health Facilities

Proper logistic support is crucial if providers are to offer good-quality services. Our visits and discussions with doctors revealed that only a few subcenters were situated in government-owned buildings. Most of the clinics were housed in rented or donated buildings, many of which were inadequate for that purpose.

A medical officer-in-charge of a subcenter commented on the government's policy of acquiring land for clinics:

> The government spends [money] on buildings but not on land. Land in villages would be available for a couple of thousand rupees. Instead of spending a few thousands, the government wants free land. [In some areas] free land is available [only] near the graveyard. Nei-

> ther is the ANM willing to stay there, nor is the client willing to visit the center or deliver her child in the graveyard. If the government would spend a few thousand [rupees] extra and purchase land in the center of a village, then ANMs would stay there.

The absence of a proper space for holding clinics provides a good excuse for many ANMs not to open the clinics or to provide proper care, such as conducting physical examinations of patients. Our field visits revealed that most of the subcenters were functioning in a single small room with no electricity or toilet facilities. Drinking water, however, was available in all the villages.

Referring to the lack of proper space for holding clinics, an ANM remarked:

> I do not have any proper place to sit or to keep instruments. Where do I ask them [patients] to sit or where do I examine them? [How] can I conduct a regular clinic in such a situation?

Another complained:

> We get only 50 rupees per month for renting a house [to use as a clinic]. Nowadays how do we get a two-room house for 50 rupees? Why cannot government provide us a clinic with living quarters?

Still another ANM said:

> We do not even get this amount of 50 rupees regularly. It is paid after three or four months. During this period either we have to pay the rent from our pocket or face trouble from the landlord, who often threatens to throw away the goods of the subcenter.

Many subcenters had inadequate supplies of medicine. Most of the ANMs told us they lacked medicines for treating patients suffering from even common ailments, such as malaria, infection, sepsis, dysentery, colds, cough, or fever. Even if medicines were provided, the quantities were insufficient to meet the subcenters' needs. Except for iron, folic acid, and calcium tablets, other medicines were largely unavailable at the 54 subcenters we visited (Table 12.3).

In a focus-group discussion, ANMs made the following observations:

> When people ask for medicine and we do not have it to offer them, they lose confidence in me and think that we are only there to provide family planning services and not other types of health care.

TABLE 12.3
Supplies of medicines at selected subcenters: Sitapur District, Uttar Pradesh, 1995

Condition requiring treatment	Percentage of ANMs reporting medicines as		
	Available on date of interview	Out of stock in past 6 months	
		Once	More than once
Cold or cough	31	13	7
General fever	24	11	6
Malaria	11	6	2
Infection or sepsis	18	6	7
Diarrhea	37	9	4
Dysentery	18	7	4
(No. of ANMs interviewed) (54)			

ANM=auxiliary nurse-midwife.

> We are provided with only iron and calcium tablets and sometimes paracetamol and antibiotics. Many times we have to prescribe or even purchase medicines from the market, spending money from our own pocket just to keep patients happy, especially if she [a patient] is a potential case for sterilization.
>
> The biggest problem is that we have been provided with no other medicine except iron and calcium. People complain and almost throw it back in our face, demanding to know why is it that only red tablets and white tablets are given for all the problems. They have almost lost faith in me and my treatment.

One in three ANMs complained of short supplies of vaccines (e.g., to prevent measles; tuberculosis; diphtheria, pertussis, and tetanus; and polio). At the time of our interviews, one-third of the ANMs reported that those vaccines were not in stock at their clinics. Such shortages pose a serious problem for the ANMs, who are compelled to give incomplete series of vaccinations to children. We observed ANMs inviting women clients to return with their children the following week for immunizations, but we do not know how many of those mothers actually returned, nor whether all the vaccines were available if they did return.

Having basic equipment in working condition and basic supplies is also a prerequisite for providing good-quality services. Although 70 percent of the ANMs had an operable blood-pressure (BP) instrument, which the United Nations Children's Fund (UNICEF) had recently provided under the Child Survival and Safe Motherhood

TABLE 12.4
Availability of equipment and medical supplies at selected subcenters: Sitapur District, Uttar Pradesh, 1995

Equipment and supplies	Percentage of ANMs reporting equipment or supplies as	
	Available	In working condition
Needles and syringes	66	64
Blood-pressure instrument	76	70
Stethoscope	24	13
Thermometer	82	80
Weighing scale for infants	74	63
Weighing scale for adults	20	19
Examination table	33	24
Nondisposable gloves	74	NA
Chemicals used for testing		
Urine	6	NA
Blood	2	NA
Test tubes	19	13
(No. of ANMs interviewed) (54)		

ANM=auxiliary nurse-midwife; NA=not applicable.

(CSSM) Programme, only 13 percent had a working stethoscope (Table 12.4). Without a stethoscope, how useful a BP instrument can be is an open question. Similarly, most of the subcenters lacked an examination table, weighing scale for adults, or reagents for urine and blood tests. Weighing scales for infants were available and in working condition in 34 subcenters (63 percent). Those too had been provided recently under the CSSM Programme of UNICEF. Nondisposable gloves and thermometers in working condition were available in 74 and 80 percent of the subcenters, respectively.

Typical of the comments we heard from ANMs were the following:

> For antenatal cases, I would like to record her [the woman's] weight, but there is no weighing machine. I know that [a] urine test to examine albumin is necessary for antenatal cases, but there are no test tubes or reagents. How do we do [a] urine test?

> I have nothing in my subcenter. No table, [no] stool, no bed. There is one table which is useless. Further, no medicines, no equipments, no cologne [antiseptic], no pressure cooker or utensils or stove are available. What can I suggest for improving the quality of services?

> Madam, you are asking about quality of services. Here we have problems in providing even the basic services.

Contraceptive supplies were inadequate or lacking altogether at most of the subcenters and even at the PHCs in Sitapur District. For example, according to the ANMs we interviewed, a third of the 54 subcenters we canvassed did not have either intrauterine devices (IUDs) or IUD insertion kits. Of the 10 PHCs we visited, five did not have IUDs in stock. In at least three PHCs, condoms or oral contraceptives were not available. The medical officer-in-charge had no explanation for the shortages, merely asserting that contraceptives were always available to workers except during the end of the fiscal year (March).

Eighteen of the 54 subcenters (33 percent) had both equipment for sterilizing instruments and kerosene, which is needed to boil water to sterilize equipment. Thirty had equipment but no kerosene, and six had neither the required equipment nor kerosene. Thus only a third of the subcenters were able to sterilize their instruments. Disinfectants (Cidex, Savlon, and alcohol) were available in only five subcenters. The following complaints were typical of those we heard from both ANMs and LHVs:

> We have to do vaccinations without using spirit. Even if we want to purchase it from [the] market, we cannot because it is sold only under license.
>
> Kerosene oil is not available at subcenters. We never get a supply. Although there is an allocation of 30 rupees per subcenter each month for the purchase of kerosene oil, it never reaches the subcenter. God knows what happens to it!

Neither disposable (sterile) nor nondisposable gloves were available to a third of the ANMs. Lacking gloves, some ANMs inserted IUDs without first doing a pelvic checkup. Some did pelvic examinations without gloves, but two resourceful ANMs told us they used condoms for doing pelvic examinations.

ANMs, particularly those who were staying at their subcenters or in nearby villages, provided assistance in deliveries. Only a few of the 54 ANMs we interviewed had delivery kits, however. They did not have even a pair of gloves. Cotton and gauze, needed for immunizations, were not available in adequate quantities at any of the subcenters. Many ANMs spent their own money to buy those supplies.

The following comments suggest that, with adequate support for their work, the health workers we interviewed could improve their services:

> *LHV:* In the absence of adequate facilities and medicine, the services provided by the ANMs are optimum. If facilities are improved, we can think of improving quality of services also.
>
> *Medical officer-in-charge:* I feel that the ANMs are doing as much as they can do. It is unfortunate that no facilities or quarters are provided to them. There are never enough medicines, instruments, or other essential logistic support for them at the subcenters—not even for IUD insertion and vaccination.
>
> *ANM:* The condition of the subcenter should be improved. We should have equipments like weighing scale, reagents for urine test, blood-pressure measuring instruments, stethoscope, etc. Some medicines, like calcium, B complex, Methergine, and Ciplin, should also be available to us. Some furniture, such as [an] examination table, table and chair for myself, should also be provided. I want the people to look at me as their ANM. I do not want them to think that I am one of the old *dais* [traditional birth attendants].

A lack of appropriate information, education, and communication (IEC) materials was another problem. Out of 54 subcenters, only 36 (66 percent) had books, 19 (35 percent) had pictures or posters, and 3 had a model of the female reproductive organs that could be used to explain family planning methods to clients. Such IEC materials as pamphlets and booklets on family planning and maternal and child health were available at only one-half of the subcenters for distribution to clients. Seventeen of the subcenters had no IEC materials whatsoever. Moreover, during our two months of field work we did not observe clinic staff using any of the available IEC materials. We were told that this was because most of their clients, being illiterate, could not read the pamphlets. The ANMs regarded the materials as useless, and a medical officer-in-charge agreed:

> A lot of printed materials are wasted. Provide something which is useful.

Another medical officer-in-charge noted a problem with the program's IEC efforts:

> IEC activities planned so far have not given any results or significant impact. The truth is that the BEE [block extension educator, now called a health education officer] has no role to play. The BEE could have done lot of things but has not done anything so far. They do not do any motivational work, while they are assigned a key post to carry out this activity. This is a frustrated cadre; and as there is no avenue for any promotion, it does not stimulate them to work.

When a health education officer at one of the PHCs was asked about this, he had the following response:

> We try our best to promote IEC activities, as this is going to be our only activity. But we have to depend on district or CHC authorities for getting vehicles and also VCR [video cassette recorders] and projectors for organizing a video or slide show. They hardly cooperate or take initiative. What can we do alone, with no support?

Time Management

To assess how the ANMs managed their time and to what extent they had enough time to do outreach work, we carefully examined their work schedules. In discussions with the ANMs and LHVs we learned that their schedules varied with the season. April was a somewhat relaxed month, from May to August they were preoccupied with epidemic control, and from October to March they concentrated on family planning. When time permitted, they did immunization work. Maternal care and primary health services were mostly neglected.

An analysis of their schedules revealed that the ANMs wasted a lot of time in unproductive work. For instance, every Tuesday they went to the Sitapur District Hospital to collect vaccines, arriving at about 11:00 a.m. and returning to their clinics with vaccines between 2:00 and 2:30 p.m.; on this day no other work was done. Similarly, on Thursdays most of them went to *Kisan Seva Kendra* (a farmers' cooperative). The purpose was to inform the farmers about family planning and other services available from the PHC or subcenters and thus motivate them to have small families. In reality, however, the ANMs had no role in the meetings. Instead, they just sat there for the whole day and then returned to their clinics. Most did not know why they were supposed to attend the meetings. As one of the ANMs said to us:

> Thursday is the camp day, and if there is no camp I have to attend Kisan Seva Kendra for three hours. I do not do anything there. People come from different departments and talk with farmers. But I do not have any role. I never understand why they call me there.

Even those who did know the purpose of attending the meetings thought they were wasting their time there:

> During the meeting my duty is to explain about immunization and family planning to the women. But hardly any women come there, and if no woman comes then what do I do? Also no one comes from

> my department. Only [male] farmers come to the meeting. But because it is my duty, I sit there from 10:00 a.m. to 5:00 p.m. If any officer comes to check [on my attendance], at that time I should be present there.

We noted a similar misuse of ANMs' time during camp days. At least one day per week, all the ANMs had to attend sterilization camps to assist in various activities, whether they had a case or not. On several occasions during our field visits we observed far more PHC and subcenter staff at the camps than the number of women and men who had turned up for sterilizations. On one occasion only one case was there for a vasectomy, but all 24 ANMs were present. They had nothing to do with the camp. Instead, all were sitting in a room, talking among themselves. When we asked the doctor why it was necessary to call all the ANMs for just one case, he replied:

> When camps start, we divide all the ANMs into four or five groups to attend different [kinds of] work—one group for OT [operation theater], one for ward duty, one for clothing, etc. So they have to come for every camp. We never know in advance how many cases will be coming on a particular day.

During the summer, outbreaks of malaria, cholera, and gastroenteritis are common. In that season, epidemic work occupies everyone and all other activities are stopped. As a medical officer put it:

> Epidemic disturbs the whole work. Every one of us is busy with the epidemic work. Last year [1994] the condition was quite bad; I have not seen such a [serious] condition in the last 17 years of my service. [This situation] demands day and night service, and everyone is busy with epidemic work.

Family planning activities come to a halt at such times. The following comment by an ANM was typical:

> During an epidemic, when there is the question of life and death, how do we talk of family planning and sterilization?

How much time do ANMs actually have for outreach work? According to the work plan mentioned by the ANMs we interviewed, they had only two days a week for field visits. As one of them told us:

> Frequent field visits are not possible. [Each] month I have to come to the PHC to collect vaccine for four days, [attend] camp for four days, and [attend] monthly meeting for two days. In this way [I

> spend] 10 days [at the] PHC. Four days I do vaccinations, four to six days I spend at the clinic and Kisan Seva Kendra, and four Sundays and other holidays are [spent] there. In the remaining four to five days I have to cover all 11 villages.

The schedule of two field days per week is not fixed for the ANMs. Occasionally a monthly meeting is called on the day normally reserved for field visits. Sometimes the ANMs go to collect their salaries on that day. If they have any personal work to do on that day, they also postpone their field visits. As one ANM stated:

> Tuesday, Wednesday, Thursday, and Friday we have [a] fixed schedule; hence a field visit is not possible. On Monday and Saturday I go to [the] field according to my convenience and depending on whether or not I have some ad hoc work.

Support from Male Workers

From our observations in the field and discussions with medical officers, it became clear that ANMs were the key workers at the grassroots level. Most of the subcenters were managed by the ANMs alone, as the number of male workers was very limited. Even when male workers were posted at a subcenter, the ANMs did not get adequate support from them. Both the ANMs and the LHVs complained that they received negligible support from their male counterparts. According to three LHVs:

> Male workers were very helpful earlier. They used to accompany us to the field. We [female workers] used to get lifts, and in turn the [sterilization] cases motivated by us were shared by both of us. We used to cater to antenatal, postnatal, and other cases, and males used to do their malaria and survey work. But now we have to do our work all alone.
>
> They [male workers] only go around and order like bosses in meetings. Otherwise they do no work, though we have the same portfolios [work responsibilities].
>
> The male supervisors project themselves as experts and are always ready to guide us—or order us. They go on buttering the officials and escape from all work.

Taking the side of male workers, however, another ANM argued:

> [A] female worker covers 5,000 to 6,000 population, and [a] male worker has to cover 25,000 population. How can he help five or six ANMs at a time? They [the male workers] have their own duty too.

A medical officer-in-charge agreed with most of the LHVs and ANMs that male workers generally did not help the ANMs:

> Besides transport problems, there are no *pukka* [reliable] roads, no vehicles, and the distances to be covered are long. They [the ANMs] have to carry heavy vaccine containers to the field. Male health workers seldom accompany them to the field. Most of the ANMs have complained that they do not get much support from their male counterparts.

Providers' Perspectives on the Quality of Services

During the interviews we asked health providers to give us their views on the quality of services being provided at public-sector clinics. In general, the ANMs appeared satisfied with the services they were providing, although most of them could not define quality of care. Few could identify gaps in their activities or give suggestions for improving services.

The medical officers-in-charge of the PHCs blamed the lack of infrastructural facilities and the inadequate equipment, medical supplies, and other logistical problems for the clinics' failure to provide a high quality of services. They also mentioned the poor location of the subcenter buildings, including safety considerations; the lack of traveling and living allowances; and the late payment of salaries as obstacles to improving the quality of services. All three of the medical officers-in-charge felt that discussing the quality of services without defining minimal physical, technical, and logistic standards did not make sense. According to one deputy chief medical officer:

> We have to think of the given situation before talking of quality of services. We cannot turn Sitapur into Miami. People here are poor, illiterate, and have very low expectations. They have very few basic needs and do not have high expectations of counseling or informed choice. They are happy and satisfied as long as they get the [contraceptive] method which they desire. We certainly have to improve our services, but we have to keep in mind the local situation and sociocultural milieu.

A female worker stated:

> We have so much work that we cannot satisfy the clients fully. We have large populations to cover and [must] move around 20 villages. During epidemics all of us are busy controlling the epidemic. PHCs

> and subcenters are full of people, and we have to work day and night. In such situation how can we satisfy everybody?

Technical Competence and On-the-Job Training

When asked whether they needed additional training, most ANMs indicated their willingness to attend training sessions to strengthen their skills or improve their performance; but they could not identify any specific topic or skill area in which they needed training. The following comment, by an ANM, was typical:

> At our center, I am doing immunization, distributing medicines, doing dressings, etc. I provide pills and condoms if they [the clients] ask for contraception and attend sterilization camps. I am inserting IUDs alone [without assistance]. During my training I inserted three or four IUDs. So, if you design my training program for further improvement of our work, I am ready to attend it. Otherwise I myself am unable to pinpoint any specific area for training.

Another ANM, however, wanted training to improve her "counseling skills for better motivation." An LHV mentioned the need for training in supervision:

> If we are given training on how to improve our supervision work, it will help us in improving our work and help the ANMs in providing better-quality services.

Some staff told us that the training sessions were often not useful or taught the same subjects every time. A general view was that trainers were far removed from the realities of the villages and that much of the training could not be put into practice. Those perceptions were reflected in the following comments made by LHVs during a focus-group discussion, as well as in comments made during individual interviews:

> All trainings are the same. What we had learned in 1985 is being repeated in every other training. It is in fact a waste of 8 to 10 days and money. If we are given some practical training instead, we will be more interested.
>
> During the training, they [the trainers] present ideas which are not at all practical at the field level. For instance, in CSSM training it was suggested that for each delivery a woman should use new cloth of about two meters to spread on the floor for avoiding infection. The poor women are not even ready to spare their used saris for

> this purpose. Where will they find 10 to 15 rupees for purchasing new cloth?

The medical officers-in-charge told us that reorientation training should be critically examined and designed to meet workers' needs. They felt that in rural Uttar Pradesh, not all procedures prescribed in textbooks and training manuals could be practiced. The trainers who designed the reorientation courses needed to understand better the realities in the field and teach what could actually be done, not simply proper procedures in ideal circumstances. These comments indicate a need for serious thinking on how orientation and training programs should be restructured to make them more practical, realistic, and of immediate use to the workers. Unless these issues are given due attention, health workers will consider training to be "punishment" rather than something useful to them.

Providers' Knowledge of Family Planning Methods

Interviews with individual health workers, as well as informal group discussions and the focus groups, revealed that the providers were generally well aware of various family planning methods. They also knew which questions they should ask and which examinations they should perform before prescribing a method. For example, in the case of oral contraceptives, an ANM said:

> [I should ask about] age of the woman and her youngest child, lactation status, and menstrual history [date of last menstrual cycle], and [should] examine her nails, eyes, and tongue to check for anemia. If a blood-pressure instrument is available I will check her blood pressure also; otherwise [I will] ask whether she had any symptoms or previous history of high blood pressure.

On the administration of oral pills they also demonstrated knowledge:

> We tell them to take one pill daily in the evening. We also tell them that if she forgets to take [a pill] one day, she should take two pills the next day. Some women do not wish to take pills on the day of fasting. In such cases I advise [them] to take two pills on the next day.

The ANMs were able to describe with confidence what they should ask or tell their clients when instructing them in the use of

other methods. However, during our field visits we observed that they did not provide detailed information to their clients about how specific methods worked, what the possible side effects were, and in some cases, such as condoms, how a method was used. According to one ANM:

> What is there to tell about condom? We give condom to only those women who ask for it and know how to use it.

Another said:

> This knowledge is natural. We do not have to tell them how to use condom. Usually one out of every four women asking for condom is coming for resupply.

Similarly, most of the ANMs interviewed had theoretical and practical knowledge about IUDs. For example, 42 of the 54 ANMs said that they inserted IUDs and were trained in IUD insertion. Most of them had received IUD-insertion training, mainly by the LHV, at their PHCs. In a few cases they had been trained at the CHC by doctors. Because most of them had actually inserted only three or four IUDs during their training, few were confident about their skill in this procedure. As one ANM said:

> Didi [the LHV] taught us how to insert an IUD. During training I inserted IUDs in two women. I am not confident to do it independently. Even today I wait and insert an IUD only in the presence of the LHV.

Thirty of the 54 ANMs interviewed had the required equipment for IUD insertions at their subcenters. Those who did not have the equipment either shared IUD insertion sets with other ANMs or depended on the LHV for IUD insertions.

As mentioned earlier, most of the ANMs did not do pelvic examinations. Among those who did, only a few had gloves and used them while doing the examinations. If in the course of doing an examination the health workers identified a reproductive health problem, instead of treating the patient or referring her to the PHC or CHC for treatment, some simply told her that an IUD would not suit her. Even worse, some ANMs would insert an IUD despite noticing some indication of a reproductive tract infection (RTI), especially if the woman was already motivated to accept the method. As one LHV said:

> If we do a pelvic check, we find that 75 percent of the women are suffering from at least one major or minor reproductive health problem, whether [or not] there is any wound or swelling. I still insert an IUD; otherwise we may lose the case. Who knows whether she will come back again for an IUD [after she recovers]?

It was therefore encouraging to hear one ANM say:

> I refer some of the cases with mild or severe reproductive health problems to the postpartum center, the community health center, or the district hospital before inserting an IUD. To women with minor reproductive health problems, I give iron, folic acid, and calcium tablets.

A majority (33) of the ANMs reported that it was important to ask women for their medical histories and to do a pelvic examination. Nevertheless, only one-third of them mentioned that it was necessary to do a blood test, RTI screening, and urine test before inserting an IUD. In most cases, the ANMs did not inform clients about the side effects of contraceptives. A typical reply was, "We ask women to come back if they have any problem."

Contraceptive Choice

All the health workers in the group discussions and even during individual interviews agreed with the statement that all contraceptive methods should be promoted. However, by tailoring their advice to the presumed need of each client, they missed the opportunity to promote a broader choice of methods. For example, an ANM in a group discussion was applauded by all the other coworkers when she said:

> For newly married couples, we recommend condoms only. After first child, when she is lactating, we give condoms or motivate for IUD. If she is not breastfeeding, then we suggest oral pills. After two children, we motivate them mainly for sterilization.

The worker perceived that she was offering the client method choice and not emphasizing any particular method. In actuality, however, she was trying to motivate the client to accept a particular method, depending upon the woman's parity or reproductive status, rather than helping her to choose a method from the available contraceptive basket. During our observation period of several weeks, we seldom observed an ANM discussing all appropriate family planning methods with cli-

ents or giving them detailed information about the methods. The following comment was characteristic of the ANMs' attitude:

> After three or four pregnancies a woman's skin [uterus] becomes loose and often IUD comes out on its own. What is the point in prescribing such women the IUD? To all of them I advise sterilization.

Cultural biases—especially a preference for sons—also prevented some ANMs from telling clients about all the methods. For example, in counseling a woman who was pregnant and had come to the clinic for an abortion and sterilization, the ANM suggested:

> Why don't you continue with this pregnancy? You have only three daughters. See if your next child is a son, and then you can go for the operation.

Others told us:

> We would never ask a woman with only daughters to go for sterilization. A son is required by the family and the society. Who will look after [the parents] in their old age? Even for couples with one son I would recommend sterilization only after the son has completed his first year. If by God's wish something [bad] happened [to the child], I would be in trouble. I myself would feel sorry for the couple.
>
> I mostly recommend the IUD to women with one or two children. After two children [one of them a son], I motivate them only for sterilization.

When the issue of promoting a broader method mix was discussed with the medical officer-in-charge, he had the following comment:

> Our ANMs are attuned to understand that they have to do only sterilization work. They are not bothered about any other problem. They talk and discuss only sterilization. Even with me, they think they have to talk only of sterilization. I feel if they start promoting spacing methods also, they can do better work. But, unfortunately, they are never asked questions about spacing [births].

When we asked him whether, as the medical officer-in-charge of the PHCs, he asked ANMs at monthly meetings whether they promoted spacing methods, he replied:

> I ask, but so what? If I talk of the IUD, they would say that they do not have apparatus and applicators. It is also true. More than half of the ANMs do not have kits for IUD insertion. Many times I have

> reminded higher officials, but I do not know why these are not supplied! I can only remind the seniors. Sterilization facilities are also not adequate. Kerosene is not available many times. How to sterilize equipments? Theories for improving quality of care and promoting method mix are many, but one has to look into practical problems as well.

Family planning targets, particularly sterilization targets, were also mentioned by the ANMs as an important reason for not giving attention to method mix:

> If one provides all services—antenatal care, postnatal care, and all family planning methods—but has not achieved this [sterilization] target, then it means that she has not done anything. So we are compelled to put more emphasis on sterilization.
>
> We do not get any credit for achieving spacing targets, but we get a scolding for not achieving [our] sterilization target. Sterilization is also easy for the rural women. They take rest for a week and it is [done] once and for all. On the other hand, nonterminal methods are cumbersome, difficult to use in the given social setting, and have one or the other side effects.

Thus the ANMs offered IUDs and oral pills only to those clients whom they could not motivate to accept female sterilization. They did not talk of male sterilization, for several reasons:

> Vasectomy is not at all popular in this region.
>
> Females themselves oppose [vasectomy] because of fear of failure. Even in the case of genuine failure of vasectomy, females would be blamed. The women would be accused of conceiving by another man. About three years back, this happened in this village to an educated inspector's wife. When she conceived after the inspector was vasectomized, there were a lot of problems and finally the husband underwent medical checkup to find out the truth.
>
> We do not force them [couples] or tell them about vasectomy because women believe that the man is the bread earner; and if something happens to him or he becomes weak, then what will happen to the family?
>
> We cannot do much in removing these fears regarding vasectomy because everybody believes it, and these fears are now very deep-rooted.

A similar discussion with the medical officers revealed that they had almost written off vasectomy as a family planning method. The following comments, made during an informal group discussion with

about 12 medical officers of PHCs and deputy chief medical officers, reflect their thinking:

> I do not think much could be done to revive vasectomy.
>
> If you really want vasectomy to revive, train the doctors in nonscalpel vasectomy. This new technique may attract males for vasectomy. In this area all believe that vasectomy is not suitable for males. Women themselves oppose vasectomy for their husbands. What can the worker do?

When we asked what the medical officers were doing to encourage vasectomy, they could not give a firm answer. One said:

> Why spend so much time and energy to remove misconceptions about vasectomy, when they are so strongly believed by all? With the same effort, workers can motivate many women for sterilization.

Despite the fact that vasectomy is much simpler than tubectomy, with a shorter recovery period and fewer side effects, often the community members believed otherwise. In a recent study covering about five hundred males, probing revealed that a majority of them believed that tubectomy was simpler (61 percent) and needed less time for rest and recovery (52 percent) than vasectomy (Khan and Patel 1997). Our interviews with many doctors posted at the PHCs revealed that they were not technically prepared to conduct vasectomy operations. Some who had been trained earlier to perform vasectomies told us they were out of practice and could no longer do the procedure. Thus, for all practical purposes, vasectomy is not offered, nor are the doctors posted at the PHCs trained to do vasectomy or skilled in conducting vasectomy operations.

Family Planning Targets

The Indian Family Welfare Programme has adopted a method-specific target approach to reduce the birth rate. The emphasis has been on numbers of acceptors rather than on the quality of service. The method-specific annual targets for each state are planned at the central level in consultation with the respective state governments. The state governments distribute targets to their districts, which in turn allocate targets to the PHCs and finally to the workers. In Sitapur District, each ANM has been assigned an annual target of 36 male

TABLE 12.5
Percentages of sterilization and IUD targets met by 54 ANMs: Sitapur District, Uttar Pradesh, 1994–95

Method and number of cases	Percentage achieved
Sterilizations (target=36 per ANM)	
1–5	38
6–10	50
11–15	4
16+	8
IUD insertions (target=70 per ANM)	
1–20	5
21–40	8
41–60	24
61–80	36
81+	27

ANM=auxiliary nurse-midwife; IUD=intrauterine device.

and female sterilization cases, 70 IUD cases, 200 pill users, and 500 condom users. Each LHV has a target of 24 sterilization cases. In reality, the ANMs and LHVs place major emphasis on achieving the sterilization targets. Few of the ANMs we talked with appeared even to remember their targets or achievements for IUD and pill acceptors. To find out, they had to refer to their registers or discuss this question with other ANMs.

Table 12.5, which presents the percentages of sterilization and IUD targets met by the 54 ANMs during the year between April 1994 and March 1995, shows that despite the program's emphasis on targets, few ANMs could achieve their assigned target of 36 sterilizations and 70 IUDs. In the case of sterilization, nine out of 10 ANMs had motivated 10 or fewer cases. Only 25 percent of the total sterilization targets were achieved.

The ANMs and LHVs were aware that higher officials would not reprimand them if the workers achieved only one-fourth of their sterilization targets. Because of this general understanding the ANMs were not motivated to put extra effort into persuading more clients to accept the procedure. The following exchange, which took place during one of our observation sessions, illustrates this attitude. A mother with three daughters who thought she was pregnant came to an ANM in mid-March for an abortion, to be followed by sterilization.

> *ANM:* Why don't you continue with the pregnancy and have a son? If you still do not want this pregnancy, come after 20 days. We will

go to Sidhauli [where there is a CHC] or Sitapur [where the district hospital is located] for the operation.

Researcher (to ANM): Why did you not motivate her to undergo sterilization now?

ANM: It is possible that she will change her mind and continue with the pregnancy to have a son and then undergo sterilization. And if still she does not want the pregnancy and wants to get operated, I will get it done after 20 days when the new year starts. I have to have some sterilization cases for the next year also. This year I already have completed eight cases of sterilization out of a target of 36. I do not need any more.

Nearly all the workers complained that they faced major problems in achieving their assigned sterilization targets. Most believed that competition from workers in the Revenue Department exacerbated the difficulty:

> I am facing problems because of the Revenue Department workers. Using provisions under various developmental schemes, they are able to give much more attractive incentives, like 4 *bighas* [1 bigha is roughly one-fifth of an acre] of land or 5,000 rupees for building, and thereby take away their motivated cases. We cannot provide these types of incentives. If someone is very poor, then I may give her one sari, but not more than that.

When asked why she must spend money from her own pocket to induce clients to accept sterilization, the worker replied:

> What to do? We have to get sterilization cases. Otherwise we would be transferred or would not be paid for months. Nowadays all women who want to have an operation [tubectomy] are getting it done through the Revenue Department workers because they offer good incentives. But they do not take MTP [medical termination of pregnancy] cases. So for an MTP, women have to come to us. Thus instead of sterilization cases, we are getting mostly MTP cases. Three out of my five cases are MTP cum sterilization cases.

Another ANM explained:

> We serve women right from their second or third pregnancy, take care of them in their antenatal period, [care for] their newborn, and go on counseling them for family planning. But they do not listen to us even after the second or third child. After the fifth, sixth, or seventh pregnancy, when they [have] become very weak and again become pregnant, then they come to us and say, "Oh, my *didi*, oh

> mother, now save me from this pregnancy!" Then they are ready to get sterilized after MTP. This time they have to come to us [for MTP]. Otherwise they would go to revenue workers for help and incentives.

Our impression is that the ANMs' search for sterilization cases was becoming increasingly selective. Many of those we observed seemed to seek out women with unwanted pregnancies who wanted to terminate them. A majority of the sterilization cases recruited by the ANMs were also abortion cases. Many of their clients regarded induced abortion simply as another family planning method, and the ANMs appeared to promote that view because it helped them to achieve their sterilization targets and prevented those women from going to the revenue workers for sterilization:

> It is very difficult to motivate rural people. After great difficulties I motivate one or two cases to accept sterilization. However, often on camp days, instead of coming with me they go through revenue workers. They [the revenue workers] are giving them land, a house, buffaloes, and cows under various development schemes. From where will I [find the wherewithal to] offer them these incentives?

> As they [the revenue workers] are giving more incentives, poor people would obviously like to get operated through them. At times their husbands tell us that the revenue people are giving incentives worth 5,000 rupees, and the husbands ask, "What are you giving?" This year I have only five cases, and I had to spend an average of 1,000 rupees after each case.

At least one-half of the ANMs with whom we interacted agreed that sterilization targets affected their suggestions to clients regarding appropriate family planning methods. Because of their supervisors' emphasis on meeting sterilization targets, the ANMs encouraged all women with two or more children to be sterilized. In a focus-group discussion some ANMs admitted that because of the targets they did not tell the women about the disadvantages of each family planning method, and they overemphasized the advantages of tubectomy:

> I discourage the women with higher parity from accepting IUD so that they accept sterilization. After the second child or one son, I only motivate them for sterilization.

Nevertheless, a majority of the ANMs also told us they did not attempt to persuade women with contraindications to be sterilized:

> If the woman has any serious problem, then we think about her also. In such cases we never force her [to accept] any particular method. We have to live and work in the same community. If anything [bad] happens to her [as a consequence of being sterilized], then we will only be in trouble.

The targets not only affected client counseling and reduced the range of methods the providers offered to their clients, but also had a negative effect on the quality of their work. For example, during sterilization camps, we observed at least three cases in which health workers operated on women whose hemoglobin levels were less than 10 g/dL, the borderline level for performing the procedure safely. The workers recorded the levels as 10 g/dL in their records. Workers also told us they arranged for women with advanced pregnancies to receive abortions followed by sterilization, as well as for women with pelvic infections to accept IUDs:

> *LHV:* Because of our target, if I get a patient who is anemic and wants to have an operation, I will not leave her. I will definitely try to bring her in for an operation, and as much as possible I will try [to make sure] that her operation is done.
>
> *ANM:* Many times in case of MTP, even if the pregnancy is more than three months, we never leave the case because along with MTP they easily and readily accept the sterilization. Even if the doctors ask the clients for some money to do MTP at an advanced stage of pregnancy, we do not bother about that. We pay that money from our own pocket on behalf of the clients and get the MTP and sterilization done.
>
> *LHV:* Out of 50 IUD cases only 20 women will be found normal after pelvic examination. But because of my target I insert an IUD even if some discharge or infection is noticed.

It is easy for workers to inflate the number of acceptors of nonterminal methods in their records, and many of the ANMs we interviewed told us they did so. The following comment was typical:

> We do not have any problem in achieving the target for spacing methods. Whatever number of pills and condoms we were given to distribute, we distributed that easily.

When asked how many clients were currently using pills and condoms, however, they did not know the answer.

In a focus-group discussion, the ANMs reported that women themselves demanded spacing methods and came to them for fresh supplies:

> Women come for contraceptive resupply, especially on the vaccination day.

During our field visits, however, we saw no evidence of such demand.

Health workers may have exaggerated IUD acceptance as well:

> It is somewhat difficult to convince the women [to accept an IUD], but once they understand [its advantages] then they accept it easily and use it for a long period. There is not much problem in achieving the target for IUDs. Even Muslim women accept this method.

When we asked the LHVs about the reliability of more than 500 reported cases of IUD insertions in the previous fiscal year, at first they insisted that those were the figures reported to them by their ANMs. Upon further probing, one LHV admitted that the actual number of cases may have been only 50. Another LHV added:

> We know that the majority of the cases shown in the records by ANMs are wrong, but what could they do? They are under pressure to produce 100 percent result.

A similar picture emerged from our discussion with ANMs at the CHC. During the formal focus-group discussion, which we tape-recorded, all the participants said that they had nearly achieved their IUD targets. At the end of the discussion we switched off the tape recorder and started talking with them informally. The women became more relaxed and spoke more candidly. When we asked how, after so much motivational work, the ANMs were recruiting only six to eight sterilization cases, whereas they could easily recruit 70 to 80 IUD cases, an ANM sitting close to the researcher said:

> Actually I have inserted only four IUDs. But the *adhikari* [officers] want updated register and 100 percent achievement of target. That is why we show 70 to 80 cases in the register.

Then we asked the remaining ANMs about their actual achievement of IUD targets. They admitted recruiting only 30–35 IUD acceptors. At this point the first ANM intervened, addressing her coworkers:

> Nothing is being [tape-]recorded. Now you people can tell the truth.

All then revised their numbers of IUD acceptors to 10 or 15. The first ANM hinted that we were still not getting the correct figure. All the ANMs were smiling, but no one mentioned fewer than 10 cases:

> *Researcher:* Tell me what happens to the IUDs you have not inserted. Do you sell them?
>
> *ANM:* Who will purchase them? What will they do with IUDs?
>
> *Researcher:* Then what do you do with extra IUDs, condoms, or pills?
>
> *ANM:* We can't throw them away anywhere, so we bury them.
>
> *Another ANM (in a lowered voice):* There are many places where we can still throw them away.
>
> *Another ANM:* IUD targets are as much emphasized, but the IUD does not suit everybody and we do not get much time to motivate cases for IUD. When we go to the village, women are not found at home. They are on their farms.

The implication was that the ANMs falsely reported IUD acceptance in those cases and dumped the IUDs to destroy the evidence.

Later, when we told a higher official about this conversation, his response was:

> To some extent we all know about it. This is all because of targets.

Continuity of Care

During the field work, we attempted to assess how much value the providers attached to following up their family planning acceptors. In both focus-group discussions and individual informal interviews, the ANMs and LHVs acknowledged that although they attached great importance to following up sterilization cases, few of them visited IUD acceptors, and none of them followed up pill acceptors.

Follow-up of sterilization cases is required not only because sutures must be removed, but also because community members expect the ANM to follow up surgery cases. The following comments were characteristic:

> Follow-up of all the sterilization cases is essential. We follow up even those cases which are motivated by other workers of the Block Office [Revenue Department].
>
> I try to follow up all sterilized cases who are located in close vicinity twice, once within three days and the second time after seven or

> eight days to cut stitches. If the acceptor is in a remote village, I visit her only once, on the seventh or eighth day.
>
> We make sure to follow up all sterilization cases. Any complication after [the] operation could spoil my field. Who will believe me if I do not try to help a woman in case of complications?
>
> If we leave the clients without follow-up, next time we will not get a single case.

In contrast, providers followed up very few IUD acceptors, even those acceptors who lived in the village where the subcenter was located or in nearby villages. The workers felt no necessity to visit clients at home. In general they advised the acceptors to contact them in case of complications:

> In case of very mild bleeding [spotting], I ask women to come to me. In case of pain and heavy bleeding, I refer them to the doctor at the PHC.
>
> I tell IUD acceptors in my work area that as long as one can feel the thread, it is all right. When you don't feel it, then come and see me.
>
> For follow-up, I call on them after eight days and then after one month.

This last statement represented the exception to the usual practice.

We asked the ANMs how many women were still using IUDs, but they could not give an estimate:

> Many women take out the IUD on their own or get it taken out, so how do we know how many are actually using it?

Similarly, none of the providers could tell us how long, on average, women used IUDs. The ANMs knew, however, that not many women continued to use IUDs for extended periods:

> Because of the complications, most of the women [seven or eight out of every 10 IUD acceptors] discontinue it within three to four months.

Some ANMs suggested that some women spontaneously expelled their IUDs. While discussing IUD follow-up with a medical officer, we asked him whether spontaneous expulsions were common:

> Impossible! Even for high-parity women, IUDs cannot be expelled that way. This is only their [the ANMs'] excuse to save themselves from being caught for falsifying IUD acceptor cases. It is also possible in some cases that IUDs are not inserted properly by the ANMs, as they lack training.

Despite probing, we could not elicit precise information about the reasons for the discontinuation of IUD use. Among the frequent causes mentioned by providers were excessive bleeding, backache, white discharge, excessive discharge, and swelling. Most of these symptoms are indicative of improper insertion or infection. It is difficult to assess whether the infections were caused by the IUD insertion itself, or whether they had existed before the insertion and were merely aggravated by the insertion.

We learned that acceptors of oral contraceptives were not followed up. The following comment was characteristic:

> Oral pills have no disadvantage, and in case of any complication the woman will either come to me or will herself discontinue the method. So what is the need of follow-up?

Most ANMs gave acceptors a month's supply of pills at a time and expected the women to come back when they needed more:

> Why should we bother if she does not come for resupply? If she has gone to her parents' house or wants [an] additional child or is suffering from side effects, she will discontinue the use of the pill. If she comes to me, I will also advise the same.
>
> I do not follow up oral pill users. It is not required. Also, if she faces any problem, she will stop taking it. But there is no major problem with pills which needs our attention.
>
> I visit them [acceptors] once in a month for giving them [a] resupply. Sometimes for that I do not go. I instruct them that before finishing it, they should come and get a resupply.

Conclusion

Our study has highlighted several factors that bear directly on the performance of the health workers and the quality of the services they provide. It indicates that the public health system lacks a readiness to deliver quality services. The system's most crucial deficiencies are the lack of appropriate space for clinics and inadequate equipment and supplies, such as medicines, serum for immunizations, and even contraceptives at times. Unless these needs of the PHCs and subcenters can be addressed, the clinics will have no recourse but to compromise quality. This does not mean, however, that a major allocation of funds is required to improve the quality of services. Nevertheless, our findings argue for an increased allocation of resources to

bring the clinics up to a minimal level of readiness so that they will be used by the people.

Lack of transport for workers appears to be the next most serious obstacle to providing outreach services. It demands experimentation with various interventions to enhance workers' mobility, such as providing interest-free loans to enable them to purchase mopeds, motor scooters, or bicycles. New approaches to workers' assignments could also improve the situation: Perhaps 25–30 percent of the ANMs' time could be saved or more effectively utilized by changing their work routine. Similarly, better logistics would improve the availability of contraceptives at a number of PHCs and subcenters.

Although we cannot comment on the technical competence of the workers, our discussions with the doctors suggest that ANMs need a comprehensive technical reorientation, particularly in IUD insertion and counseling skills. As many ANMs pointed out, the training should be practical rather than theoretical, should simulate actual working conditions in a rural setting, and should be based on workers' needs. The workers do not believe they learn much from the training sessions that are available. According to them, the orientations either present information they already know or are impractical.

Finally, our findings highlight the adverse consequences of method-specific family planning targets in the Family Welfare Programme. The target approach has not only undermined women's right to make an informed choice of contraceptive method, but also contributed to an erosion of ethical considerations in providing health services and, on occasion, serious health injuries to women. Sterilization of anemic women and IUD insertions in women suffering from RTIs by poorly trained ANMs are just two examples.

The recent initiative by the Indian government to withdraw method targets nationwide is highly encouraging and, if effectively implemented, has the potential to contribute to expanded contraceptive choice and improved quality of care. In contrast, the involvement of Revenue Department workers in the Family Welfare Programme is causing major problems for health workers at the PHCs and subcenters. By offering large incentives to sterilization acceptors under various developmental programs, the revenue workers have the advantage in competing for those cases. One consequence is that health workers have frequently been forced to recruit their steriliza-

tion cases from among pregnant women seeking abortions, with sterilization often made a precondition for the abortion. Many states—for example, Karnataka, Maharashtra, and Tamil Nadu—have recently withdrawn the involvement of other agencies in family planning work. It is time that the remaining states do so as well.

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Part III.
Quality-of-Care Issues with Sterilization Services

13 The Quality of Services at Laparoscopic Sterilization Camps in Madhya Pradesh

LAKSHMI RAMACHANDAR & SANDHYA BARGE

In 1952 the Indian government adopted a population policy establishing a national family planning program, which it has constantly pursued, modified, and expanded. In the 1960s the program began offering a wide choice of contraceptive methods, and later it introduced an incentive scheme for both acceptors and service providers (Conly and Camp 1992).

Although the government has always aimed to provide an array of contraceptive methods, much of the history of the program has consisted of a series of campaigns focusing on a single method. The Lippes loop intrauterine device was promoted through intensive campaigns in the 1960s, and male sterilization (vasectomy) was aggressively promoted in the mid-1970s. Public reaction to overzealousness in recruiting acceptors led to a revised policy in 1978 that stressed the voluntary nature of the program (Conly and Camp 1992). In the 1980s, the program introduced the laparoscopic technique of female sterilization, which is simpler and less traumatic than the more common method of tubal ligation, and today almost a third of all tubectomies are laparoscopic cases (GOI 1991).

The Family Planning Programme (now called the Family Welfare Programme) has until recently been target-oriented and continues to focus heavily on female sterilization. A substantial majority of current contraceptive users have received tubectomies, and a large proportion of these sterilizations were performed in the public sector. Although district hospitals and community health centers are

well-equipped and staffed to conduct sterilizations, primary health centers (PHCs) are not as well-equipped. Moreover, most of the doctors posted at PHCs are not trained in sterilization procedures. For this reason the program periodically organizes sterilization camps run by experienced doctors who come from district headquarters.

Government officials realize that strengthening the program's outreach is critical to improving its effectiveness. Hence the organization of the sterilization camps is an annual event between the months of October and March, when teams of trained gynecologists visit the PHCs. The main activity of the health workers during those months is recruiting women to accept sterilization. The camps are organized at various locations in rural areas, and every effort is made to bring the sterilization services to the doorstep of the rural population.

To gain a better understanding of the quality of services offered through laparoscopic camps, in 1995 the Population Council undertook a study of camps in five states—Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat, and Karnataka. The Centre for Operations Research and Training (CORT), a multidisciplinary research organization in Baroda, Gujarat conducted the portion of the study in Vidisha District of Madhya Pradesh, in central India.

Objectives and Study Area

The broad objective of the study was to assess the quality of services provided to clients during laparoscopic sterilization camps. More specifically, the study was designed to assess the quality of sterilization services offered by the PHCs, subcenters, and outreach program. Attention focused on the camps' infrastructural facilities, logistic support, manpower, the surgical procedure, and pre- and postoperative care. The three types of camp were compared on each of these aspects. The portion of the study reported here included observations of 82 sterilizations at seven camps in Vidisha District, including one camp at a PHC, another at a subcenter of another PHC, and the remaining five in outreach areas of the district (Table 13.1).

Methodology

Our team of well-trained and experienced social scientists used mainly qualitative techniques to collect information from the seven camps.

TABLE 13.1
Observed laparoscopic camps and cases: Vidisha District, Madhya Pradesh, 1995

Type of setting	Number of camps	Number of cases
PHC	1	19
Subcenter	1	13
Outreach camps	5	50
Total	7	82

PHC=primary health center.

We observed the entire proceedings of the camps, from registration to postoperative care, and conducted in-depth interviews with both service providers and clients. We also engaged in informal discussions with clients and providers and held exit interviews with the clients. With the consent of the providers and clients, we used audio and visual camera recordings to document our observations.

The research team consisted of six investigators (one male and five females) headed by a project coordinator (the senior author). The investigators were given training in what to observe, observation techniques, and how to record their observations. Each investigator was trained in specific functions of the camp and thus was prepared to observe specific tasks associated with that function. Team members were also briefed on how to interact with people at the camps. They were instructed to behave casually in order to avoid causing undue tension, while executing their tasks efficiently. They were given detailed guidelines and a checklist to make sure they collected complete information.

To observe the proceedings of the camp in their entirety, it was necessary for the team to be present when daily activities began. Team members therefore made every effort to arrive at each campsite ahead of even the sweeper and the paramedical personnel, who were usually the first persons to appear on the day of the camp.

One of the study team members, a trained interviewer, was assigned the task of collecting background information on the clients and documenting their individual arrival times. She did this with the help of a checklist. She also observed the seating arrangements, the discussions that took place among the providers, and the interactions between the clients and health providers. She noted such behavioral cues as body language, facial expressions, and gestures. Another re-

searcher was trained to observe the procedure for registering clients: who registered them, what information was collected at the time of registration, and how it was documented. A third team member was trained to observe and document the quality of the preoperative care provided to clients. This information included the types of services provided, who provided them, how well the providers performed those services (e.g., how they conducted precounseling, clinical examinations, and other investigations), and their reasons for rejecting some clients seeking sterilization. The fourth and fifth team members were trained to observe the operation theater (OT) arrangements before and during the surgery. They were to observe and record the conditions of the OT, including equipment and supplies; the procedures used to sterilize surgical instruments and prevent the spread of infection from one person to another; and the surgical team's laparoscopic procedures.

Findings

The outreach camps were located 15–50 kilometers from Nateran, the site of the PHC. The average distance that the women had to travel from their villages to the outreach camps was about four kilometers. Most clients, especially those in outlying villages, were not willing to travel to the PHC for their operations. They did not perceive the services offered by the PHC to be of better quality than those they could receive at the subcenter or an outreach campsite. The medical officer, however, found it difficult to arrange logistical support for clients in outlying areas. Our own observations revealed that the quality of services, ranging from infrastructural facilities to conditions during and after surgery, varied considerably across the three types of setting.

Infrastructural Facilities

The Nateran PHC was a cement building with a moderately furnished OT, which included an OT table, surgical instruments, autoclave, and emergency kit. The OT had windows with shutters that were closed at the time of surgery.

The Kamkheda subcenter of Borrow PHC was also a cement building with two rooms, one of which was used as an OT. Both rooms

were small, and the room used for surgery was dark. Still the room accommodated an OT table, other surgical instruments, and the laparoscope, which was kept on a small table.

At the five outreach areas, the camps were organized in school buildings. One room of each school served as an OT. The facilities in the outreach areas were minimal. The makeshift OT rooms had no shutters or grills on their windows, the flooring was of very poor quality and covered with dust, and there were cobwebs and dust on the walls.

Water and poorly maintained toilet facilities were available in the PHC but not in the subcenter or the outreach camps. Sweepers brought water from taps or handpumps 20–30 meters away and stored it in plastic containers for the use of the doctors and other staff during and after the operations.

Both the PHC and the subcenter had electricity. In the OT, 100-watt bulbs were used during surgery. In the subcenter, electrical power was taken from a nearby homeopathic clinic. In the outreach camps, however, there were no electrical facilities, and lights were powered by jeep batteries. Additional sources of light were candles and torches at the subcenter and kerosene lanterns at the outreach camps. Arranging for proper lighting was a major problem at the outreach camps. Because it was winter, the days were short. The campsites were surrounded by thick vegetation, and it was pitch-dark as early as 7:00 p.m.

Drawing electricity from the jeeps was a complicated process. It was necessary to use wires long enough to reach from their batteries to the laparoscope in the OT. Hence some portion of the wires was hung loosely on the building's pillars or door, or lay on the floor. When people moved about the room, they would accidentally disconnect the wires from the batteries or the laparoscope. This happened every 10 or 15 minutes. Each time the surgeon would shout from the OT, "Please connect the wires, fast!"

In one of the outreach camps, the surgeon had completed three operations, the fourth patient was made to lie on the table, and the surgical process had started. The surgical team had applied antiseptic solution, and the surgeon had made a half-inch incision and was about to insert the laparoscope. But when he picked up the laparoscope, he found it would not reach the patient. The wire had suddenly become shorter. He removed his mask and ordered his OT at-

tendants to push the OT table closer to him. They had difficulty moving the table with the patient on it. Frustrated by the frequent interruptions of power, the surgeon left the patient and went outside to find out what had gone wrong and reconnect the wires himself. He shouted at one of the health providers:

> I told you to stand outside and keep an eye on the wires, but where the hell did you disappear? Do you expect me every time to come and shout like this?

The extra length of wire had coiled around itself. It was straightened and the surgery continued. While this incident took place, the unconscious patient lay on the OT table with her open incision.

In another outreach camp a kerosene lamp burst, throwing the camp into darkness and scattering broken glass across the ground. This accident took place close to the OT, where surgery was in progress. The patient had to be moved to the postoperative room. The multipurpose worker (MPW) screamed at the male attendant who was carrying the patient:

> *MPW:* Don't come, wait there! I am cleaning the place. There are glass pieces all over here.
>
> *Attendant:* How long can I carry her? She is too heavy. Please clean the place fast, she is a dead weight on me. I cannot even go inside the OT with my slippers.

This incident indicates that unless minimal facilities such as a reliable source of electricity and water are available, an operation or health camp should not be planned. A power failure complicates the proceedings and can create a dangerous situation.

The OT teams at all seven camps used spirit or phenyl to clean the OT rooms and tables. They covered the OT table first with a white cloth. Over this they spread a thin mattress and tied the four corners of the mattress to the four legs of the OT table. The mattress was covered with a mackintosh sheet, and a white, sterilized cloth was spread on top of the sheet.

An auxiliary nurse-midwife (ANM) explained the procedure for maintaining cleanliness:

> The tablecloth that is used to cover the OT table is particularly washed using hot water, and is also soaked in hot water for 10 to 15 minutes. This has to be done to remove the blood stains and other stains.

The research team observed, however, that the tablecloth was not changed until all the operations were completed. This procedure was followed at all the campsites. A lady health visitor (LHV) explained that in a camp situation it was difficult to change the tablecloth after each operation.

The OT tables were kept in an inclined position. The two legs at the head of the table were placed on the ground and the other two legs were placed on a bench and secured to prevent the table from slipping off the bench while the patients climbed onto the table and were made to lie down.

Transport

PHC vehicles were used in all three settings to pick up and drop off clients, although about half of the women took buses to the outreach camps on their own. In the outreach areas a vehicle was used to transport the PHC and subcenter staff and materials. One jeep was provided exclusively for the surgeon and his team to travel between Bhopal (the capital city) and the camps. During the camps the shortage of vehicles and their poor condition posed a serious problem.

Transporting clients from their homes to the PHC took one to two hours per trip. This delay caused anxiety on the part of the health workers. The subcenter had only one jeep available for picking up and dropping off the clients. The same jeep had to bring the PHC surgeon and transport OT instruments and other equipment used for postoperative care.

The health provider of the PHC remarked to one of the observers:

> There is only one jeep, and my colleague has taken the vehicle to bring cases from her area. My patients will be waiting near the main road. I had given them a time, and now I do not think I can get them. By the time the first batch arrives and the time [comes] for fetching my clients, definitely those women would have left that place. After my hard work and motivation I have to lose my cases because of the vehicle problem.

Another ANM expressed her frustration:

> We will get [a] scolding from the clients if we go back tomorrow, and we also get [a] scolding from our medical officer for our low achievement and performance. Who is to be blamed in this process? Am I responsible for this?

Only one jeep was available for the five outreach camps, and it had to be pushed from behind before the motor would turn over. At one of the camps the driver commented wryly:

> If this jeep could speak, it would literally cry. We have used this vehicle to the maximum limit. See the condition of the jeep, the damages caused to it. We have not had time for servicing it, since there is no replacement and the whole of this month we have camps.

Observing the jeep, the MPW remarked that the lack of reliable vehicles was having a negative impact on their recruitment of sterilization clients:

> I would have brought more cases today, but due to this jeep problem I have lost so many cases.

As time was running out, the medical officer asked the research team if they could spare their vehicle to bring clients to the camp.

Manpower

At the PHC and outreach camps, a surgeon and a medical officer performed the sterilizations. All PHC and subcenter staff were also present, whether or not they had brought their clients. At the Kamkheda subcenter camp, two surgeons performed the sterilizations. The medical officer of the PHC did not attend this camp, as he was on leave. In all five outreach camps, health providers outnumbered clients. When the medical officer was asked why so many staff were called when they were not required to work, he replied:

> In an outreach camp we never know when things might go out of control. Sometimes [the] surgeon does not turn up from the district, I have to send a person to contact him over the telephone, or else [the] jeep breaks down or starts giving trouble. Two men are needed to push the vehicle. [At the] last minute sometimes we notice that OT equipments have not arrived, [there is] no kerosene in the stove, no torch, no candles. Patients sometimes develop complications and immediate referral has to be done, and a worker has to accompany the client. Keeping these uncertainties in mind, a large manpower is needed.

During our observations in the camps, however, none of those problems occurred, and many person-days were wasted.

Scheduling Problems and Clients' Waiting Time

At all seven camps the clients arrived in groups, depending on the availability of vehicles. Most of the clients arrived much earlier than the health providers. At six of the seven camps the surgeon arrived late, thereby extending the clients' waiting time. Clients had to wait an average of four or five hours before seeing a doctor and having the sterilization procedure. The women had been instructed not to eat before coming to the camps, so they were both hungry and thirsty. During the long waiting periods, the health providers made no attempt to provide health education or entertainment for the women and the family members who had accompanied them.

The delay in the doctors' arrival was due not only to their long commute from Bhopal (50–70 kilometers) but also to their heavy schedules. They conducted a minimum of three camps per day in different locations. If a surgeon was held up at the first camp, the unforeseen delay affected the subsequent camps as well. Moreover, if a camp was planned for an outreach area, there was uncertainty about the timing of clients' arrival and other logistic arrangements. In this state of confusion it was difficult to predict when the surgeon would arrive.

The surgeon's delays caused anxiety for the health providers and even more so for the clients and their families. At one of the outreach camps the doctor was delayed by more than four hours. The clients became restless, and some lost their temper and tried to leave without having the surgical procedure. At the subcenter, where clients had been waiting a long time, one woman's husband lost his patience:

> *Husband (to young wife):* I don't think you should keep waiting here. It is getting too late and I cannot manage the children. Let us go.

The wife was hesitant about leaving. Her husband walked into the crowd of women seated on the floor, caught hold of his wife's arm, and began to drag her away. The LHV tried to detain them:

> *LHV:* Brother, please wait. Surgeon is coming, and I will see that she gets operated first.
>
> *Husband:* No, I am not going to wait any longer, and there is no need for her to get operated.

He walked out angrily with his wife in tow.

Program managers should take these problems into account and try to schedule the clients' arrival at sterilization camps to precede the arrival of the surgical staff by only a short interval. Staff at the camps should also do everything possible to reduce the inconvenience and discomfort to clients caused by unforeseen delays.

Registration of Clients and Preoperative Care

When the women arrived at a sterilization camp, they were registered by the block extension educator (BEE) in the case of the PHC and outreach areas, or by the LHV at the subcenter. The BEE or LHV collected basic information about the client: her name and her husband's name, number of children, last child's age, total family income, and the name of the village where they lived. Other details collected included her menstrual history and incidence of previous illnesses. At one camp the BEE was grumbling because he was assigned this work:

> Registration of the clients is not actually my work. Since the LHV has not come, I have been forced to do this work. In our department we have cooperation but no coordination.

After being registered, a client was examined by the medical officer, who checked her blood pressure and pulse rate, looked for signs of anemia, and palpated her abdomen. At one outreach camp the women were also given a blood test and urine test. Next, an ANM gave the client two injections, 0.25 milliliters each of zylocaine and Penidura, the second after a five-minute interval. Asked about the purpose of the injections, an ANM explained:

> These two test doses are given to watch out for any adverse reactions to the drugs that the patients might develop, like vomiting or shivering. In those cases who reacted, an antidote had to be given to counteract the effect. . . . Penidura is a penicillin and an antibiotic. This will prevent any type of microbial infection either before or during surgery. This injection can be given at any time. Zylocaine is an anesthesia, and this injection has to be given at least 5 to 10 minutes before the surgery. This has to be given only near the naval region.

Other injections that were given as a preventive measure included tetanus toxoid (TT) (0.5 milliliter), Avil (1 milliliter), and atropine (1 milliliter). The research team knew the purpose of those injections. As the LHV explained:

> TT is given to prevent tetanus, Avil and atropine are combined and given to prevent reactions like palpitations and also to take care of nervous breakdown and depression.

If a client had no adverse reaction to the test dosages of zylocaine and Penidura, she was given a full dose (2 milliliters) of each, the zylocaine in the arm and the Penidura in the hip. Asked why Penidura was given in the hip muscles, the ANM replied:

> Penidura is in a powder form. It is therefore mixed with distilled water to form [a] 2 milliliter dose, and it is a deep intramuscular injection. Therefore it is always given in the hip, not in the arm.

This information revealed that the health providers were knowledgeable not only about the purpose but also about the correct administration of the injections.

Screening of Clients for Eligibility

In all seven camps the medical officer determined that some sterilization candidates were not eligible because they exhibited symptoms of certain illnesses. An average of two or three cases were rejected in each camp. The main reasons were suspected tuberculosis, jaundice, acute hypertension, anemia, and uterine prolapse. It was encouraging to see that even under pressure to achieve sterilization targets, the surgeons rejected inappropriate cases in an effort to maintain an acceptable quality of care. The women who were accepted for laparoscopy at the PHC were an average age of 27 and had an average of 3.6 children, including 1.7 boys. Women in the outreach camps were, on average, three years older and had one more child.

Sterilization Procedures for Instruments

At the PHCs instruments were sterilized in autoclaves and subsequently kept in trays of hot water. At the subcenter instruments were sterilized in a pressure cooker and after each operation were soaked in hot water. Instruments used at the outreach camps were sterilized at the PHC and carried from there to the campsites, where they were subsequently kept in hot water. Of the five outreach camps observed, at least three had an acute shortage of kerosene, used to heat the water.

At the PHC and the subcenter surgical instruments were sterilized twice, both before and after the surgeon's arrival. During surgery one of the health providers constantly brought more hot water for the trays in which the instruments were kept. This precaution was not possible in the outreach camps. Because the surgeon, who brought the surgical instruments, invariably arrived at the camps late, there was not enough time to sterilize the instruments again before surgery commenced.

After each laparoscopy, the laparoscope was dipped in hot water and wiped with cotton to remove blood stains. Then it was dipped in Cidex solution for about one second and again wiped with cotton before being used on the next patient. If autoclaving or boiling is not possible, the recommended procedure for sterilizing surgical instruments is to immerse them in Cidex solution for at least 10–15 minutes. That procedure was not followed at any of the observed camps.

When an observer asked the surgeon about this, he replied:

> Laparoscopes are very expensive and we do not have more than one set. So it is difficult to sterilize it for 15 or 20 minutes after each laparoscopy. Moreover, wiping in Cidex solution is enough to take care of cross-infection. We prefer not to boil it in water for 10 or 15 minutes; otherwise salt would get deposited and erode the lens.

Inside the OT of the PHC, folded napkins were kept in the autoclave. Just before the surgery the ANM opened the autoclave, removed a steaming napkin with the help of forceps, and gave it to the surgeon. He used the napkin to wipe the patient's abdomen before starting the surgery. After using the napkin, he threw it down. For each new client, the surgical team used a new napkin from the autoclave. At the subcenter and outreach camps, however, this procedure was not followed because there was no autoclave.

Tubal rings and surgical instruments were kept in trays filled with hot water. The water was replaced after every three or four operations. The OT staff used aprons, masks, and gloves. In one of the camps, a male OT attendant used a scarf because there was a shortage of masks. In none of the three types of setting (PHC, subcenter, or outreach camp) did the OT staff change their gloves after each operation. From these observations, it is clear that surgical equipment and supplies—particularly masks and gloves—were inadequate. Gloves should be changed after each operation because unsterile gloves can transmit infection from one patient to another.

Besides instruments, the observers paid particular attention to the way syringes and needles were handled. We were shocked to discover that the surgical teams did not change syringes and needles between patients. At the PHC and subcenter the needles were changed after being used on three or four patients, but in the outreach camps they were not changed at all. Because of the threat of HIV and AIDS, corrective measures should be taken immediately to prevent this dangerous practice.

Surgical Procedures Inside the OT

The OT team consisted of at least six persons, including one surgeon, two LHVs, one ANM, and two male attendants. Team members had specific tasks. One person sterilized the surgical instruments, including needles, syringe, scissors, knives, forceps, and tubal rings. At the surgeon's command, another pumped carbon dioxide into the patient's abdomen through a small incision. There was little verbal communication between the surgeon and his staff because all were wearing masks. Most of the time the surgeon communicated through gestures and eye contact. One person helped the patient climb onto the OT table and positioned her for the operation. Her head was placed at the lower end of the table and her hips at the higher end.

In four of the observed camps, the surgeon performed a pelvic examination before starting the surgery. The LHV cleaned the patient's abdominal region with antiseptic solution, using long forceps and cotton. Next the surgeon made two half-inch incisions, one on each side of the abdomen. He pushed the laparoscope, along with the tubal ring that was fixed to its tip, inside one of the incisions. Peering through the laparoscope for a second or so, he located the fallopian tube and inserted the ring, then withdrew the instrument. The instrument was quickly resterilized. The surgeon repeated the procedure, attaching a tubal ring to the other fallopian tube.

One male staff member kept a needle and linen thread ready. He sutured both incisions and covered the wound with adhesive plaster. As with the syringes and needles, the suture needle was not changed after each operation. At the PHCs, it was simply dipped in hot water for a few minutes before use. At the subcenter, it was wiped with cotton and not even dipped in warm water. In the outreach camps,

the same needle was used for all clients without any attempt to prevent cross-infection. The use of linen thread ensured that a health provider would have to follow up with the patients to remove the stitches.

Diazepam, a sedative, used to relieve pain, was administered by injection to the patient on the OT table after the wound was plastered. Fortwin, a pain killer, is recommended for use 10–15 minutes before the surgery. It was not given, however, and all the patients were crying from the acute pain of the surgery.

Privacy for Patients

In the PHC the OT had two windows, which were closed during surgery. The doors were left open for several reasons. Clients were coming in and going out every five minutes, and those who were waiting for their operations were told to sit near the doorstep of the OT. Moreover, the OT instruments were shifted from the adjacent room every three minutes. The general public was prevented from watching the surgery from outside, but family members of patients could easily watch what was happening inside the OT. There was no way for auditory privacy to be maintained. Discussions taking place inside the OT, as well as the screams and moans of the patients, were easily heard from outside.

At the subcenter it was equally difficult to maintain privacy. The OT was small, and the doors had to be kept open. Family attendants waited near the doorstep. It was impossible to close the doors because clients were taken in and brought out every five minutes. The surgeon's voice and clients' cries were easily heard from outside.

Neither visual nor auditory privacy was possible in the outreach camps. The windows of the makeshift OTs invariably lacked shutters. Sometimes they were curtained to prevent curious onlookers from peeping in, but in most cases they were not.

Responding to our observer's comment about privacy, a medical officer said:

> How can we maintain visual and auditory privacy? It is unthinkable. How can we prevent onlookers [from] watching what is happening inside? All these auditory and visual privacies are needed only in city hospitals. Here, rural women have accepted the reality, and they understand that such things are not possible.

The OT staff made no attempt to protect the patients' modesty after surgery. The women's petticoats had to be loosened before the operation could begin, and in a few cases the OT team forgot to retie the petticoats afterward; in other cases a male attendant was asked to tie them. When the sedated patients were lifted from the OT table and carried to the postoperative care unit, their saris were not properly arranged. Family members who witnessed this, and were able to intervene, hurried toward the patients and covered their bodies. Others watched with helpless embarrassment. The insensitive manner in which the women were carried by a male attendant or sweeper in the presence of family members, children, and the general public calls for a greater effort on the part of the sterilization camps to protect patients' modesty.

Postoperative Care

After surgery the patients had to be carried to the postoperative care unit because stretchers were nonexistent even at the PHC and subcenter. In the PHC the women were placed on a mattress in an open veranda. At the subcenter they were carried 30 meters away to a room in the police station. In the outreach areas they rested either in the open corridor or in one of the other rooms of the school building.

The minimal recommended period for postoperative care is four or five hours. This amount of time was not generally possible at the camps, given the crowded conditions and time of day when the patients arrived at the units. At the PHC, however, patients were given a choice of remaining there overnight or going home the same day.

According to the PHC's medical officer:

> We keep the clients inside one of the rooms. We also give them mattresses and blankets. Nearby, there are hotels where the family attendants can go and have their night dinner and also get tea or bread for the patients. Some prefer to stay because they feel there is no point in reaching the house so late. Hence they stay back.

The same medical officer remarked:

> It is not a joke shifting 19 cases. Now the time is 2:30 p.m. From now on they are under observation and it will take easily three hours for them to regain their consciousness. Hence the first shifting will start only around 6:00 or 6:30 p.m. Dropping the client [in her village] and returning takes not less than two to three hours per trip. These

> clients have to be shifted in batches, depending on the location and distance from where they have come. Now the problem is [that] we have to drop their family attendants also, and each client has to be dropped near her house and not on some main road or elsewhere.

He added:

> We will not get [an] additional jeep because everywhere camps are going on. All medical officers are facing similar problems. Luckily, government functions or elections have not coincided with our camp. If it were so, we would have been in trouble because our jeeps would be withdrawn for election duties.

Many patients, especially those at the subcenter and outreach camps, were discharged even before they had fully regained consciousness. When some of the women were moved to the vehicle to be taken home, they began vomiting.

Before they were discharged, the women were given 20 TMP Methoxaprim tablets (four tablets a day for five days), 18 analgesic tablets (three a day for six days), and B-complex and multivitamin tablets. No other postoperative advice was given to them.

Although the government's official incentive payment for sterilization acceptors is Rs150, we observed that the clients at the camps received only Rs135. The camps deducted Rs15 to cover the cost of fuel used in transporting them to and from the campsites.

Patient Follow-up

The observation team accompanied the health providers when they returned to several outreach areas to remove patients' sutures. The observers randomly followed up 11 women who had undergone laparoscopic surgery three or four days earlier. On the day of the field visit the team accompanied a male MPW and an ANM to a village. As they arrived, the MPW and ANM had a whispered conversation:

> *MPW:* I left my instrument kit in the ayurvedic dispensary, and now what shall we do?
>
> *ANM:* We are in trouble. Who asked you to leave it there? You know very well we were going to the field for stitch removal, and how could you forget to bring the kit?
>
> *MPW:* Please ask madam whether she can give [lend us] her jeep. I will get back within a few minutes with the instrument kit.

ANM: Madam, our MPW has forgotten to bring the stitch-removal kit from the dispensary. He has to go back to the subcenter village and get it. It is hardly 5 kilometers, and can you please give your jeep?

When the MPW returned with the instrument, the group went to a client's house. Upon entering, the ANM greeted the woman:

ANM: How are you?

Client: I am okay, by the grace of God.

ANM: Please lie down on the mattress or on a cot. We have come to remove the stitches.

Client: I am having too much pain. Please give me medicines. *[Indicating the researcher]* Is she a lady doctor? Ask her to examine me.

ANM: No, no, she is not a doctor. You please lie down.

Meanwhile the MPW called the client's husband and asked for a steel vessel and hot water. When the husband brought those items, the MPW took out a needle, scissors, and blade and placed them in the hot water. He went outside and washed his hands for at least three minutes, using soap. Then he took the needle from the vessel and removed the stitches. He applied boric powder to the wound and covered it with a plaster. The ANM gave the woman analgesic tablets for her pain.

The team accompanied two male workers on another visit for stitch removal. On entering the client's house, one of the MPWs began the conversation as follows:

MPW: Water please, and soap if you have [it]. I have to wash my hands.

He went to the tap, washed his hands, using soap, and returned to the house. The house was dark, and the woman, in pain, was lying down:

MPW: What, there is no electricity?

Client: No, there is no electricity.

MPW: Then what are these [electric] switches meant for, and what are all these wires meant for?

Client: I don't know, I am having pain.

MPW: Do you have a torch?

Client: We do not keep all those things.

MPW: Do you at least have a candle?

Client: I do not know where it is.

MPW: Okay, it is not possible to remove the stitches inside the house, because it is dark and I cannot see the stitches. Why don't you come out and lie down outside. There is sunlight.

Client: What! Are you going to remove the stitches outside? Everybody will be watching me. You please remove them here.

MPW: No, it is not possible because it is dark.

The client got up slowly, went outside, and lay down on a cot. The area was partially surrounded by fencing, but neighbors were trying to see what was happening. The MPW removed the stitches within two minutes, dressed the wound, and left the place.

In both these cases it was a male worker who removed the stitches, and the situations in which the procedure took place lacked privacy. Thus the women's modesty was compromised both at the sterilization camp and again during the removal of sutures.

The health providers asked the 11 women whose cases we followed up whether they were having any problems after the surgery. Almost all of them mentioned backache. Other complaints were of giddiness and general weakness. Only four of the women reported receiving counseling at any time during their sterilization experience. All but three, however, said they were satisfied with the services they had received. Apparently their expectations were quite low; they had wanted the procedure, and they got it. The three women who were not satisfied with the services told our observers they felt they had been discriminated against because they belonged to lower-caste groups. They had not been given extra blankets or food, unlike other women.

Conclusion

Our research team observed a total of 82 women sterilized at laparoscopic camps in three settings in Vidisha District—19 at the PHC, 13 at the subcenter, and 50 at five camps organized in outreach areas of the district. From those observations we identified several aspects of the camps' operations that require attention if the quality of care provided to sterilization acceptors is to be improved.

The inadequate number of vehicles and their poor condition were a major program constraint. This was true in all three program settings.

Given the program's emphasis on laparoscopy as a contraceptive method, the two surgeons qualified to perform this procedure

were under great pressure. Their heavy schedules caused them to arrive at the camps late, creating problems for other camp personnel and a hardship for the acceptors, who had to wait long hours in discomfort. One surgeon routinely performed pelvic examinations as a preoperative procedure, but the other did not. Prospective acceptors were given blood and urine tests at only one of the outreach camps.

The surgeons did not have time to sterilize their laparoscopes between patients. In fact, several of the procedures for maintaining a sterile environment during surgery were questionable, especially in the outreach camps. For example, using the same needle and syringe on more than one patient without properly sterilizing them clearly could spread infection, with potentially severe consequences, given the emergence of the AIDS epidemic in India.

The surgeries themselves seemed to be done competently, but other aspects of patient care were inadequate. In particular, greater effort is needed to protect patients' privacy—for example, by having female workers attend them in the postoperative care unit and handle stitch removal.

Postoperative care was best at the PHC and poorest at the outreach camps. Patients could stay overnight at the PHC, and the medical team led by the medical officer was there to attend to any emergency that might arise. At the subcenter and outreach camps, however, patients were given only three hours to recuperate before being transported back to their villages.

Counseling patients before and after the surgery and providing a visit by the medical officer to the patient's home about a week after the surgery would go a long way toward improving the quality of care and client satisfaction. Steps should be taken to improve the health of those women who are deemed ineligible for sterilization because of poor health. In short, the welfare of clients should receive more attention than it does now.

These observations do not imply that staff of the PHC and subcenter lack the capability or desire to provide a higher quality of care. In difficult circumstances such as those that exist in the outreach areas, the best intentions are often defeated by inadequate physical facilities. All campsites should have water and a reliable source of electricity. In addition, if sites are selected that have public transport facilities and space for patients to rest after surgery, the program could operate more efficiently and provide greater client satisfaction.

The small number of surgeons who are trained to perform laparoscopies also appears to be a major problem. Other doctors at the PHCs were reluctant to receive the training for this work because they feared that they would have to attend the camps and their private practices would suffer. Perhaps an increase in the level of incentives would motivate more doctors to get training in laparoscopic procedures.

It is unrealistic to expect sterilization services to be brought to an equally high level of quality in the three types of setting (PHC, subcenter, and outreach camp), given differences in the infrastructure, resource allocation for health care, manpower, and logistics. Managers may have to focus their attention on the supply system—that is, on those elements of care that ensure acceptors' access to the services they need—while striving to offer the highest quality of care possible within constraints of the existing system. Commitment, leadership, and competency of medical officers who are responsible for PHC and subcenter services are crucial to the effective management of health care services.

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14 The Quality of Care in Sterilization Camps: Evidence from Gujarat

DILEEP MAVALANKAR & BHARTI SHARMA

Sterilization is the most popular method of contraception in India. The 1992–93 National Family Health Survey found that of the 36.2 percent of eligible couples using any modern method, most (30.7 percent) had been sterilized and only 5.5 percent were using temporary methods (IIPS 1995, p. 143). Sterilization is thus six times more common than all the other modern methods combined. Although the Family Welfare Programme has begun to give higher priority to spacing methods than to permanent methods, sterilization is expected to remain the most popular method for the foreseeable future. Unfortunately, the government of India has paid little attention to the quality of sterilization services, and has tended instead to emphasize achieving targeted numbers of cases. A great deal of demographic research has been conducted in India, but few studies have focused on the quality of care in family planning, in particular the quality of sterilization services (see Shariff and Visaria 1991; Verma, Roy, and Saxena 1994).

History of the Camp Approach to Sterilizations

Although sterilization has been an important component of the Family Welfare Programme since the 1960s, the camp approach was not introduced until the Fourth Five-Year Plan (1969–74). Sterilization received a strong push in the early 1970s with mass vasectomy camps.

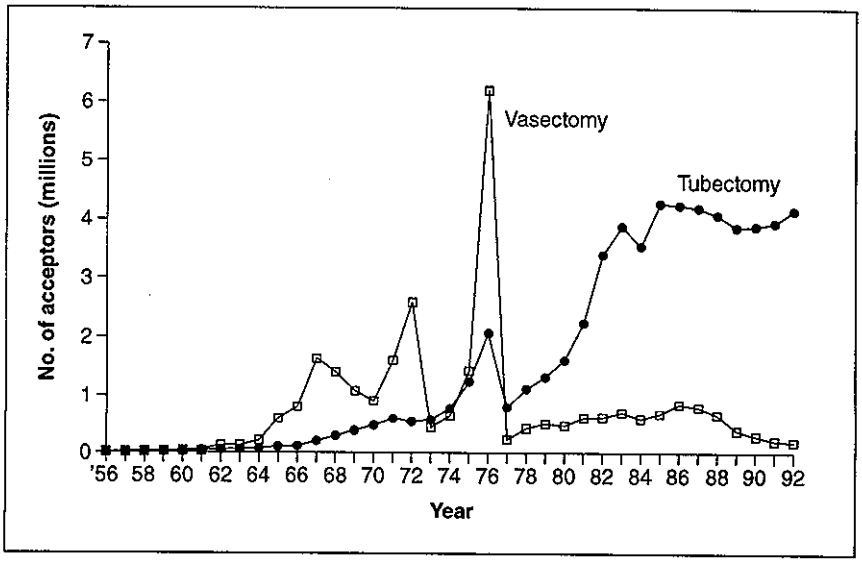

FIGURE 14.1 Acceptors of male and female sterilization: India, 1956–92
Source: GOI, MOHFW, Department of Family Welfare 1996, p. 140.

The chief district administrator (called collector or district magistrate in India) of Ernakulam District in Kerala successfully brought large numbers of villagers to camps for vasectomies, thus setting an example for other regions in the country (Agarwala and Sinha 1983). This approach spread rapidly, and the prevalence of sterilization rose by two percent per year. Doctors at the camps tried to outdo one another in the number of operations they performed each day, with the result that there were high rates of failure and other complications.

The Ernakulam camps were models of organizational efficiency, but their methods were not always duplicated elsewhere. Handling large numbers of cases placed a strain on the camps' organizational capacity, making follow-up difficult. The number of sterilizations fell as problems associated with this hurried approach came to light (Soni 1983). The number of vasectomy cases declined further after 1976, when the government declared a national emergency during which thousands of men were coerced to accept vasectomies. Since 1977 female sterilization has been the most commonly used method (Figure 14.1). Among the 31 percent of couples sterilized as of 1992–93, female sterilization accounted for 27 percent and male sterilization accounted for a mere 4 percent.

Female sterilization consists of two methods—the abdominal method, or mini-laparotomy ("minilap" for short), and laparoscopy,

which was introduced in the early 1980s. By the end of the decade, the laparoscopic procedure had become popular because it was quick and it did not require general anesthesia or a stay in the hospital. When the procedure was still new, only a few surgeons were trained in this method, and hence laparoscopies took place in large "camps" where a single surgeon performed 100–300 operations per day in an assembly-line approach. The camps were held in any building available. As more surgeons were trained and some of the problems of such large camps became evident, the camp sizes shrank to 20–50 cases per day, only occasionally exceeding 100 cases.

Sterilization is the center of what remains a target-oriented program. The central government sets targets for each state, which the state in turn distributes to each primary health center (PHC) and worker. In Gujarat each worker is expected to recruit about six sterilization cases per 1,000 population, or 18–24 cases per year. The government's fiscal year begins on April 1 and ends on March 31, which has led to a system in which the impetus for sterilization recruitment starts in October and ends with a crescendo in March. Workers must reach their targets by the end of March or face possible punishment, ranging from a verbal reprimand to the withholding of their salary or denial of promotion. The acceleration of cases can be seen in data from Gujarat and Maharashtra. In Gujarat during fiscal year 1992–93 about 5,100 sterilizations were completed in April 1992, whereas in March 1993 the number rose to more than 45,000. The data on sterilizations performed each month in 1993–94 also show that the numbers increase from about 5,000 in April 1993, the beginning of the fiscal year, to a peak of 48,000 in December and then decline to 37,000 in March 1994 (Figure 14.2). This periodicity could be due to women's preference for sterilization in winter and also to pressure to fulfill targets by the end of the fiscal year. Maharashtra presents a similar picture: 16 percent of sterilizations took place during the first quarter of the year (April–June), compared with 33 percent during the last quarter (January–March). Part of this periodicity is due to women's preference for having surgical procedures done during winter months, but the peak of operations in March can be explained largely by the target system and the pressure workers feel at the end of the fiscal year to meet their targets. Such pressure has adverse consequences for the quality of services provided by the camps.

In this chapter we assess the quality of sterilization in camp settings, drawing upon Judith Bruce's framework for evaluating the qual-

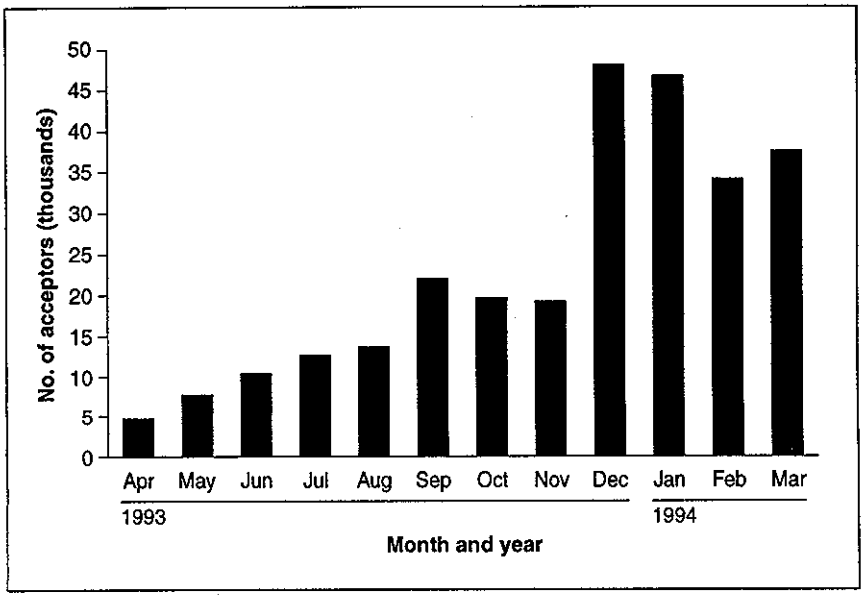

FIGURE 14.2 Acceptors of tubectomy: Gujarat, 1993–94
Source: Unpublished information from the Government of Gujarat, Department of Health and Family Welfare, Gandhinagar 1996.

ity of family planning (Bruce 1990). The sterilization camps provide an opportunity to observe what information is given to clients, the technical competence of providers, interpersonal relations, and some aspects of follow-up. We draw lessons for the national sterilization program based upon our observations.

The Setting and Study Methodology

The study took place in a district in northern Gujarat, the westernmost state in central India. According to the latest Indian census, Gujarat had a population of 41 million in 1991. It ranks high economically, but on a range of social indicators Gujarat ranks considerably lower.

A district is divided into several small blocks called *talukas*, each headed by a taluka development officer who is in charge of the block's development activities. In Gujarat the laparoscopic camps are organized at a community health center (CHC) or a "mother PHC"—that is, an old, large PHC constructed before the new pattern was established of one PHC for every 30,000 population (instead of for 100,000)—which is usually located at the taluka headquarters. The sites for camps are generally located in the town where the taluka

has its offices. Camp staffing and management duties are divided among the various PHCs of the area by rotation. Throughout the year, one day of each week is dedicated to sterilization camps. On that day the operations are carried out from morning to afternoon or evening, depending upon the number of cases.

This study of sterilization camps covered one PHC and two CHCs and was part of a larger project assessing microlevel planning for PHCs. We observed 10 sterilization camps between January and March 1994. Initially each camp received a visit from a team consisting of a public health physician, a researcher, and one or two female field investigators. The team participated in all activities of the camp and observed the camp's technical, interpersonal, and administrative aspects. On the basis of these initial observations, we developed a checklist for noting salient characteristics of each camp. Detailed information about each camp was also recorded in the form of a descriptive narration. The intent was to assess the quality of the camps and identify areas in need of improvement.

Results

The 10 camps served a total of 275 women. We did not observe all the sterilization procedures, but we spent at least one hour in the operation theater (OT) of each camp. We also spent part of our time observing activities outside the OT. Our attention focused on four aspects of the camps: (1) the physical facilities of the PHC or CHC for camp-related activities, (2) the technical quality of care provided by the camps, (3) the human quality of care, and (4) organizational and administrative aspects of the camps.

Physical Facilities

The most important physical facility at a sterilization camp is the OT. Other physical features we were interested in observing were patient facilities and facilities for patients' relatives.

OT. In the PHCs the OT was usually a room that had been temporarily converted for that purpose, whereas at the CHC it was generally better equipped. We found the OT at one of the three sites to be in good physical condition as it had been newly constructed by a private donor and handed over to the government. At the other two

sites (one a PHC and the other a CHC) the OTs were in poor condition owing to improper construction and lack of maintenance. Lighting and ventilation were also poor; windows did not close properly. The paint on many walls was old and peeling.

Lack of cleanliness was a serious problem. One CHC's OT had pigeon nests on the light fixture above the surgical table. None of the theaters had facilities for scrubbing hands between operations. Although wash basins were located outside the theaters, most had no water; even if they did, the surgical staff did not scrub after each operation. Although the general cleanliness of the OT is the most important aspect of the technical quality of care in sterilization, the unsanitary condition of the OTs in two of the three centers we observed indicates the lack of importance given to cleanliness by PHC administrators.

OT equipment was old and in poor condition. There were no shadowless lamps but only tube lights and modified table lamps with ordinary bulbs. One might argue that laparoscopy does not require sophisticated OT lamps, but at three stages of the procedure—making the incision, closing it, and manipulating the uterus—proper lighting is essential. At the two CHCs other routine operations were also done under these circumstances.

Emergency medicines and equipment were lacking at the camps. For example, although the OTs had oxygen cylinders, the key to open them, the pipes, and the masks were not readily accessible. No anesthesia trolley or respirator bag and mask were available for artificial respiration in the theater. In one of the theaters a blood-pressure (BP) cuff bulb was being used to pump air into the abdomen, and that bulb was so tattered that it was being held together with sticking plaster. We could find no systematic mechanism for regular inspection and maintenance of the OT equipment.

Most of the equipment normally found in an OT, such as trolleys, saline stands, standing BP meter, and the operation table, were either nonexistent or improvised from wooden furniture. The table was missing stirrups for arranging a woman's legs in the proper lithotomy position. The linen was meager and torn, and there was a shortage of gowns, masks, slippers, and other OT apparel.

The supply of water and electricity was erratic. During our observation at one center, water had to be brought by tanker because the water pump's motor had burnt out. At the center there was no running water, so that an assistant had to pour water for the surgeon

to wash his hands. We were told about operations that had to be suspended because of the lack of electricity. Twice during the camps we observed a surgeon having to wait for two to three minutes for interrupted power to return while the laparoscope was inside a patient. Later, when discussing this matter with the district-level officers, we learned that some years earlier they had run the laparoscope by attaching it with a cable to a car battery. But this ingenious solution was not used in any of the centers we saw.

Patient facilities. To make surgery a more comfortable experience requires not only a properly equipped and maintained OT but also facilities for preoperative preparation and postoperative recovery. In most of the camps we observed, attention was not paid to such details. Clean and functioning toilets are essential at a sterilization camp because, as part of the preoperative preparation, women are given an enema to empty their bowels. In most camps we observed, the toilets were not functioning properly for lack of water and maintenance. They were full of waste.

There were no systematic seating arrangements for waiting cases. Women had to sit on the floor or were kept lying on mattresses after receiving preoperative medications. At one camp, 35 women clients were packed side by side on the floor of a small anteroom next to the OT, waiting for surgery. Overcrowding was less of a problem at the CHCs.

Patients were not given OT clothes to change into. A woman's own *ghagara* (below-waist petticoat) was tied above the breast so that it covered her from the breast to mid-thigh. Such exposure must be acutely embarrassing to most women in this culture, where exposure of women's legs is unacceptable. Patients had little privacy in the resting room. Not only were many women crowded into the room, but the PHC staff—including male ward boys, *peons* (untrained male staff), and doctors—had to pass through it on the way to the OT.

Normally women come to the camps through their own means, but the centers arrange for them to be transported home after surgery. The vehicle used for this purpose is a jeep that is usually crowded with PHC staff, other women from the patients' villages, and patients' relatives. Therefore the ride home can be quite uncomfortable.

The camps provide no food or water for patients, who must fast both before and after the operation. This means that women undergoing sterilization have nothing to eat or drink for nearly 24 hours, beginning the night before their surgery.

Facilities for patients' relatives. An operation is considered a major event in the lives of Indian women, and therefore they are accompanied to the sterilization camps by two or three relatives. Many patients have just given birth and so have infants to feed. The relatives and infant arrive with the patient at around 9:00 a.m. and must stay until 4:00 or 5:00 p.m. At none of the camps we saw had the authorities made any systematic effort to provide them with a shaded place to sit, chairs or benches, drinking water, or toilets. The relatives had to wait in the open yard, seeking shade wherever they could find it. Those with infants made temporary cradles by tying two ends of a cloth to two supports. Relatives provide much-needed psychological support to the women who are undergoing the operation, but the PHC system does not seem to care about their welfare.

Several years ago the Health Department stopped paying workers a motivator's fee. Workers told us that, as a result, they had to spend their own money to purchase tea or snacks for the relatives of the women they had recruited for the operation. This change was a source of considerable resentment.

Technical Quality of Services

The technical quality of care is critical to the overall quality of care provided by sterilization camps. Poor technical quality can cost lives and discredit the entire program. We looked at this aspect of quality during the preoperative, operative, and postoperative phases of care. Our results indicate that technical quality was inadequate.

Preoperative care. We focused on four elements of preoperative care: (1) screening and preoperative preparation; (2) the administration of preoperative medication; (3) technical skills of workers; and (4) patient counseling.

Proper screening identifies and eliminates high-risk cases, and preoperative preparation reduces risks associated with surgery. Screening should include a systematic examination to rule out contraindications for the operation. The preoperative preparations we observed included a general examination, BP measurement, a urine test using the Benedict method of measuring sugar level, a blood test to measure hemoglobin level, shaving of the pubic hair and lower abdomen, an enema, and the administration of preoperative medications. As already mentioned, patients were required to have fasted

since the previous night. The general examinations we observed were cursory and hurried. In most cases a pelvic exam was not done. Hence in our view the cases accepted for surgery were not properly screened.

The preoperative medications given to each patient included atropine (to prevent vasovagal shock), penicillin (an antibiotic), diazepam (a sedative), and Phenergan (to prevent allergic reaction). In all the camps we observed, the nurses were using only about 8 to 10 needles and syringes to inject the four medicines into 20 to 30 women. The needles and syringes were washed in hot water or sometimes boiled for few minutes and then reused. Ideally, reusable needles and syringes should not be reused until they have been boiled for 20 minutes. There does not seem to be a shortage of supplies—the PHCs have adequate stocks of needles and syringes given to them under the Universal Immunization Programme—but the camp organizers and nurses were not taking the trouble to prepare autoclaved sets of needles and syringes for the sterilization cases as they normally do for immunization camps. Moreover, in most cases they allowed too little or too much time to elapse between the preoperative medication and surgery, with the result that the medication had not fully taken effect or the effect had waned by the time the women were operated on.

We observed nurses using the same instrument to give successive patients an enema without disinfecting or even cleaning it. We could not observe the shaving, but we suspect that the nurses used a single razor blade on more than one patient. This would have increased the risk of transmitting blood-borne diseases, such as HIV and hepatitis B virus, from one patient to another.

The technical skills of the workers were also deficient. At one camp we observed, the nurse did not know how to open the vials properly and accidentally spilled some medicine from each vial. She even accidentally broke several vials, with the result that the last patients did not receive any antibiotics. In another camp a nurse improperly attached a needle to the syringe she was using, thereby causing medicine to leak out while she injected a patient. Such incidents indicate that the staff were not properly trained in preoperative procedures, or they reflect simple carelessness.

After being examined and prepared for surgery, the women were kept lying in a room until their turn came for the operation. PHC staff made no attempt at this point to prepare them psychologically for the operation by telling them what the surgery would entail and

what they could expect to experience during the procedure. It is possible that the auxiliary nurse-midwife (ANM) had explained this when recruiting the women at their homes, but this is doubtful. This omission and the other problems described above indicate the weaknesses of the preoperative preparations.

Quality of care in the OT. The observance of proper OT procedures is critical to the prevention of infection and other complications. We found that instrument sterilization was inadequate in all the camps we observed. The trocar, cannula, scalpel, needles, forceps, and other instruments used in surgery need to be properly cleaned and thoroughly sterilized after each use to prevent the transmission of infection from one patient to another. What we saw instead was that the trocar, cannula, laparoscope, and scalpel were merely washed in hot water in a tray after use, dipped in the germicidal solution Cidex (glutaraldehyde 2 percent solution) for 30 seconds to 1 minute, washed with hot water again, and reused after being wiped with a sterile towel. The recommended amount of time for immersion in germicidal solution is 20 minutes at or above 25 degrees centigrade for a high level of disinfection and 10 hours for complete sterilization (Tietjen, Cronin, and McIntosh 1992). The catgut and needle used for suturing were cleaned with spirit and hot water, respectively, before reuse. Instruments used for uterine manipulation were not sterilized adequately either. Instead of being boiled for 20 minutes, they were washed with hot water. Surgical staff did not swab each patient's vagina and cervix or paint them with antiseptic solution before inserting the uterine sound, which is required for manipulating the uterus during sterilization. This omission increased the risk of infection ascending from the vagina to the uterus and fallopian tubes. Although skin preparation with antiseptic was done reasonably well, there was also room for improvement here.

Among the large number of staff present in the OT, only some wore a mask, gown, or cap. The surgeons and nurses did wear surgical garb, but did not follow general aseptic precautions, such as changing their gloves, gowns, masks, and caps after each operation. After operating on one patient, the surgeon simply washed his gloved hands in hot water and dipped them in Cidex before moving on to the second table, where another patient was kept ready so as not to waste time.

Thus the sterilization of equipment and the aseptic precautions were extremely inadequate in the camps we observed. No one seemed

to be paying attention to these important details. One positive observation was that, at least at the beginning of a day's surgical activity, most OT instruments and linen were autoclaved and the color indicator strips were preserved and pasted in a notebook to keep a record of autoclaving quality. But subsequently the same instruments were merely boiled or cleaned with hot water and reused.

Supporting our observations of OT procedures at the camps we visited is a study of 398 PHCs in 199 districts covering most major states in India, which the Indian Council of Medical Research conducted during 1987–89 (ICMR 1991). The researchers observed 2,075 sterilization cases at camps organized by the PHCs. They found that in 40 percent of the cases, sterilization of the instruments was "improper or not done." They reported that in Gujarat, the laparoscope was not properly sterilized in 51 out of 65 cases observed, and that the sterilization of other instruments was inadequate in 36 out of 65 cases.

Improper surgical technique increases the risk of complications and failure. We did not observe the surgical technique of the laparoscopy procedure very closely, as we were not competent to do so, although an expert gynecologist could tell whether proper surgical procedures were being followed. In the final analysis, only follow-up of rates of complication and failure can determine the quality of surgery. We have not followed up the cases we observed because properly doing so would have required a prospective study of a large sample.

The attendants in the OTs we observed were not well trained. Peons served as OT attendants, making mistakes that caused patients to suffer. In one camp, for example, a peon instructed a patient to assume the wrong position, making it necessary for her to get on and off the table twice. Doing so was difficult because no steps were provided and the table could not be lowered. Nor were the ANMs who assisted in the operations properly trained to clean the instruments and disinfect them after each operation. According to one district-level officer, they had been taught some improper techniques during their basic training. Low technical quality of care in the OT could well be a reflection of deteriorating standards in various teaching and training institutes in the state.

Postoperative care. After the operation, patients are kept in a room to rest for two hours and then discharged. In one PHC we observed, the resting room was very congested. We did not observe any regular measurement of the patients' BP or pulse after the operation. Al-

though this is less important now that laparoscopic operations are done under local anesthesia, it should be done to ensure that patients do not go into shock as a result of internal injury or allergy to medications.

Follow-up. Patients were given paracetamol and iron tablets at the time of discharge. But we did not see staff giving them any advice except such basic instructions as "Don't put water on the wound." No written instructions were given to the women. The women were delivered to their homes in a vehicle. The next day the health worker (an ANM or male worker) or doctor visited each woman at home and inquired about her health. After seven days the ANM removed the stitches at the woman's home. We were told that the materials available to the ANM were not adequate for proper dressing of the wound. Even though follow-up is routine, workers have no set protocol for examining the patient; they may miss a developing problem even if they visit the woman.

Human Quality of Service

The human quality of service, one of Bruce's six elements for measuring the quality of care, is very important because negative impressions have an immediate effect on clients' behavior, often causing them to reject sterilization. For most women who come for the operation, this is their first encounter with hospital services, which include such unpleasant preoperative procedures as the shaving, enema, and vaginal examination. Such an experience can be traumatic if there is little empathy, gentleness, and proper psychological preparation for the procedures. The provision of good human quality of care requires training, adequate time, and the right attitude on the part of providers.

Our observations indicate that the PHC system has not given thought to the interpersonal aspect of the sterilization procedures used in the camps. The camps are run more or less like an assembly line in which the surgeon operates on two tables, one patient right after the other. Generally in this operation the medical officer prepares each case by painting and draping the patient, then injecting air into her abdomen. The surgeon makes an incision, inserts the trocar and cannula, and then inserts the laparoscope and ligates the fallopian tubes. It takes only two to three minutes for this part of the procedure, after which the surgeon moves on to the other table. The medical officer then sutures the wound and puts a dressing on it. At one center we observed that besides the two patients on the table, two more were

kept waiting in the OT in a squatting position so that as soon as one patient came down from the operation table, one waiting could immediately take her place. This was done to save the time of the surgeon, who came from the private sector or from another center. Approximately 10 to 15 operations are done in one hour. In such a setup, it is not possible to provide much empathetic treatment.

We believe that while waiting for their turn, clients who are next in line must be frightened by what they see and hear, especially if the woman being operated on cries in pain—which is common as the operation is done with local anesthesia. In one instance we observed, the surgeon had to do a lot of uterine manipulation because the patient was obese. The woman was crying in pain, and after the operation she began bleeding from the vagina as a result of internal injury caused by the procedure. Strong painkillers like morphine or pethidine are not given even in such cases.

The division of labor among the lower-level staff has male peons assigned to the OT to help women get on and off the table and to help them assume the lithotomy position, in which the women's private parts are exposed. Female attendants are assigned the task of cleaning the instruments and boiling water outside the OT. In most camps there are no female doctors, so that male doctors do all surgery. Only the nurses who assist the doctors are women. Thus the gender allocation of work follows the established hierarchy and is insensitive to clients' cultural modesty.

The nurses we observed did not seem to be sympathetic to the women. One woman was feeling uncomfortable after being prepared for surgery and was unable to lie down. She requested water. Instead of helping or comforting her, the nurse ordered her to "shut up and go to sleep." No one seemed to pay any attention to the mental condition of the clients, whose anxiety might have been alleviated had they been told, honestly and sympathetically, what to expect during both the preoperative and operative phases of sterilization. The clients' relatives might have provided some comfort to the women, but they were not allowed to be with them either before the operation or afterward until the women were discharged.

The camps made no effort to provide health education or information to the clients. The women were required to give their consent for the operation, but it could not be called informed consent. They were simply told to sign a printed form or, in the case of the large

number of illiterate women, put a thumb impression on it. Nobody explained to them what was written on the papers.

Organization and Management of the Camps

As mentioned earlier, the sterilization camp is held at one place in the taluka, usually at the CHC or the "mother PHC." The center's staff are involved in organizing the camp, but the various PHCs of the areas where operations are not performed rotate responsibility for staffing the camp so that all share the burden of work and accountability if something goes wrong. The medical officers share responsibility for preoperative examinations and assisting in the OT. The surgeon comes from the private sector or from a nearby CHC or district hospital. The peons and *ayahs* (female attendants) work as OT attendants, and the ANMs or nurses provide assistance in the OT. Task allocation and overall responsibility are not clearly defined or adhered to. Generally the PHC sets up four or five stations, one each for registration, preoperative examination, preoperative preparation, operative procedures in the theater, and postoperative rest. Patients are admitted in order of their place in some sort of queue, but no numbering system is followed.

There was no systematic preparation for the camps we observed, nor was any thought given to the details of planning and organizing the camps. No one person had overall responsibility for their management. There was no monitoring of the various procedures, nor were there manuals, protocols, guidelines, or standing orders for anything done in a camp. We found no supervisory checklists in use. Most activities took place on an ad hoc basis or according to the tradition of a particular center. District-level health officers came periodically to visit the camps, but they did not seem to play any role in ensuring a high quality of services.

For example, during our observation period the district-level officer visited one of the camps. Instead of inspecting the various activities of the camp, he called all the workers and supervisors into one room and demanded to know who had not achieved their sterilization targets, reprimanding those who had a shortfall. Thus instead of helping the camp, he disrupted its activities by diverting staff away from their respective duties. Likewise, when the taluka development officer or other higher administrators visited a camp, they were more concerned about meeting targets than about the quality of care provided or resolving the camp's organizational problems.

Some camps are organized as "prestige camps" in the name of politicians or top administrative officers of the district, but we found no indication that the quality of care is given importance even in these camps. Social service organizations do support the camps, but they focus most of their attention on increasing the number of cases by giving additional incentives to acceptors rather than on improving the quality of care. Fortunately, during the last few years the additional incentive system has been discontinued. Nevertheless, there is no indication that camp organizers are paying more attention to the quality of care provided.

Discussion

Our study indicates that although the technology of sterilization is well established, the quality of services offered in the sterilization camps has to date received little attention. In recent years the Family Welfare Programme has directed much of its attention to spacing methods in response to the criticism that it relied exclusively on sterilization. Consequently, there has been much talk about improving the quality of family planning services, but only in relation to spacing methods. This shift to a wider selection of services will take a long time to accomplish. Meanwhile, sterilization will remain the dominant method offered by the program, and therefore the quality of this important service should be given priority.

The effects of poor quality on the Family Welfare Programme have not been studied systematically, and future research should concentrate on this aspect. The literature on business management indicates that poor quality may seem effective in the short run, but is costly over the long term, and that investment in improving quality pays high dividends. In service management, high quality is regarded as an important asset that can give a provider a competitive advantage (Berry and Parasuraman 1991).

In the case of sterilization services, poor technical quality can lead to complications and even death. Poor interpersonal quality can create tremendous psychological barriers to the use of such services, and negative impressions of service quality will soon spread fear in the community. Our mini-survey and in-depth studies done as part of the same project revealed that community members had substantial fear and numerous misconceptions about sterilization. Of the 372 women interviewed in the in-depth study, 41 percent believed that

laparoscopy burned the blood or the uterus because it used electricity to "burn" the fallopian tubes. In focus-group discussions, women who had undergone laparoscopy made such statements as "My complexion has darkened," and "I get black blood during menstruation" as a proof of "burning" during the operation.

Our survey results also revealed a sizable proportion of nonacceptors of family planning. The annual target for sterilizations is around 350–375 per PHC. At one community served by a PHC, we estimated there were 1,176 couples who did not want more children but nevertheless had not accepted sterilization; this gap could be defined as unmet need. During our in-depth interviews, we probed the reasons for not accepting this method. Fear alone accounted for approximately 4 percent of the total unmet need for contraception. "Poor health" and the belief that sterilization caused weakness accounted, respectively, for nearly 22 percent and 18 percent of unmet need in two PHCs we studied. Underlying responses like these may be apprehension about the operation—apprehension caused by anecdotal information from clients about the poor quality of services.

The impact of poor quality has been assessed by comparing mortality rates following sterilization in the state of Gujarat with those in developed countries where the quality of care is generally high. Bhatt (1991) reports that the mortality rate due to sterilization in Gujarat during 1978–80 was 20.6 deaths per 100,000 operations. In contrast, in the United States the death rate was only 1.5 per 100,000 hospital sterilization procedures during a similar time period. Over the years, sterilization mortality has declined in India and Gujarat owing to improvement in quality of services. Government data show that between 1990 and 1994, the sterilization mortality rate for India as a whole declined from 5.5 to 2.2 deaths per 100,000 operations (GOI, MOHFW 1994). Recent data from Gujarat show that sterilization mortality declined from 9.1 per 100,000 operations in 1990 to 5.0 in 1994 and then to 2.0 in 1998 (personal communication, Department of Health and Family Welfare, Government of Gujarat, Gandhinagar, March 1998). Thus we have not yet reached sterilization mortality rates that were prevalent in the United States 20 years ago. Given that in India about 3.7 to 4.3 million female sterilization operations are performed every year and assuming a rate of 2 deaths per 100,000 operations, there would be 74 to 86 deaths due to sterilization every year.

Finally, the fact that health workers face great difficulty in achieving their sterilization targets—which may represent only about 20–25 percent of the potential demand among clients to limit fertility—indicates that many potential clients are reluctant to undergo sterilization in spite of not wanting more children. A major reason could be the perceived poor quality of care at sterilization camps. Improving such quality is within the direct control of the health care system.

Why Is Quality Poor?

Why is the quality of care so low in a program of such great national importance? We previously described eight probable reasons (Mavalankar 1994):

1. *Lack of understanding of the importance of quality of care in the government system in general.* The top managers of the Family Welfare Programme have not realized the importance of quality of care. The program so far has used a target-incentive approach in which the emphasis is on recruiting acceptors "by hook or by crook," as a senior program manager put it. And because the funds for the program come from the central government and the targets are determined at that level as well, state-level officers believe they should be guided by what the central government directs them to do.
2. *Failure to monitor and reward quality.* It has been assumed that because fully qualified doctors perform the operations, they must be doing a good job. And who outside the medical profession can monitor doctors? Many managers have not recognized that standards of medical education have declined and that the doctors coming into the public system, at least in Gujarat, are often not adequately qualified.
3. *Pressure to achieve numerical targets.* At times doctors have had to compromise their medical standards in response to pressure from general administrators to meet program recruitment targets.
4. *Poor physical infrastructure and equipment.* Maintenance standards for all government facilities, including PHCs, have been declining rapidly. Budget cuts, centrally squeezed allocation of meager resources, and lack of initiative at the PHC level mean that the PHCs and OTs are not well maintained.

5. *Deterioration of technical standards in teaching and training institutions.*
6. *Lack of standards, protocols, manuals, and systematic recording systems.* Systems of quality assurance have not been set up in the program, despite the fact that the government periodically sets guidelines and issues orders to improve program quality. Most of the orders seem to remain in the files of the state or district headquarters and do not get implemented in the field. For example, since the early 1990s the central government has been preparing a draft manual on quality of care in the Family Welfare Programme with help from the National Institute of Health and Family Welfare and the US-based Association for Voluntary Surgical Contraception. By 1997, however, only parts of this manual had reached the state and district level, and its use in the field was not evident.
7. *Lack of concern for the human aspects of quality of care.*
8. *No choice or voice for the clients.* Poor people are accustomed to receiving poor services from all sectors, public and private, and hence they rarely complain. Perhaps they see no point in complaining because they do not believe their complaints would have any effect. The Family Welfare Programme has no established mechanisms that enable people to have their voices heard.

Researchers have neglected the issue of quality until very recently. During the last 40 years, most of the research on the Indian program has focused on demographic outcomes. Programmatic research, operations research, and health-systems research have received little attention. Women's groups, who have vociferously protested the introduction of new contraceptive technologies, are surprisingly silent about the quality of sterilization services. No wonder all is quiet on the quality front.

Steps That Can Be Taken to Improve Quality

The literature on service-quality improvement has numerous lessons for the Family Welfare Programme (Fitzsimmons and Fitzsimmons 1994). The most important requirements for improving quality are:

- Commitment from top management;
- Systematic assessment of quality and rewards for improvement;
- Establishment of a continuous, iterative process of quality improvement with both short- and long-term goals;

- Attention paid to critical details and systems set up to record and monitor them;
- Focus on clients' rather than staff needs;
- Process orientation, not person orientation;
- Follow-up and consistency in approach;
- Use of data for decisionmaking; and
- Teamwork and development of shared values toward high quality.

Given these nine requirements, the program should assess the current situation, develop new standards, and work toward improving quality. Service quality has to be built into the process and should be a part of training. It cannot be imposed through mere supervision or inspection. Unless top management commits itself to developing a high-quality program, efforts made at lower levels of the bureaucracy will be futile.

In conclusion, sterilization is critical to the success of India's demographic and health goals, but the quality of the government's sterilization program must improve if further progress is to be made. Fortunately, there is opportunity for improvement, as the World Bank and many donors are now ready to allocate funds to improve the Family Welfare Programme under the new Reproductive and Child Health Initiative of the Indian government. It is hoped that this study will encourage many government officers to bring about positive changes in the sterilization program, which remains a central component of India's Family Welfare Programme.

Postscript: A Success Story

In December 1997 we observed a laparoscopic sterilization camp at a PHC in the same district. The meticulous attention that the government surgeon paid to the technical quality of care was so surprising that we thought it merited description.

The surgeon, a male doctor with postgraduate qualification in general surgery, came to the PHC from a distant CHC. He is extremely careful about surgical aseptic procedures. Moreover, he has adapted the laparoscope to the rural situation, thus improving the quality of care and reducing cost. The key quality-improvement features we noted at the sterilization camp are described here.

The surgeon insists that the OT be wet-mopped and then fumigated with formalin a day before surgery. No one is allowed inside

the room until the next day. All the instruments are meticulously autoclaved, and drums of instruments are prepared on the day of surgery. Details of instrument sterilization are recorded. No one is allowed inside the OT without a mask and a change of footwear.

Women are screened for diabetes and anemia. Only those without sugar in their urine and a hemoglobin level above 8 g/dL are approved for surgery. The routine examination and preparation are done as in other camps.

The surgeon has procured five laparoscopes from nearby hospitals and CHCs where they are not being used. All the laparoscopes are properly sterilized in Cidex solution for 30 minutes. After every operation the used laparoscope is cleaned with boiled water and dipped in Cidex. The amount of time a laparoscope is dipped in Cidex is noted. Generally each surgical procedure takes about five or six minutes; hence with five laparoscopes, the 30-minute cycle works well. The surgeon waits until the stipulated time has elapsed even if the operations take less time to complete.

A device designed by the surgeon powers the laparoscope's bulb when there is no electricity. Three regular flashlight-battery dry cells and a connector provide the power source. This device ensures that laparoscopic sterilization continues even when there is a power failure, a common occurrence in most rural areas. The surgeon has also replaced the light bulb socket of the laparoscope with an ordinary flashlight socket so that any flashlight bulb can be used to replace the laparoscopic bulb. A laparoscope bulb is expensive to replace (Rs1,200) and often cannot be found outside the state capital. A flashlight bulb is much cheaper (Rs2) and is readily available.

Some of the problems observed in other camps were also seen in this camp. They include men working inside the OT to help partially exposed women clients climb on and off the table, women having to wait from morning to evening for surgery, the shaving of pubic hair with used razor blades, lack of a proper place or arrangements for patients' children and other relatives to wait, and the lack of health education services at the camp. Notwithstanding those problems, the technical quality of the sterilization procedure is good. The surgeon has attended the government's quality-of-care training, but our view is that he is exceptional in implementing the training and going beyond it. Unfortunately, there is no recognition or reward for such good

work, and no one in the administration has thus far taken note of, or tried to replicate, his innovations.

Acknowledgments

We gratefully acknowledge the help and cooperation provided by the officers of the Gujarat State Health Department and the PHC staff involved in this study. The study was funded by a grant from the International Development Research Centre, Canada (No. 88-0295). The writing of this chapter was supported in part by a grant from the Ford Foundation.

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15 The Quality of Care in the Sterilization Camps of Uttar Pradesh

JOHN W. TOWNSEND, M. E. KHAN, & R. B. GUPTA

Sterilization for men and women is the most commonly used contraceptive method both in India at large and in Uttar Pradesh. In Uttar Pradesh (as well as nationally), three of every four contraceptive users have chosen sterilization, and about 13 percent of all married women 13–49 years of age have been sterilized. From the beginning of the public program in Uttar Pradesh in 1956 through 1994, a total of 8,136,167 sterilizations were performed. During the 1990s, the annual number of sterilizations performed in the state has averaged about 400,000, of which about 13 percent have been vasectomies and the remainder tubectomies (GOI, MOHFW 1994). About three-fourths of female sterilizations involve laparoscopy, and nearly all vasectomies involve a scalpel incision. No-scalpel vasectomy has only recently been introduced in India.

In recent decades the number of sterilizations performed each year has varied widely, depending upon the government's priorities for the organization of services (e.g., camps or facilities for postpartum women) and its policy on outreach and targets. During the 1980s, for example, the numbers in Uttar Pradesh ranged from a low of 78,438 in 1981 to a high of 751,600 in 1988. Nevertheless, the potential demand for sterilization services in the state is considerable. According to the National Family Health Survey, nearly one-third (31.4 percent) of married women in Uttar Pradesh want no more children but are not currently using any contraceptive method (IIPS 1994). Even among

TABLE 15.1
Chronology of sterilization camps in India

Period	Description
1951–56	No public sterilization service
1956–61	61 stationary and 16 mobile facilities
1961–66	Incentives to private physicians; railway camps
1967	Targets set; 1.6 million sterilizations to date (83% vasectomies)
1969–74	409 mobile clinics, 4,120 stationary clinics; compensation for mortality
1974–78	Emergency period; 8.3 million sterilizations to date (75% vasectomies)
1980–85	Laparoscopic method introduced, but not in camps; 4.1 million sterilizations (14% vasectomies)
1985–90	Mini-laparotomy techniques introduced; 4.1 million sterilizations (6% vasectomies)
1990–95	2,328 CHCs, 21,254 PHCs identified as potential sites for camps; introduction of surgical standards

CHC=community health center; PHC=primary health center.

those women who intend to use spacing methods in the future, given their early childbearing, many will eventually choose sterilization to prevent additional births.

Public health care in India is designed to be a cascading system. Each district, containing about three million people, is served by a district hospital and a network of community health centers (CHCs) and primary health centers (PHCs). A CHC is a small hospital with inpatient facilities designed to serve a population of about 100,000. A PHC is a primary care facility with two physicians and several nurses meant to serve a population of about 30,000. Postpartum centers (PPCs), which provide birthing care and family planning services for postpartum women, may be attached to a CHC or a large PHC. A camp is defined as any grouping of patients for a specific service, regardless of the site or quality. Operationally, even when services are provided at a health facility such as a PHC or postpartum clinic, the event is called a camp if either personnel (e.g., surgeons or an anesthesiologist) or materials (e.g., medicines or equipment) are supplied externally. In Uttar Pradesh an estimated 80 percent of sterilizations occur in camps organized by the Ministry of Health and Family Welfare (Kumar 1988).

The evolution of camps in India has paralleled the changes and development of sterilization services over time (Table 15.1). During the First Five-Year Plan (1951–56), no public sterilization services were

proposed. Although India established an official, centrally sponsored family planning program in 1952, most of the services were provided in private clinics and hospitals. By the late 1950s, however, 61 government-sponsored stationary clinics and 16 mobile clinics were providing sterilization services. In Uttar Pradesh the first publicly supported sterilizations were conducted in 1956. The early 1960s witnessed the introduction of new networks, such as railway dispensaries for camps, and also incentives to private physicians to provide permanent contraceptive methods. Mobile services, however, continued to be emphasized because of the weak public health infrastructure.

In 1967, 15 years after the program's inception, the government set targets for specific methods within the public system. By this time 1.6 million sterilizations had been performed nationally, 83 percent of them involving vasectomy. In response to explicit method targets, the number and size of the camps increased dramatically. In Uttar Pradesh, for example, the number of sterilizations doubled between 1967 and 1968 to nearly 160,000, largely because of this focused effort. The move toward compulsory sterilizations during 1976, promoted by the government under Prime Minister Indira Gandhi, saw the number of cases of sterilization increase to 8.3 million, nearly five times the number only 10 years before. Family planning targets were dropped briefly after major public opposition in 1977, but were reintroduced in 1978. By the mid 1970s 409 mobile services and 4,120 stationary sites were providing sterilizations nationally. With the increase in volume, the incidence of postoperative deaths also grew, and the government began to provide compensation to families who experienced a death due to surgery.

During the 1970s, vasectomy was still the predominant contraceptive method in India, accounting for about 75 percent of all cases. With the introduction of laparoscopic surgery for women in the early 1980s, the percentage of vasectomy cases fell dramatically, to 14 percent nationwide by the mid-1980s. The health system's increasing emphasis on maternal and infant care narrowed the focus of the Family Welfare Programme to women as the demographic target group to reduce population growth. Another innovation in surgical technique in the late 1980s, mini-laparotomy, reinforced the focus on surgery for women. Myths and misconceptions grew about vasectomy, so that by 1993 that method accounted for only 5 percent of sterilization cases

at the national level. In Uttar Pradesh, however, vasectomy still accounts for about 12 percent of all sterilizations.

Although the number of sterilizations appears to have stabilized nationally during the early 1990s at about 4 million per year, the number of potential sites for providing sterilization and follow-up services has continued to grow, reaching 2,328 CHCs and 21,254 PHCs by the end of 1994. Despite the large number of potential service sites in Uttar Pradesh (213 CHCs and 3,716 PHCs) in 1994, only 41 percent of the PHCs had the necessary equipment and facilities to provide sterilization services, and only 14 percent of the state's medical officers had been trained to provide surgical services. The introduction of no-scalpel vasectomy in 1990 marked the first innovation in male contraception in nearly 40 years.

Only in 1991 did the Ministry of Health and Family Welfare promulgate standards for care (GOI, MOHFW 1991, p. 4). Previously it had issued guidelines but placed much reliance on the skill of individual surgeons and camp organizers. Standards impose a higher level of demand on the system and begin to shift the focus from the number of cases to system readiness and quality. Camps have also changed in size over time. During the early years of the program, it was common for several hundred operations to be performed during a single camp, and surgeons often boasted about the large number of sterilizations they had performed. More recently, camps have become smaller, and a larger number of sites has been used to increase the accessibility of services.

The percentage of eligible couples sterilized has risen with time, not only because of the cumulative effect of sterilization acceptance, but also because the demand for limiting births continues to be high. According to the government's management information system, in Uttar Pradesh between 1988 and 1992 the percentage of couples sterilized rose from 17 to 20 percent. The rise in percentage sterilized in urban districts, such as Kanpur, was more rapid (from 18 to 26 percent) during that period, while the rise in rural districts, such as Sitapur, kept pace, but at a lower absolute level (from 15 to 18 percent).

Annual targets for Uttar Pradesh have varied in the 1990s from 650,000 to 820,000, but the achievement of state-level targets has never exceeded 60 percent in recent years. Target achievement has varied dramatically among state districts, moreover, ranging from 11 percent to more than 136 percent. In districts designated as target-free in 1995, 1994 target achievements for sterilizations ranged from 29 per-

cent in Sitapur to 61 percent in Agra, where the targets were approximately 13,600 sterilizations for populations of about 2.8 million each. Moreover, in recent years about 34 percent of annual vasectomy cases and about 17 percent of annual tubectomies in Uttar Pradesh have been performed during the last month of the fiscal year (March), when pressures to improve the level of target achievement are often intensified.

How the Public Sector Recruits Sterilization Cases and Provides Its Services

Most sterilization services in Uttar Pradesh are conducted in the public sector (93 percent for females and 95 percent for males), and therefore the quality of public-sector services is the logical focus of analysis. The usual sites for sterilization camps are hospitals (about 60 percent) and PHCs (35 percent). Only 5 percent of sterilizations are still provided through mobile services. In the past, schools and other public buildings were sometimes used for camps, but because they were unlikely to have adequate facilities, the use of these sites has been gradually discontinued.

Both health and development-sector staff recruit sterilization cases, but sterilization services are the responsibility of the Ministry of Health and Family Welfare, regardless of the setting. Within the development sector, recruitment is handled by community development workers, who report ultimately to the district magistrate, the most senior government administrative authority within a district. Within the health system, the auxiliary nurse-midwife (ANM) and the male multipurpose worker (MPW) have principal responsibility for recruiting sterilization cases at the village level. Since little counseling is provided in the camps themselves, camp administrators assume that those two entities, the community development workers and the ANMs and MPWs, provide the information clients need for making an informed choice. They also assume that the health system provides the training needed by ANMs and MPWs for proper follow-up. However, clients recruited and brought to the camps by development personnel are less likely than those recruited by health personnel to have undergone adequate screening and counseling. Moreover, development staff are more likely to induce prospective clients to accept sterilization by telling them about monetary incen-

tives, which they disburse. In 1994 the government of Uttar Pradesh allocated one-half of the targets for sterilization to nonhealth personnel in development agencies, rather than to health system staff.

In theory there is nothing inherent in a camp setting that limits the quality of care, as clients should receive counseling about available methods and their options before they arrive at a camp. In Tamil Nadu, for example, a women's health-advocate group provided diaphragms in a camp setting after providing extensive community education about contraceptive options, potential benefits and risks of method use, and follow-up (Ravindran 1995).

Quality of Care as Measured by Camp Infrastructure and Staff Competence

Although community education is of considerable interest, this chapter does not focus on that aspect of the quality of sterilization services in Uttar Pradesh. Rather, it examines two elements of quality that are under the control of camp organizers and surgeons: the readiness of the camp infrastructure to provide a standard quality of service and the technical competence of providers and their staff.

Data

We draw upon several sources of data. The first is the 1992–93 National Family Health Survey (NFHS), which posed a set of questions to a nationally representative sample of women who had undergone sterilization prior to the survey. The second is research conducted by the Indian Council of Medical Research (ICMR 1982, 1991) on sterilization and quality of care in Uttar Pradesh. The third consists of primary data collected by a team of Population Council consultants using participant-observation techniques at three sterilization camps in Sitapur District in March 1995 (Gupta 1995). The Population Council team also conducted interviews with providers in the three camp settings: a PPC, a CHC, and a PHC. They observed some 30 women undergoing sterilization procedures, approximately 10 at each site. Five other women who sought sterilization were denied the service because of contraindications detected during preoperative examinations. The data from these three sources are interwoven in the following

TABLE 15.2
Clients' reports of problems with sterilization: Uttar Pradesh, National Family Health Survey, 1992–93

Problem	Percentage reporting problems related to	
	Female sterilization	Male sterilization
One or more problems	28	11
Pain or backache	20	7
Weakness or inability to work	10	4
Fever	3	2
Sepsis	1	<1
Failure; women became pregnant	<1	—
Loss of sexual power	<1	<1
Other	4	1
No problems	72	89
(No. of clients)	(1,287)	(151)

Source: IIPS 1994.

section to provide a more comprehensive picture of the quality in camps in Uttar Pradesh.

Results

First, a few facts about acceptors of vasectomy and tubectomy in Uttar Pradesh. They had an average of 3.8 living children in 1991, about 0.5 children more than the national average. The average age at which a woman receives a tubectomy in Uttar Pradesh is 32.8 years, three years higher than at the national level (GOI, MOHFW 1994).

Few data exist on the quality of sterilization services in Uttar Pradesh as perceived by female acceptors, but the NFHS asked women who had undergone sterilization about the problems they subsequently experienced. Whereas only 11 percent of vasectomy acceptors reported one or more problems, nearly 28 percent of women experienced one or more problems following tubectomy (Table 15.2). The most common complaint in both types of sterilization was postoperative pain or backache (20 percent for women and 7 percent for men). The second most common complaint was weakness or inability to work (10 percent for women, 4 percent for men). Given that women's work is central to the welfare of most families, a woman's inability to work even for a day or two can be a major family problem. Women considering the operation for themselves understandably pose such questions to health workers as "Who will care for my children?" and "Who will prepare meals and do the work in the fields?"

Their fears about sterilization are not unfounded. The Indian Council of Medical Research (ICMR) (1982) found that one month after the operation, pelvic infections afflicted 15.5 of every 1,000 Indian women undergoing the procedure, and 84 of every 1,000 women reported problems with the wound. As with any major surgical procedure, sterilization carries with it mortality risk. According to the same review, mortality rates among postoperative women were 6.2 per 10,000 for sterilizations unaccompanied by a birth or abortion, 3.3 per 10,000 for postabortion sterilizations, and 0.7 per 10,000 for postpartum sterilizations (ICMR 1982). Most sterilizations performed postpartum or postabortion are conducted in PPCs, where staff and facilities are generally better prepared and equipped than elsewhere to provide this service. Mortality among vasectomy cases is virtually unknown, and morbidity following vasectomy is also lower than for female sterilization (ICMR 1982).

Recent data from Tamil Nadu indicate that death rates associated with female sterilization in the public sector are considerably lower there than in Uttar Pradesh (ranging from 1.0 to 1.8 per 10,000 sterilizations between 1989 and 1994), but still higher than reported for sterilizations conducted in private nursing facilities or by nongovernmental organizations (Ramasundaram 1995). Research in Karnataka suggests that self-reported symptoms of gynecological problems are significantly higher among women who have undergone a tubal ligation than among those using reversible methods of contraception or no method (Bhatia and Cleland 1995). Although there is still debate about causal mechanisms, these data suggest that adverse reactions to sterilization when it is performed under low standards of hygiene are not unique to Uttar Pradesh, but widespread.

Although sterilization is promoted as a permanent method, method failure is also a significant problem. In the ICMR study (ICMR 1982), method failure ranged from 1.1 per 1,000 for laparotomy to 5.9 per 1,000 for laparoscopy. Rates can be expected to vary according to the competence of the surgeon and the readiness of the camp to provide the support required for quality service. Such readiness should include, at a minimum, sufficient light, adequate surgical supplies (e.g., sutures, thread, needles), and equipment (e.g., autoclaves and laparoscopes) in working order.

In general, the data from the participant-observation study of the three sterilization camps in Uttar Pradesh (Gupta 1995) suggest

major differences in readiness by type of facility (Table 15.3). The camp held at the PPC appeared to have adequate space, light, and water, as well as appropriate equipment and supplies (e.g., gloves and slippers). The CHC had a somewhat less adequate setting (no running water) but, like the PPC, it did have a considerable infrastructure and trained assistants for laparoscopic ligation. In contrast, the PHC had an operation theater (OT) in poor condition, inadequate lighting due to irregular electrical supply, and equipment in poor condition, including evidence of rust.

Although water should be available in every camp setting, of the three sites visited, only the PPC had running water. Trained assistants were available at the CHC and the PPC, but the assistants at the PHC camp were not actually trained for laparoscopic ligation and needed constant instruction on procedures from the surgeon. The condition of toilet facilities was a problem in all three camps. The Ministry of Health and Family Welfare has promulgated recommendations for the proper maintenance of toilet facilities at the camps, but those recommendations were not being heeded. Ramachandar and Barge (Chapter 13) and Mavalankar and Sharma (Chapter 14) have observed a similar lack of consistent hygienic standards at sterilization camps in Madhya Pradesh and Gujarat, respectively.

Readiness for quality goes beyond a camp's infrastructure and includes willingness on the part of staff to comply with standards of care set by the institution. Table 15.4 contrasts the practices observed in Sitapur District with the standards defined by the Ministry. For example, at the PPC, the OT is supposed to be fumigated weekly; but according to interviews with staff, it is fumigated fortnightly. Clients are asked to arrive early in the day so that clinical and laboratory tests can be done, but then they must often wait hours for the surgeon, who may be delayed when several camps are scheduled on the same day. Camp personnel are supposed to give clients preoperative instructions, but in practice clients receive little information or reassurance about what will happen to them before, during, or after the procedure. They are merely instructed to do what they are told. Prior to the operation, a woman's pulse and blood pressure (BP) should be checked, a pelvic examination done, and blood and urine samples taken and analyzed. In its study of camps in Uttar Pradesh, the ICMR found that BP was checked in 89 percent of the cases, blood was tested

TABLE 15.3
Infrastructure and equipment, by level of facility: Three camps in Sitapur District, Uttar Pradesh, 1995

Infra-structure or equipment	Condition recommended	Condition observed, by facility		
		PHC	CHC	PPC
Space	Space at least 3m×3m with one entrance and one exit	Small, inadequate, paint peeling	Fairly adequate	Adequate
Lights	Nonreflecting focus lamps; working generator (required)	Regular power source inadequate (power failure during observation); working generator available	Adequate	Adequate
Water	Running water available and basin present	No running water; basins present	No running water; basins present	Running water available
Equipment	BP instrument, D&C set, uterine elevator, scissors, scalpels, retractors, clamps, bowls, trolleys, stand and suction apparatus (all required)	BP instrument, D&C set, bowl, trolleys (in poor condition); instruments water-stained and rusting	BP instrument, D&C set, bowl, trolleys	BP instrument, D&C set, bowl, trolleys, suction apparatus
Anesthesia trolley	Anesthesia trolley or anesthetist with ether, endotracheal tubes, and oxygen cylinders	Trolley not present; instead, oxygen cylinder plus key	Respirator bag, laryngoscope, and oxygen cylinders	Boyles apparatus present
Cleanliness	Clean toilets with running water	Toilets present but without water	Dirty toilets, no water	Dirty toilets
Gloves	100–200 pairs of sterile gloves	Present	Present	Present
Staff for assisting in ligation	Trained assistants	Not trained	Trained	Trained

BP=blood pressure; CHC=community health center; D&C=dilation and curettage; PHC=primary health center; PPC=postpartum center.

TABLE 15.4
Mandated versus observed operative procedures for sterilization: Three camps in Sitapur District, Uttar Pradesh, 1995

Operative procedure	Mandated	Observed
Fumigation of OT (PPC)	Weekly	Fortnightly
Instructions to clients	Preoperative instruction	Little information or support
Physical examination and lab tests	Pulse, blood pressure, pelvic exam, blood, urine	Completed but irregular reporting
Sterilization of reusable needles	20 minutes	5–10 minutes
Time between injection of anesthetic and sterilization (CHC)	30–60 minutes	Variable, sometimes hurried
Disinfection of laparoscope (CHC)	15 minutes	5–8 minutes
Postoperative care	Discharge after 6 hours; medicines, instructions	Discharge after 3–4 hours; medicine given, limited advice
Follow-up	In 7–30 days	At 2, 4, and 7 days for dressings and antibiotics

CHC=community health center; OT=operation theater; PPC=postpartum center.

for anemia in 88 percent, and urine tested for diabetes in 95 percent (ICMR 1991). The camps usually performed pelvic examinations, but it is unclear why 1 in 10 cases did not get all the laboratory tests that are a prerequisite for this service.

In the cases observed in Sitapur, all the required examinations were completed. However, the results of the laboratory tests were sometimes reported incorrectly. In a review of the registers, we found that identical levels of hemoglobin were recorded for most of the women, and one woman whose hemoglobin level was low according to the test was reported as having an adequate level. Clinic staff told us that about 70 percent of pregnant women and women with infants were anemic. One nurse commented that if all the women with anemia were considered ineligible for sterilization, the camps would have no clients. Besides, she added, after an ANM spent a great deal of time motivating women to be sterilized, if the women were then denied the service, the ANM would no longer be welcome in the community.

As all ANMs from the area are required to attend the camps, whether they have recruited a case for sterilization or not, the number of health staff at a camp is sizable. During the camps, most ANMs engage in conversation with one another and have little contact with

their clients. In recent years, tents have been set up at larger camps so that camp personnel can provide information to clients' family members and other visitors, but the long delay before the surgeon's arrival is not used for counseling or providing other services. For example, if a woman accompanying a sterilization client to the camp would like to have an intrauterine device (IUD) inserted or begin to use oral contraceptives, those services are not immediately available. She will be referred to the PHC or given an appointment for a later date, even though ANMs and medical officers are present. If, however, the camp is held at a PHC or CHC and IUDs are readily available, women wanting to use this method are usually accommodated right away.

The 1991 study by the ICMR on sterilization camps reports that 97 percent of women opting for sterilization completed the required consent forms, in return for which they received an incentive payment of Rs145. In 72 percent of the cases, the client's privacy was respected during the preoperative examination, but only 11 percent of the clients were given a change in clothing for the operation. Only 87 percent of the cases were provided with premedication, and 94 percent were provided with local anesthesia. The laparoscope was properly sterilized in only 73 percent of the cases, and in 9 percent of the cases it was not sterilized at all.

The support services observed in 1995 were also deficient in quality, as evidenced by improperly sterilized equipment and discomfort reported by clients. The Ministry's standard requires reusable needles to be sterilized in an autoclave for 20 minutes. In practice, needles were usually left in the autoclave for only 5–10 minutes (Table 15.4). Injections of anesthetics are supposed to be given 30–60 minutes prior to surgery. In practice, because the arrival time of the surgeon was uncertain, the injections were given either too soon or, in some cases, in a hurried fashion just prior to the sterilization procedure, with the result that many clients experienced pain.

In our view and that of the staff we interviewed, the surgeons are generally competent to perform the sterilization procedure. The weakest component of care is the support provided by the health system. Camp surgeons complain bitterly about the problems of support, aware that equipment is often not sterilized according to prescribed standards and that tests are sometimes not completed. At

times they feel overwhelmed by the system, which is driven by acceptor targets. If a surgeon complains to his superiors, he can expect little help in resolving the immediate problems and is identified as an uncooperative member of the team. As the person with ultimate responsibility for the quality of care in the camp, the surgeon is in a difficult position.

Postoperative care is an important link between the camp service and follow-up care within the community. The Ministry recommends that patients be discharged after six hours of rest, and that they be given such medicines as analgesics before departing from the camps. Patients are to be instructed about the proper care of the wound, and the local PHC is to provide follow-up from 7 to 30 days after the operation. In practice, patients are often discharged only three to four hours after the operation. ANMs feel responsible for the relatives who accompany the patients, often providing them with food and transport. The families also desire early discharge so that they can reach their villages during daylight hours. The Revenue Department often provides transportation home for patients. Government ambulances are available in only a few sites and are not generally used for patient transport. In addition, many ambulances are not suited for rural roads.

Patients receive little advice at the camps, although ANMs provide consistent follow-up care in the community. A verification study of sterilization acceptors indicated that 80 percent received follow-up services at home (Sawhney 1986). According to recent in-depth interviews, ANMs make home visits to women who have undergone sterilization at intervals of two, four, and seven days after the procedure, to change dressings and provide antibiotics if they find evidence of infection. Sometimes the ANM pays for the antibiotics herself to ensure a client's satisfaction because an unsatisfied client makes recruitment of subsequent sterilization cases more difficult. ANMs report spending about Rs300 on each case to provide tea to family members during the long day at the camp and to purchase medicines for the client.

The ICMR found that only about 11 percent of sterilized women in Uttar Pradesh were afforded a postoperative recovery period of more than six hours (ICMR 1991). Ninety-five percent of the cases received the minimum postoperative advice about care of the wound and follow-up, and 97 percent received medicines. A trolley or

stretcher was used to transport the clients to the postoperative care room in only 73 percent of cases. In other cases, the women were carried by a camp assistant or were asked to walk.

Issues of Methodology

Despite the apparent clarity of these results, several methodological issues may affect the conclusions arising from this analysis. The issue of standards is perhaps the most important one. The fact that the Ministry of Health and Family Welfare has developed and published standards of care at the central level does not necessarily mean that those standards are known to district-level staff. For most staff, they were neither a part of their preservice nor in-service training, and it is unclear whether the standards would even be acceptable to frontline providers. At the point of care delivery, all standards are local. One cannot expect care to be uniform in all settings, and certainly the data we have presented are consistent with the variability one expects between PPCs and PHCs.

The fact that we observed only three camps in this study is not problematic from a methodological perspective. The presence of service-delivery problems in those sites indicates the need for action, although it in no way implies that similar conditions are present in other districts. It does suggest, however, that an effort should be made to determine whether similar problems exist elsewhere. Similar studies in Bihar (Parveen 1995), Gujarat (see Chapter 14), and Madhya Pradesh (see Chapter 13) indicate that an unsatisfactory level of services at such camps is widespread. Anecdotal evidence from numerous camps also suggests that staff and clients alike would welcome more attention to quality.

Another common issue is the reliability of the observer in complex and often crowded camp settings, which can be reduced to two questions: Would a different observer witness the same events during the same session, and would the same observer see the same problems over time in the absence of intervention? In the present case, the observer was a physician who had provided services in similar sites. One would expect that the measurement of some routines, such as the sterilization of instruments, would be more reliable than observations about, for example, the arrival time of the surgeon.

Of equal concern is the issue of validity. The physician-observer was accustomed to the problems of lack of running water, less than ideal conditions in the OT, and the disorganization of sterilization camps. Because of this, he may have been less critical of the inadequacies observed than another observer might have been. Additional methodological studies are required to better define the parameters for data collection on the quality of services, particularly indicators and the use of observations.

Conclusions

What does quality have to do with the number of sterilizations and the achievement of targets? Program managers interpret quality of care in different ways, depending upon the outcome they desire. Those managers who are concerned primarily about limiting population growth tend to associate it with motivating clients to accept a particular contraceptive—usually a permanent or long-acting method—rather than offering a range of methods; and they often limit follow-up to managing complications, rather than providing information to acceptors about care or support for method switching. Such managers often regard quality as a feature of the "contraceptive hardware" or of the age or parity characteristics of the acceptor, rather than as an essential element of the service provided.

The data we have presented indicate that the quality of care is a multifaceted phenomenon. Readiness to provide quality services varies by level of facility. Basic infrastructure (electricity, water, and sanitation) is lacking in most PHCs and even in some CHCs. Although the technical competence of the surgeon may be good or even excellent, the support systems that would allow the surgeon to provide a high quality of service are often lacking. Support deficiencies include untrained assistants at the PHCs, improper procedures used by even trained staff to sterilize equipment, incomplete coverage during preoperative screening tests, and inadequate follow-up for controlling infection and treating complications.

The issue of standards is an important one for program managers and staff alike. Standards define what is expected of service providers. If they are consistently not met, the health system has several options: it can change the standards, withdraw the facility's authorization to provide the service (as has happened in the case of medical termina-

tions of pregnancy), or replace the workers. More commonly, program managers make adjustments in training, supervision, operating budgets, and inventory to ensure that locally acceptable standards are met.

The size and location of a camp affect the management of quality. An urban PPC with an established system for patient flow and a functioning laboratory is better prepared to deal with the demands of large case loads than is a PHC, which normally has fewer cases and infrequent contact with surgical cases. Large camps (those with more than 20 cases) place a major administrative burden on PHC staff and facilities.

The role of the Revenue Department in recruiting cases and supporting the operation of camps also remains controversial. Revenue Department staff are interested in recruiting sterilization cases to meet targets and all too often have little or no concern for the long-term welfare of the clients or their families.

Given the large demand for sterilization services, the Indian government's strategy of relying on camps is likely to continue as long as local government staff and facilities are unable to provide sterilization services without external assistance, and as long as sterilization targets require the recruitment of large numbers of clients at the end of each fiscal year. Given that reality, policies and practices are needed that make an increasing commitment to quality. District authorities must make a commitment to provide the facilities, equipment, trained staff, and procedures necessary to ensure that basic quality is guaranteed to clients seeking sterilization. Given the large number of sites, external quality-assurance efforts are unlikely to meet with much success. It is in the long-term interest of both clients and the health system that quality be a concern at all times, not just after quantitative goals are achieved. The basic and essential elements of improved health services in Uttar Pradesh are an awareness of standards, a focus on the system's readiness to provide quality, and proper financing to ensure that promised care is delivered. At the district level, research has a role to play in monitoring the quality of care for program management. It is essential that the health system monitor services and measure results. Currently the system measures outputs in terms of the number of users but invests little effort in monitoring the inputs or the quality of care being provided.

Improved quality is one of the promising goals of India's new population policy. But changing priorities means changing those processes that lead to poor quality and the underutilization of health serv-

ices in states like Uttar Pradesh. The large unmet need for limiting births identified in the National Family Health Survey, particularly in settings where the health system has traditionally provided monetary incentives to clients and providers alike, is evidence that poor care results in underutilization of family planning services. Over time, national, state, and local authorities have made efforts to reduce the obstacles to quality in camps. Nevertheless, experienced observers of the program in Uttar Pradesh have noted how the obstacles faced by providers in the early 1970s seem remarkably similar to those confronting providers today. If the national program is to meet both its goals and clients' needs, it must make a renewed commitment to improving the quality of the services it provides.

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Part IV.
Improving
Quality of Care:
A Change in Focus

16 The Effects of Service Quality on IUD Continuation Among Women in Rural Gujarat

DAXA PATEL, ANIL PATEL, & AMBRISH MEHTA

India was the first developing country to adopt the national goal of reducing its rate of population growth more than four decades ago, in the early 1950s. Initially the policy focused on both child-spacing methods—oral contraceptives, condoms, and intrauterine devices (IUDs)—and limiting methods—male and female sterilization. The focus gradually shifted largely to sterilization. The 1992–93 National Family Health Survey revealed a contraceptive prevalence rate for India as a whole of 41 percent among couples of reproductive age (IIPS 1995). Of these, 75 percent had been sterilized, 5 percent were IUD acceptors, and about 9 percent were using condoms or oral contraceptives (pills). Acceptance of IUDs was reported to be three times greater in urban areas than in rural areas.

Because the prevalence of spacing methods is low, program managers have tended to assume that women would not accept IUDs or other spacing methods. Relatively few efforts have been made either to understand the reasons for the low acceptance of these temporary methods or to devise intervention approaches to improve their acceptance and continued use. This chapter describes an intervention program in which the response to the IUD was positive among the target population of rural women.

Background of the Program

Action Research in Community Health (ARCH), a voluntary nongovernmental organization, has been working in rural eastern Gujarat

since 1980 to develop appropriate primary health care programs. Ten villages with a combined population of about 8,000 are intensively covered by ARCH's activities, although the catchment area for ARCH's clinical services encompasses a much wider area. About 70 percent of the population is tribal; the remaining 30 percent includes Harijans (out-castes), other so-called backward castes, upper castes, and Muslims. The economy is dominated by dry-land agriculture, although irrigation facilities have been expanded in recent years. The literacy rate is very low. In 1995 about one-third of the women were illiterate, and another 15 percent had completed their primary education without significant numerical or reading ability. Modern health services are virtually nonexistent in the area. The populace relies heavily on traditional healers and other unqualified local practitioners. Our field data from 1996 indicate that traditional birth attendants conducted 90 percent of deliveries at home. A government primary health center is located about 8 kilometers away, but its focus is on female sterilization. People are aware that health workers from the center visit their houses mainly to encourage sterilization, so they do not turn to those workers for regular health services.

During the first decade of ARCH's work in this area (1980–90) we intentionally chose to avoid advocating contraceptive services in the project area, since we believed that doing so would antagonize the rural population. As women began to trust us, they grew more willing to discuss their needs during pregnancy, which included information for ending unwanted pregnancies and preventing future pregnancies, as well as routine care during pregnancy. Nearly 30 percent of the pregnant women who came to ARCH for antenatal care in 1994 said that they did not want to be pregnant. It was clear to us that these women, while reluctant to accept sterilization soon after the birth of a second or third child, wanted some means of spacing their pregnancies. While most people in this area are unaware of, and hence do not use, condoms or pills to prevent pregnancy, a relatively large number of women of all socioeconomic classes know about the IUD. Despite their desire for spacing, most women are reluctant to accept the IUD, and most of those who do so continue its use for only a short time.

In a major review of research on contraceptive dropouts in 20 countries, Kreager (1977) observed that the determinants of discontinued use usually studied were a basic set devised for medical purposes but that these were inadequate with reference to social, cul-

tural, and psychological factors. He further observed that the interrelation of medical, cultural, social, and psychological factors leading to the early discontinuation of oral contraceptives and IUDs was not clear. The studies he reviewed generally did not attempt to identify the reasons for discontinuation in terms of those factors. Kreager stressed the importance of social and cultural factors in determining the acceptance and continued use of IUDs but acknowledged that the extent to which such factors influenced acceptance or could be manipulated to improve continued use was unknown.

In a more recent study of the quality of care and contraceptive continuation in six countries, Huezo and colleagues (1993) report that high levels of counseling tended, paradoxically, to be associated with a higher risk of discontinuation. However, when they examined the content of the counseling, it became clear that it did not address relevant social and cultural concerns that shape women's expectations and apprehensions. Counseling devoid of such sociocultural sensitivity may accentuate rather than mollify women's apprehensions about the side effects about which they are informed.

From our intimate and long interaction with the rural population in the ARCH project area, we know that most rural women do not know where the IUD is inserted in the body, what it does, or how it works. Many have told us that they believe it will ascend into their chests or be lost in the abdomen, that it causes "heat," or that it could cause a loss of weight and energy. A common belief is that with an IUD in place, the woman's partner will become stuck during sexual intercourse and will not be able to withdraw without a doctor's intervention. Some women even fear that an IUD insertion could result in death. We have learned that such apprehensions and misconceptions are prevalent in other parts of rural Gujarat as well. These fears, rooted as they are in false notions of anatomy, must be systematically addressed by means of a sensitive health education program. The experience of ARCH in developing such a program and the results of the program in affecting levels of contraceptive continuation offer insights to other organizations engaged in family planning efforts.

The ARCH Approach

ARCH did not initially plan to study IUD acceptance and continuation in the population being served. The study evolved in response to a per-

ceived need in the community. In conducting the study, as in ARCH's other health programs, we have maintained proper records, followed standard medical procedures, and undertaken proper follow-up care.

During the initial phase of the ARCH project (1980–86) its focus was on curative services and children's health. Although women's reproductive health problems were becoming increasingly apparent, we were reluctant to undertake a family planning initiative because of the strong antipathy toward the government's family planning program. ARCH staff began, however, to perceive a need for fertility control among the women with whom we interacted. As a result, from early 1987 on, we began offering spacing methods—rhythm, condoms, oral contraceptives, and IUDs—to those who came to the dispensary seeking contraceptive services. By the end of 1990, 56 women of various castes and economic backgrounds had requested and received IUD insertions. We call the period 1987–90 Phase 1 of ARCH's family planning program.

An experienced senior doctor (the first author) inserted IUDs. We followed the usual textbook precautions and clinically screened women with obvious gynecological infections, used sterilized instruments, and followed an aseptic technique of insertion. We also advised clients to report side effects such as excessive bleeding or pain and to have the IUD removed in three years' time. More upper-caste women than women from lower castes accepted the IUD, most likely because they knew more about this method. Initially our understanding of women's fears and misconceptions regarding IUDs was poor. Hesitant and nonvocal, the women rarely revealed their thoughts to us. Consequently, we offered little education and counseling that addressed women's deeply rooted and legitimate concerns.

In 1989 ARCH conducted a small study to assess women's family planning needs and their use of various contraceptive methods. In six project villages, we registered 492 eligible couples, among whom 282 (57 percent) had already undergone sterilization. From the remaining 210 (43 percent), we randomly selected 44 women from different caste groups for open-ended, in-depth interviews. Eighty-eight percent of those women expressed a desire to space future births. Only 20 percent were familiar with pills, 40 percent knew about condoms, and 70 percent knew about IUDs. However, a large majority of the women had deep fears about IUDs. The actual acceptance level of any of the spacing methods was extremely low.

During the early years when women came to the ARCH dispensary to have an IUD removed, they attributed any physical problems they were experiencing to the device. For example, one woman who had a sore throat thought it was due to the IUD, which she believed had come up into her throat. She was understandably insistent upon its removal. Another woman who had pain in her abdomen could not sleep for two nights because a neighbor had told her that her IUD might have entered her liver. When we examined her and told her that the IUD was still inside her womb and the thread was visible in the vagina, the relief on her face was clear, although she still insisted upon its removal. In numerous cases, no amount of reassurance was sufficient to change a woman's mind, and so we removed the IUD.

By 1990, intensive informal interaction had begun with our female health workers (FHWs), who belonged to the same community and had shared the same fears and beliefs before joining ARCH. By this time, our relationships with the village women had also improved. Informal and intimate discussions with these women revealed their poor understanding of female anatomy, especially the relationship between the reproductive and the gastrointestinal systems. They had no knowledge of the organs composing the reproductive system, nor did they know it was completely separate from the gastrointestinal system. They did not know that the stomach and the uterus were two different organs or that the uterus was closed from above. We realized that merely screening for infections and using aseptic techniques for insertion, though essential, were insufficient to ensure acceptance. A specific health education program about women's bodies was needed.

Accordingly, the project entered its second three-year phase, which we call Phase 2, in 1991. In January of that year, we initiated a process of free and informal information exchange through community group meetings and on an individual basis when women came to our clinic for antenatal checkups. For the first time, women were shown, through slides, models, posters, and pictures, that the reproductive organs were completely separate from the gastrointestinal tract in the abdominal cavity. We also developed a simple low-cost plastic model of the uterus, cervix, vagina, and fallopian tubes for the purpose of demonstration. All women who came for an IUD insertion were first shown the entire process of IUD insertion on this

model. Even women who came to the clinic for other reasons were encouraged by the FHWs to see for themselves the models and pictures. The demonstration included the insertion of an IUD in the model through the cervix and into the uterus, with the IUD's thread hanging freely in the vagina. This demonstration, which took only a few minutes, enabled women to see that the uterus was separate from the stomach and that the IUD could not migrate from the uterus into the chest. They could also see that the IUD would not cause their partner to become stuck during intercourse. It became apparent to them that with the help of the thread hanging in the vagina, a doctor or FHW could easily remove the IUD at any time. All the possible problems associated with IUD insertion—initial discharge, bleeding, and pain—were explained to women agreeing to accept this method, and they were encouraged to visit the dispensary if they experienced any of those problems so that appropriate measures could be taken.

During Phase 2 (1991–93), a total of 80 women accepted IUDs. We screened for reproductive tract infections and used aseptic technique of insertion, as we had in Phase 1. For each woman, we used a sterilized set of instruments and towels. In addition, for Phase 2, a senior FHW was trained to insert the IUDs (in Phase 1 only a doctor had inserted them). In both phases the neighboring government health center supplied the same brand of IUDs in standard sterilized packs. ARCH kept records of all complaints, clinical findings, treatment given in all subsequent visits, and the reasons for IUD removal. We made follow-up contacts with women who did not return to the dispensary on their own, checking whether the IUD was still in place or had been removed, and determining the reason for removal.

To analyze the rates of IUD continuation and removal among acceptors of different demographic and socioeconomic characteristics, we have used life-table techniques described by Kahn and Sempos (1989). We calculated separate rates of IUD removal for the two groups of women who received IUDs in Phase 1 and Phase 2, in two-month intervals for up to 24 months after the date of insertion (to 1 April 1995). The data for IUD acceptors in Phase 2 who had not completed 24 months of observation by the end of the study period were considered to be "censored," and these cases were withdrawn from the analysis at the last full two-month interval of observation. There were no such cases in Phase 1 (1987–90), as all women who had received

TABLE 16.1
Selected characteristics of women accepting IUDs during 1987–90 and 1991–93: Rural Gujarat

Characteristic	Phase 1 (1987–90)	Phase 2 (1991–93)
Mean age (years)	23.9	23.4
Education (%)		
None	21	25
Lower primary (1–4 years)	16	11
Upper primary (5–7 years)	27	21
Secondary (8+ years)	36	43
Total	100	100
Social group (%)		
Upper castes	61	39
Scheduled tribes	13	41
Scheduled and other low castes	14	14
Muslims	13	6
Total	100	100
Desire for spacing through use of an IUD (%)		
Spacing before first child	4	0
Spacing between births	58	58
Spacing before permanent sterilization	38	42
Total	100	100
(No. of women)	(56)	(80)

Note: Percentages may not add to 100 because of rounding.
IUD=intrauterine device.

IUDs in that initial period had been followed for at least two years on 1 April 1995. Cases we were unsuccessful in following up (two cases in Phase 1 and one case in Phase 2) were considered to have withdrawn from use in the first two-month interval.

Results

Table 16.1 shows that IUD acceptors in the two phases were similar with regard to age, education, and desire for spacing. Their composition differs significantly, however, with respect to caste. Whereas upper-caste women were much more common in Phase 1, tribal women predominated in Phase 2 (41 percent), indicating greater acceptance among tribals during the second phase.

The percentage of women who complained of discharge (leukorrhea), excessive bleeding during menstruation, or pain during the first six months after having an IUD inserted was slightly higher among acceptors in Phase 1 than Phase 2 (36 versus 29 percent), al-

TABLE 16.2
Complaints of discharge, bleeding, or pain among Phase 1 and 2 IUD acceptors: Rural Gujarat

Complaint and response	Phase 1 (1987–90)	Phase 2 (1991–93)
Percentage of women who complained of leukorrhea, bleeding, or pain within six months of IUD insertion	36	29
Of those who complained, percentage who		
Had IUD removed	80	22
Retained IUD	20	78
(No. of women)	(56)	(80)

IUD=intrauterine device.

though the difference is not statistically significant (Table 16.2). However, among women who complained of complications, the percentage who had their IUDs removed because of these problems was significantly higher in Phase 1 than in Phase 2 (80 versus 22 percent). A possible reason is that during Phase 1, in the absence of appropriate counseling about female anatomy, acceptors magnified normal difficulties of adjusting to an IUD. In addition, the women in this group were continually told by other women that the IUD was unsafe.

As Table 16.3 shows, among IUD acceptors for whom information on method-related problems was available, a somewhat higher percentage of women in Phase 2 than in Phase 1 reported no problems (40 versus 29 percent). Substantial majorities of those followed up in both phases (71 percent and 60 percent, respectively), reported excessive menstrual bleeding, pain in the lower abdomen, or other problems within the first six months after having an IUD inserted. All of those complaints were clinically investigated. At the same time, as was shown in Table 16.2, the percentage of women who retained their IUD in Phase 2 was significantly higher than in Phase 1.

More women mentioned leukorrhea, pain, and excessive menstruation as reasons for IUD removal in Phase 1 than in Phase 2 (Table 16.4). The lower incidence of such complaints in Phase 2 likely reflects changes in women's perceptions due to appropriate health education. The desire to have another child was the most common reason for removal given by women in Phase 2. Six women (16 percent) in Phase 2 also reported spontaneous expulsion of their IUDs, which may have been related to the fact that four of those IUDs were inserted by a senior FHW who was under training.

TABLE 16.3
Problems reported within six months of IUD insertion among Phase 1 and 2 IUD acceptors: Rural Gujarat

Problem	Phase 1 (1987–90)	Phase 2 (1991–93)
Percentage of women for whom information is available	80	88
Of these women, percentage reporting		
No problems	29	40
Pelvic inflammatory disease	22	20
Excessive menstruation	22	14
Vaginitis	13	13
Cervicitis	7	10
Pain in abdomen	7	3
No information available (% of women)	20	12
Total (%)	100	100
(No. of women)	(56)	(80)

IUD=intrauterine device.

TABLE 16.4
Reasons for IUD removal among Phase 1 and 2 IUD acceptors: Rural Gujarat

Reasons for IUD removal	Phase 1 (1987–90)	Phase 2 (1991–93)
Leukorrhea and pain	46	27
Excessive menstruation	28	19
Desire for a child	15	30
Desire for sterilization	8	8
Spontaneous expulsion	0	16
Other	3	0
Total	100	100
(No. of women)	(39)	(38)

IUD=intrauterine device.

Figure 16.1 shows curves of IUD continuation rates in the two phases, based on life-table analysis as described earlier. Six months after insertion, 89 percent of the women in Phase 2, versus 66 percent in Phase 1, continued to have their IUDs in place. The corresponding figures at the end of one year were 77 percent and 48 percent, and at two years, 52 percent and 28 percent. These differences are highly significant ($p = .001$). The rate of IUD continuation for all intervals was also significantly higher in Phase 2 ($p < .01$). We obtained this difference by considering removal of IUDs for all reasons as drop-

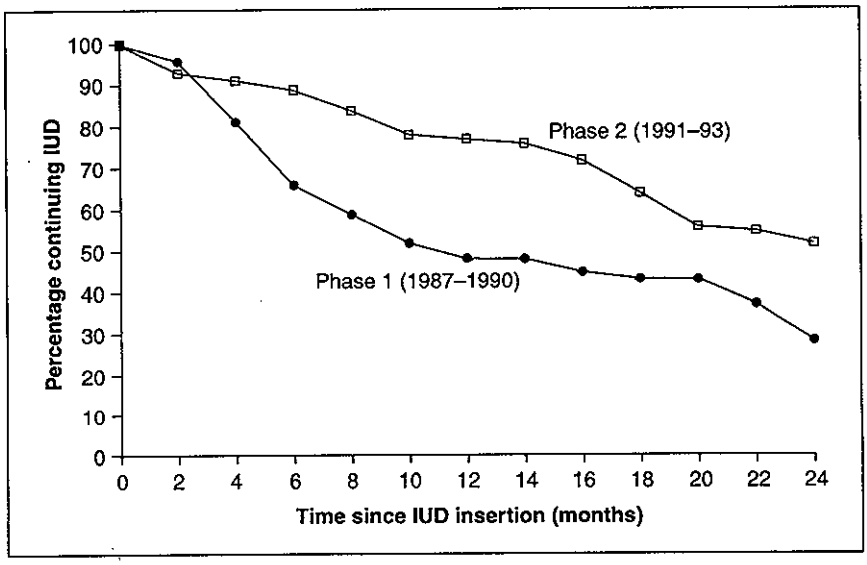

FIGURE 16.1 IUD continuation rates in Phases 1 and 2, taking into consideration removals for all reasons: Rural Gujarat

outs. The difference between the two phases increases further when we consider only the removals due to IUD-related problems such as leukorrhea, pain, and excessive bleeding (i.e., excluding removals due to the desire for more children or to switch to sterilization).

Figure 16.2 plots IUD continuation rates in the two phases, taking into consideration only removals due to IUD-related problems. Here, as in Figure 16.1, the differences in continuation rates at all intervals are highly significant ($p = .0002$).

Discussion

This study does not demonstrate that the IUD is either the most appropriate or the most preferred spacing method available for rural women. What it does indicate is that when women are given a choice of methods, IUD continuation rates can be improved markedly by providing health education that effectively addresses women's apprehensions and concerns about the method. Although the study may have overlooked other differences between the two intervention phases, we do not believe that the marked decline in the rate of IUD discontinuation during Phase 2 was the result of any other factors operating in the project communities. Living conditions and ameni-

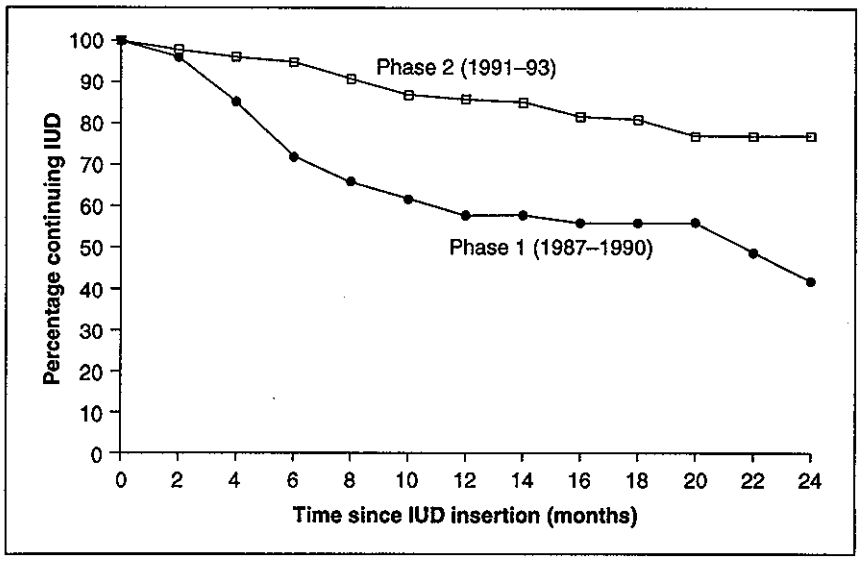

FIGURE 16.2 IUD continuation rates in Phases 1 and 2, taking into consideration removals due only to IUD-related problems: Rural Gujarat

ties available to the communities remained essentially unchanged over the two study phases. One difference between the two periods was the significantly higher proportion of tribal women among IUD acceptors in Phase 2. It is unclear, however, whether this difference would have contributed to a widening or narrowing of rates of IUD continuation between the two study periods. In any event, the key point is that anxiety and apprehension about the IUD prevent poor women from accepting the method in the first place. Once these fears are allayed, women are probably more willing to tolerate the discomfort of an IUD than to risk another unwanted pregnancy.

The proportion of women who reported leukorrhea, bleeding, or pain during the first six months or even later after accepting an IUD was essentially the same in both phases. However, the rate of IUD removal due to those problems was significantly lower in Phase 2. This finding strongly supports our contention that dissemination of specific, easily understandable information addressing women's deeply held beliefs and fears about the female reproductive system can have a positive effect on the continuation rate of IUDs.

Discussions with our FHWs revealed how the information network within the community was gradually established. They indicated that in Phase 1 their own understanding about the IUD was

much poorer than in Phase 2. During Phase 2, they worked in the clinic as well as in the community and undertook other activities related to women's health, including antenatal and postnatal care and health education. They were thus better able to win the trust of the community in Phase 2. If women accepting an IUD during Phase 1 had any sort of health problem afterward, they attributed it to the IUD. They were encouraged to do so by family members and neighbors, who repeated negative rumors about the IUD and advised them to have it removed if it caused even minor discomfort. During Phase 2, however, IUD acceptors regularly discussed their health problems with the FHWs and were usually reassured. The fieldworkers, for example, explained that the reproductive system was unconnected to the gastrointestinal system—comparing it to "a box closed from above." Because of the project's efforts to provide health education during Phase 2, the understanding of the community as a whole increased.

The data obtained in this clinical setting, although based on a small sample, suggest that our approach has promise and needs to be followed up in a wider community setting. During both phases of the study, we were unable to carry out bacteriological tests on women with specific complaints. We found no evidence of gynecological infection during clinical examinations preceding IUD insertions (although one woman in Phase 2 was subsequently detected through laboratory tests to have an infection, and her IUD was promptly removed). Despite their complaints about the IUD, a large majority of women who had received appropriate health education could be reassured and were willing to continue with the method. On follow-up, these women were usually found to have no adverse effects. This is an important finding at a time when many family planning programs have largely abandoned the IUD.

With respect to the replicability of our intervention strategy, developing a good relationship with the community was necessary to learn about women's misconceptions about their bodies, but counseling clients did not require either an exceptionally high order of dedication on the part of the health staff or intimate and prolonged interaction with clients. Any preinsertion counseling must, however, incorporate specific information about female anatomy, using readily available visual materials. The models we used were simple and inexpensive, and government clinics and staff could easily replicate our

approach. On the basis of our experience, we conclude that the IUD can be one of a number of contraceptive choices for Indian women, who, in large numbers but with subdued voices, are demanding methods for spacing births rather than experiencing unwanted pregnancies or undergoing sterilization.

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17 Developing an Alternative System of Monitoring Indicators for the Family Welfare Programme

JAY SATIA & SANGEETA SUBRAMANIAN SOKHI

For nearly two decades, demographically determined targets have been the driving force for the Family Welfare Programme in India. The government's goal of reducing fertility and its assumptions about the public's acceptance of various contraceptive methods determine its acceptor targets for specific methods. These targets are then allocated to the states, largely on the basis of population size but also on the basis of the states' past performance and family planning infrastructure. In turn, the states allocate targets to their districts, the districts allocate them to primary health centers (PHCs), and the PHC medical officers allocate them to their field staff. Although this top-down target system simplifies the monitoring of program and staff performance, it has led to an overemphasis on sterilization, poor quality of care, and lack of concern for clients' needs. As a result, public opinion in India favors the abolition of targets (Bose 1988).

Numerous studies (e.g., Satia and Jejeebhoy 1991) have noted the harmful effects of method-specific targets on family planning, which include the neglect of maternal and child health (MCH) services, poor quality of services, and some falsification in reporting. It is also well known that considerable variability exists in auxiliary nurse-midwife (ANM) competence, work facilities, and logistics support. The Department of Family Welfare, Ministry of Health and Family Welfare, has noted the harmful effects of overemphasizing demographic targets:

> So far the emphasis of the Family Welfare Programme in the country has been on the target oriented approach with focus on sterilization. Because of the profile of the acceptors, it has not been possible to achieve the desired demographic goals. Now that with the changing age structure in the country, more and more young couples are entering the reproductive age group, the focus has to change from permanent methods to temporary or spacing methods. (Mishra 1995, p. 7)

Women's health advocates have documented the program's lack of responsiveness to women's needs and its treatment of users with insufficient dignity and respect (Nataraj 1994). Studying quality of care in 16 health facilities in Tamil Nadu, Ravindran (1994) found that basic amenities such as running water were not available in all facilities, that only five had toilet facilities, and that even those five were in poor condition. The facilities often did not remain open when they should have, compromising the availability of services. Although women clients preferred female to male doctors, five facilities did not have female doctors; many clients turned to private lady practitioners. In a 1987–89 study, the Indian Council of Medical Research also identified shortcomings in the health facilities of 19 states and union territories (ICMR 1991).

The research literature indicates that considerable effort is needed to improve the quality of reproductive health care in India. In addition to access to and availability of services, issues to be addressed include method choice, information provided to clients, technical competence of providers, follow-up care, and mechanisms for continuity of use. At a recent seminar to review evidence, participants reported many deficiencies in quality of care, in particular clients' lack of method choice and limited information given by providers about individual methods. They noted that providers seldom discussed contraindications or side effects with clients. Access and availability are better in southern states such as Tamil Nadu and Karnataka than in northern states such as Uttar Pradesh, but even in South India, female sterilization remains the most emphasized method. Clients often rate the technical competence of private providers as superior to that of government providers, yet despite these quality problems, a majority of clients have expressed satisfaction with the services they received from the Family Welfare Programme, perhaps because they had low expectations (Foo 1996).

India has considerable unmet need for contraceptive services. According to the 1992–93 National Family Health Survey, 8.5 percent of married women between the ages of 13 and 49 who wanted no more children and 11 percent who wanted to space future births were nevertheless not using contraception. The use of spacing methods remains very low, with only 5.5 percent of couples using spacing methods, often for the purpose of limiting their family size. Therefore, only one-fourth of the need for spacing has been met (IIPS 1995, p. 188).

Rethinking the Monitoring Process and Indicators

Two recent decisions by the Indian government have led to the necessity of rethinking the monitoring processes and indicators in the Family Welfare Programme. First, in 1995 the government declared 18 districts in selected states as target-free and committed itself to making the entire program target-free in April 1996. Second, at the policy level it has proposed a paradigm shift from the vertical approach to family welfare, in which family planning is segregated from MCH, to an approach integrating reproductive and child health. Both of these changes require a client-centered, quality-of-care focus. Thus a change in program indicators will not only affect the implementation of the current Family Welfare Programme, but also provide the underpinnings for a broader array of reproductive health services.

There have been many discussions and several workshops on alternative indicators for the program. Two meetings of district health officers from the target-free districts have also taken place. A workshop was organized in September 1995 as part of the preparatory process for a proposed World Bank–assisted Reproductive and Child Health Project on monitoring and evaluation issues. The meeting highlighted the need for, and identified possible actions to move toward, a new system of indicators and procedures for monitoring and evaluation. These activities have underscored the urgency of introducing alternative indicators, and they have pointed to the need for concerted work and continuing dialogue among key stakeholders before a new system of indicators is introduced. The government's draft concept expresses this need for dialogue as follows:

> In the new approach, when we are moving away from the target approach to [a] client approach, an important issue would be to find a way to judge the performance of the health workers, keeping in

> view the new goal of containing family size and good spacing between children in view to improve maternal and neo-natal health. (GOI, Department of Family Welfare 1995, p. 1)

Subsequently the government appointed a task force to develop an alternative system of indicators.

Targets have long been used as a means to ensure staff accountability. Because the government has decided to move away from demographic targets toward client-centered, high-quality reproductive and child health services, many field-level managers are concerned that accountability and performance will decline if targets are removed. In a program as large as India's, with more than 150,000 field staff, implementing such a major change is an enormous challenge. It requires not just a carefully worked out alternate system of indicators and monitoring, but also a reorientation of field staff and a fundamental shift in operational methods.

The experience of target-free districts varies considerably. Our visits to several suggest a mixed response. The announced removal of targets produced varied initial reactions ranging from relief ("I do not have to worry about cases anymore?") to disbelief ("This cannot be true!" "They will impose targets again!") and confusion ("How do we know that workers are working?" "What is expected of me?"). In one district, although targets were no longer prescribed for contraceptive methods, information on the number of acceptors continued to be collected. Because the program there made no effort to introduce a major change in workers' emphasis, there was no perceptible change in the acceptance pattern. In that district, the officials thought that it was not desirable to shift to the target-free approach but preferred to include some quality indicators in the current monitoring system. Perceptions of indicators of quality varied. Some officials thought that when evaluating worker performance, cases of younger acceptors and couples with two or fewer children who accepted a permanent contraceptive method should be given greater weight than other cases, to reflect the higher demographic impact. Clearly, more effort will be required to create a common vision.

Case Studies of Alternative Indicators

The shift to a target-free approach has prompted considerable experimentation. Several managers within the government and nongovern-

mental organizations (NGOs), with or without assistance from other agencies, have begun to experiment with alternative indicators and with management systems to support the use of those indicators. Below we describe five examples of such experimentation. Most of these experiments were still at an early stage of implementation at the time this chapter was written, and documentation is needed to continue to learn from their experiences.

Ahmednagar District, Maharashtra

An operations research project is underway in Ahmednagar District, implemented jointly by the Directorate of Health Services of Maharashtra and the Foundation for Research in Health Systems (Murthy and Barua 1996). A baseline survey was carried out to ascertain the situation regarding MCH, family planning, and quality of care in other reproductive health services. It revealed a number of weaknesses in the district's health system.

To provide comprehensive MCH and family planning services through the village-level primary health care system, the project offers services through a multipurpose camp held in each village with more than 1,000 inhabitants that does not have a health center. Immunization, antenatal care, and family planning services are all offered in these camp settings, and a schedule and routine for the camps has been worked out. Lady health visitors and ANMs provide antenatal care and family planning services; ANMs also perform vaccinations. Male multipurpose workers weigh children. Medical officers examine high-risk cases. All staff are involved in providing health education. In four out of five villages where space was not available to ensure clients' privacy, the community has made suitable space available.

The emphasis in the project has been on increasing the coverage of all services, and coverage has risen to nearly universal levels in the project area. To ensure full coverage, the project has introduced a family health card to record all services provided to family members. The family health card has replaced the numerous registers that ANMs had to maintain. It consolidates records of immunization, pregnancy history, disease surveillance, family planning follow-up, antenatal care, delivery, and postnatal services. Although the project's experience with this record-keeping procedure is still limited, it is seen as a major step toward streamlining the work of ANMs.

In the next phase the project proposes to incorporate an essential reproductive health package that includes screening and treatment for reproductive tract infections (RTIs) and sexually transmitted diseases (STDs); abortion services; family planning information, education, and communication (IEC); and counseling. The experience of the project thus far indicates that strengthening existing services creates a strong foundation for including a broader range of services at a later stage.

Pregnancy-Based Approach in Agra and Sitapur, Uttar Pradesh

The Population Council has been implementing an operations research program in three blocks of Agra District and five blocks of Sitapur District since August 1995 (personal discussions with Dr. M.E. Khan and Dr. Saumya RamaRao of the Population Council). In this pregnancy-based approach, ANMs are asked to visit each pregnant woman three times before delivery and three times afterward. ANMs are encouraged to discuss family planning during the postnatal visits. The indicators used by this project emphasize antenatal and postnatal care coverage, use of spacing and permanent contraceptive methods, and IEC activities.

The management information system used to support these monitoring indicators is based on the 42-column register developed for the Child Survival and Safe Motherhood Programme and on the eligible couples register, with the addition of two columns to assess unmet need (clients' desire to limit and to space births). The emphasis is on ensuring continuity of care beginning with pregnancy. The coverage indicators include services for pregnant women, use of permanent and spacing contraceptive methods, and community coverage with orientation training camps.

This approach involves changes in the philosophy of the service program to meet clients' needs, in the work routine of ANMs, and in the purpose of monthly meetings for in-service training. Many additional changes are needed, including greater involvement of male workers and the introduction of training camps devoted to reproductive health and gender issues. As the project has been in existence for only a short time, it is too early to evaluate its performance. Initial reports, however, indicate that the team spirit, self-esteem, and con-

fidence of ANMs have improved. Assistance from supervisors to ANMs has also contributed to the effectiveness of this system.

Vikalp Strategy in Tonk and Dausa Districts, Rajasthan

Vikalp (meaning "Alternative") is a framework developed by the Indian Institute of Health Management Research, Jaipur, and implemented by the Rajasthan government since March 1995 (Vikalp 1996). It is a district-based approach, and client segmentation is the basis for its planning and implementation strategy. The focus is on assessing unmet need for family planning—especially for spacing—on the basis of women's responses to questions about whether they want another child, and if so, how soon. Key elements of the Vikalp strategy have included:

- holding women's health camps once a month in the PHC to address women's health issues and to promote the use of spacing methods such as intrauterine devices and oral contraceptives;
- involving traditional medical practitioners and local NGOs in the Family Welfare Programme by providing them information on spacing methods and encouraging them to be depot holders for contraceptives;
- identifying and training traditional birth attendants to provide safe delivery and better postpartum care; and
- involving members of village councils, especially female members, in community education and in organizing the health camps.

The project has used a camp approach to deal with other gynecological needs of women. According to program managers, this approach has elicited a positive response from the women. The managers now propose to strengthen the static service-delivery point at the block level by converting it into a comprehensive reproductive health center that will operate as the nodal point for service delivery. Managers also plan to systematize referrals from the field to the reproductive health center, and to follow up clients treated at the center when they return to the field.

Bundi District, Rajasthan

A combined distribution and training project in Bundi District has been supported by the United Nations Population Fund (UNFPA) in

three PHC areas since November 1995 (Mangal 1997). The project has essentially two components: (1) extension of the Community-Based Distribution of Contraceptives *(Jan Mangal)* Project, which began in Udaipur District; and (2) training of ANMs for the prevention and management of RTIs, including routine testing of pregnant women for syphilis as part of the antenatal care package.

In this district the project focuses on MCH services and emphasizes MCH coverage indicators. Of particular interest is the use of indicators of continuation rates rather than of the number of users of spacing methods. Certain changes have been made in the management information system for this project. ANMs' monthly reports now have information on the number of new acceptors for each method, the number of continuing users, and the number of acceptors who have discontinued use. During monthly meetings the PHC medical officers are encouraged to probe ANMs for details on method switching, and for clients' reasons for discontinuing contraceptive use. The emphasis is on improving continuation rates rather than on enrolling ever-larger numbers of new acceptors.

Each ANM maintains a register for RTI cases indicating the dates of the first visit and follow-up visits. Every month she reports on the number of first visits and the treatment given, follow-up visits, outcome of treatment, and details of referral, if any. Some of the treatment protocols for RTI management had to be modified because preferred drugs were not available or were too costly. A more serious drawback is that the project has not had much success in partner referral and treatment, and it has not yet defined a successful strategy for addressing this problem. Impact assessment had not been undertaken at the time of this writing, as the project was still in its early stages.

Tamil Nadu's Experience and Indicators from the Rural Women's Social Education Centre

In Tamil Nadu, program managers agreed that method-specific targets should be removed. They implemented an alternative approach in two phases (personal discussions with S. Ramasundaram, Special Secretary of Health and Family Welfare, Government of Tamil Nadu). During the first phase (1994–95), targets for nonhealth staff were removed. During the second phase (1995–96), the top-down target system was replaced and ANMs were asked to determine their own

workload targets. Those targets were to include delivery of MCH services and referrals by ANMs of cases requiring treatment for RTIs or STDs. ANM workloads for family planning depend upon the number of couples with two or more children who accept a permanent method during the year and upon the percentage of couples with two or fewer children who continue to use spacing methods over the same period.

A systematic process was developed to implement these reforms. It was first discussed at a meeting called by the ANMs' Association. Addressing the genuine grievances of ANMs began the process of empowering ANMs and creating individual accountability. The Rural Women's Social Education Centre (RUWSEC), an NGO in Chengalpattu District, Tamil Nadu, acknowledged that change must start at the grassroots level and that ANMs held the key to making the system more client-focused.[1] No significant change took place in the state's management information system, however. There is still a need to involve male workers in the new process, and not all PHC medical officers share the vision of empowering ANMs.

The indicators used by RUWSEC cover all the organization's services and their outcomes for pregnancy, birth, and postpartum care; abortion and contraception; RTIs and STDs; and adolescent reproductive health. A list of illustrative indicators includes the following:

- the percentage of women using a safe-delivery kit for home delivery;
- the number of women developing postabortion complications or infections;
- the percentage of women practicing contraception;
- the percentage of men practicing contraception or using condoms for noncontraceptive purposes;
- the proportion of women whose last two deliveries occurred at least two years apart;
- the percentage of women and men seeking medical help for RTIs and STDs;
- the percentage of help-seekers whose spouses could also be contacted and treated;
- the proportion of adolescent boys and girls who know:
  - how conception takes place
  - about various methods of contraception, including natural family planning methods such as periodic abstinence and withdrawal

  - how STDs, including the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), are transmitted, and how to practice safe sex
  - about basic preventive and promotive health practices; and
- the proportion of adolescent boys and girls seeking counseling and treatment for reproductive and sexual health concerns.

Lessons

What lessons can be derived from these early experiences? First, it is necessary to replace acceptor targets with another driving force for the program, which we call an alternative strategic driver. Most of the experiments discussed above have emphasized the provision of various services. Some focus on unmet need for contraception. They regard this as a first step, which can be followed up by expanding the range of reproductive health services and improving their quality. Second, almost all interventions are attempting to alter the relative emphasis placed on the services provided. Most of them suggest an increased focus on MCH, particularly antenatal care, largely through female outreach workers. The involvement of male workers and medical officers still needs to be addressed in most of these experiences. Third, many management systems will need to be changed if the focus is to shift to client-centered, high-quality reproductive and child health services. These changes include how work is organized, how meetings are held and what the meetings emphasize, how supervision is carried out, what type of management information system is used, and how a district supports staff at the field level. In the projects we have described, such changes were being implemented incrementally. Moreover, while considering changes in indicator systems, it is necessary to consider other attendant changes that also will be required. Finally, districts and PHCs will need considerable technical support in making the transition to an alternative system of indicators.

A Framework for Developing an Alternative System of Indicators

Now that targets will no longer be the driving force of the Family Welfare Programme, a major issue is what alternative strategic driver—or drivers—should be used. Other issues to be addressed are

the program's relative emphasis on various aspects of its operations, the appropriate mix of indicators and sources, the criteria for selecting indicators, and how the alternative system of indicators is to be assessed.

Alternative Strategic Drivers

Several possibilities need to be considered for alternative strategic drivers. These include increasing health care coverage, meeting unmet need for contraception, ensuring a high quality of care, and decentralizing planning as an implementation vehicle.

Increasing coverage. Increasing coverage involves substituting new program service indicators in place of targets. For example, in Bangladesh, when the government decided to de-emphasize method-specific targets, program focus shifted to contraceptive prevalence, which has become the accepted way to measure performance. Targeted coverage levels may vary for different population segments. Many Indian states have revised, or are considering revising, their management information systems to reflect this new focus. In Maharashtra, for instance, the focus is now on coverage within a subcenter area by a variety of services rather than on services provided by a specific ANM. The main instrument for organizing work becomes the family register or card. The record of services it provides can emanate from specific service-delivery sites (immunization sessions, camps, clinics, etc.) or from service-delivery records. The coverage-based focus comes closest to the current target system. Its advantage is that it removes method-specific targets from family planning activities and minimizes conflict among providers for "credit" for services. While this focus leads to improved accessibility and availability of services, it does not directly encourage or result in improved quality of care.

Reducing unmet need. Reducing unmet need entails replacing targets with indicators of the unmet need for services. Indonesia, for example, has replaced method-specific targets with what are called "demand fulfillment" targets. For family planning, this means placing the focus on couples who do not desire more children or who wish to space their next child but are not practicing contraception.[2] For most other MCH and reproductive health services, such as antenatal care, the goal remains to provide services to all who need them.

The advantage of using unmet need as a focus is that it separates the responsibility for providing services from that of institutionalizing small-family norms. It may also lead to a focus on those geographic areas where unmet need may be greatest and appropriately emphasize demand creation and service-delivery interventions.

Ensuring quality of care. The major driving force behind ensuring quality of care is making high-quality services—defined according to specific standards—accessible and available.[3] Because accessible services of high quality tend to be better utilized than other services, coverage can be expected to increase over time, and unmet need to decline. This may not happen, however, in the case of services whose need is not perceived by prospective clients. For instance, many women have silently suffered from RTIs rather than seeking medical attention for their problems. Therefore IEC may have to accompany improved service quality if the use of such services is to increase rapidly.

Decentralizing plans as an implementation vehicle. The existing system of targets has been implemented largely from the top down, each higher level allocating the targets to the next lower level. Perhaps the most fundamental change in a move toward a client-centered, quality approach must be increased decentralization, which is generally regarded as a prerequisite for any such change (Satia, Mavalankar, and Sharma 1994). The Indian government has recently recommended the involvement of grassroots workers in decisionmaking:

> . . . grassroots workers may get together to give an estimate of likely acceptance of various family welfare activities in 1996–97 for every quarter in their area of jurisdiction to form part of their PHC level Family Welfare and Health Care (FWHC) plan for 1996–97. The FWHC plans should also contain materials and supplies required to accomplish the activities estimated by grassroots level workers as well as non-governmental agencies, heads of village councils, primary school teachers in the area and population covered by that PHC. . . . The performance of each PHC would need to be evaluated against their own plan by the district health and family welfare system at the end of every quarter to advise them suitably. There would also be need to tune the IEC activities in the PHC areas and the districts to promote this bottom-up approach of planning and implementation of a sensitive programme like family welfare. . . . A timetable for preparation of plans at various levels may be set. (GOI 1996, p. 1)

The plans, generally prepared at the field level, thus become the strategic driving force for the program. Yet the plans at each succes-

sive higher level are not simply the aggregate of plans made at lower levels: Each level must also plan its own activities. Thus, while ANMs at the subcenter level must plan their own activities, the PHC must plan to provide support through inputs from the medical officers and supervisors, and for necessary logistics support. The district level may need to plan for improving the access, availability, and quality of services. The plans at each level must use an appropriate mix of coverage, unmet need, and quality-of-care objectives.

In conclusion, one "driver" (objective) may be easier than another to implement at a particular time, but a single driver may not be the best for all situations. Therefore, program managers may prefer to change drivers as conditions change. For instance, areas with low coverage may focus first on increasing coverage, areas with modest coverage may focus on reducing unmet need, and areas with reasonable coverage may focus exclusively on improving the quality of care. A locally developed plan may be able to incorporate a suitable mix of these objectives.

Changes in Relative Emphasis

If the Family Welfare Programme is to move toward a client-centered, quality focus, the relative emphasis on various aspects of its operations also needs to change, as indicated in Table 17.1. Managers need to plan for and review quality regularly, enable and motivate staff to deliver high-quality services, and focus on all the service providers in the community.

Whether an indicator should be included in the alternative system should then be decided on the basis of whether it will sufficiently alter the emphasis in the desired direction. Measuring how managers spend their time on various tasks is a simple way to judge the relative emphasis. For example, how much time do managers spend monitoring staff performance as compared to listening to and addressing the grievances of staff? The answer may determine the relative emphasis placed on monitoring versus enabling and motivating staff.

Mix of Input, Process, Output, and Outcome Indicators and Sources

Any alternative system needs to use a combination of indicators reflecting the availability of necessary inputs and the process (of activi-

TABLE 17.1
Needed changes in relative emphasis: Monitoring indicators for the Family Welfare Programme

Reduced emphasis on	Increased emphasis on
Output/outcome (such as the number of acceptors of various contraceptive methods)	Ensuring that high-quality services are provided
Monitoring staff	Enabling and motivating staff
Corrective action when things go wrong	Planning for high-quality services
Services provided by staff	Client reach and coverage

ties) that result in desired outputs and outcomes. This requires a judicious mix of data sources: routine reports, supervisors' reports, surveillance areas, rapid assessment, and special surveys, including concurrent evaluation. Thus, moving to an alternative system of indicators requires developing a corresponding system of data collection and analysis. For instance, workers may report on inputs and coverage, supervisors may carry out quality audits, and special surveys can be used to measure outcome indicators.

Criteria for Selecting Indicators

It is important to pay adequate attention to the indicators that are to be used for monitoring a reproductive health program. A good indicator has a number of desirable attributes (Graham and MacFarlane 1996; WHO 1994). Specifically, it should be:

- valid—actually measuring the phenomenon it is intended to measure;
- reliable—producing the same results when used to measure the same phenomenon more than once;
- specific—measuring only the phenomenon it is intended to measure;
- sensitive—reflecting changes in the state of the phenomenon under study;
- useful—indicating follow-up action that is immediately apparent;
- accessible—ensuring results are readily available in a usable format at appropriate time intervals;
- understandable—making certain that results are easy to define and to interpret; and
- representative—adequately encompassing all the issues or population groups it is expected to cover.

Ideally, the indicators should be useful, not just for monitoring and evaluation, but also for planning, especially at the local level. Thus the set of indicators needs to include a subset that can be used by grassroots health functionaries such as ANMs to plan their activities.

Framework Elements

To assess an alternative system of indicators, we need to ask the following questions about it:

- Is it derived from an appropriate mix of "strategic drivers"?
- Will it result in a desired shift in emphasis in program operations?
- What mix of data sources is needed and how will they be used?
- Does each indicator meet the desired criteria?

Illustrative List of Indicators

The illustrative list of indicators that follows is derived from various sources. The development of indicators should be in consonance with the development of reproductive and child health services.

Access and Availability Indicators

Access and availability indicators help to answer the question: Are the services available? They indicate whether desired inputs are in place and whether activities to make these services available are taking place.

An illustrative list of input indicators includes the following:

- percentage of ANMs with equipment for testing blood pressure;
- percentage ANMs trained in RTI detection and referral; and
- percentage of PHCs providing medical termination of pregnancy.

The data source for these indicators is the PHC's annual report. A plan is needed to ensure that the desired inputs of facility, trained staff, and equipment are in place.

An illustrative list of available services indicators includes:

- number of immunization sessions (multipurpose camps) planned and held;
- percentage of households visited;
- number of orientation camps organized; and
- percentage of subcenters with needed supplies.

The sources of data for these indicators are generally worker or supervisor reports.

Performance or Coverage Indicators

Performance or coverage indicators help answer the question: Have the services been delivered? This question in turn consists of two parts: Which services have been provided? What proportion of target segments of the population have been covered? An illustrative list of coverage indicators includes the following:

- percentage of pregnant women registered;
- percentage of pregnant women receiving iron and folic acid tablets;
- percentage of deliveries by trained persons;
- percentage of newborns weighed;
- percentage of contraceptive acceptors using permanent or spacing methods; and
- number of RTIs and STDs detected, treated, or referred.

The usual source for the performance or coverage indicators would be the worker reports or surveillance data.

Quality Indicators

Quality of care for reproductive health services has many dimensions, as shown in Table 17.2. Although all these dimensions require attention, it may be useful, when instituting a process of quality improvement, to begin by emphasizing counseling, follow-up, and technical aspects of services.

An illustrative list of quality indicators includes:

- Counseling
  - average time spent with a client
  - percentage of contraceptive users who know about side effects
  - percentage of couples who received reproductive health counseling
- Follow-up
  - percentage of clients who know when they should return for service

  - percentage of sterilization clients visited at home by the health worker within one week of the procedure
- Technical
  - percentage of providers who know about proper practices
  - percentage of procedures that meet specified standards
  - percentage of procedures in which aseptic conditions were maintained

The data for these indicators come from observations of service provision and interactions between the service provider and clients, and from client feedback and provider interviews. Many dimensions of quality cannot be measured quantitatively and require qualitative measures. For instance, measuring the interpersonal dimension of quality requires judgment by observers. The extent to which a program meets the needs of women as well as men can be assessed in part by the involvement of clients in program planning, implementation, and evaluation. How well the organization of service delivery addresses men's and women's concerns and responds to their social situation is another indicator of met or unmet need.

Outcome Indicators

An illustrative list of indicators for assessing whether reproductive and child health services are having the desired outcomes includes the following:

- number of deaths from vaccine-preventable diseases;
- neonatal mortality rate;
- percentage of hospital admissions with abortion-related complications; and
- STD prevalence.

Considerable debate remains, however, about the output and outcome indicators for family planning services. Some illustrative indicators are:

- contraceptive prevalence;
- continuation rates for spacing methods;
- percentage of parity-four or higher-order births;
- percentage of births to women under age 20 or over age 35; and
- total fertility rate.

Generally the sources for these data are annual updates of ANM registers and special surveys. However, there is still an absence of con-

TABLE 17.2
Dimensions of quality of care for reproductive health services

Service delivery	
	Does the constellation of reproductive and child health services meet client needs?
	Is there an informed choice about contraceptive methods?
	Is there adequate follow-up for continuity of use?
	Are there effective referral linkages?
Information	
	Do clients receive comprehensive reproductive health education?
	Are they sufficiently informed about the side effects of contraception and how to address them?
Technical	
	Are the service providers technically competent?
	Do they use sound and appropriate technical practices?
	Do they take universal precautions for asepsis?
Interpersonal	
	How much time is spent on clients?
	How much care is shown them—for example, are they listened to and counseled?
	Do clients have privacy?
	Are they treated with dignity?
Social	
	Are services designed to meet the needs of both men and women?
	Is there male involvement in responsible sexual behavior?
	Do women have roles in program decisionmaking?

sensus about what the impact indicators should be for some of the reproductive health service components, such as the prevention and treatment of RTIs, HIV/AIDS, and other STDs, and how they should be measured.

The Way Forward

A number of issues remain to be addressed. In addition, action will be required on two fronts: (1) implementing an alternative system of indicators; and (2) continuing to refine the new system as experience is gained.

Remaining Issues

Should the system of indicators be different for different geographic areas? Different states and districts within each state are at various stages of infrastructural development and performance. Therefore, it is reasonable to argue that the system of indicators should accommodate those differences. For instance, where small-family norms are well institutionalized, such as in Tamil Nadu or Andhra Pradesh, it may make sense to focus on quality-of-care indicators for family planning. On the other hand, if poor access and availability of services still constrain their

use, as in Uttar Pradesh, it may be prudent to retain a greater emphasis on coverage indicators. Different areas may also emphasize different quality-of-care indicators, although there is evidence that one indicator, increased client orientation, leads to improvement everywhere. All health services need to emphasize counseling, but the services with inadequate technical quality of care may be wise to give greater emphasis to technical aspects than to interpersonal counseling.

In addition, the various states have been classified into three performance categories on the basis of certain family planning and MCH indicators such as the birth rate, proportion of births that take place in institutions, and the proportion of births attended by trained attendants. The emphasis on indicators may differ depending upon the category. In areas where access and availability of services are low, the relative emphasis on coverage is high and that on unmet need and quality of care low. In areas with moderate coverage, emphasis may be placed on unmet need and the quality of care. Quality of care receives the greatest emphasis where the access and availability of services are good and reasonable coverage levels have been achieved.

Should development be phased? There are two ways to bring about change. One school argues that it is best to make a clean break. Another school suggests gradual or phased development. The clean-break approach causes large disruptions, but it is usually acceptable when there is a consensus that a crisis exists and the only solution is a clean break from the past. As key stakeholders in a program rarely share such a view, it is perhaps best to have a phased development. For instance, in an area requiring change, the program could first emphasize coverage measures (e.g., contraceptive prevalence or immunization coverage) for monitoring performance and subsequently replace them with unmet-need and quality indicators.

What changes in management information systems would be needed? Any alternative system should not impose undue burdens of data collection. Indeed, the burden of data collection is already so high that most states are seeking ways to simplify it and reduce the number of registers by using more comprehensive ones such as family registers. However, as already discussed, the experience to date indicates that it may be possible to make the transition and in the process simplify the management information system.

What changes would be needed in supervision? Perhaps a move to a client-centered, quality approach has the greatest effect on the content

and style of supervision. The supervisors would have to perform at least four roles while de-emphasizing their monitoring role. They should (1) provide technical updates and on-the-job training; (2) carry out quality-assurance functions; (3) seek feedback from clients; and (4) compile some data themselves rather than rely exclusively on workers' reports.

Implementing and Refining the Alternative System

The government's task force has made recommendations for an alternative system of indicators. The implementation of an alternative system would require: (1) creating a consensus on the use of the alternative system; (2) providing technical support to implement it; and (3) training all involved in its use. Creating a consensus on the use of the alternative system would require holding workshops or using regularly scheduled meetings to explain the background and rationale for the alternative system. As for technical support, the state would have to assist the districts, which in turn would have to assist the PHCs, in making supportive changes in their management systems. This might entail preparing plans, reorganizing the work, changing the content and style of supervision, and streamlining the management information system. Training will be required in data collection, analysis, and use at all levels.

In addition, to begin the phased development of indicators, program managers will have to learn from field experiences and pass this knowledge on to lower-level staff. Three steps are required: (1) documenting the implementation experience; (2) reviewing this experience each year; and (3) making necessary changes in light of this review. Adopting a client-centered quality-of-care approach will not be easy, nor will it occur quickly. There is a need to recognize it for what it is—a fundamental change in both program emphasis and in the process by which this new emphasis is brought about.

Acknowledgments

This chapter is a revised version of a background paper for the Workshop on Quality Indicators for Reproductive and Child Health, organized by the Government of India, the United Nations Population Fund (UNFPA), and the International Council on Management of Population Programmes (ICOMP), which took place in New Delhi, 18–19 March 1996. Support from the Ford Foundation made ICOMP's involvement in this workshop possible.

Notes

1 RUWSEC provides comprehensive reproductive health education and services to women, adolescents, and men in approximately 100 villages in Tamil Nadu. Its activities include community-based action for health promotion and women's development, youth programs, a program for men, dissemination of health-education materials, action research, and a reproductive health clinic.

2 Anrudh Jain has developed an index called Helping Individuals Achieve Their Reproductive Intentions (HARI), which he defines as 100 minus the percentage of women who have an unplanned birth (for spacers) or an unwanted birth (for limiters) during a specified period (e.g., 24 months). This index of unmet need is difficult to implement. Moreover, it does not take into account the unmet need of others, such as dissatisfied contraceptive users and young persons.

3 In Egypt after a pilot test, the Ministry of Health has begun to implement a program to improve the quality of reproductive health care. Four times a year, a team of supervisors rates each service-delivery point on selected quality dimensions: equipment, facilities, commodities, infection prevention, client registration and history-taking, counseling, IEC, home visits and follow-up, maintenance of records and reports, clinic operations, achievement of service-delivery targets, and client satisfaction. The supervisors then develop an action plan for improving the quality rating of the service-delivery point in collaboration with the staff. These ratings are made widely known, creating considerable peer pressure on staff to improve the rating of their own service-delivery point. The entire process is repeated every quarter.

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