ENVIRONMENTAL HEALTH PROJECT

Activity Report 133

Situational Analysis for Guiding USAID/India and EHP/India

Technical Assistance Efforts in Indore, Madhya Pradesh, India

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We hope that this report will be able to extend its reach as it is used by various stakeholders and program implementers. It can also serve as a model for carrying out other quantitative and qualitative studies. We look forward to comments and suggestions from its readers.

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Acronyms

ADB	Asian Development Bank
ANC	antenatal care
ANM	auxiliary nurse midwife
ARI	acute respiratory infection
ASO	Assistant Statistical Officer
AWC	Anganwadi Center
AWW	Anganwadi worker
BGMS	Bharatiya Grameen Mahila Sangh - CBO
BPL	below poverty line
CBO	community-based organization
CD	civil dispensary
CDPO	Child Development Project Officer
CECOEDECON	Centre for Community Economics and Development Consultants Society
CSS	centrally sponsored schemes
DFID	British Government's Department for International Development
DHFW	Department of Health and Family Welfare
DMEISM	Department of Medical Education and Indian Systems of Medicine
DPT	diptheria pertusis tetanus
DWCDO	District Women and Child Development Officer
EHP	Environmental Health Project
EPI	Expanded Program for Immunization
FGD	focus group discussion
FWWB	Friends of Women World Banking
HDI	Human Development Index
HNP	health, nutrition and population
ICDS	Integrated Child Development Service
IDA	Indore Development Authority
IHIP	Indore Habitat Improvement Project
IFA	iron and folic acid

IMC	Indore Municipal Corporation
IMR	infant mortality rate
JRY	Jawahar Rojgar Yojana, a government employment program for rural unemployed and underemployed.
LBW	low birth weight
MC	Municipal Corporation
MGD	millions of gallons per day
MICS	Multi Indicator Cluster Survey
MMDA	Madras Metropolitan Development Authority
MP	Madhya Pradesh
MPHDR	Madhya Pradesh Human Development Report
MTP	medical termination of pregnancy
NFHS	National Family Health Survey
NGO	nongovernmental organization
NIUA	National Institute of Urban Affairs
NMR	neonatal mortal rate
NRY	Nehru Rojgar Yojana, a government employment program for urban unemployed and underemployed
ODA	Overseas Development Authority
OECF	Overseas Economic Cooperation Fund (Japan)
OPD	outpatient department
ORS	oral rehydration salts
ORT	oral rehydration therapy
PHC	primary health center
QMP	qualified medical practitioner
RMP	registered medical practitioner (i.e. unqualified)
SC	sub center
SLI	Standard of Living Index
SHG	self-help groups
SJSRY	Swaran Jayanti Shahri Rozgar Yojna
SRS	sample registration survey
TCS	Tata Consultancy Services
TT	tetanus toxoid
UFWC	Urban Family Welfare Center
UIP	Universal Immunization Program

USAID	United States Agency for International Development
UN	United Nations
UNICEF	United Nations Children's Fund
VAD	Vitamin A deficiency
WHO	World Health Organization
WVI	World Vision of India

Prologue

Responding to the growing need to address child health issues in urban poor settlements, the USAID/India-funded Urban Slum Child Health and Nutrition Program selected Indore in the state of Madhya Pradesh (MP) as one of the first cities for program interventions.

The process of determining the "what" and "how" of the proposed urban slum child health program, was carried out by the Environmental Health Project (EHP) India staff with a systematic and comprehensive situational analysis of the urban health environment in the city. This was done through key informant interviews and consultations with various stakeholders, assessment of the field conditions as they related to child health, and reviews of secondary literature. The interactions and consultations involved government departments associated with slum and health issues, nongovernmental organizations (NGO) and community-based organizations (CBO). Focus group discussions with slum dwellers helped in getting a deeper understanding of the health realities of the city's poor. Various reports (health surveys, slum surveys) and data from ongoing projects (such as the Integrated Child Development Service (ICDS)) and past projects (such as the Indore Habitat Improvement Project) contributed to the information base to be analyzed.

This report describes the process as well as the outcomes of conducting a situation analysis of the city of Indore, with the objective of understanding the health conditions, available services and opportunities for the slum dwellers of the city, and to assess options for developing a partnership-based program for improving the health of the underserved urban dwellers. The effort helped to better appreciate slum and health conditions, present roles and capacities of stakeholders, analyze needs of the slums of Indore, identify issues and challenges such as access to and demand for services for the urban poor, identify gaps as well as available resources, and develop a programming framework to guide interventions.

The Indore Urban Situation Analysis report and learnings have helped in developing the scope and strategies for the program subsequently implemented in the city (beginning in March 2003) to better serve the urban poor. The major findings and program directions based on the situation analysis are:

- After finding that several CBOs were active in some slum development activities and that NGOs in the city had experience in health programming, USAID-EHP support has been channeled through an NGO-CBO consortia.

- Analysis of the existing health facilities demonstrated ample public sector health infrastructure and supplies. However this government spending on health was not being accessed by the poor. Poor quality of service provision (for the poor) limited the access of needy populations. Therefore, the program being implemented is focused on building linkages between community and public sector providers and building community capacity for enhancing demand.

- Health vulnerability assessment of slums showed that all slums were not equal. One hundred fifty seven of the 539 slums of Indore were identified as vulnerable, while 382 were considered less vulnerable slums ("other slums"). The program is targeting 75 slums, where 55 belong to the vulnerable category and 20 to the "other slums" category.

- An analysis of health status, on the basis of a reanalysis of state urban poor data and as a result of focus group discussions in slums, was the basis for the technical focus areas (i.e., birth and, neonatal survival practices, diarrhea prevention and management, immunization, and nutrition) of the Urban Health Program.

- The situational analysis helped develop an understanding of the roles of various stakeholders in an urban setting (both local government agencies and state departments) and emphasized the need to build mechanisms for better coordination and collaboration. A pilot collaborative approach at the ward level is tested in one city ward, with EHP playing a catalytic role.

- The process of creating this situational analysis has strengthened our belief that investing adequate time to understand the state of affairs in a city prior to program planning helps to develop a context-appropriate approach that ultimately gains broad ownership among key stakeholders. The in-depth situation analysis also helped build on capacities and delivery platforms already in existence.

The report is being published in the hope that it will serve as a model for assessing the health scenario in a city of similar size experiencing growing poverty levels. This report will help urban health program planners in various cities conduct similar exercises to better identify urban needs and to then develop plans and programs for promoting child health among the urban poor, based on city-specific understandings of existing conditions, resources and experiences.

Summary

Background

USAID India has committed itself to addressing the needs of the urban poor and working with key partners to mobilize resources and raise awareness about health conditions in urban slums. It also plans to work to improve child health and nutrition among urban slum dwellers in selected cities. The Environmental Health Project (EHP) was tasked with developing an approach and strategy to initiate action toward achieving these goals. To date, EHP has concentrated its efforts on Indore in Madhya Pradesh (MP) state and Jamshedpur in Jharkhand state. It aims to develop, promote and test urban slum approaches to neonatal survival, diarrhea prevention and other child health priorities through behavior change and community actions and to provide technical assistance to slum-based NGOs/CBOs and to Municipal Corporations to improve health-related service delivery and community linkages. The following is a report of a situational analysis of Indore carried out by EHP to guide their program development there. The situational analysis was carried out from July to September 2002.

The following approaches, techniques and resources were used for collecting and analyzing information on child health in the slums of Indore: researching secondary sources of data in the public sector and in other parts of the city; group and individual consultations with city stakeholders; telephone and e-mail requests for references and information on current urban health programs and available studies and reports; analysis of available data to compare child health status and determinant indicators for urban, urban poor and rural populations; and focus group discussions (FGDs) held in six slums of Indore to identify maternal and child health beliefs and practices.

Urbanization

Indian demography shows a 2-3-4-5 syndrome[1]. In the last decade, as India grew at an average annual growth rate of 2%, urban India grew at 3%, mega cities at 4% and slum populations rose by 5%[2]. During the past 50 years, the urban population has multiplied five times. In the largest cities, between 40%-60% of the population is currently living in slums or other substandard dwellings where they often lack even the most basic health and other infrastructure services. The current distribution of the urban population is not anticipated to change. This fact is critical in realizing that such degrees of poverty are no longer only rural problems.

These urban conditions and growth prospects present serious public health challenges. For example, rates of infant and child mortality as well as malnutrition have been found to be at

[1] Chatterjee, G. 2002. Consensus versus confrontation: Local authorities and state agencies form partnerships with urban poor communities in Mumbai. Urban Secretariat, United Nations Human Settlements Programme. UN-HABITAT.

[2] Census of India, 1991 and 2001.

least as high among the urban poor as among the rural poor. In addition, no strategy currently exists to address the health needs of the urban poor in India. Recent analysis of the 1992-93 National Family Health Survey (NFHS) results by economic quintile showed that the disparity in the infant mortality rate (IMR) between the richest quintile and poorest quintile was greater in urban areas than in rural areas[3]. As part of the situational analysis, NFHS II, 1998-99 data (Madhya Pradesh) for specific child health indicators, was reanalyzed according to the Standard of Living Index (SLI) for both urban and rural populations by EHP (2003).

Other estimates of poverty levels stand at 41% for rural MP and 48% for urban MP[4]. While the 2001 census reports a relatively low figure of just 16% of the city's population living in the slums of Indore, local officials[4] estimate it at 41% and civil society groups[5] estimate that if the non-slum poor were included, more than 63% of the city's population would be defined as poor.

Indore city profile

Indore, the largest city of MP, is considered the financial capital of the state. Migrations from its hinterland and other states of India to MP have resulted in a large slum-dwelling population, with a mixed socio-economic profile. Spread over 130.17 sq. km, the city's average population density was 12,290 persons per sq. km. in 2001, with a disproportionate high number of 33,742 persons per sq. km. in the 19.42 sq. km. slum area.

The buoyant economy of the city is supported by industrial (in Dewas and Pithampur) and agricultural activities (on the Malwa Plateau) in surrounding areas. Though the city's economic output is significant, employment opportunities are limited with low labor-intensive work. In addition, uncontrolled and unplanned growth of this urban center has led to a infrastructure under significant stress. Water shortages, for example, represent an acute problem for all residents.

Urban poverty in Indore

Over 40% of Indore's 1.8 million residents (i.e., 747,000 people) live in slum and squatter settlements[6]. Health conditions vary because of factors within and outside of the control of these impoverished groups.

Poverty is reflected in the selective access to services and infrastructural facilities. Only one-third of slum families own an individual toilet facility, with only a tenth having access to a private water tap connection[7]. Slums vary in size, duration of residence, population density, service facilities, employment status, access to Anganwadi centers (AWCs), schooling

[3] Gatkin, 2000 in Cleason M., and C. Griffin et al. 2001. Health, Nutrition and Population

[4] According to reports from Indore Municipal Corporation and the Indore Mayor's Office.

[5] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

[6] Government of India. Planning Commission. Press Information Bureau. Estimates of Poverty, 1997. New Delhi: GOI. Available at http://www.niua.org/niuaorg/USH/index.html

[7] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust

opportunities, infrastructure, land rights, etc. These factors impact on the quality of life for the residents. From a health perspective, about one-fourth of the total number of slums could be considered vulnerable[8].

In the poor areas, female literacy is 20% and male literacy, 46.4%. It is estimated that agencies (public sector, NGOs, etc.) reach only 30% of the urban poor, and the slums that are reached belong to the comparatively better off slum settlements.

Policies and plans of MP government for urban health

The state government is largely responsible for the delivery of public health services. Official aid agencies and development banks also generally use the government bodies as their "local implementer."

About 80% of government health funding goes toward the maintenance of existing levels of services[9]. The balance of funds may be used for the development of innovative programs or to upgrade existing programs. In reality, the degree of flexibility that the state government has over its health budget is less than that 20% figure may represent, since even some of that budget is committed. An analysis of the Five Year Plan budgets and actual expenditures of the local bodies shows a declining priority being given to the MP health sector, across all income groups.

In addition, the Plan budget does not take into account the differences between the urban-rural allocations of existing social and developmental programs (the proportion of funding in urban to rural areas for poverty alleviation programs was on the order of 1:35, while the proportion of the urban poor to rural poor population was on the order of 1:3.5)[10]. Additionally, who are the end users/beneficiaries of these publicly funded schemes and facilities? Studies show that usage of government public health services is in direct proportion to income brackets. Of those accessing the government health sector services, 9% belong to the poorest economic quintile, and 35% are from the richest economic quintile. Thus, per capita health expenditure for an urban poor person is much lower than the average per capita health expenditure for a well-to-do urban dweller. Moreover, conservative estimates put inpatient health costs for low-income groups at 20% of annual family income[11].

Even at an aggregate level, the public sector share of total health expenditure is only about 22%, making India with one of the most privatized health care systems in the world.

[8] USAID/EHP. 2002. Health vulnerability assessment. Indore

[9] Asian Development Bank. 2002. Madhya Pradesh public finance reform and institutional strengthening. Tata Consultancy Services for Asian Development Bank.

[10] National Institute of Urban Affairs. 1998. India's urban sector profile. Research Study Series no. 61. New Delhi: National Institute of Urban Affairs

[11] What globalization does to people's health, Books I and II. 2000. National Coordination Committee, Jan Swasthya Sabha, Chennai

Health vulnerability assessment in Indore

Illness is one of the most powerful forces pushing low income households into poverty. EHP undertook a health vulnerability study to identify and geographically map, from a health perspective, the vulnerable population in Indore, and to then identify the key internal and external factors that predispose certain urban populations to health vulnerability.

Key factors that increase health vulnerability, as identified by slum residents, NGOs and public sector functionaries, are:

(i) economic conditions — nature of occupation, access to fair credit

(ii) social conditions — alcoholism, gender inequities, education

(iii) living environment — water & drainage systems, sanitation facilities

(iv) access and usage of public health services — Integrated Child Development Scheme (ICDS) & Department of Health and Family Welfare (DHFW)

(v) poor health status and high disease incidence

(vi) presence/absence of collective or organized community-based organizations (CBOs)

Through a combination of group discussions, workshops, slum visits and a compilation of available data, a total of 539 slum locations were identified, of which 156 were assessed as vulnerable. In further FGD-cum-mapping exercises, these were further divided into four groups based on varying degrees of vulnerability. The highly and moderately vulnerable slum locations will be the focus of EHP's work in Indore.

Child health determinants

Overview

In a disturbing trend, there is a visible decline in mortality indicators seen over the past century, either stopping or even reversing in some developing countries. More than 10 million of the 10.5 million children under age 5 who died in 1999 lived in African, Asian and Latin American nations[12]. The overall distribution of deaths by regions and nations reflects the gravity of the situation in those geographies, but masks the differences within their boundaries[13].

MP has the highest neonatal, child and under-five mortality rates of any state in India. Even within MP, children born in a poor family experience a 73% higher probability of dying

[12] United Nations Children's Fund. 2000. State of the world's children 2000. New York: United Nations Children's Fund (UNICEF).

[13] Gatkin, 2000 in Cleason M., and C. Griffin et al. 2001. Health, Nutrition and Population

before being a month old than a child born into a wealthy family[14]. Similarly, the Reanalysis of NHFS II (1998-99), EHP (2003)[15] according to SLI (Table 1) found that child mortality is almost three times higher among children with a low SLI compared to the children with a high SLI. Neonatal mortality among families residing in urban low SLI areas is double that of those living in high SLI areas.

Healthcare for newborns is also in crisis. Newborn deaths worldwide account for 60% of all infant deaths and over 40% of deaths among children under five years of age[16]. This suggests that pregnancy, delivery practices, and immediate care of newborns are critical factors for improving their chances of survival and thriving.

Table 1: Mortality rates for the 10-year period preceding survey by selected background characteristics, Madhya Pradesh

Social Groups	Child Mortality	Infant Mortality	Neonatal Mortality
Scheduled Tribes	179.6	101.0	69.4
Scheduled Castes	156.0	101.5	68.2
Standard of Living Index			
Low SLI	182.0	105.8	64.4
*Urban Low SLI	131.9	99.4	69.7
High SLI	64.7	50.2	37.2
*Urban High SLI	41.0	36.6	23.2
M.P. Average	144.7	92.5	59.8

Sources: NFHS II, 1998-99 &* Reanalysis of NFHS II (1998-99) by EHP (2003)

Providing simple low-cost care, such as two doses of tetanus toxoid vaccinations for a pregnant woman, training in midwifery skills for traditional birth attendants, or encouraging a mother to breastfeed her baby in the first few hours after birth and keeping mother and baby warm are examples of proven, cost-effective measures to reduce maternal and neonatal deaths. Such measures must be better publicized, made available and used, while at the same time, disseminating information about basic care techniques and knowledge for treating certain complications.

Child health determinants in Indore

Gaining an informed perspective on the present status of the determinants influencing child health in vulnerable populations of Indore will help in better program planning. Though specific data for Indore slums are not available, a comprehensive picture of the slums can be derived by examining studies of urban areas and urban slum populations in similar Indian

[14] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS.

[15] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP)

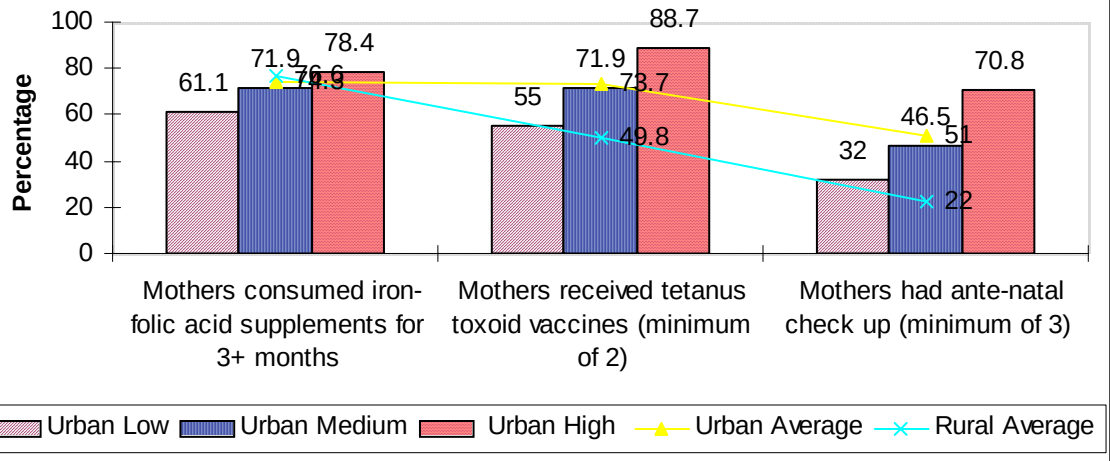
[16] United Nations Children's Fund. 2002. UNICEF calls for global commitment to reduce maternal mortality. International Women's Day Press Release. New York: United Nations Children's Fund.

cities. FGDs in Indore slums have already provided a qualitative picture of the situation and substantiated other urban slum data. In addition, NFHS II 1998-99 (MP) has been reanalyzed according to SLI, providing a comprehensive picture of the differences between those with a low SLI and average urban areas.

Antenatal care

Cross-sectional surveys (NFHS II India and NFHS II, MP) show average figures of 51% of women in urban MP receiving antenatal care. If we look into the break-up of averages derived from Reanalysis of NHFS II, EHP (2003) (see Figure 1), it becomes clear that as income levels go down, the health realities also change. For example, Iron Folic Acid (IFA) consumption among women with a low SLI is 61.1% as opposed to 78.4% with high SLI. This statistic becomes of greater concern in light of the high prevalence of anemia in women of reproductive age. Similarly, the prevalence of TT vaccinations also diminishes as income levels decrease from 88.7% in high SLI to 32% in low SLI groups.[17]

Figure 5.4 Antenatal care received by mothers during pregnancy in Madhya Pradesh



Discussions in the slums also showed that pregnant women go to obstetricians or to health workers only when there is an obvious problem (i.e., a common symptom identified is bleeding) or when they need to register themselves for delivery (i.e., when a delivery in a health care facility is planned).

Two critical program issues emerge:

Though there is a high dependence on the private sector for curative services, women usually prefer the public sector, and they also prefer a female attendant for gynecological care.

[17] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP)

Therefore, such facilities need to be provided at the slum level or at a convenient referral center. At the same time linkages with these centers should be enhanced to ensure their usage. This would help in promoting prevention efforts, early screening and treatment of complications and improved TT coverage.

Improved nutritional intake, particularly before and during pregnancy would take the form of supplements (when available) and appropriate nutrient-dense foods. Individual counseling skills and appropriate BCC methods used in group discussions to enhance compliance of IFA intake would need to be strengthened.

Attendance during delivery

A primary barrier to delivering effective obstetric care in the urban slums of MP is that, on average, about 43% of the deliveries take place at home and mostly assisted by untrained personnel. In fact, only 61% of all births are attended by a trained health professional. The Reanalysis of NFHS II, EHP (2003)[18] data for urban low SLI shows an even more disturbing critical picture. It indicates that an even larger number of deliveries (73.8%) take place at home and of all deliveries, only 38.1 % were attended by trained persons. The reasons for these statistics are affordability, accessibility to health care as well as prevailing cultural norms. Ultimately, the presence of a skilled birth attendant during labor and home deliveries would save newborn lives.

FGDs with Indore slum women and interactions with community volunteers show that a large number of births (especially in families that cannot afford hospitalization) take place at home, either with assistance of TBAs or more often, of family members and neighbors, neither of whom are likely to be adequately trained.

Therefore, slum health programs should consider:

- strengthening competence and knowledge of community level obstetric care of those untrained persons who attend to large numbers of births
- strengthening linkages with appropriate referral centers so that they may be able to confidently refer/accompany the woman to a health facility
- build their knowledge and competence in essential components of neonatal care

Birth practices and neonatal health

Even though quantitative data on birth practices for the underserved urban population is not available, FGDs with groups of women in the reproductive age group in Indore slums were instructive. These FGDs revealed that safe birth practices such as using a new blade for cutting the cord and seeking medical care in the event of obstetric complications have improved as a result of improved access to health care facilities. However less than desirable

[18] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP)

practices that are related more to beliefs and traditions than to access still persist. Therefore, babies begin breastfeeding three days after birth (a practice noted in most of rural and tribal MP), given jaggery water as a prelacteal feed and bathed immediately after birth.

Attention should be focused on:

- enabling families to challenge current beliefs and practices and adopt and maintain greater child-health-friendly behaviors
- helping families to identify the at-risk baby (small, preterm, cold-stress, hypoglycemic) and to take extra care of them (extra warmth, feeding expressed milk) until they get medical care
- equipping communities with information on early detection of danger signals in neonates and seeking timely care

Birth spacing

A child's health is affected by the timing and frequency of pregnancies. Women who give birth when they are too young or too old, or who have babies too closely spaced, place themselves and their newborns at higher risk. Since the chance of low birth weight (LBW) are high in these babies, their chances of survival and of reaching optimal growth are affected. Therefore the timing of the pregnancy is a critical factor. With a low co-habitation age (a median of 16.8 years in MP, NFHS II M.P.)[19], usage of contraception becomes the deciding factor.

NFHS II, 1998-9912 data show that a newborn less than 24 months younger than the next oldest sibling is 2.6 times more likely to die than a newborn who arrives after 48 months. A report[20] from the World Bank analysis of the poorest two quintiles from NFHS, 1992–93, shows a 32% usage of modern contraceptive methods (i.e., pill, IUD, condom, female sterilization and male sterilization) in low income groups. Of these methods, only 1% use temporary contraceptive methods. A reanalysis of NFHS II, EHP (2003)[21] data shows a 39.1% usage of modern contraceptive methods among the low SLI group, of which 34.4% utilize permanent sterilizations. This would indicate that there is only a minimal effort in delaying the first pregnancy or extending the gap between two successive pregnancies.

Discussions in the slums also revealed a complete absence of use of any temporary birth spacing method (pills, condoms, etc.). There was also a marked preference for the open-surgery method over laparoscopic surgery for permanent tubectomies.

Slum health programs should therefore consider:

[19] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS.

[20] Gatkin, 2000 in Cleason M., and C. Griffin et al. 2001. Health, Nutrition and Population.

[21] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP)

- increasing the family's control in planning their children, by increasing awareness and dispelling myths related to modern contraceptive methods

- ensuring easy availability of contraceptives through a variety of channels while respecting community customs and norms

Birth weight

LBW infants (< 2500 grams) experience high rates of morbidity and mortality from infectious disease, malnutrition and stunted growth beginning in the neonatal period and continuing through childhood. Unfortunately, it is difficult to fully assess the scope of the problem in India, since many babies born at home are not weighed.

In urban MP, the NFHS II[22] survey found 58% of the babies were not weighed. Even for babies that were weighed, some mothers (9%) did not remember their weights. Among the children whose birth weight was reported (33.4%), one-third of children (11.3%) weighed less than 2.5 kg. It should also be noted that the children who were not weighed were most likely to be babies belonging to poorer families, with poorer nutritional intake and therefore a higher likelihood of LBW incidence.

Risk on the basis of birth weight was understood in the slums by the concepts of a "small baby" and a recognized "inability to suckle." However, in most cases, treatment for these high-risk babies was not sought.

It is recommended that slum programs promote:

- counseling to improve nutritional intake during pregnancy

- counseling for appropriate care of the LBW baby

Feeding practices

Only 12% of women in urban MP (NFHS II M.P.)[23] breastfeed their babies within one hour of birth. Reanalysis of NFHS II, EHP (2003)[24] shows that among the low SLI households, only 8.2% of newborns were breastfed within an hour of birth, and 74.5% of mothers from this group discarded the first milk coming from the breast. Complementary feeding in the urban families with low SLI of MP[25] begins at about 4–6 months for more than half (53.3%) of the children.

[22] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS.

[23] Ibid.

[24] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP).

[25] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS

Infants are often given water (plain or flavored with some supplement, such as betel, jaggery or glucose) during the initial days of birth. Discussions with slum residents revealed that colostrum is considered "bad" or "stale milk" because of its color. This is also associated with the custom that the mother and the baby are untouchable until the cord dries up (usually until the third day). Until then the mother does not breastfeed the child. Women reported that the children started consuming foods other than breast milk by the time they were approximately six–seven months old, a time when the child was able to sit up and demand things. This was also linked to other factors in the environment such as women pursuing outdoor vocations, inadequate flow of milk because of insufficient nutrition, and many children of more or less the same age groups influencing the food patterns in the house.

Key focus issues therefore should be:

- initiation of immediate, exclusive breastfeeding within an hour of birth
- encouragement of proper diet for lactating mothers and strengthening a mother's confidence about her ability to breast feed
- further examination of complementary feeding practices and promotion of the timely introduction of appropriate quality, quantity and frequency other foods

Immunization

NFHS data (urban MP)[26] shows that 38% of the children were fully vaccinated by 12 months of age. Corresponding figures for urban low SLI were only 20.6% (Reanalysis of NFHS II, EHP 2003)[27]. Not all children who begin the DPT vaccination series go on to complete them. The dropout rate (i.e., the percentage of children who receive the first dose but not the second or third dose of the vaccine) for urban MP and urban low SLI is 25.9% and 36.1%, respectively. Half (50.9%) of the children had received the measles vaccine in urban MP (NHFS II). The left-out rate (i.e., the percentage of children who did not receive the first DPT dose) was as high as 20%. Most of the children received one or the other vaccine. Only 26.6% of children with low SLI received at least one dose of Vitamin A, and only 7.8% had received one dose within the last six months.

The FGDs revealed that awareness of the need for immunization is fairly high and the attitude is also positive. However, coverage rates are low for underserved populations and parents are not well informed about the periodicity of vaccinations. Slums that had AWCs also reported irregular vaccination coverage, and frequently, vaccinations were reported to have been administered during a visit to the native village. Several mothers said that their children had been vaccinated, but on further probing, it was discovered that they had only received polio drops, which are often used interchangeably for immunizations.

[26] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS.

[27] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP).

The current situation and attitude about immunizations requires urban slum programs to focus on:

- expansion of services to unreached slum settlements while also emphasizing, follow-ups to minimize the drop-out rate and/or untimely vaccinations

- strengthening slum community information on vaccination schedules and the reasoning behind them in order to increase demand for services and build linkages to central delivery systems

Malnutrition

In urban areas of MP, about 44% (NFHS II,1998-99) of the children are underweight, with almost half (19.5%) of these children being severely undernourished (i.e., below – 3 SD). However, within this group, children from households with low standards of living (72.4 %) are three times more likely to be severely underweight as children from households with a high standard of living (25.6 %). Out of these, 40.3% are severely undernourished (i.e., below – 3 SD) as compared to 6.6% of children from the low and high SLI families, respectively. The proportion of undernourished children increases rapidly from ages 6–11 months (from 16% to 46%) and beyond (to 67%). This is the time when the child's nutrition requirements increase rapidly and cannot be adequately met by breast milk alone. High prevalence of anemia (88.5%) was found in the children of urban MP with low SLI and more than half (55%) of the women found to be anemic.

The focus of urban health programs in slums, therefore, should encompass:

- improving the mother's nutritional status through adoption of appropriate eating habits

- promoting appropriate breastfeeding methods

- promoting appropriate complementary feeding

- providing opportunities for nutrition education, in part by identifying foods high in nutrient value, leading to improved nutritional practices among women

Diarrhea

Diarrhea continues to be a major killer of children under 5 years of age (ARI and diarrhea cause about one-third of all deaths). While the death rate remains an indicator of the problem, the morbidity arising out of repeated episodes of diarrhea is the hidden burden. The incidence of diarrhea is quite high in urban MP with one-quarter (NFHS-II) of children found to suffer from diarrhea during the two weeks preceding surveys. The situation is even worse among the children living in low SLI areas with a rate of 30.7% (Reanalysis of NFHS-II, EHP 2003)[28]. Several factors likely contribute to these high diarrhea morbidity and mortality rates,

[28] Environmental Health Project. April 2003. Reanalysis of NFHS II, 1998-99 Madhya Pradesh by Standard of Living Index (SLI). Arlington, Va.: Environmental Health Project (EHP)

including poverty, female illiteracy, sources of drinking water, poor water supply and sanitation, poor hygiene practices and inadequate health services.

Oral Rehydration Therapy: Only 34.7% of children with a low SLI[29] were treated with ORS or a recommended home fluid during an episode of diarrhea. Clearly, an improved understanding of the complex beliefs and attitudes held by people regarding rehydration during episodes of diarrhea is required to begin to deal with the causes of this statistic. After all, despite increased availability of ORT in the country, there has been no corresponding increase in its usage.

Appropriate Feeding Practices: During an episode of diarrhea, nutrient losses occur as a result of decreased food intake, malabsorption and increased catabolism. Appropriate feeding during and after the diarrhea episode (including breastfeeding) can prevent dehydration. Every diarrheal episode leaves a child on the edge of malnutrition, which makes him vulnerable to further disease bouts, leading to a state of ever-increasing malnutrition.

In Indore, it is widely accepted by the local cultural standards that whatever the mother eats will pass into her breast milk. She is therefore enjoined to avoid "hot" or "cold" foods, and not to breastfeed the child when the child is suffering from diarrhea, since it is believed that it is her milk that is causing the illness. This incorrect belief must be addressed.

Care seeking behaviors: Though a substantial proportion of children (72.8% in the low SLI group)[30] were referred to a health specialist, ORT usage remains insufficient. Instead, more often drugs are prescribed, even though the routine treatment of acute watery diarrhea does not require any drugs. This costlier treatment not only takes away precious funds that might otherwise be available for a more appropriate treatment, but it can also have adverse effects and actually worsen the disease. Dysentery and cholera, caused by a different bacterium, do require antibiotics to shorten the duration and diminish the severity of the episode, but these two causes of diarrhea are not common enough to explain a usage rate for medicines of some 70%[31].

Education of caregivers in diarrhea management: ORT makes treatment at home much easier and more effective. The role of the mother (and other caregivers) is important in ensuring treatment and adequately monitoring the child. Therefore, strengthening their capacities in this context needs to be built into any diarrhea control program.

The facts surrounding diarrhea treatment highlight the need to:

- *Partner with private sector:* The role of private health providers in providing appropriate and inexpensive treatments for diarrhea should be strengthened. Recommendations to take medicines should be actively discouraged.

[29] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS.

[30] Ibid.

[31] Ibid.

- *Treatment in communities:* Education about appropriate feeding during and after the diarrhea episode (including breastfeeding) should focus on mothers and caregivers. Supplies of ORT should be available in community centers.

- *Prevention at the community level:* Promotion of proper hygiene practices and key behaviors using appropriate media should be initiated.

Environmental health factors

The data from Reanalysis of NFHS II, EHP (2003) for urban low SLI of MP shows that over half (56.1 %) of the population has access to piped water supplies at home while nearly one-tenth (11.4%) of Indore slum dwellers have piped water supplies at home (Oxfam, 1999)[32]. One-third of the households had toilet facilities (public or private), while the remaining households used open fields. Public toilets have been installed in several slums (intended to serve 22% of the total slum population), but their maintenance has been grossly inadequate. They remain in abysmal conditions, and may be more unhygienic, in most cases, than the open fields.

FGDs in different slums showed that although the municipal authorities have made arrangements for water to be delivered through tankers, a regular schedule is not followed. Thus a large proportion of slum populations have to travel some distance to get water. The collection and subsequent disposal of used water at the household level has occurred. However, the kutcha drains that flow through all the houses and the water that accumulates in the no-man's land provide a dangerous breeding ground for germs and mosquitoes. Unhygienic conditions persist in such areas leading to a high incidence of diarrhea and other infectious diseases.

Health improvements are directly related to infrastructure improvements in slums. Thus the program should focus on:

- the critical role of government agencies in ensuring basic water and sanitation services, and therefore on strengthening the capacities of the urban local bodies and other government agencies in providing basic services

- the urgency of prioritizing the needs of the urban poor in city development schemes

- the need to search for and test affordable and appropriate solutions to water and sanitation situations in urban slums

- the need to engage and build ownership in communities regarding infrastructure decisions before suggesting that an infrastructure be built

[32] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

Assessment of health services in Indore

Health services in MP are provided by the public sector (Department of Health and Family Welfare or DHFW) and private sector agencies (hospitals, nursing homes and clinics). In addition, charitable hospitals and the ESI (Employee State Insurance) hospital and its dispensaries network provide services. A national level survey 16 showed that, for outpatient care, about 80% of patients in urban areas sought treatment from the private/non-government sector, rather than from public hospitals or Primary Health Centers. This preference for private practitioners is also seen in a slum-specific analysis[33].

The DHFW functions through 30 service delivery channels in the city — dispensaries, urban family welfare centers, polyclinics, nursing homes and the district hospital, creating a heavy institutional structure. The heavy workload on the limited outreach staff (predominantly ANMs) results in insufficient contacts or interactions at the community level.

There are two urban ICDS (Integrated Child Development Schemes) projects in Indore, one managed by an NGO (Baal Niketan Sangh) and the other managed by the Department of Women and Child Development. An analysis of the distribution of these services in Indore again shows an imbalance between the urban and rural areas of the district. Also within the urban set-up, the Anganwadi centers are clearly located in reasonably "better-off slums"[34]. Inadequate linkages between the ICDS and Department of Health and Family Welfare impede health services from reaching through the auxiliary nurse midwives to the Anganwadi center.

Slum residents seek medical care from private practitioners as a result of easier access, availability of credit, seemingly quick "cures" and personalized treatments. However, the excessive charges to the poor and the poor quality of the services (including over treatment through injections, unnecessary prescriptions and unwarranted medical tests) remain causes for concern.

The complexity of urban slum dwellers' health problems requires comprehensive action: programs must provide a platform and an interface between the public and the private sectors. A corresponding sensitivity and commitment are needed in the public sector as well.

Assessment of CBOs and NGOs in Indore

Nongovernmental organizations

NGOs in Indore city have predominantly focused on promoting savings and credit groups. However, their presence in the slums in the form of Self Help Group (SHG)-linked work is considerable. In addition, there are several NGOs who have their administrative headquarters in Indore, but the main focus of their work is in rural areas. These are well-established agencies with substantial experience in grassroots work, training and documentation. Some agencies are not native to Indore, but have been functioning in the city on specific projects.

[33] Ibid.

[34] Ibid.

There is considerable diversity in NGO activities and capabilities. The capacity of NGOs to work effectively in urban areas remains, by and large, unexplored. Intensive efforts with the poorest of the urban poor are rare.

Community-based organizations

Indore has a rich culture of community level processes, promoted over the years by both public and private sector agencies. In general, those groups promoted by government agencies have tended not to flourish or to develop a strong independent identity. In contrast, groups promoted by banking institutions over the past 5–7 years, focused on savings and credit, seem to function well and are perceived as strong. Some neighborhood committees, promoted by the Indore Habitat Improvement Project (1989–98), have evolved into capable institutions (some are now registered NGOs) and are engaged in development work in slums. Members of some of these groups have emerged as active participants in some of the community building processes attempted by still other organizations.

The experience of CBOs has been largely restricted to finance and savings. Yet interactions among themselves, and with public authorities and NGO staffs, have generated a great deal of confidence in their capabilities. Indeed, many CBO group members are now successfully working as promoters for their own agencies. The experiences gained have resulted in a heightened level of consciousness and political will in the slums of the city. Despite the seeming impenetrability of formal systems, groups of the poor have learned that they can be effective in accessing resources through ward councilors, by using vote bargaining and through lower level bureaucratic channels.

Benefits and challenges of NGO/CBO partnerships

The representatives from NGOs have existing networks as well as the potential capacity to forge linkages with both private and public sector providers.

While NGOs and CBOs are useful agencies to partner with for an urban health program, three aspects of these agencies should be understood and considered:

- A partnership between NGOs and CBOs with a common vision to improve health and well-being among the urban poor should be facilitated.

- Adequate capacity building of NGOs and CBOs, essential to establishing these organizations as strong institutions for urban health programming, requires time and patience.

- When selecting partnering agencies one should make certain that these agencies identify and target the most vulnerable parts of the population and that the agencies thereby represent the community in all its aspects and complexity.

Participatory and consultative planning for developing strategies to address the health problems of the community will ensure long-term sustainability. Involving government (the Health Department, Municipal Corporation, ICDS) and nongovernmental (NGOs)

stakeholders and community representatives (CBOs, slum- based leaders) helps in evolving a context-responsive program approach.

Lessons from the Indore Habitat Improvement Project

The Slum Networking Project[35], supported by DfID, provided Indore slum residents with an opportunity for infrastructure development in their localities. A well intentioned project of over Rs. 605 million, the IHIP (1990-98) received international acclaim. Winning a Global Best Practices Award during the Habitat II Conference as well as the Aga Khan Award for Architecture. Though the project has left a good deal of infrastructure in the city, it remains a controversial and sensitive matter for Indore Development Authority, the implementing agency, and Indore Municipal Corporation, the agency responsible for maintenance of infrastructure at the completion of the project. Slum residents have suffered in the midst of all this with clogged drainage lines, water shortages and dysfunctional public toilets. Land tenure remains uncertain in these slums. However, in part as a result of the inputs derived through the IHIP and in part due to the basic fact that the IHIP slums are older, the 183 slums in which this project was implemented are today relatively "better-off" than other slums of the city.

Recommendations

EHP should raise the profile of the issue of intra-urban differences in child health and get it on the agenda of influential decision-makers and advocacy groups. This should be done both at the local (i.e., Indore and MP state) level and at the national level.

The health vulnerability assessment exercise has emerged as a valuable tool for targeting efforts and resources. The methodology should be documented for replication, and the final product disseminated widely.

Health services for the urban poor should be reconfigured in order to improve access, coverage and quality. This should include strengthening linkages between health service delivery channels and the community, as well as improving referral systems and involving private practitioners. ICDS services need to be located in the most vulnerable slums to improve the reach of public health services.

[35] Diacon, D. 1997. Slum networking – An innovative approach to urban development. United Kingdom: Building and Social Housing Foundation.

1. Introduction & Methodology

USAID India has made a commitment to addressing the needs of the urban poor and to working with key partners to mobilize resources and raise awareness about health conditions in urban slums, working to improve child health and nutrition among the urban poor in selected cities. To this end, the Environmental Health Project (EHP) was tasked with developing an approach and strategy to initiate actions toward achieving these improvements. EHP has concentrated its efforts to date on Indore in Madhya Pradesh (MP) state and Jamshedpur in Jharkhand state. EHP sought to develop, promote and test urban slum approaches to neonatal survival, diarrhea prevention and other child health priorities by utilizing behavior change strategies and by providing technical assistance to slum-based NGOs/CBOs and to Municipal Corporations to improve health-related service delivery and community linkages. This report provides a situational analysis of Indore undertaken by EHP to guide their program development in that city.

Methodology

The following approaches, techniques and resources were used for collecting and analyzing information on child health in the slums of Indore:

- Desktop and library research of secondary sources of data, such as demographic and health surveys, project reports, studies and other surveys. Sources of data include reports from public sector departments of the Integrated Child Development Service (ICDS); Indore Municipal Corporation (IMC); the Mayor's office; District Survey findings; National Family Health Survey (NFHS-2) 1998-99; Multi-Indicator Cluster Surveys (MICS) in Urban Slums of Three Cities of Madhya Pradesh; OXFAM research reports; and World Bank surveys and reports.

- Individual meetings and group consultations: Several meetings were held with representatives of the public sector departments, NGOs, CBOs and other city-based individuals who presently are or in the past have been associated with slum development and urban issues. Health institutions, particularly those offering subsidized care to the slum populations, were visited.

- Telephone and e-mail requests for references and information on current urban health programs and about available studies and reports.

- Analysis of available data to compare child health status and determinant indicators for urban as well as urban poor and rural populations.

- The reanalysis of NFHS- 2 (1998-1999), Madhya Pradesh, was done to collect data reflecting conditions of the urban poor by disaggregating the existing urban data on the basis of the Standard of Living Index.

- Focus group discussions (FGDs) held in six slums of Indore to identify maternal and child health beliefs and practices, and to provide a qualitative understanding of realities in the field.

- Health vulnerability assessment (and mapping) of slums through consultations and field visits.

2. City profile

Indore is situated in the administrative region of the Malwa Plateau in the central state of India, Madhya Pradesh. The district is highly urbanized at 72% (second only to Bhopal in the state) versus the state average of 27%. The city of Indore is also the largest city in the state (in terms of area and population). It is often referred to as a "modern city" or "mini-Bombay" because of its role as the state's industrial and financial center.

Table 2.1: Indore profile[36]

Category	Urban Indore	Urban Madhya Pradesh	Urban India
City Area (municipal)	130.17 sq. km		
Population (municipal)	15,97,441		
Density of population	12,272		
Urbanization (%)	72	26.67	27.78
Rate of increase in urban population over 1991-2001 (%)	45.18	31.19	31.13
Gender ratio (per 1000 males)	901	899	901
Literacy rate (%)	81.2	79.7	80.3
Human Development Index Not exclusive to urban areas	0.637 (MPHDR, Sanket, 1998)	0.349 (India Development Forum, 1997)	0.423 (India Development Forum, 1997)
Human Deprivation Index	0.363	0.641	0.577
Per capita income (Rs., 1991)	6531	4558	
Total fertility rate (1991)	3.8	4.6	3.6
Worker participation ratio - Female (1991)	16.14	32.68	22.25
Estimated urban poverty (1993-94)	41.54	48.385	32.365

[36] Census of India, 1991 and 2001

2.1. Geographic location

Indore is located 180 km southwest of Bhopal on the Mumbai-Agra highway. Divided into four blocks, the District of Indore has an aggregate population of 2.58 million, the majority of whom reside in the city of Indore.

Table 2.2: Indore district

Name of block / tehsil	Area in sq. km	Total population	Urban to rural ratio	Literacy rates (%)
Indore	948.77	1883662	9:1	79.32
Debalpur	987.91	211585	1:4	55.53
Sanwer	745.95	188028	1:9	60.68
MHoW	804.23	302046	2:3	67.99

Source: Provisional census figures, 2001

The city of Indore is spread over 165.17 sq. km, of which 130.17 sq. km fall within the municipal boundary of the Indore Municipal Corporation (IMC). Migrations from its hinterland and other states of India have resulted in a large slum population, with mixed socio-economic profiles.

2.2. Growth of Indore city

Box 1: Milestones in Indore's growth until 1947

1906 – Electricity introduced
1907 – Telephones made available to the public
1909 – First fire brigade formed
1912 – H.V. Lancaster invited to advise on city expansion and sanitary conditions
1918 – Sir Patrick Geddes prepares City Development Plan
1924 – Nagar Sudhar Nyas established to implement suggestions of Geddes plan
1928-40 – Underground sewerage lines installed
1938 – R.H.V. Stamper invited to suggest improvement of the city's traffic circulation and the design of new residential colonies

The present city's history can be traced back about 400 years. Originally a small village, Indrapur grew on the banks of the Saraswati River in the late 15th century. It was a convenient stopping point for pilgrims traveling between the religious towns of Ujjain, Maheshwar and Bhikangaon. Indrapur is now known as "Juni Indore". The Mughals, Marathas, Holkars and the British have all been closely associated with the development of Indore into an important city in central India. The native royals were the Holkars, whose vast reserves of wealth have played the most significant role over the centuries in the growth of the industrial city of Indore (or Ahilya Nagri as it is called, in reverence to the Holkar Queen,

Ahilya Bai). This prosperity also attracted migrants from nearby areas. Table 2.3 shows the size of the city continually increasing in area and population

Table 2.3: Area and population of Indore through the years

Year	Area (MC) in sq. km	Population in millions
1961	55.8	.39
1971	58.72	.56
1981	113.52	.83
1991	130.17	1.11
2001	(Not available)	1.59

Source: Census data of respective years[37]

The population density was 8,387 persons per sq. km in 1991, and has grown to 12,290 per sq. km in 2001. The slum settlements are spread over 19.42 sq. km of the city. Slum population figures are highly disputed. However, it is believed to be around 660,000, with an alarmingly high population density in the slums of 33,742 persons per sq. km.

2.3. Structure of the economy

Indore has always had a consciously promoted (by the Holkars) culture of industry and economic activity. The opium trade was the initial lifeline of this area (until the beginning of 20th century). The first textile mill in Indore was established in 1871 and was followed by several others in the early 20th century. This boosted employment in Indore and also cotton cultivation in the agricultural hinterland of the Malwa and Nimad regions. As the relationship between Indore and Ahmedabad (the other textile capital of India) grew, Indore flourished under the Gujarat influence.

However, just as the overall decline of the textile industry spread throughout the country, Indore also saw a drastic reduction in the mills there from 1985–1991. The closure of six mills, the backbone of the city's economy, changed the economic and social environment of the city. Industrial slums that had mushroomed around the mills are now in worse condition than before, with most of the male residents of these areas dependent solely on whatever they can earn on a day-by-day basis. Consequently, women have ventured out to work and today are active wage-earning members of families.

Despite this setback in its economy, Indore continues to be at the forefront of the country's commercial centers because of the emergence of several other industries in the city and also in the satellite townships of Dewas and Pithampur. Trade and commerce also contribute measurably to the economy of the city. In recent years, there has been significant domestic investment in the automobile industry.

[37] Indore Census 1991.

Figure 2.1 illustrates that over 94% of the workforce of Indore is in the non-farm sector. However, worker participation rate is low at 30% (urban Indore). The aggregate female participation in the workforce was as low as 14% for urban Indore in 1991[38].

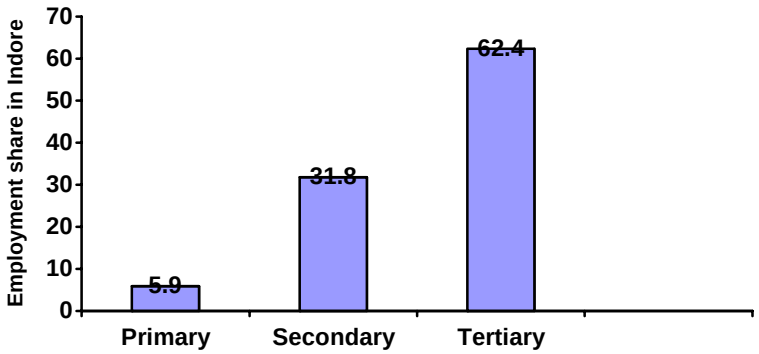
Kinds of Workers:

- Primary — The primary sector of industry generally involves the conversion of natural resources into primary products. Most products from this sector are considered commodities or raw materials for other industries.

- Secondary — The secondary sector is the manufacturing, i.e., the transformation of raw materials into finished goods for sale, or intermediate processes involving the production or finishing of semi-manufacturers.

- Tertiary — The tertiary sector is also known as the service industry. It involves the provision of services to other businesses or people. Services may involve the transport, distribution, and sale of goods from the producer to a consumer as may happen in wholesaling and retailing or may involve the provision of a service, such as in tourism and entertainment sector. It includes all types of services ranging from lawyers to consultants.

Figure 2.1: Percentage distribution of workers in Urban Indore, 1991



An analysis shows that labor-intensive industrial units have either closed down or have drastically reduced staff. Newer industries are capital-intensive, and offer opportunities only for technically qualified personnel. Therefore, while economic output in the area remains significant, employment opportunities are limited, resulting in large sections of slum populations dependent on the informal sector for their livelihoods.

[38] Gatkin, 2000 in Cleason M., and C. Griffin et al. 2001. Health, Nutrition and Population.

2.4. Educational institutions

Indore offers a rich array of educational opportunities. Options for schooling and higher education are plentiful with several graduate and post-graduate colleges for various disciplines affiliated to the Devi Ahilya Bai University. Studies (p.17, City of Indore: An Educational Profile)[39] reveal that about one-half of enrolled children are studying in private schools and another 40% are studying in government schools.

The city is proud of its literacy rate of 81%. This is higher than urban MP and urban India, as a whole. However the figures in Indore slums show a different picture where male literacy is 46.4 % and female Literacy is 20% (Oxfam, 1999)[40].

2.5. Health infrastructure

The city has a vast infrastructure of medical facilities delivered through the government as well as private and charitable enterprises. Maharaja Yashwant Rao Hospital and T. Choithram Hospital are the largest hospitals in the state. The CHI-Apollo and Bombay Hospitals are other important medical centers in Indore. In addition, there are other institutes, nursing homes, polyclinics and medical centers. People from neighboring districts (including Bhopal) avail themselves of these facilities because of the many options for specialized medical care in Indore.

The Department of Health and Family Welfare functions through a multi-tiered system of dispensaries and referral hospitals (discussed in detail in Section 5). Employees State Insurance Scheme's hospital and dispensaries also operates in the city, with many of the mill workers and industrial workers using their services.

2.6. Environmental conditions

2.6.1. Water services

Indore receives a total of 36 million gallons per day (MGD) of water, with 31 MGD coming from the Narmada River. The balance is drawn from the Gambhir River, tube wells and other sources. With growing demands for water in the city as well as demands on the Narmada from several other states, IMC needs to explore other sources of water.

George et al. (1999)[41] predicts that by 2011, Indore's estimated population of 3 million will need 120 MGD (at 40 gallons per person per day), leaving a shortfall of 84 MGD. The difference in the pumping costs and recovery was already about Rs. 37 crores for fiscal year

[39] Juneja, N., and N. Nandi. 2000. The city of Indore: An educational profile. New Delhi: National Institute of Educational Planning and Administration.

[40] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

[41] Census Primary Abstracts (Provisional figures), 2001

1997–98. This gap will continue to widen unless appropriate measures are taken by the city administration.

2.6.2. Solid waste management

Over one-third of Indore's daily waste of 400 metric tons is not picked up by the IMC. Hospital waste also remains untreated. Efforts to systematically fight the city's pollution started in 1930, when it was decided that the dirt and filth accumulated in the latrines and drainage areas of the city should be systematically collected and taken to the city outskirts. Growth of the city has led to periodic relocations of the dumping grounds. Concerted efforts are now needed to identify distant sites for dumping and to identify other means of achieving satisfactory levels of solid waste management.

At one time, the Municipal Corporation, using a Jaipur-based NGO, took the initiative to promote a cleaner and healthier environment by encouraging participation of its citizens. However, the program was halted as a result of irregularities in the flow of funds. In addition, an effluent treatment site has been proposed, but civil groups are opposed to it because of its proximity to their homes.

2.6.3. Sewerage

Indore does not have a sewage disposal system that encompasses the entire city. Presently, the city has about 610 km of underground sewerage pipes, of which 300 km were built by IDA during the Slum Networking Project. But the older disposal system was not constructed to anticipate current needs. In addition, in many cases, these lines are close to the water pipes and the fear of contamination is real as older pipes erode. In addition, unplanned connections have resulted in problems related to water-logging, surface drains and storm water drains.

2.7. Transport and connectivity

Major roads form the major entry points to Indore. The Agra-Mumbai national highway passes through the city. Bhopal, the state capital, is also on this route. The state roads connect to other towns in the district as well as to nearby districts such as Dewas and Ujjain.

Bus services to and from the city connect Indore to the townships of Rajasthan, Uttar Pradesh, Maharashtra and other parts of MP. Migrations usually occur along this route.

Connectivity on the rail route is inadequate. Air travel is regular, as Indore is on the daily flight schedules of Indian Airlines and Jet Airways.

Chapter 2: Key points

Indore is considered the hub of financial activities in the state of Madhya Pradesh. Spread over 130 sq. km, the city has a population of about 1.6 million (with an increase from 1991 to 2001 of 44%). Though the city's economic output is significant, employment opportunities have remained limited for the unskilled and semi-skilled.

Implications for EHP India

1. The economic status of the city of Indore and the surrounding areas has made this city a target for in-migration.

2. Physical accessibility within the city is not a critical issue for health delivery.

3. Urbanization and Urban Poverty

The process of urbanization has led to an increase in the proportion of the country's population residing in towns or cities. Urban centers present tremendous opportunities for all people as places of individual and societal transformation, where a broad range of economic activities and opportunities prevail and where services (health, education, art) can be accessed. Unfortunately, the urban poor do not share in many of the benefits of urban development.

The Indian urban scenario has been aptly summarized by a demographer as the 2-3-4-5 syndrome.[42] In the last decade, as India grew at an average annual growth rate of 2%, urban India grew at 3%, mega cities, at 4% and slum populations rose by 5%.[43] If such a trend continues unabated, all that will be left will be slums, instead of viable cities.

3.1. Urban poverty

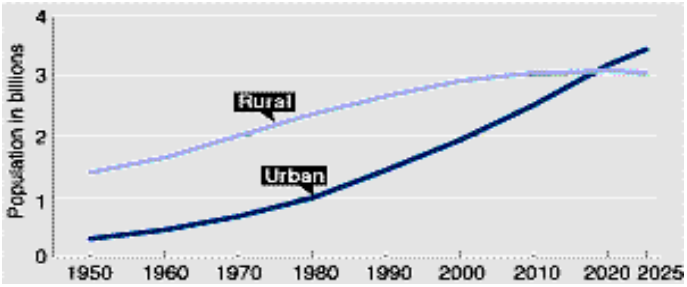
The future of urban areas is a source of concern for a variety of reasons. Uncontrolled domestic migration into these areas, the natural growth of the population and increasing density of population is resulting in the unplanned development of cities. Between 1991–2001, the rural population in India grew by 18%, whereas the urban population showed a growth of 31%.[44] Given the UN projections in Figure 3.1, it appears likely that urban India will overtake rural India in terms of population by 2025.

[42] Chatterjee, G. 2002. Consensus versus confrontation: Local authorities and state agencies form partnerships with urban poor communities in Mumbai. Urban Secretariat, United Nations Human Settlements Programme. UN-HABITAT.

[43] Town and Country Planning Organization estimates in GOI presentation, June 26, 2002.

[44] Census of India – 2001. Madhya Pradesh Series 24. Provisional figures of census: Rural – Urban distribution Paper 2.

Figure 3.1: Urban and Rural Population, Less Developed Countries, 1950–2025



United Nations Population Division, World Urbanization Prospects: the 1999 revision (2000)[45]

In the past, poverty was assumed to be mainly a rural problem, but with the rapid growth of urban populations, the balance has shifted. Although the majority of people, in absolute numbers, still live in rural areas, a large and growing proportion of India's poorest live in cities (see Table 3.1). Many do so under conditions of extreme poverty, without access to adequate shelter and basic services.

Table 3.1: Population below poverty line, 1993-94 (Modified Expert Group)[46]

	Rural		Urban		Combined	
	Number (in millions)	Percentage of total population	Number (in millions)	Percentage of total population	Number (in millions)	Percentage of total population
India	244.03	37.27	76.34	32.36	320.37	35.97
Madhya Pradesh	21.62	40.64	8.23	48.38	29.85	42.52

3.2. Magnitude of urban poverty

The scale of urban poverty in India remains a subject of debate. Conservative official estimates put the figure at 61 million people (27% of total urban population)[47] while other independent estimates are over 80 million people (37% of the population).[48]

Previous assessments and forecasts have also been conflicting. Before the Planning Commission accepted the advice of the Lakdawala Committee on poverty, the official estimate of urban poverty was 20% (1987–88). The Lakdawala Committee Report suggested an upward revision to 83 million (40% of the urban population) for the same year. The report also estimated that in 1991, 86 million people out of a total urban population of 217 million (39.63%) lived below the poverty line. Poverty levels have been reported at more than 89% of

[45] Brocheroff, M. 2000. An urbanizing world. World Urbanization Prospects: The 1999 Revision. Population Bulletin, Vol. 55(3), September 2000.

[46] Government of India. 1997.Estimates of Poverty, 1997. Planning Commission, Press Information Bureau. New Delhi: Government of India. Available at http://www.niua.org/niuaorg/USH/index.html.

[47] Department for International Development. 2000. Reducing urban poverty in India: The evolution of DFID's urban poverty reduction programme. New Delhi: Department for International Development.

[48] Town and Country Planning Organization estimates in GOI presentation, June 26, 2002.

the slums of Calcutta, 73% of the slums of Bangalore, and 68% of the slums of Indore[49]. The Madras Metropolitan Development Authority (MMDA) reported a poverty figure of 77.2% in the slums of Chennai.

Urban poverty often is focused on slums. However, the category "slum" excludes some of the poorest settlements. "Slum" can have several meanings: squatter settlements, private sub-divisions, traditional inner city quarters, urban villages, or any settlement, but these do not often conform to state defined norms. The definition of "slum" may vary from one state to another. Therefore, an area categorized as a "slum" in one state may not be called a "slum" in another. Furthermore, the situation becomes more complex when slums are located on privately-owned lands.

Smaller and less established slums often are not considered or categorized at all. Temporary settlements of construction site workers and pavement dwellers (among the poorest urban dwellers) are routinely omitted from estimates. At times, underestimation of urban poverty is also seen in recognized ("notified") slums where "hidden" populations such as sub-rental groups living on the slum edges are missed. There are also neighborhoods on the urban periphery that are not considered legal entities. This is especially true of those cities experiencing rapid urbanization. If all these groups were counted, then the estimates of urban poverty would be much higher, but at the same time, probably much closer to the reality as well.

Therefore, the census/published data of India should be viewed with some degree of caution and skepticism. For example, the following data suggest that poverty is comparatively low in the city of Indore and has seen a drastic decline in the past decade. This stands in sharp contrast to other reports. Most documents relating to the poor center on the number of "slums" and estimates of their population. These estimates emerge from 438 slums (525 in another official document)[50] housing a population of 747,000 or 41.5 % of the city's population, according to recent reports from the Municipal Corporation and the Indore Mayor's office. Some civil society groups working in slums and other low-income areas estimate that, if the non-slum poor were included, more than 63% of the city's population would be defined as poor.[51]

[49] Urban poverty and deprivation. Available at http://www.undp.org.in/report/IDF98/idfurpov.htm

[50] Centre for Community Economic and Development Consultants Society for All India Institute of Local Self Government. 2002. City profile – Indore. 2002. Draft Report. New Delhi: Centre for Community Economic and Development Consultants Society for All India Institute of Local Self Government.

[51] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

Table 3.2: Slum population in the city of Indore

Year	Total population of the city	Percent decadal change	Slum population in the city	Percent increase	Proportion of slum population to total city population
1951	310859	+ 62.6	67619	+ 23.0	21.7
1961	394941	+ 27.0	83174	+ 23.0	21.0
1971	560936	+ 42.0	112352	+ 35.1	20.0
1981	829327	+ 47.8	168246	+ 49.7	20.3
1991	1109056	+ 31.0	346625	+ 106.0	31.89
2001	1597441	+ 44.0	259577	- 25.1	16.25

Source: Census Data[52]

3.3. The multi-dimensional nature of urban poverty

A sharper picture of inequality emerges from data on access to services, with access to water and sanitation serving as useful indicators of both the inequality and reality of the situation. One-fifth of all urban households in India lack access to a water supply, and 60% of urban households live without access to sanitation. In slums, two-fifths of households have no access to safe drinking water, and 90% are without access to sanitation. Estimates of poverty by income do not capture actual access to water by poor groups. Even in cities claiming 100% coverage, availability and access varies widely between poor and rich locations. For example, in Ahmedabad, Gujurat, 25% of the population consumed 90% of the water, while the remaining 75% of the population consumed 10% of the water. In Calcutta, slum areas received 20 gallons per day, while non-slum areas were supplied 60 gallons per day.[53]

A study undertaken in the Indore slums[54] revealed that only 11% of the slum population had a private tap connection. Access to toilets is also problematical, with only 35% of the slum dwellers owning an individual flush toilet or septic tank (see Figure 3.2).

[52] Registrar General and Census Commissioner of India. 1991. Census of India. 1991. A, B, C Series; International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS

[53] Urban poverty and deprivation. Available at http://www.undp.org.in/report/IDF98/idfurpov.htm.

[54] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

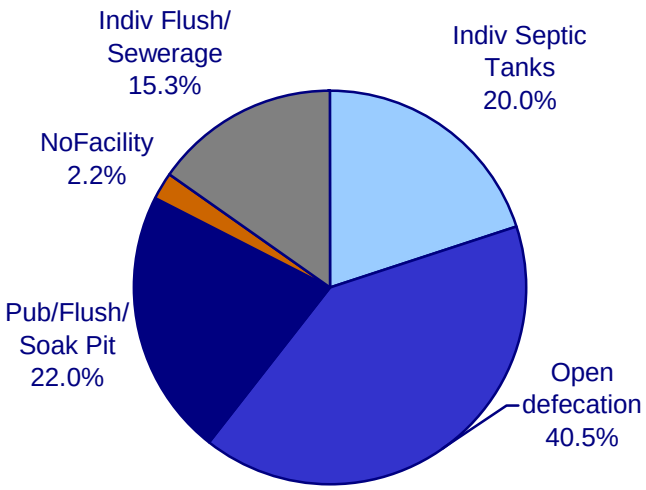


Figure 3.2: Place of Defecation in Urban Slums of Indore[55]

Slums are sites of extreme poverty, suffering and environmental degradation. Conditions place residents at an increased risk of disease and mortality. Adding to these burdens is the social and legal vulnerability of slum dwellers to eviction. Where legal or social security is ensured, one also sees improved housing structures and better access to services. An understanding of the multi-dimensional nature of poverty is required before any actions can be taken to address problems in the slums.

Slums are sites of extreme poverty, environmental degradation and insecurity of tenure. In slums, 90% of the population lives without access to adequate sanitation.

[55] Ibid.

3.4. Main Factors affecting poverty in Indore

Urbanization and industrialization have been the main factors affecting poverty in Indore. As cities expanded, villages on the outskirts were included within municipal limits and were designated as urban (Aahir Khedi is one such example). The hitherto rural populations of such areas came to be considered part of the urban poor. Another factor fueling urbanization has been migration from rural to urban areas in search of employment opportunities. It is these populations who were forced to camp in temporary dwellings or "slums." The slums of Pardeshipura (commonly referred to as Mill Area) grew out of settlements of unskilled laborers from Uttar Pradesh, Maharashtra and Rajasthan who came in search of work in the textile mills.

3.5. Institutional framework

In the early 1990s, India embarked on a process of political decentralization, ratified for the urban sector by the 74th amendment to the Constitution. Urban local bodies — Nagar Panchayats, Municipal Councils and Municipal Corporations, depending on the size of the township — were assigned powers and functions to empower local governing bodies. The intention was that these new urban governance institutions would best represent local citizens and make government more accountable.

Pro-poor policies and interventions are now the responsibility of these local bodies. These include responsibilities for slum improvement and upgrading, public health, sanitation, water supply and poverty alleviation. The State has empowered local urban bodies to levy specific taxes, duties and tolls so that they can best perform the functions assigned to them.

However, because of outdated and inappropriate procedures and a lack of accountability, available resources are not being appropriately or efficiently used. Instead, there have been instances of discrimination based on economic class, gender, ethnicity or other social factors. The result has been inadequate services, underinvestment in infrastructure and a lack of resources for maintenance.

These problems are complicated by the fact that often, many decision-makers do not understand the situation on the ground or where the needs are.

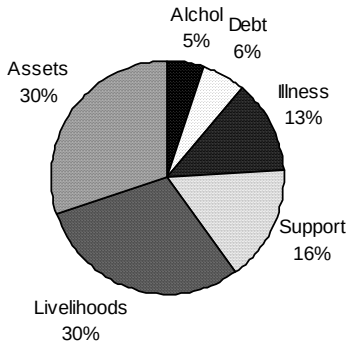
3.6. Urban poor's own perception of poverty

The poor's own perception of poverty should be an important factor guiding any program. Agencies have undertaken participatory exercises to understand these perceptions. Among these primary stakeholders, the importance of household assets and savings — and therefore the absence of such possessions — is commonly considered a definition of poverty. The poor

themselves considered the lack of access to a television or not wearing a nose ring as indicators of poverty[56].

The importance of security within the labor market has been noted in different surveys. The identification of casual daily wage labor as a factor contributing to poverty is also clear. Another category to define poverty relates to a lack of support or dependence, generally seen as a feature of social exclusion and/or chronic poverty.

Figure 3.3: How do the poor perceive poverty?



Source: "Rethinking UK aid in urban India: reflections on an impact assessment study of slum improvement"

The critical importance of illness in this chart is that it is the most significant shock faced by low income households. The impact of shock through asset depletion and subsequent debt — to fund private health care — is one of the most powerful forces pushing households into poverty. In many cases, the urban poor will go to a private hospital even though this at times requires the family to mortgage land entitlement papers. Efforts to repay the debt often take the form of a family member bonded in labor to the moneylender.

3.7. Health Vulnerability Assessment in Indore

Categorizing slums as areas of urban poverty, as discussed earlier, is not a conclusive or effective method for reaching an understanding of the most vulnerable sections in a city. A health vulnerability assessment study was therefore undertaken in Indore to do two things:

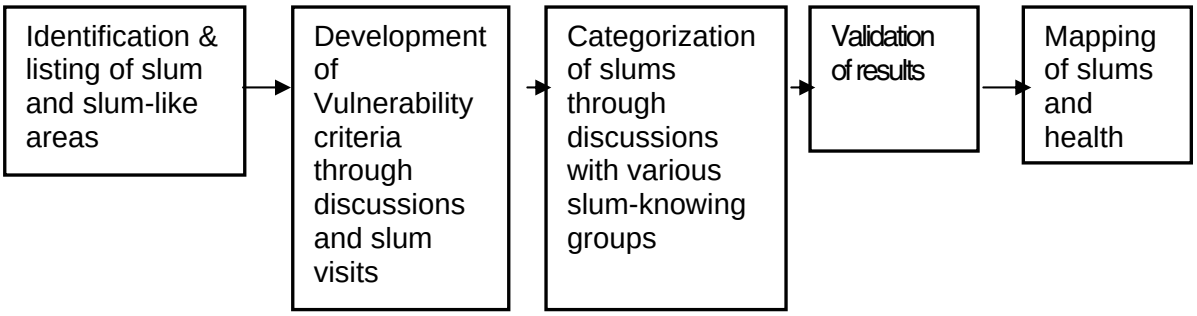
- identify and geographically map the vulnerable populations from a health perspective
- identify the key internal and external factors that predispose certain urban populations to health vulnerability

[56] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India, 1998-99: Madhya Pradesh. Mumbai: IIPS

"Vulnerability" can be defined as the chronic set of structural conditions that maintain people in a constantly precarious state. With reference to health, it implies a situation with or leading to increased morbidity and mortality indicators. Factors that contribute to such a situation may or may not be within the group's control.

Health Vulnerability Assessment

The assessment was carried out July–September 2002. The following describes the process:



A list of all slums in Indore was compiled based on all available lists: the Municipal list of registered slums, slum lists from the District Collector's/Magistrate's office, a list at the Mayor's office and a list developed in a mapping exercise carried out by a city NGO[57].

A Focus Group Discussion (FGD) with 55 Anganwadi workers was held Aug. 2, 2002, to examine possible mechanisms to support and strengthen the ICDS program, and an FGD with 68 CBO representatives was held August 3 to examine the potential for using existing opportunities and platforms at the community level to promote urban health among the poor. Both platforms were used to develop criteria against which to assess health vulnerability.

Visits to slums at different levels of development and location (older and newer slums, those at the center and others at the periphery of the city, both registered and unrecognized slums) were carried out in order to assess the reality of the criteria developed when seen against the backdrop of how the urban poor actually live. An FGD was then held August 23 with 35 CBO and NGO representatives where the health vulnerability criteria were refined and missed pockets of the urban poor were identified. Slums were categorized into two broad areas — more vulnerable and less vulnerable.

Triangulation of the compiled information was carried out at two additional workshops held with 35 stakeholders from all groups August 24 and 26.

A total of 539 slum locations were identified. Through a participative effort with a smaller group of local people familiar with Indore slums, the slums were considered based on the different criteria and then were grouped into four categories: extremely vulnerable, moderately vulnerable, less vulnerable and least vulnerable. The vulnerability criteria were further detailed and refined to reflect the situation in different slum categories (see Table 3.5). About 156 slums have been assessed vulnerable (place in one of the first three categories)

[57] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

from a health perspective. Subsequently, the process and results were presented to larger groups of public sector functionaries, CBO and NGO representatives, and amended with their inputs.

Table 3.3: Health vulnerability in slums

		Health Vulnerability based slum groups/categories			
	Vulnerability criteria	**Category A (extremely vulnerable)**	**Category B (moderately vulnerable)**	**Category C (less vulnerable)**	**Category D (least vulnerable)**
1	Social conditions (education, alcohol abuse, gender inequity)	0	0	1	2
2.	Poverty (employment opportunity, regularity of livelihood, access to fair credit, proportion below poverty line (BPL)	0	0	2	2
3.	Infrastructure (drainage & sanitation)	0	0	0	2
4.	Water supply	0	1	1	3
5.	Govt. health facility	0	1	2	3
6.	ICDS services	0	0	1	1
7.	Health & morbidity status	0	0	2	2
8.	Presence & capacity of CBO	0	1	2	2
	TOTAL	0	3	9	17

Annex 1 contains a list of the identified slums.

The extremely and moderately vulnerable slum locations will be the focus of EHP's work in Indore.

Factors that predispose populations to health vulnerability

Some key factors that exacerbate the health vulnerability status of the poor and that have been identified through the course of the study include:

- Economic conditions — nature of occupation, access to fair credit
- Social conditions — alcoholism, gender equity, education
- Living environment — water and drainage systems, sanitation facilities
- Access and usage of public health services — ICDS and DHFW
- Health and disease — prevalence
- Organized community collective efforts (CBOs)

Economic conditions — A steady income contributes to improvements in basic living standards and notions of security. Many of the urban poor service the formal employment sector through such activities as petty shops, tea-stalls or through manual labor. Frequently slums are relocated to peripheral areas where sources of employment are scarce and the costs of traveling to work are automatically increased, often to such an extent that it is no longer financially viable to continue in a job. Income uncertainty and casual daily wage earning are strong determinants of vulnerability.

People who do not earn enough to meet their daily needs, or who are barely able to do so, need to access credit when any unplanned or major event arises. Funds are borrowed at varying rates of interest depending on their source. At times, assets are provided as security or to be held in escrow to obtain funds. Sometimes, for those who have no assets, family members may be offered instead – virtually in bondage. Access to fair credit is therefore a critical factor in assessing health vulnerability.

Social conditions — Education has an established and strong link with good health practices. As a result, lack of education is taken as an indicator of vulnerability. Gender inequity and alcoholism also emerged as important factors contributing to health vulnerability.

Certain ethnic groups show a greater disposition to vulnerability, presenting comparatively higher mortality and morbidity rates. For instance, the infant mortality rate (IMR) in tribal populations is 180 per 1,000 live births, compared to the state average of 145. Social identity, therefore, is highly correlated with vulnerability.

Environmental conditions/Infrastructure — Absence of adequate water and sanitation facilities has a direct effect on people's health and thus on their health vulnerability.

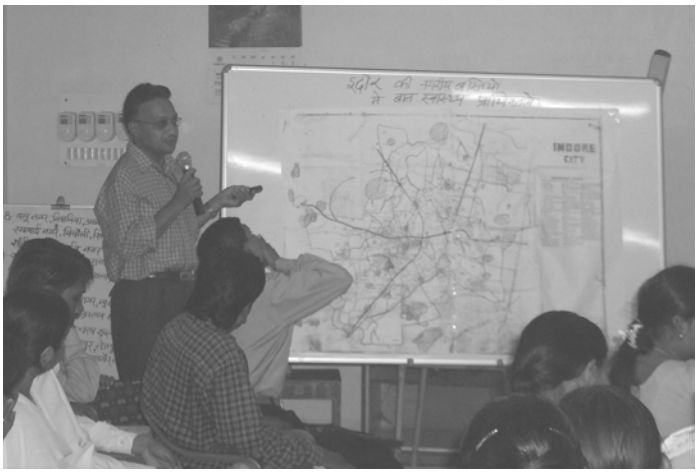
Access and usage of public health services — Access to a public health service delivery point is one criteria, but not defining by itself since a majority of the urban poor are reluctant to use such services (because, among other reasons, of the time it may take to get to that health facility and the negative attitude of many service providers toward poor people). The presence of an ICDS center in the slum is a positive factor since several reproductive and child health (RCH) services become available in the immediate vicinity. But because of irregularity in service delivery and poor targeting of beneficiaries, several vulnerable pockets in the slums are ignored. Therefore, accessibility and utilization of public health services affect the vulnerability of different slum groups.

Health status and disease incidence — High rates of infectious diseases and/or low immunization coverage are direct indicators of health vulnerability.

Organized community collective efforts — The presence of a strong community-based organization (CBO) can function as a support system within the community. Even in slums where CBOs have worked on health matters garner an added benefit, the existence of such collective efforts around any issue is positive, implying an active and progressive community.

Table 3.4: Ranking on vulnerability

Vulnerability Criteria		Points			
		0	1	2	3
Social conditions	Education	Minimal levels of education with the majority of children not going to school	Two of the conditions enumerated in previous column	One of the conditions enumerated in previous column	None of the three conditions present; also reasonable social conditions present
	Alcoholism	High levels of alcohol abuse			
	Gender equations	Gender insensitivity, with high domestic violence incidence			
Poverty levels	Access to employment opportunities and nature of work	Extremely limited because of distances. Uncertain flow of income for those who are daily wage workers	Irregular and unsystematic patterns, but better off than previous category	Working in small shops or as semi-skilled laborers	Working as domestic servants, semi-skilled jobs or as workers in factories
	Access to fair credit	None. High rates of interest/ mortgaging and selling of assets. High rates of indebtedness.	Close to previous description	A few organized systems – through community saving groups, banks or moneylenders.	Through community saving groups, banks, employers, money lenders at low rates
	Proportion of population below the poverty line (BPL)	>75% BPL	50 – 75% BPL	25 – 50% BPL	<25% BPL
Infrastructure	Toilets	No facility; use open fields.	Public toilets unusable	Public toilets functional	Majority of families have private toilets
	Drainage	No facility; clogged facility causing harm	Clogged drains/ineffective	Open semi-functional drains	Underground/cover-ed drainage.
Water supply		No access within 200 m	Public facility within 100-200m	Public facility within 100m	Majority of families have individual taps
Health Facility (Government. facility)		Not accessible with a transport cost of minimum Rs 15 return	Accessible within 3 – 5 km but not used	Available nearby, but limited use	Easy access to and use of facility
ICDS services (Anganwadi center)		No AWC	AWC present		
Health & morbidity status		High incidence of diarrhea, fever, pneumonia; no/very low immunization coverage	High incidence of diarrhea, fever, pneumonia; low immunization coverage	Marginally better than previous category	Lower incidence of diseases; reasonably & promptly treated; high immunization coverage
Presence/capacity of CBO		No CBO	Weak or dysfunctional CBO	CBO functional, with limited activities	CBO proactive with a wide range of activities and strong links with government departments



Conducting the health vulnerability assessment exercise in Indore

3.8. Key issues for programming

All slums are not equal, hence there is a need for targeting the vulnerable and addressing differentials among slums.

Poor urban dwellers typically reside in underserved and very often unrecognized pockets, which need to be located and mapped.

Health vulnerability assessment is a useful tool for identifying and targeting the underserved/ unreached for more effective health programming. The methodology should be documented for replication, and the final product disseminated widely.

Most previous programs in the urban slums of Indore have largely been incentive based or focused only on service delivery. Because of the nature of these programs and because the vulnerable were not actively identified, the disadvantaged have continued to remain underserved. This situation is further aggravated by limited time commitments and a prerequisite among some to demonstrate results.

The program needs to work to raise awareness about trends in urbanization and about the health status of the urban poor. As part of this effort, EHP should illustrate the intra-urban differences in child health (e.g. by collating and disseminating urban slum-specific data among policy makers, academics, the general public, the media, etc., and by raising the profile of this issue in order to get it on the agenda of key opinion leaders and reformers, among others). This should happen both at the local level (i.e., Indore and MP state) and at the national level.

Chapter 3: Key points

Urban poverty along with its attendant problems is increasing at alarmingly faster rates than other demographic trends. In the last decade, as India grew at an average annual rate of 2%, urban India grew at 3%, mega cities, at 4%, and slum populations rose by 5%.

Of Indore's total population of 1.8 million, 41.5% (747,000) live in underserved urban settlements. These slums vary in living conditions (11% of the poor have a private tap connection, and only 35% own an individual flush toilet or septic tank). Economic and social status also differ from other segments of Indore's population, impacting health vulnerability.

As a result of this situation, a health vulnerability study was undertaken to identify and geographically map the vulnerable populations in Indore from a health perspective, and to identify the key internal and external factors that predispose certain urban populations to health vulnerability.

Key factors that affect health vulnerability include:

- Economic conditions — nature of occupation, access to fair credit
- Social conditions — alcoholism, gender inequity, education, social identity
- Living environment — water & drainage systems, sanitation facilities
- Access and usage of public health services
- Health status and disease incidence
- Organized community collective efforts

The total of 539 slum locations in Indore were categorized into four groups, from highly vulnerable to marginally vulnerable. 156 slums were found to be vulnerable at some discernible level.

Implications for EHP India

1. The program needs to work to raise awareness about trends in urbanization and urban poverty (both those officially recognized as poor and the so-called hidden poor). This is required both at the local level (i.e., Indore and MP state) and at the national level.

2. The health vulnerability assessment exercise has emerged as a valuable tool for targeting efforts and resources. The methodology should be documented for replication, and the final product disseminated widely.

3. The highly and moderately vulnerable slums identified in the city of Indore should be the focus of the program since the need for health interventions is much more acute in those areas than elsewhere.

4. Madhya Pradesh Government's Policies and Plans for Urban Health

This chapter describes how the state and the agencies that can influence funding (government or non-government) have continually disadvantaged the urban poor. Indore is used as a case study to illustrate this point.

4.1. Expenditure allocation process

Although a substantial proportion of funding comes through the central government, the state governments in India are largely responsible for the delivery of public health services. Since official aid agencies and development banks do not implement projects but fund others to do so, these "local implementers" are also often government ministries or agencies. The central government is therefore also responsible for channeling international and bilateral funding to Indian states for various projects.

Revenue and capital expenditures are classified as (i) development and non-development, and (ii) plan and non-plan. Development expenditures refer to social and economic investments in infrastructure (e.g., education, health, power, rural development). Non-development expenditures primarily focus on interest payments and pensions.

State government expenditures are influenced by the planning process under the state's five-year plan. The plan budget refers to all expenditures, both capital and recurrent, on new programs to be initiated in the current five-year plan. After the completion of the five-year plan, the recurrent expenditure associated with the continuation of programs is generally transferred to the non-plan budget. The exception to this is the Family Welfare Program which is wholly financed by the central government.

More than 80% of the MP government's health spending is made up of committed expenditures for maintaining existing levels of service and is financed out of the non-plan budget. In reality then, the state government has some flexibility over less than 20% of its health budget since even some of plan spending is committed[58].

[58] Finance and account statistics of MP for various years. Available at http://www.mpinfo.org/english/policies/eco/stat5.htm.

4.2. Public spending on health

4.2.1. Five-year plan outlays

Public health spending can be broadly divided into three groups – health, family welfare, and water supply and sanitation.

Outlays for the entire health sector, including Family Welfare, in MP's five-year plans show a significant decline from the First to the Eighth five-year plans. The following table shows that slightly more than 7% was allocated to the health sector from 1951-56, but this decreased to 2.6% during 1992–97.

Table 4.1: Outlay for the health sector in five-year plans in MP (Unit: million Rs.)

Five-year plan	Total plan outlay	Outlay for health	% outlay for health
I	588.6	41.4	7.0
II	1,489.3	114.6	7.6
III	2,866.3	140.0	4.8
IV	4,859.3	116.0	2.3
V	13,883.6	230.0	1.6
VI	36,070.0	938.2	2.6
VII	70,140.3	1,570.4	2.2
VIII	154,590.0	4,038.6	2.6

Source: Finance Report of Public Finance Reform and Institutional Strengthening, ADB[59]

Though figures for the Ninth Plan (1997–2002) are not presented here, a substantial shift in plan priorities has taken place in recent years. As a result of the greater emphasis on basic minimum services at the national level, and the human development agenda adopted by the state government, social services were allocated 42.37% of plan investments in this plan as compared to 18.73% in the Eighth Plan[60]. However, the deliberations thus far at the national level during the preparation of the Tenth Plan (2002–2007) lead one to be less than optimistic about future funding.

Proposal to freeze social spending budget allocations[3]

Out of the total national budget expenditure of Rs.375, 000 crore in fiscal year 2001 (US$ 83 billion), a sum of Rs.35,000 crore (US$ 8 billion) is spent annually by the central government on social sector projects (education, health, employment and income generation) — together known as Centrally Sponsored Schemes (CSS). This number contrasts with an expense of Rs.112,000 crore (US$ 25 billion) on interest and debt payments and Rs 62,000 crore (US$ 14 billion) on military expenditures. The Planning Commission of India is proposing to freeze

[59] Asian Development Bank. 2002. Madhya Pradesh public finance reform and institutional strengthening. Tata Consultancy Services for Asian Development Bank.

[60] Finance and account statistics of MP for various years. Available at http://www.mpinfo.org/english/policies/eco/stat5.htm

this sum at its current level for the next five years as it prepares the draft Tenth Five-Year Plan documents. The Planning Commission has cited “misuse and poor implementation” by the Comptroller and Auditor-General of India as the rationale for the freeze, noting:

- *The pattern of shortcomings in all the CSS include inability of the Union Ministries to control the execution of these schemes since they basically confine their roles just to provision of the budget and release of funds in a rather mechanical way.*

- *Indulgence in overstatement of figures of physical and financial performance with no way to check the correctness on the part of Union Ministries, rather indifferent attitude of the State Governments to the execution of the programmes, rampant misuse of funds, absolute lack of monitoring are some of the other common shortcomings in case of CSS.*

The Commission thus draws the conclusion that:

- *It is everybody's knowledge that the massive flow of funds to the tune of Rs. 35,000 crores per year for upliftment of poor and backward areas are enough to bring about the desired results during the next five years. So the first initiative should be to retain the Ninth Plan outlay for all the sectors in the coming years also and allow for step up only in respect of areas where there are committed liabilities.*

4.2.2. Health and family welfare budget in MP

While agriculture and education enjoy the largest shares of development expenditures, medical and public health services and social security (which includes Family Welfare) have experienced a decline over the past decade. Table 4.2 also demonstrated this decrease in per capita health expenditure in real terms.

Table 4.2: Government spending on health in MP from 1990–91 to 1996–97

Year	Government Health Expenditures (Rs.)				Government Health Expenditures as % of total government expenditures
	Total amount (current prices, millions)	Total amount (1980-81 prices, millions)	Per capita (current prices)	Per capita (1980-81 prices)	
1990-91	3,141.54	1,400.80	47.50	21.18	5.76
1991-92	3,525.49	1,386.69	52.16	20.25	5.70
1992-93	3,811.36	1,365.79	55.17	19.77	5.45
1993-94	4,060.27	1,319.06	57.50	18.68	4.88
1994-95	3,818.74	1,129.61	52.94	15.66	4.40
1995-96	4,431.41	1,076.34	60.11	14.60	4.44
1996-97	4,578.84	1,228.86	60.81	16.32	3.67

Source: Chaurasia, 1998

4.2.3. Public health expenditures in Indore

As seen in the trend for state-level spending, public health expenditures by Indore Municipal Corporation has declined in absolute terms over the past three years.

Table 4.3: IMC's public health expenditure allocations

Head	(in Rs. '000s)			Per Capita Spending (Rs.) 1999-2000
	1997-98	1998-99	1999-00	
Water Supply	47420	32517	37064	23.2
Water Distribution Maintenance	3346	3074	5725	3.6
Drainage Maintenance	25848	15720	12403	7.8
Road Cleaning	3455	9549	3396	2.1
Public Gardens and Parks	2890	2127	5232	3.3
Expenditures to stop epidemic diseases	831	184	60	0.03
Food Inspection	26	14	11	0.01
Medicines and Treatments (including purification of water, treatment of zoo animals, etc.)	0	0	5565	3.5
Total Public Health Expenditures	83816	63185	69456	43.5

Source of expenditure details: Accounts Department, IMC; Per capita spending calculated for the year 1999-00 on the basis of the 2001 population figures.

The low level of spending on services for the poor also becomes evident when we examine the water supply component (water supply and distribution maintenance), which amounts to more than 60% of IMC's total spending. Given that only 11% of slum dwellers have access to

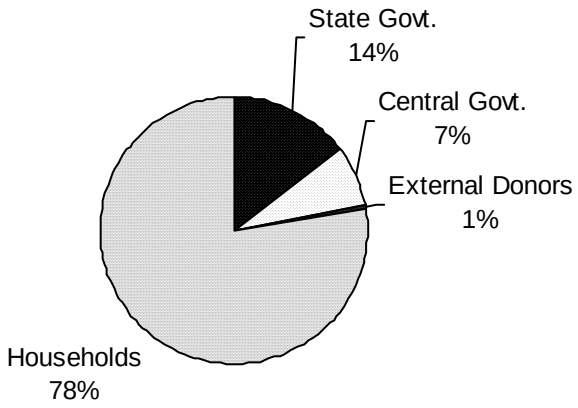
piped water (Oxfam, 1999)[61], the benefits of this expenditure are enjoyed predominantly by the non-slum population of the city.

4.3. Private and public spending on health

Studies indicate that the total (private and public) per capita expenditures on health in India is very low. According to 1996 data from NCAER[62] on the government of MP's expenditures, per capita spending on health is Rs. 227, compared to Rs. 340 in Orissa and Rs. 580 in Kerala. This amount is less than half the World Bank's (1993) recommended $US 12 for a low-income country.

Tata Consultancy Services, in the MP Public Finance Reform Report[63], has further disaggregated these health expenditures as depicted in Figure 4.1.

Figure 4.1: Percentage share in financing total health expenditure, M.P., 1994-95



Here we see that the public sector's share of total health expenditures is about 22% — approximately the lowest in the world. In fact, the lowest figure for any developed nation is for the United States, but even there, the figure is 44% — double the Indian figure (see Figure

[61] George R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

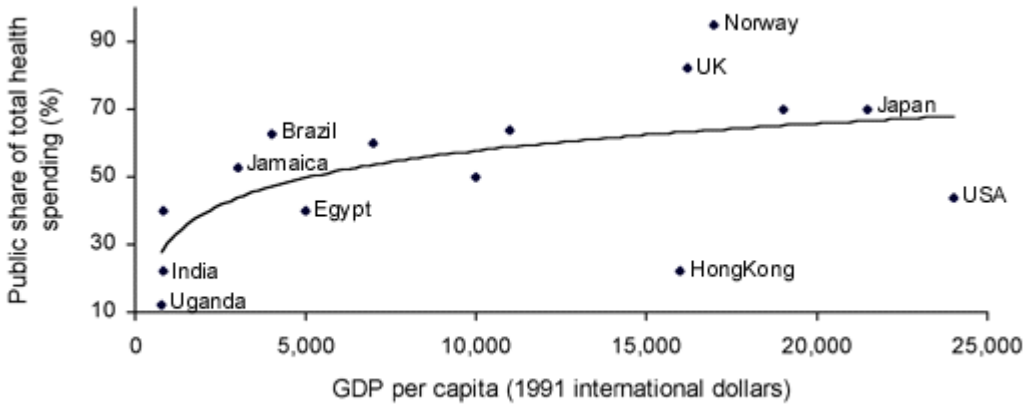
[62] NCAER. Sharaef, A. 1999. India human development report: A profile of the Indian states in the 1990s. New Delhi: Oxford University Press.

[63] Asian Development Bank. 2002. Madhya Pradesh public finance reform and institutional strengthening. Tata Consultancy Services for Asian Development Bank.

4.2). It is important to note this feature because when policymakers talk of privatizing in the Indian context, one should understand that it is already one of the most privatized health systems in the world[64].

[64] What Globalization does to people's health, Book I and II. 2000. National Coordination Committee, Jan Swasthya Sabha, Chennai.

Figure 4.2 - Public share of total health spending



Source: Murray et al., Background paper in 'What Globalization does to People's Health', 2000[65]

These facts clearly illustrate that families are currently paying for their health, and programs should take this into account when planning. On average, Indians spend about 4% of their income on treatment of common ailments. Although the wealthier spend more in absolute terms, their expenditures represent an insignificant proportion of their total income. For example, households having an annual income between Rs. 40,000–Rs. 82,000 spend about 1.6% of their incomes on health, and those earning less than Rs. 20,000 spend 8.3% of their household incomes on treatment of illnesses[66]. Conservative estimates put in-patient health costs for low-income groups at 20% of the annual family income[67].

On average, 70-75%[68] of a family's health expenditure is spent on drugs, fees and diagnostics. Most of this (60-90%) is for nonessential medicines. For example, the most common expense is for diarrhea treatments, which may cost from Rs. 20–Rs. 50 if there are no hospitalizations[69]. However, most episodes of diarrhea do not even require medicines and could be dealt with more inexpensively by a local health worker.

[65] What Globalization does to people's health, Book I and II. 2000. National Coordination Committee, Jan Swasthya Sabha, Chennai.

[66] NCAER. Sharaef, A. 1999. India human development report: A profile of the Indian states in the 1990s. New Delhi: Oxford University Press.

[67] What Globalization does to people's health, Book I and II. 2000. National Coordination Committee, Jan Swasthya Sabha, Chennai.

[68] Ibid.; NCAER. Sharaef, A. 1999. India human development report: A profile of the Indian states in the 1990s. New Delhi: Oxford University Press.

[69] Phadke, A. 1998. Drug supply and use - Towards a rational policy in India. New Delhi: Sage.

For health expenditure planning purposes it should be noted that:

- Household expenditures on treating illnesses are substantial, and programs should take these into account when planning.

- A large and thriving private market for health care exists. However, cuts in public expenditures will adversely affect the poor.

- Easily manageable ailments, such as diarrhea, deplete the precious savings of vulnerable population groups. Programs should focus on building the capacity of local community groups to prevent and treat these conditions.

The National Health Policy 2002[70] also recognizes that the quality of public health services, as reflected in the achievement of improved public health indices, is closely linked to the quantity and quality of investment in the primary health sector (health care that is provided by a health care professional in the first contact of a patient with the health care system). Global experiences indicate that standards of health are more a function of the accurate targeting of expenditures on the decentralized primary sector (as in China and Sri Lanka), than a function of the aggregate health expenditure[71]. Sri Lanka spends 3% of its GDP on health, contributing to 45% of the total health spending, while reducing the IMR to 16 per 1,000 live births.

4.4. Urban-rural bias and utilization of urban public health expenditures

The urban-rural mix of government health expenditures for 1996-1997 in MP is shown in Table 4.4 and illustrates the bias in public health expenditures. The table shows that the government spent more or less equal amounts on urban and rural health services during that year. However, since more than three-quarters of the state's population lives in rural areas, the per capita expenditures for rural residents are much lower than for their urban counterparts.

[70] National Health Policy – 2002

[71] Asian Development Bank. 2002. Madhya Pradesh public finance reform and institutional strengthening. Tata Consultancy Services for Asian Development Bank.

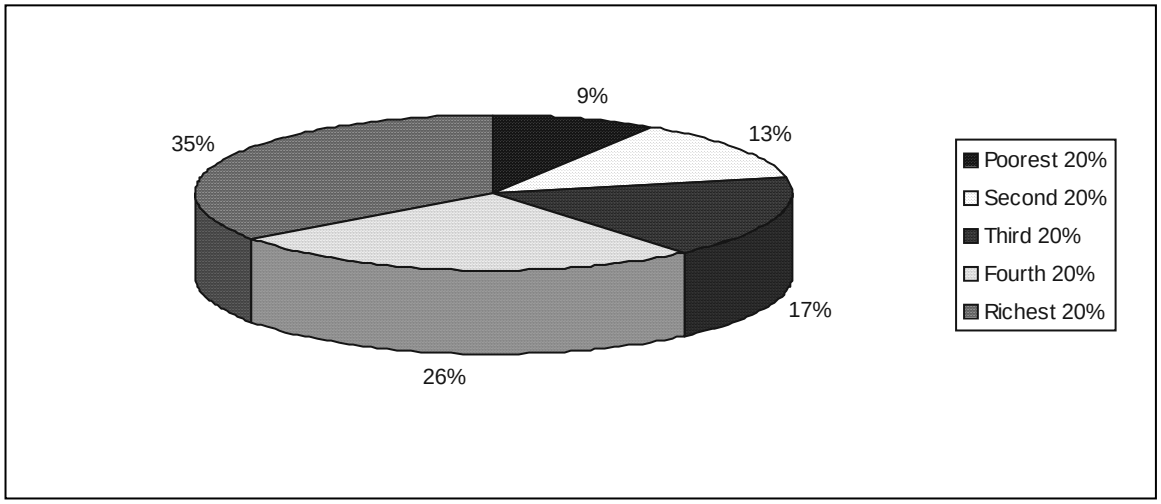
Table 4.4: Expenditure on rural and urban health services in MP, 1996-97

Category of Expenditures	Amount	% Share
Urban health services (Rs. millions)	1,468.8	48.79
Rural health services (Rs. millions)	1,541.4	51.21
Total	3,010.2	100.00
Per capita rural expenditures (Rs.)	25.49	
Per capita urban expenditures (Rs.)	87.19	
Per capita total expenditures (Rs.)	39.98	

Source: Finance Report of Public Finance Reform and Institutional Strengthening, ADB[72]

These figures overstate the urban bias of government health expenditure to some extent, as urban health services also serve rural residents as referral centers. However the users of urban institutions are, by and large, urban dwellers. It is useful to explore who the urban dwellers are using public health services. Since there have been no surveys on the socio-economic backgrounds of public health service users, estimates should be taken as indicative, and not definitive. Tata Consultancy Services has tried to answer this question by using the NCAER survey data[73]. Respondents were asked to mention the facility used for treatment. A further analysis was done of those who had visited a government facility on the basis of their per capita income. Results are shown in Figure 4.3.

Figure 4.3: Distribution of government hospital users by income quintiles, MP



Source: Finance Report of Public Finance Reform and Institutional Strengthening, ADB

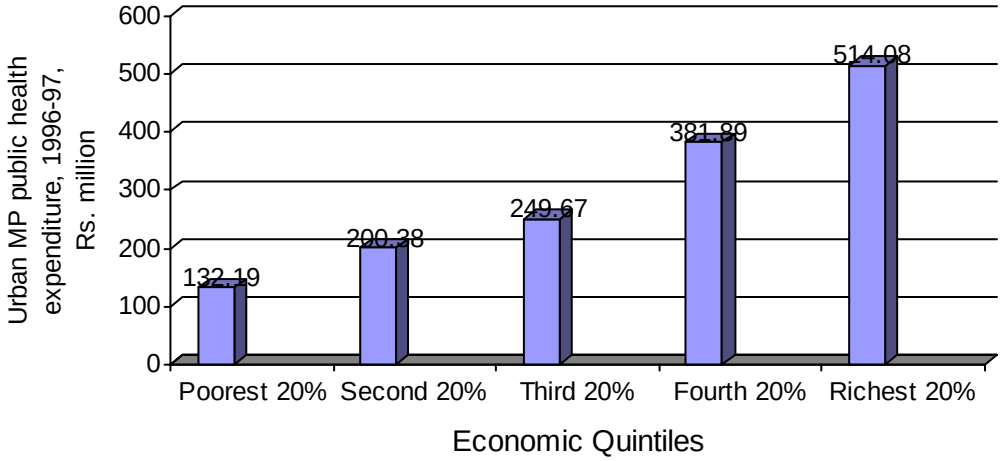
Only 9% of those accessing the government health sector belong to the lowest economic quintile (poorest 20%). If we apply these (utilization) figures to government health expenditures in urban MP, the picture in Figure 4.4 emerges. It shows that per capita health

[72] Ibid.

[73] Ibid.

expenditures for an urban poor person (the two lowest economic quintiles) are much lower than the average per capita health expenditures for a well-off urban dweller.

Figure 4.4: Utilization of subsidized public health services in urban MP



Source: Calculated on the basis of the urban government health expenditure and proportionate users

Per capita income for different social groups and economic classes is given in Box 2. The government invests in health services and allows access to services by all groups equally. Research shows that the poorer the family, the greater the chances of poor health and illness. By treating those who are "unequal" equally, the government is perpetuating and institutionalizing the imbalance in utilization. In reality, poorer sections of society are not accessing the existing state-provided services.

Per capita income (Rs.)

Scheduled castes	3,237
Scheduled tribes	3,504
Wage earners	2,450
Low income groups (< 20,000)	2,192
High Income groups (>86,000)	17,865

Source: NCAER, 1998

The above discussion highlights two things:

- A minute proportion of public spending is reaching very poor urban slum dwellers
- The rich are using a significantly higher proportion of public health services, when they could actually pay for these services without government assistance

A DFID report exploring the dynamics and structure of private health care in MP[74] illustrates the pattern of health seeking behavior in urban MP. Only one-quarter of respondents reported

[74] Department for International Development. 2002. Dynamics and structure of private health care in Madhya Pradesh: Summary report. TARU for Department for International Development (DFID).

visiting the civil or district hospital for inpatient care; the majority of people accessed private practitioners (QMPs and RMPs). This is reiterated in the Oxfam study (1999)5 conducted across Indore slums, which reports that 24% of slum dwellers accessed a government hospital for treatment (only 11.5% were using government services exclusively).

The government of India has started a system of annual district surveys in the form of a sample of 1,000 families statistically chosen in each selected district to cover both rural and urban areas. Though this survey focuses on the status of Reproductive and Child Health services, it is indicative of the utilization of public health services by different income groups in MP.

Table 4.5: Distribution of women accessing care from a public health service delivery channel (Govt. hospital, Govt. dispensary, PHC, SC) in MP

Income class	Receiving full antenatal care (%)		Institutional delivery (%)		Immunization for children (%)	
	From anywhere	From a Govt. channel	From anywhere	From a Govt. channel	From anywhere	From a Govt. channel
Poorest 20%	3.28	2.4	7.26	4.99	32.81	26.89
Next 20%	3.83	2.74	9.32	4.84	41.85	33.68
Middle 20%	5.16	3.51	10.4	6.33	46.68	37.52
Next 20%	8.38	5.46	16.19	11.74	44.47	37.22
Richest 20%	15.65	9.49	27.71	17.73	62.02	51.51

Source: Calculations based on District Survey Findings of GOI (1999)

Table 4.5 substantiates the fact that the poor are not the primary beneficiaries of the public health system.

4.5. External funding for urban areas

Analysis of development programs and funding patterns consistently demonstrates that the needs of the urban poor have been underserved. A study conducted by the National Institute of Urban Affairs (NIUA, 1998)[75] showed that funding for poverty alleviation programs in rural and urban areas was in the ratio of 1:35 in a situation where the population of rural to urban poor is in the ratio of 1:3.5. A similar trend is seen in all government programs. For instance, the Nehru Rozgar Yojna (NRY) and the Jawahar Rozgar Yojna (JRY) are the urban and rural programs, respectively, for providing employment to unemployed and underemployed. The expenditures for this poverty alleviation program during the Seventh Five-Year Plan (1992–97) were for NRY – Rs.498.04 crores and for JRY–Rs. 17,473.05 crores[76]: The rural program received approximately 35 times (17,473.05/498.04=35.08) the

[75] NIUA. 1998. India's urban sector profile. Research Study series no. 61. New Delhi: NIUA.

[76] Ninth Five Year Plan – Vol. 2. Poverty Alleviation Programme.

allocation of the urban program. Similarly, there are 278 urban ICDS projects against 4,170 for rural areas (ratio of 1:15).

Table 4.6 gives further examples from three of the largest international aid agencies. The benefits of these programs are not always only for the poor, but may involve extending facilities to a city's population (including higher-income groups or industrial and commercial concerns).

Table 4.6: Proportion of total funding to urban poverty reduction and urban infrastructure, services and management; selected agencies, 1981-98

Proportion of total funding going to poverty reduction in urban areas							
	1981-83	1984-86	1987-89	1990-92	1993-95	1996-98	All years
World Bank	7.0	8.6	8.4	12.2	15.9	15.4	11.3
ADB	7.7	10.9	6.7	3.6	6.1	11.8	7.8
OECF (Japan)			3.7	3.6	6.7	6.5	5.3
This analysis is based on a review of the descriptions of all project or other loan or credit commitments made by these agencies for the years shown. From this review, it was possible to identify all funding commitments that went to urban projects. Six broad project categories were identified for directly reducing one or more of aspects of urban poverty: by improving housing conditions aimed at lower- income groups; improving or extending provision for water, sanitation, drainage and garbage collection; other components of primary health care including health care services and measures to control or prevent diseases; support for primary and basic education, including literacy programs; integrated community development projects in urban areas that combine two or more of the above; and other projects or programs specifically aimed at reducing urban poverty, including social funds and socially-oriented public works programs. If a project has both rural and urban components, it is included here as well.							
Proportion of total funding going to improving housing conditions in urban areas aimed at lower income groups							
	1981-83	1984-86	1987-89	1990-92	1993-95	1996-98	All years
World Bank	1.9	2.6	3.2	1.9	1.9	2.2	2.3
ADB	1.9	3.6	0.4	0.1	0.8	3.4	1.7
OECF (Japan)			0.3	0.1	0.4	0.2	0.3
NB: This includes 'slum' and squatter upgrading, serviced sites, core housing, support for housing finance meant to reach lower-income households, and integrated community development projects whose focus is on improving housing conditions and related infrastructure and service provision in urban areas.							
Proportion of total funding going to improving or extending provision for water supply, sanitation and drainage in urban areas							
	1981-83	1984-86	1987-89	1990-92	1993-95	1996-98	All years
World Bank	4.1	3.9	3.1	3.0	3.8	2.8	3.4
ADB	5.1	5.5	3.5	2.0	4.4	1.7	3.3
OECF (Japan)			3.4	2.8	6.2	4.1	4.2
In this table, only projects for water supply, sanitation and drainage that seek to extend provision to those inadequately served or unserved or that seek to improve the quality of provision are included; water and sanitation projects whose main focus is not improving or extending provision but, rather, other aspects such as sewage treatment or water reservoir construction (where the increased water supply may be used principally to serve higher-income groups or industrial and commercial concerns) are not included.							
	1981-83	1984-86	1987-89	1990-92	1993-95	1996-98	All years
World Bank	14.8	17.5	18.7	22.5	27.7	22.1	20.7
ADB	21.4	20.3	20.8	22.5	22.6	25.5	22.7
OECF (Japan)			20.3	24.3	34.5	39.0	30.1
This includes not only all funding to the poverty reduction categories noted above but also funding to urban infrastructure (including ports, airports, markets, industrial estate, sewage treatment, intra-urban roads and bridges), urban services not included in poverty reduction (including higher education institutions, large hospitals, public transport and air and water pollution control), urban tourism projects and projects to support urban management.							

Source: Satterthwaite (2001)

The following issues surface from recent trends in the funding patterns of international agencies:

- According to Satterthwaite's analysis of the three international agencies, only 5-11% of their funding during 1981–98 has catered to urban needs.

- In recent years, several aid agencies (DFID, ADB, World Bank, USAID, Oxfam) have begun supporting urban focused programs. However, there is certainly an opportunity to further strengthen donor support here.

Chapter 4: Key Points

More than 80% of government health spending is made up of committed expenditures to maintain existing levels of service. Public health expenditures in MP and in Indore has demonstrated a significant decline from the First Plan to the Eighth Plan.

Analysis of total (public and private) per capita expenditures on health shows that the public sector share is currently at about 22%—making it one of the lowest in the world. At the same time, a large private healthcare market is thriving.

The poor are not the primary beneficiaries of the public health system. Only 9% of those accessing the government health sector belong to the poorest 20% of the population. Thus, per capita health expenditures for an urban poor person is much lower than the average per capita health expenditure for an urban dweller who is well-off. Conservative estimates put inpatient health costs for low-income groups at 20% of their annual family incomes.

A study has shown that the ratio of funding of poverty alleviation programs between urban and rural areas was 1:35, whereas the ratio of rural to urban population was 1:3.5.

Implications for EHP India

1. The program must prioritize the urban poor when allocating health sector resources, both to address the imbalance between rural-urban allocations and within urban settings. Global experience indicates that standards of health are more a function of the accurate targeting of expenditures on the decentralized primary sector than a function of aggregate health expenditures. Government health spending on the urban population can be better targeted (to serve the most deprived) in order to attain maximum benefits in terms of improved sanitation, immunization (and other services) coverage and thereby decrease IMR, NMR ad child mortality. In the present situation, any cuts in public health expenditures will adversely affect the poor. This recognition also should be communicated to other critical stakeholders (government and donor agencies).

2. Communities (including poor families) are spending a significant amount of the total health expenditures in urban MP, primarily in the private medical sector and to some extent, to cover increasing costs when services are provided by the public sector. It is

therefore important to consider community contributions to cover subsidized but quality health services at local levels.

5. Child Health Conditions

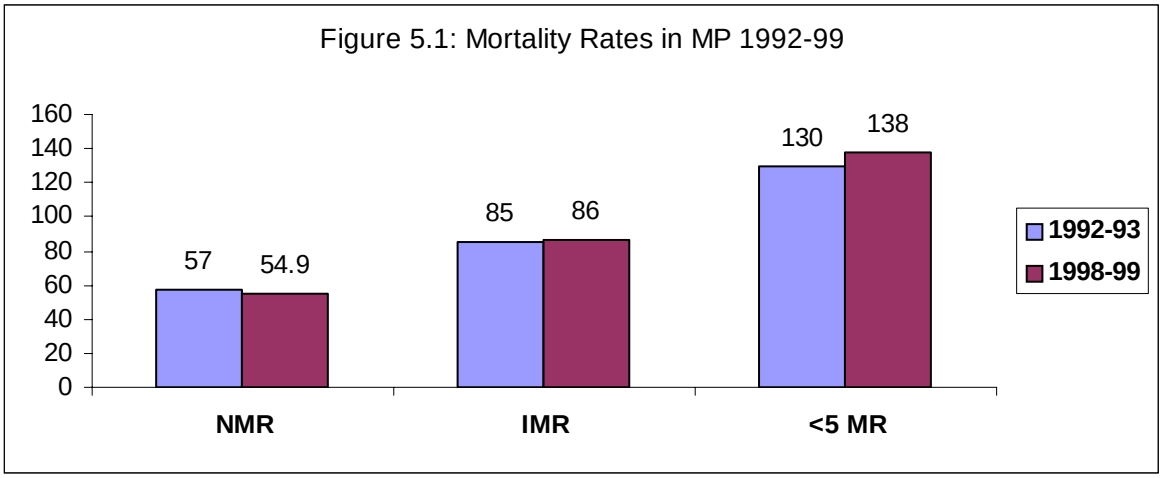
5.1. Overview of child health

5.1.1. Trends in infant and child mortality

The past century has witnessed a revolution in health care. The global decline in child mortality since 1950—from 150/1,000 to 40/1,000 in the 1990s—is a success story attributable to innovative drugs, vaccines, improved living conditions and access to basic health services. Disturbingly, there is now evidence that the decline in mortality indicators is stagnating or even reversing in a number of African, Asian and Latin American countries.

A comparison of mortality rates between the early 1990s and the late 1990s in India suggests no significant improvement: IMR has moved from 74/1,000 in 1993 to 70/1,000 in 19991. In MP (as well as in some other states) it actually shows stagnation or reversal (see Figure 5.1). For example, the IMR for the five years preceding NFHS-2 (1998–99) at 86 is in fact marginally higher than the IMR of 85 for the five years preceding the NFHS-1(1992–93). Similarly, the under–five mortality rate has also increased and the trend of NMR has shown a slight reduction as it has come down from 57 (NHFS I, 1992–93) to 54.9 (NHFS II, 1998–99). While this change is not statistically significant, the trend of stagnation or reversal certainly is disturbing.

Figure 5.1: Mortality Rates in MP 1992-99

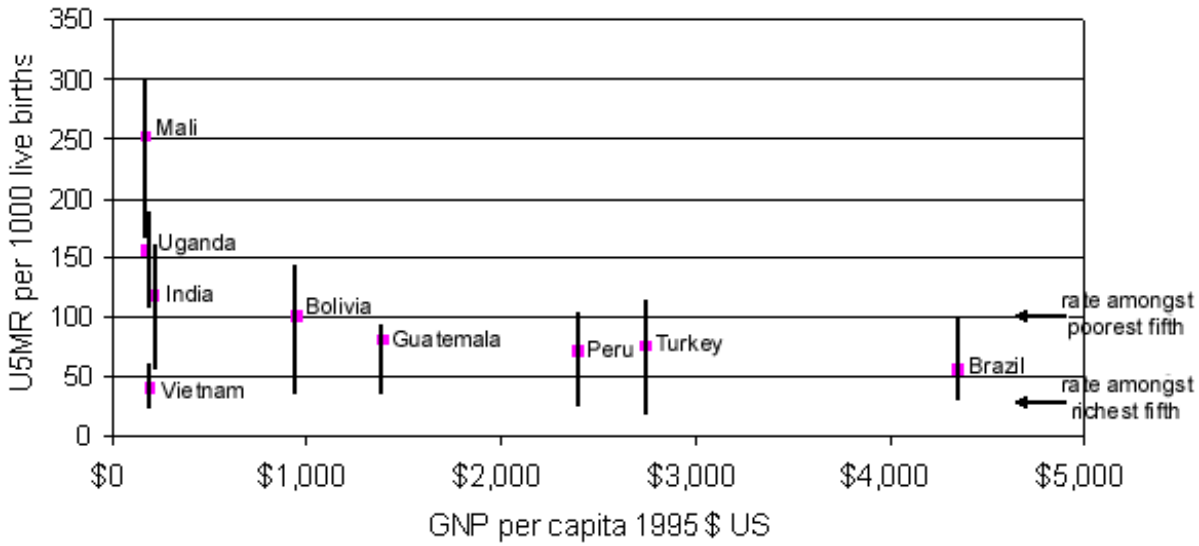


Source: National Family Health Surveys of indicated years[2]

5.1.2. The poor are more vulnerable than averages indicate

More than 10 million out of 10.5 million children under age five who died in 1999 lived in developing countries[77]. Africa and Southeast Asia each account for one-third of these deaths. The overall distribution of deaths by regions and nations reflects the gravity of the situation in those areas, while also masking differences within these boundaries. Figure 5.2 shows the range of under-five mortality among several countries and economic groups within those countries.

Figure 5.2: Under-5 mortality: gaps between and within countries



Source: Gwatkin, 2000 in WB – HNP Draft for comments[78]

Figure 5.2 clearly demonstrates that within each country, children in the poorest one-fifth of the population have higher mortality rates (top bar of each line) than either the country average (small square box) or the richest one-fifth (bottom bar of each line).

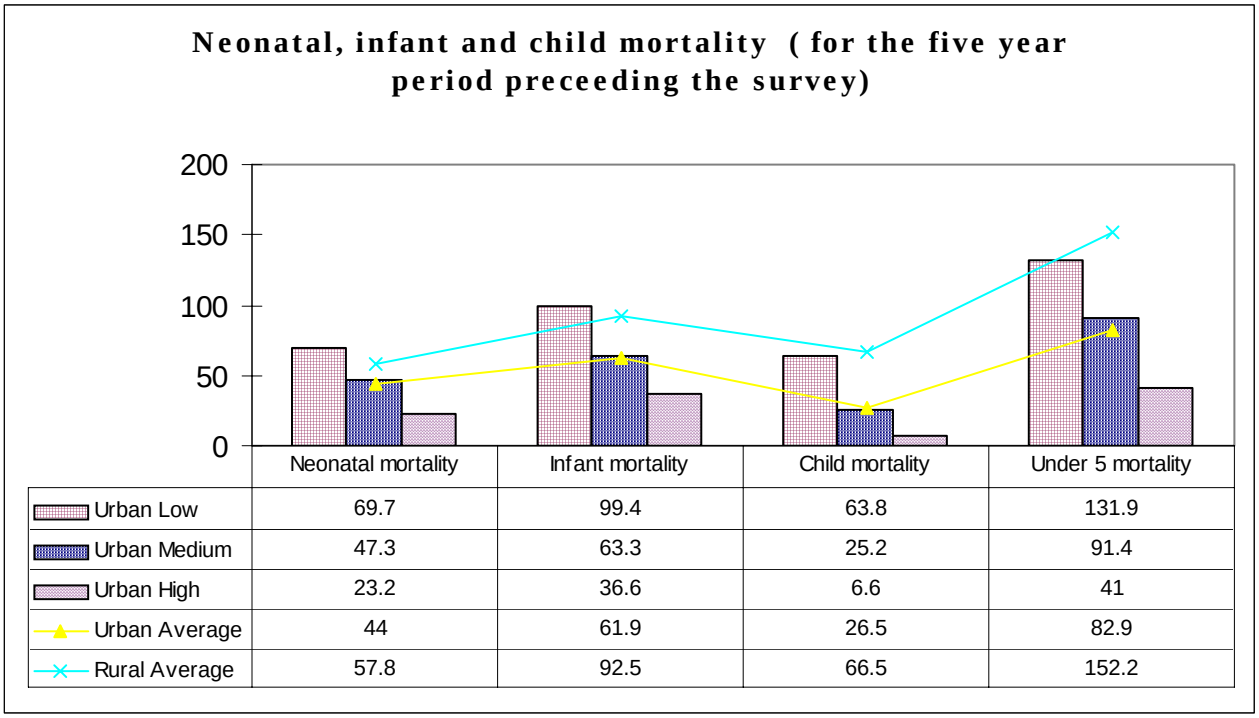
This situation is mirrored in India. The highest under-five mortality rates in India are in the states of Madhya Pradesh, Orissa, Uttar Pradesh, Rajasthan, Assam and Bihar — in that order. Demographic studies (SRS, NFHS, UNICEF Reports) have continuously shown that infant and child mortality rates in MP remain very high. In fact, MP has the highest neonatal, child and under-five mortality rates of any state in India, with one in every 12 children born during the 1993-98 period dying within the first year of life, and one in every seven children dying before reaching age five (NFHS II, 1998-99).

[77] United Nations Children's Fund. 2000. State of the World's Children 2000. New York: United Nations Children's Fund.

[78] Gatkin. 2000 in Cleason, M. and C. Griffin et al. Health, nutrition and population, (Draft for comments, 2001). In World Bank, Poverty Reduction Strategy Sourcebook. Available at www.worldbank.org/poverty/strategies

The probability of dying in early childhood is higher in some population subgroups than in others. For instance, the under-five mortality rates (in Madhya Pradesh) for Scheduled Tribes and Schedules Castes is 179.6 and 156.0, respectively, compared to the state average of 144.[79] (NFHS II, 1998-99). Figure 5.3 presents differentials in mortality rates across economic groups within the urban areas.

Figure 5.3



	Neonatal mortality	Infant mortality	Child mortality	Under 5 mortality
Urban Low	69.7	99.4	63.8	131.9
Urban Medium	47.3	63.3	25.2	91.4
Urban High	23.2	36.6	6.6	41
Urban Average	44	61.9	26.5	82.9
Rural Average	57.8	92.5	66.5	152.2

Source: NFHS II and Reanalysis of NFHS II (1998-99), EHP (2003)

Similar to the earlier global analysis[80], in MP all indicators of infant and child mortality decline with an increase in income. Children born in a poor family experience a 73% higher probability of dying before a month of age than a child born into a rich family (NFHS II, 1998–99). Child mortality is more than three times higher and infant mortality is practically three times higher, among children with a low standard of living index than among children in households with a high standard of living index in the state's urban areas.

Similar studies for Indore are not available. However, focus group discussions with slum dwellers, observations during transect walks, and interactions during July–September 2002 suggest that the picture in Indore would be very similar to that indicated above for poor populations in India and MP.

[79] United Nations Children's Fund. 2002. UNICEF calls for global commitment to reduce maternal mortality. International Women's Day Press Release. New York: United Nations Children's Fund.

[80] Gatkin. 2000 in Cleason, M. and C. Griffin et al. Health, nutrition and population, (Draft for comments, 2001). In World Bank, Poverty Reduction Strategy Sourcebook. Available at www.worldbank.org/poverty/strategies

The state of health of the urban poor vis-à-vis the rich clearly underlines the significance of targeting resources and efforts where they are most needed. This is all the more crucial in urban programming because average statistics (which are the common form of data available) reflect a skewed image of the health of the urban poor, and because poor urban dwellers typically reside in underserved and very often unrecognized pockets of poverty, and therefore are missed by various development programs.

5.1.3. Causes of morbidity and mortality in children under five

The direct causes of most childhood deaths are infectious diseases that could be effectively prevented or treated with basic, inexpensive interventions. The secondary determinants (those that are not seen as the immediate cause of death) are socioeconomic and environmental factors. Improved practices in general health measures — clean water and food, vaccinations, better feeding practices, improved hygiene practices, and prompt treatment — all significantly bring down child mortality rates. General social measures, such as better education of women, also deliver long-term benefits in child survival.[81]

Table 5.1: Distribution of causes of deaths at ages 0-4 in all developing countries, 1998

Condition	Percentage of deaths
ARI	17
Diarrhea	17
Measles	8
Malaria	7
Injuries	6
Congenital conditions	4
HIV/AIDS	3
Perinatal	20
All other	18
Malnutrition contributes to about 50% of all deaths under age five	

Source: WHO estimates for 1998

According to the World Health Organization's estimates for 1998[82], the direct causes of most childhood deaths in developing countries are infectious diseases (see Table 5.1). It is also common that very sick children — those at highest risk of death — suffer from more than one of these acute conditions, often having evidence of acute or chronic malnutrition, and having also missed key preventive measures, particularly immunizations.[83] Specific infectious

[81] Gelband H., and S. Stanfield. 2001. The evidence base for interventions to reduce under five mortality in low and middle-income countries. CMH Working paper Series, 2001.

[82] WHO estimates for 1998.

[83] Gelband H., and S. Stanfield. 2001. The evidence base for interventions to reduce under five mortality in low and middle-income countries. CMH Working paper Series, 2001.

diseases that directly account for more than half the toll are ARI, diarrhea, measles and malaria. As evident from the table, it is important to examine neonatal deaths as a separate and critical factor in child mortality (see Figure 5.4).

5.1.4. The vulnerable newborn

Greater attention to healthcare for newborns has been lacking even as healthcare overall has improved in many parts of the world. Consequently newborn death rates have remained virtually stagnant since 1990[84]. Every year, four million babies are stillborn. Another four million newborns die before they complete their first month of life. Indeed, worldwide, newborn deaths (deaths of babies between birth and 28 days) now account for 60% of all infant deaths and over 40% of deaths among children under five years of age.[85]

In urban MP, three out of every four children who die under the age of one, die in the very first month of life, and one out of every two under-five child deaths occurs in the neonatal period (Derived from NFHS 98-99 data).

Table 5.2 shows the child health indicators from different sources. The higher incidences of infant mortality in urban MP in areas with a low SLI (99.4) (Reanalysis of NHFS-II, EHP, 2003) is in contrast to the general urban population in MP with a rate of 61.9 (NHFS-II, 1998–99) emphasize the fact that children living in low SLI groups are vulnerable and needs additional focus.

[84] WHO estimates, based on data collected around 1999.

[85] United Nations Children's Fund. 2002. UNICEF calls for global commitment to reduce maternal mortality. International Women's Day Press Release. New York: United Nations Children's Fund.

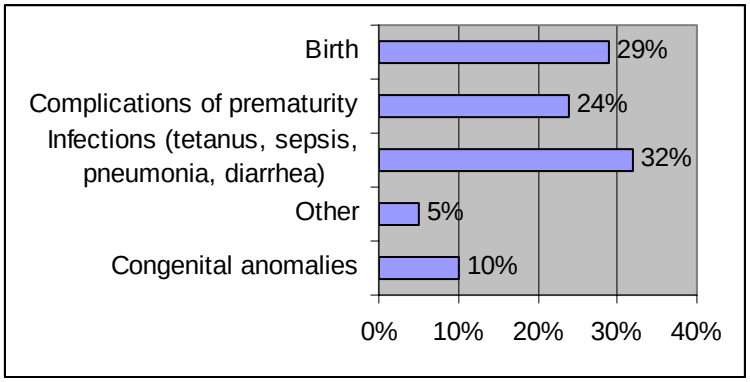
Table 5.2: Child health indicators of urban MP and urban India

Child Health Indicators	Urban MP, NFHS 1998-99	Urban MP, Low SLI, NFHS, 1998-99	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in urban India, 1992-93	Urban India NFHS 1998-99
Neonatal mortality (for the five-year period preceding the survey)	44.0	69.7	na	na	31.7
Infant mortality (for the five-year period preceding the survey)	61.9	99.4	60 (for 3 year period)	107.7	47.0
Under-5 mortality (for the five-year period preceding the survey)	82.9	131.9	na	142.6	63.1
Neonatal mortality as a proportion of infant mortality (percentile)	71.08	Na	na	na	67.44

Figure 5.4 shows the direct cause of neonatal deaths, the highest being infections, which account for 32% of newborn deaths (e.g., respiratory infection, tetanus, sepsis and diarrhea). Complications of prematurity contribute a further 24%, and birth asphyxia and injuries cause 29% of the deaths. An important secondary factor in neonatal deaths is low birth weight (a weight less than 2,500 gm at birth).

From a life-cycle perspective, mothers and babies both need attention. After all, determinants of a neonate's health include the health of mothers, particularly during her pregnancy and in the postpartum period, as well as delivery practices and care of newborns.

Figure 5.4: Direct causes of neonatal deaths



Source: WHO 2001 estimates

Provision of simple low cost care, such as two doses of tetanus toxoid vaccinations for a pregnant woman, training in midwifery skills for traditional birth attendants, and encouraging a mother to breastfeed her baby in the first few hours of birth and keep her (or him) warm are

examples of proven, cost-effective measures that save both maternal and neonatal lives. Efforts are required to ensure that these measures are more widely available and used, while also disseminating basic knowledge and techniques for treating certain neonatal complications.

In developing countries, the death of a mother means almost certain death for her newborn child (in a CARE project area in Uttar Pradesh, India, only 4% of children survived when born to women who died in childbirth).[86] When mothers are malnourished, or receive inadequate antenatal and delivery care, their babies face a higher risk of premature death. Thus, making motherhood safer is critical to saving newborn lives, since the causes of infant mortality and the interventions to reduce it, are related to pregnancy and to the birth process itself.

5.2. Determinants of child health: urban data from various sources

Reducing child mortality does not necessarily require any additional medical breakthroughs or expensive technology. Major strides can be achieved simply by bringing about desired changes in behaviors at the individual and community levels. The following sections deal with the present status of these determinants.

Sources of data

The data for the following analysis comes from reliable sources such as UNICEF, Oxfam, demographic and health surveys of the government of India, and the International Institute for Population Sciences. The focus of this analysis is on creating a picture of the urban impoverished groups in Indore, MP. Though many of the studies are not Indore-slum-specific, a reasonably comprehensive picture can, nevertheless, be derived from the data.

District survey findings[87]

The government of India has initiated a system of district surveys in the form of a sample of 1,000 families statistically chosen (using a 30-cluster technique) in each district to cover both rural and urban areas to ascertain the status of reproductive and child health services. Data were collected in two phases during 1998–99. Indore is one of the 253 districts that were surveyed in Phase II. Within the district, the data is not disaggregated for urban and rural areas.

National Family Health Survey (NFHS-2) 1998–92 — The International Institute for Population Studies was designated as the nodal agency to initiate the survey by the government of India Ministry of Health and Family Welfare. The principal objective of the survey was to strengthen the demographic and health database and facilitate implementation and monitoring of health programs in the country. State-level and national-level information

[86] Agarwal, S. 2001. Strategy development plan for birth planning and community based newborn care for INHP-II. New Delhi: CARE.

[87] Government of Madhya Pradesh (GOMP). 2000. District survey findings. Available at www.mohfw.nic.in/fsnfhs.htm

is available on health conditions and indicators stratified according to socioeconomic and cultural factors. The Madhya Pradesh and India report have been extensively referred to in this paper, particularly in figures for urban MP and for urban India overall.

Reanalysis of NHFS-II (1998–99) conducted by EHP (2003) — EHP has reanalyzed the raw data of NHFS II (1998-99) according to standard of living index (SLI) for urban and rural Madhya Pradesh in 2003, focusing on child health indicators to gain a better understanding of the present situation and the disparity between low SLI and average urban populations. The segregated data for urban and rural MP for different SLI groups have been annexed (Annex 11).

Multi-Indicator Cluster Surveys in Urban Slums of Three Cities of Madhya Pradesh[88] — This survey was undertaken in 1999 by Population Resource Centre, Baroda, on behalf of UNICEF. The main purpose of the survey was to assess the current status of key indicators related to the major goals of the State Program of Action for Child Survival and Safe Motherhood in MP. The cities covered in the study were Jabalpur, Bhopal and Gwalior. The quantitative findings of the slums of these three cities have been averaged to ascertain the picture in MP slums, and to understand the status in Indore slums.

Poverty and Vulnerability in Indore[89] — This research report was prepared as a part of Oxfam's Urban Poverty Research Program in 1999. The purpose of the study was to more fully understand issues around basic rights and sustainable livelihoods among the urban poor, their interrelationships, and how they vary according to geographical location and size in the urban center. The study has been used here primarily to understand the environmental conditions affecting Indore slum populations.

Socio-economic differences in Health, Nutrition and Population in India[90] — for the HNP/Poverty Thematic Group of the World Bank. The Demographic and Health Surveys program (conducted by Macro International) collects information about a large number of health, nutrition, population and health service utilization measures among individuals belonging to different socio-economic classes. The data presented in this report represent an average of the poorest two quintiles in urban India for 1992-93 (for the HNP and Poverty: urban-rural figures refer to Annex 3)

Focus Group Discussions — Focus group discussions (FGDs) to identify maternal and child health beliefs and practices were held in six slums of Indore during September 2002. The discussions were held with groups of women from different age groups. An effort was made to include pregnant and lactating mothers in each group. Mothers of different age groups of children participated. Traditional Birth Attendants (TBAs) also took part in the discussions. The findings of these FGDs are presented to give a qualitative understanding of life in the slums. The FGD Guideline has been annexed. (Annex 4) The discussions were held in

[88] United Nations Children's Fund. 1997. Multi indicator cluster survey in urban slums of three cities of Madhya Pradesh. Baroda: Population Research Centre.

[89] George, R., B. Rajeev and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

[90] World Bank. 2000. Socio-economic differences in health, nutrition and population in India. Washington, D.C.: The World Bank.

underserved settlements, and not in the comparatively “better-off’ slums. A socio-demographic profile of the slums is presented in Annex 5.

5.2.1. Pregnancy-related practices

Table 5.3: Child health determinants (pregnancy and delivery-related practices)

Child Health Determinants	Urban MP, NFHS 1998-99	Urban MP, Low SLI, NFHS, 1998-99	Indore, District Household Survey, 1999	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in Urban India, 1992-93	Urban India NFHS 1998-99
Antenatal care						
Percentage of births where mothers had ante-natal visits (minimum of 3)	51.2	32.0	35.0	32.6	46.5	69.2
Percentage of births where mothers consumed iron-folic acid supplements	76.2	61.1	51.8	40.3 (50-100 tablets)	na	72.8
Percentage of births where mothers received tetanus toxoid vaccines (minimum of 2)	73.7	55.0	75.7	89.7	na	81.9
Safe delivery						
Percentages of deliveries at home	50.1	73.8	37.7	42.7	75.6	34.9
Percentages of deliveries at a health center (public/private/NGO)	49.1	24.8	62.3	57.2	24.4	65.1
Percentage of deliveries attended by a trained person at home or at a health facility	61.5	38.1	72.0	60.8	45.9	73.3
Birth Spacing						
Birth interval (median number of months between current and previous birth)	31.4	31.7	na	na	na	30.9
Modern contraceptive prevalence rate (any method, currently married women)	52.5	39.1	67.4	na	29.1	61.0
Permanent sterilization method rate	37.9	34.4	51.1	na	na	36.0
Female sterilization method in proportion to total modern contraceptive prevalence method (percentile)	72.19	85.6	75.82	na	na	59.01

5.2.1.1. Antenatal checkups

Care of newborns starts with care of the expectant mother. Appropriate health care during pregnancy (ensuring pregnant women are adequately nourished, are free of infections, are given preventive vaccinations and monitored for complications) and at delivery (skilled birth attendants, clean delivery kits, counseling for birth preparedness and for newborn care), ensures newborns the best chances for survival.

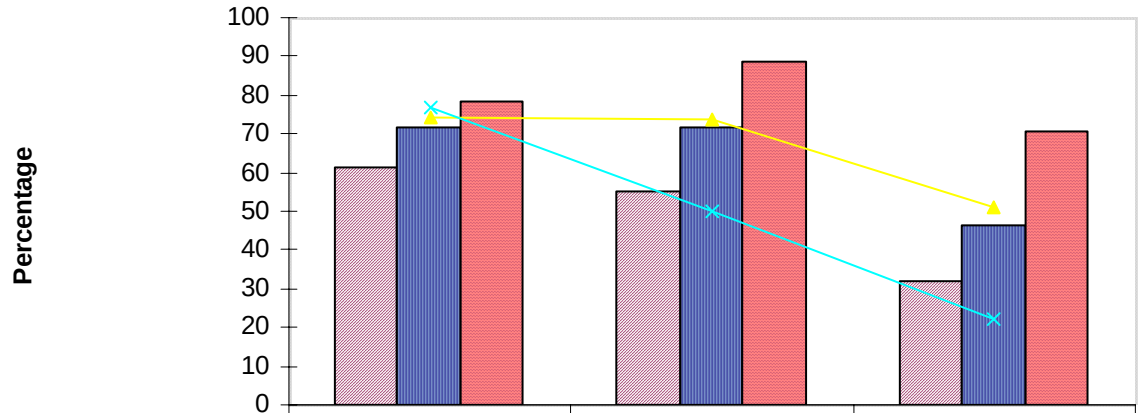
The Reproductive and Child Health Program (Ministry of Health and Family Welfare, 1997) recommends at least three antenatal checkups that include blood pressure checks and other procedures to detect pregnancy complications. Cross-sectional surveys show average figures of 50% of women receiving antenatal care. But as we look into these averages (see Figure 5.5), it becomes clear that as income levels go down, the health status also changes.

5.2.1.2. Tetanus toxoid

In India, an important cause of death in infancy has been neonatal tetanus. This is caused when unhygienic instruments are used during delivery, particularly in cutting the umbilical cord. Immunizing pregnant mothers with the tetanus toxoid vaccine protects both women and newborns as the immunity is passed on from the mother's body to the fetus. Tetanus toxoid is one of the safest, most effective and least expensive vaccinations available.

Tetanus toxoid injections are quite common in urban MP, with more than 70% of mothers receiving the vaccinations.. MICS data for the slums suggest an exceptionally high coverage as well — about 90%. This needs further verification since no other reports or experiences in the slums would validate such high figures. NFHS (1998-99) data for urban MP shows a 74%, rate for mothers with 55% within the urban poor (Low SLI) families (see Figure 5.5).

Figure 5.5 Antenatal care received by mothers during pregnancy



	Mothers consumed iron-folic acid supplements for 3+ months	Mothers received tetanus toxoid vaccines (minimum of 2)	Mothers had ante-natal check up (minimum of 3)
Urban Low	61.1	55	32
Urban Medium	71.9	71.9	46.5
Urban High	78.4	88.7	70.8
Urban Average	74.3	73.7	51
Rural Average	76.6	49.8	22

5.2.1.3. Iron-folic acid supplements

Nutritional deficiencies (of iron, folate and other nutrients) in a woman often become more acute during pregnancy because of the additional requirements of fetal growth. Iron deficiency anemia is a common micronutrient deficiency in the world. In India, 50-60% of women of reproductive age are anemic.

Iron deficiency during pregnancy is associated with low birth-weight babies, premature delivery, maternal death, and even perinatal and fetal death. An infant born with low iron stores, if untreated in the early months of life, will develop childhood anemia. That condition leads to impaired cognitive and motor development, and stunted growth. It also damages the body's normal defenses against infection.

Because of the increased need for folic acid during pregnancy, iron tablets are combined with folic acid, and a minimum of 100 IFA tablets (dosage for three months) is recommended during pregnancy. Surveys report about half of pregnant mothers consume the recommended dosage. However, the figure for the slum dwelling population is 40%, for the consumption of 50+ tablets. Among low SLI in urban MP, only six out of 10 pregnant women (Figure 5.4) receive IFA supplements (Reanalysis of NHFS II, EHP, 2003). It is apparent from the data that women in slums who are most lacking in a nutritious diet are least likely to receive the recommended supply of vitamins. Studies also show a poor IFA compliance rate, where, on average, one-quarter of women do not consume all the vitamins they receive.

The critical program issues that emerge are:

- Ensuring that pregnant women receive the recommended three-month supply of IFA
- Identifying cultural barriers and understanding why many women do not consume all the IFA they receive (This would entail awareness-raising and counseling on the advantages of IFA and nutrition counseling on the benefits of an iron-rich diet during pregnancy)
- Promoting antenatal care and increasing TT vaccination coverage

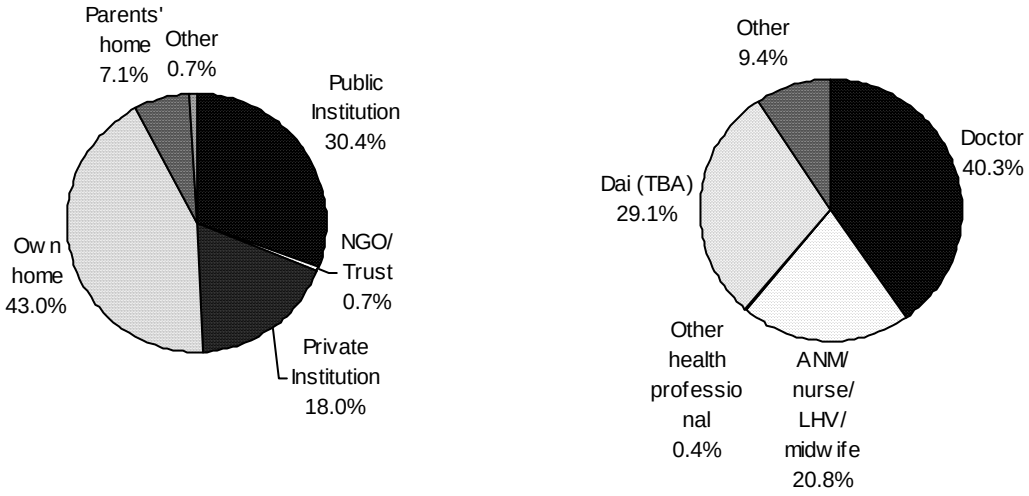
5.2.2. Delivery care

Almost 30% of neonatal deaths are the result of injuries sustained during delivery (see Figure 5.3). Asphyxia, for example, occurs when the newborn receives an inadequate supply of oxygen immediately before, during, or just after delivery. It is often caused by obstructed labor, a complication that also causes about 8% of maternal deaths.[91]

A primary barrier to delivering effective obstetric care in urban MP is that half the deliveries take place at home (the figure for urban low SLI families is 74%). Of total births, 61% are attended by a trained health professional (see Figure 5.6). However, only 38.1% of the deliveries were attended by trained health professionals in low SLI, urban MP (Reanalysis of NHFS II, EHP, 2003). Table 5.3 shows that the proportion of home deliveries is greater for impoverished groups, likely because of issues of affordability, accessibility and a number of cultural norms. The presence of a skilled birth attendant during labor and home deliveries certainly would save newborn lives. These professionals play a critical role in prompt detection and management of complications. For example, managing obstructed labor and severe antepartum bleeding can prevent asphyxia in newborns. Many of the newborns who are unable to adjust to the external temperature and develop pneumonia, could be saved if they were not given a bath immediately after birth, and instead were warmly wrapped, or had skin to skin contact (so-called kangaroo care) with their mothers. The presence of a skilled birth attendant would also be useful in ensuring a clean delivery, preventing infections both of the newborn and the mother.

[91] Tinker, A., and E. Ransom. 2002. Healthy mothers and healthy newborns: The vital link. Policy Perspectives. Save the Children and Population Research Bureau.

Figure 5.6: Place of delivery and assistance during delivery, NFHS-2, Urban MP



Slum-focused health programs should therefore consider:

Minimizing the risks of a home delivery by ensuring skilled care at delivery providing for a clean delivery:

- clean hands, clean delivery surface, clean cord cutting, tying and stump care, and clean clothes
- counseling on appropriate newborn care — keep newborn warm, dry and well-wrapped, information on early initiation of breast feeding and on avoiding prelacteal feeds

Special attention needs to be given to:

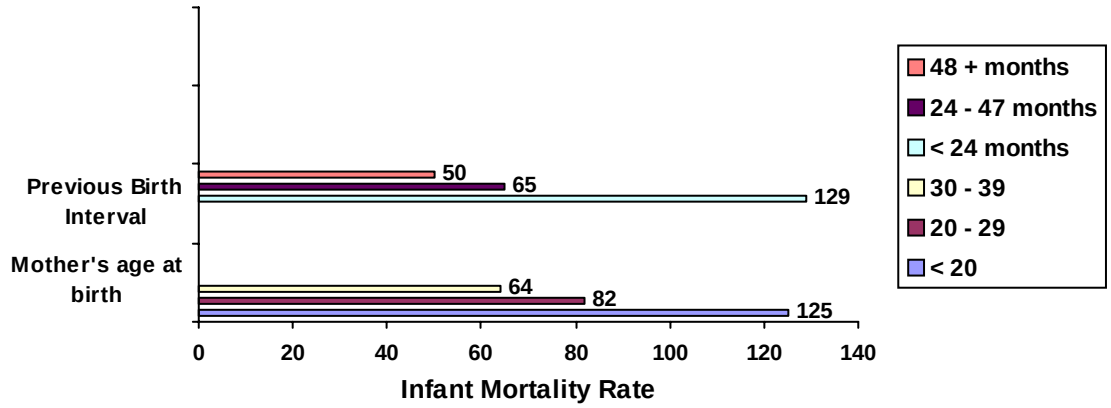
- recognizing danger signals in mothers and newborn
- providing extra care and implementing prompt action
- imparting simple techniques and skills to save newborns' lives, such as resuscitating asphyxiated babies immediately
- provisions (monetary support and transportation) for immediate referrals to health centers

5.2.3. Birth spacing

A child's health is affected by the timing and frequency of pregnancy. Women who give birth when they are too young or too old, or have babies too closely spaced, place themselves and their newborns at higher risks of complications. Worldwide research clearly demonstrates an association

between infant mortality and birth interval as well as a mother's age[92] (see Figure 5.7 for data specific to MP).

Figure 5.7: Infant mortality rates by selected demographic characteristics, NFHS – 2, Madhya Pradesh, 1998-99



Infants born less than two years apart are significantly more at risk. For example, a newborn less than 24 months younger than the next oldest sibling is 2.6 times more likely to die than a newborn who arrives after 48 months (see Figure 5.7). Infant mortality, in particular neonatal mortality rates, increase dramatically for those who have very young mothers. In MP, the median age for first cohabitation with a husband remains 16.8 years even for those recently married (see Table 5.4 for data on women from households with low SLI).

Table 5.4: Age at first cohabitation with husband

(Median age at first cohabitation with husband among women ages 20 – 49 years in low SLI households)

Current age	Age at first cohabitation
20-24	16.8
25-29	16.0
30-34	16.1
35-39	15.8
40-49	15.9

Source: NFHS II (1998-99)

Fifty to seventy percent of people have reported using a modern contraceptive method (pill, IUD, condom, female sterilization and male sterilization) in different surveys. The HNP survey shows this statistic to be a little less than 30% for poor groups. Though this survey dates back to 1992–93, 1998–99 NFHS data for women with the same background provides similar data.

Permanent sterilization is the modern contraceptive method of choice for more than three-quarters of people across all socio-economic backgrounds. This means that only about 15% (the difference

[92] Tinker, A., and E. Ransom. 2002. Healthy mothers and healthy newborns: The vital link. Policy Perspectives. Save the Children and Population Research Bureau.

between modern contraceptive prevalence and the permanent sterilization rate (see Table 5.5)) of the eligible population is using any method to postpone conception.

Table 5.5: Current use of modern contraceptive methods in low SLI households in Madhya Pradesh, NFHS 1998-99

Condom use – 0.6 %	Female sterilization – 31.5 %
Pill usage – 0.6 %	Male Sterilization – 2.2 %

The use of temporary contraceptive methods in households with a low standard of living is almost negligible (see Table 5.5) with only 0.6% using oral pills and the same percentage using condoms. This statistic is disturbing, particularly as we see women entering married life at a young age. Effective use of birth spacing methods to improve maternal and newborn health, by helping women postpone pregnancy when the risk of a poor outcome is high, is critical. The focus of programs addressing this issue should be on understanding the cultural and social barriers to the acceptance of modern temporary spacing methods, highlighting their benefits, and encouraging their acceptance.

Short inter-pregnancy intervals affect maternal and child health and survival

5.2.4. Birth weight

Low birth weight (LBW), or birth weights less than 2,500 gm, is one of the main causes of neonatal morbidity and mortality worldwide. LBW infants have high rates of morbidity and mortality from infectious diseases, malnutrition, and stunted growth beginning in the neonatal period through their childhoods. These children also are more likely to have abnormal cognitive development and poor school performance. Studies have consistently revealed that at least a third of all infant deaths could be prevented with the prevention of LBW and with preventive interventions against the sequelae of LBW during early childhood.

It is difficult to get a true picture of the scale of the problem in India, since many babies born at home are not weighed. However it has been observed that the highest LBW incidence is in South Asia with as many as 50% of all infants being born with LBW.[93]

[93] Fuchs, George J. Low birth weight. Dhaka: Centre for Health and Population Research. Available at http://www.globalforumhealth.org/Non_compliant_pages/forum3/Forum3doc326.htm

Table 5.6: Child health determinants (birth weight)

Child Health Determinants	Urban MP, NFHS 1998-99	MP Urban slums, MICS, UNICEF,1998	Urban India NFHS, 1998-99
Birth Weight			
Percentage of babies weighed at birth	33.4 + 9 (wgt. not known)	51.1	51.1+8.7 (wgt. not known)
Percentage of known babies with weight < 2.5 kg	11.3	13.3	10.8

In urban MP, the NFHS survey found that 58% of babies were not weighed. Even when babies were weighed, some mothers (9%) did not remember the weight. Among the children whose birth weight was reported (33.4%), one-third weighed less than 2.5 kg. One can surmise that the children who were not weighed at all are most likely babies belonging to poorer families.

Table 5.7: Child health determinants (infant feeding and immunization practices)

Child Health Determinants	Urban MP, NFHS 1998-99	Urban MP, Low SLI, NFHS II, 1998-99	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in Urban India, 1992-93	Urban India NFHS 1998-99
Breast feeding					
Percentage of infants breast fed within one hour of birth	12.3	8.2	1.8	Na	19.2
Percentage of infants breast fed exclusively up to 6 months	34.5 (all MP)	na	1.3	Na	19.4 (all India)
Complementary feeding					
Percentage of children given soft solid foods at 6 months	19.6 (all MP)	53.3	45.6	Na	23.6 (all India)
Immunization rates					
Percentage of children completely immunized by 12 months	38.1	20.6	69.8	Na	51.9
Percentage of children receiving measles immunization by 12 months	50.9	43.1	Na	Na	59.7
Percentage of children < 12 months left out from UIP (Children not receiving DPT 1) {Left-out rate}	19.5	25.2	Na	44.4	16.4
Percentage of children dropping out from UIP (DPT 1 to DPT 3) {Drop-out rate} out of total children	25.9	36.1	7.2	Na	13.0
Vitamin A					
Percentage of children receiving at least one dose of Vitamin A in the past six months	18.7	7.8	Na	Na	21.2

5.2.5. Breastfeeding

5.2.5.1. Initiation of breastfeeding

Appropriate breastfeeding practices have a beneficial impact on mothers and their babies. Immediate initiation of breastfeeding helps the release of oxytocin hormone, resulting in uterine contractions that expel the placenta, thereby reducing the chances of postpartum hemorrhage. The first breast milk, colostrum, provides natural immunity to the child since it is enriched with anti-infective proteins (immunoglobins) and Vitamin A, enabling the newborn to help fight infections. Table 5.7 shows that only 12.3% of women in urban MP breastfed their babies within one hour of birth. The figure for low SLI areas of urban MP (Reanalysis of NFHS II, EHP, 2003) was 8.2% and the corresponding figures per MICS were even worse, with less than 2% of women following this desirable practice. Three-fourth (74.5%) of mothers instead followed the tradition of discarding the first milk from the breast. Changes in traditional beliefs and practices will be necessary to achieve improvements in this area.

5.2.5.2. Exclusive breastfeeding

Exclusive breastfeeding is the recommended practice as it minimizes the baby's exposure to pathogens from any source, thus reducing diarrhea, respiratory tract infections, and other risks. Research has also proven that breast milk contains an adequate supply of water to nourish the baby.[94] Data show that women breastfeed their children for up to two-three years. But exclusive breastfeeding rates are low. In urban Madhya Pradesh, only about one-third of babies are exclusively breastfed. MICS data for slum populations reveals that only 1.3% of babies are being exclusively breastfed for at least six months. Infants are often given water (plain or flavored with some supplement, such as betel, jaggery, glucose) or other milk (such as cow or buffalo milk).

5.2.5.3. Complementary feeding

The timing and type of supplementary foods introduced into an infant's diet play a critical role in determining the child's nutritional status. As an infant comes into his/her sixth month of life, breast milk is insufficient to meet the needs of a growing baby. While initiating complementary foods too soon runs the risk of enabling infections, initiating it too late translates into an insufficient supply of protein, energy and micronutrients for the infant's needs. In Madhya Pradesh, the introduction of complementary foods is delayed for 80% of children. These figures vary for urban slum populations, with about 45% of mothers introducing solid or mushy foods to their children when they are 4–6 months old and Reanalysis of NHFS II for urban low SLI reports that more than half (53.3%) of the children are given complementary food by the time they are six months old.. This is probably a result of numerous factors including women pursuing employment outside the home and an inadequate flow of milk because of insufficient nutrition. Thus, though these figures are better than the statistics for the entire state, there remains a need to improve complementary feeding practices in the slums, increasing coverage and promoting appropriate nutrient-dense foods at desired frequencies.

[94] Sanghvi, T. 1999. Nutrition essentials. WHO, BASICS, UNICEF.

Key issues to be promoted in slum programs are:

- initiation of immediate, exclusive breastfeeding within an hour of birth.
- encouragement of a proper diet for lactating mothers and strengthening a mother's confidence of her ability to breastfeed
- further examination of complementary feeding practices and the promotion of the timely introduction of appropriate quality, quantity and frequency of complementary foods

5.2.6. Immunization

In 1978, the government of India sought to reduce morbidity, mortality and disability from six diseases — tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis and measles — by making vaccinations freely available to all eligible children through the Expanded Program for Immunization. The program is now called Universal Immunization Program (UIP) renamed after a declaration by UNICEF in 1985 aimed at adding additional impetus to the global EPI program. The standard immunization schedule developed for the program specifies the age at which each vaccine is to be administered, the number of doses to be given, and the route of vaccination (intramuscular, oral or subcutaneous). In an ideal situation, an infant would have received all vaccinations by the time she/he is nine months old. In the Indian context, given the gaps in the system, the nine month cut-off date can stretch to a year. However, most government and non-government studies use two years of age as the benchmark for success of their programs. Since children remain exposed to different pathogens and many succumb to these diseases during this period, this report uses vaccination coverage data only when administered during the first year of life, thereby making that the target of a successful child immunization program. Of course, it should be noted that children who have already passed one year of age, but who have not yet been immunized, should still receive the necessary vaccinations as soon as feasible.

NFHS data (urban MP) show that 38% of children were fully vaccinated by 12 months of age (see Table 5.7). However, not all children who begin DPT vaccinations go on to complete the series. The dropout rate (i.e., the percentage of children who receive the first dose but not the second and third dose) is 26%. Half the children had received the measles vaccine. The left-out rate (i.e., the percentage of children who did not receive the first DPT dose) for the UIP is as high as 20%.

Only 20.6% children belonging to the urban low SLI group of MP below one year of age were found to be completely immunized for their age, with 43.1% children having received measles immunizations by 12 months of age and one-fourth of the children <12 months old reported to have been left out of UIP (Reanalysis of NFHS II, EHP,2003).

The figures reflected by the MICS study — 70% children fully immunized and 7% dropping out from UIP, against SLI are optimistic. However, there is a strong probability that the slums visited were not a fair representation of the actual situation. Official "notified" slums usually include only a fraction of the urban poor. Being "notified" implies that the slum has been recognized in different settings and as such, may have benefited from a variety of government and non-government program. Therefore it can be considered "better off" when compared to the general slum population.

Given these realities, it is important for urban slum programs to focus on the following: Since 95% of children have received at least one vaccine, it is likely that cultural norms accept vaccinations, so there is a need for developing effective linkages to build on those attitudes.

5.2.7. Build linkages between health service delivery channels and the community

The city of Indore is about 10 km x 13 km in area; therefore accessibility because of distance should not be a constraint in accessing health services.

Though there is a system of giving vaccination cards to mothers to help them keep track of the vaccinations administered to their children, this is not always done. Studies and experience show that poor people pay greater attention when importance is attached to an issue, so consideration should be given to developing and distributing a written vaccination card or a pictorial presentation for these groups. Such practices should be encouraged to ensure full vaccination coverage within the appropriate time frames.

5.2.8. Vitamin A

Vitamin A is essential for three vital functions:

- normal vision
- maintenance of the integrity of the epithelial lining — i.e., the lack of Vitamin A results in damage to the skin, eyes, mouth, lining of the stomach and the respiratory system
- optimal functioning of the immune system — i.e., a child with Vitamin A deficiency (VAD) has more infections that are also likely to be more severe because of poor immunity

Studies estimate that by giving adequate Vitamin A in Vitamin A-deficient populations, child mortality from measles can be reduced by 50% and mortality from diarrheal diseases by 23%[95].

The National Program on Prevention of Blindness administers oral doses of Vitamin A to children beginning at nine months of age, and at six-month intervals. NFHS data show that less than one-fifth (18.7%) of the urban child population in MP were reported to have received a single Vitamin A-dose in the six months preceding the survey. For children belonging to households with a low SLI that figure was even lower — at 8% (Reanalysis of NHFS II, EHP, 2003). Their lower body immunity made them highly vulnerable to infections like diarrhea and acute respiratory infections (ARI).

The situation surrounding Vitamin A use indicates the following:

- The coverage of Vitamin A supplementation has been insufficient in government outreach programs

[95] Ibid.

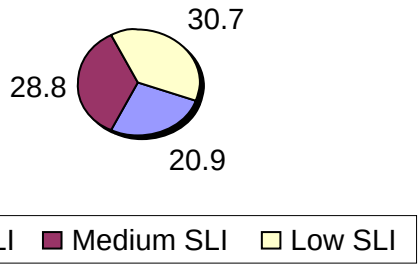
- increased emphasis on administration of Vitamin A supplements, along with immunization activities, is necessary

- daily intake of Vitamin A-rich foods should be encouraged

5.2.9. Diarrhea and hygiene practices

Diarrhea is a major killer of children under-five years (with ARI and diarrhea causing about one-third of all deaths). While the death rate is an important indicator of the problem, the morbidity arising out of repeated episodes of diarrhea is the hidden burden that must also be addressed. The incidence of diarrhea is high in urban MP, with one-quarter of children suffering from diarrhea during the two weeks preceding surveys. Several factors are likely to contribute to the high diarrhea morbidity and mortality rates, including poverty, female illiteracy, sources of drinking water, poor water supply and sanitation, poor hygiene practices and inadequate health services. Figure 5.8 shows the prevalence of diarrhea among children belonging to different SLIs.

Figure 5.8 - Percentage of children suffered from diarrhea two weeks preceding the survey



Source: Reanalysis of NFHS II (1998-99), EHP (2003)

Infectious diseases are significantly associated with community and family level practices. This is particularly the case for diarrhea, which is often caused by environmental factors — water, sanitation, and hygiene. Organisms enter the body through different pathways, but predominantly the hands (the caregiver's or the child's). Handwashing is therefore one of the most effective interventions for reducing diarrhea. In a study of handwashing by Huttley[96] et al., a positive relationship was found between improved handwashing and diarrhea prevention. A study in India that encouraged handwashing resulted in a 32% reduction in diarrheal morbidity in children.[97]

[96] Huttley,S.R.A., S.S. Morris, and V. Pisani. 1997. Prevention of diarrhea in young children in developing countries. Bulletin of the World Health Organization, 1997, 75(2):163–174. Geneva: World Health Organization.

[97] Ibid.

Areas for focus need to be understood in the context of options that are either feasible, available or manageable in the context of slums:

- Handwashing with soap before food preparation and consumption and after dealing with feces. An NIUA study in the slums of Nagpur[98] shows that about 67% of women washed their hands after defecation, but only 23% washed their hands after disposing of a child's feces.

- Availability of water directly influences this behavior. Therefore, in addition to providing information about the need for washing, any meaningful interventions also must be coupled with systems in which the provision of water is also addressed.

- Latrine use and safe disposal of children's feces. While arguing for provision of toilets, the immediate problem would need to be solved with interventions such as covering stools with mud to prevent spread of infection or defecating where natural disinfection could be enhanced.

- Exclusive breastfeeding. Kirkwood[99] has reported that 37% of deaths due to diarrhea in children under-five years occur when a baby is between 1–5 months old, suggesting that the child has been given contaminated food or water. The strongly-held belief in Indore that "bad" breast milk can be a cause of diarrhea needs to be addressed.

- Safe food preparation (since diarrhea is often related to food that might be contaminated by flies, dirty utensils, dirty water).

- Safe water handling and storage. Keeping water in covered utensils should be encouraged.

- Soil eating can cause diarrhea and worm infestations. This is sometimes linked to the habit of not cutting nails. Community monitored nail cutting and eating with washed hands should be encouraged in community group settings.

- The impact of hygiene promotion and education can be maximized by using participatory techniques, and by specifically targeting women and children.

- Formative research studying the feasibility of key hygiene improvement practices should be undertaken to understand the scope and effectiveness of such efforts.

- Sufficiently detailed data are also available from other studies[100] suggesting that plentiful water for personal and domestic hygiene has an impact on diarrheal morbidity and also on the growth in children. Water shortages and the difficulties surrounding its transport both emerged as issues in all field visits: such shortages obviously impact the recommended practice of handwashing.

[98] National Institute of Urban Affairs (NIUA). 2002. Status of urban poor in Nagpur – A benchmark study. New Delhi: National Institute of Urban Affairs.

[99] Kirkwood, B.R., S. Gove, and S. Rogers, et al. 1995. Potential interventions for the prevention of childhood pneumonia in developing countries: A systemic review. Bulletin of the World Health Organization, 1995, 73(6): 793 – 798. Geneva: World Health Organization.

[100] Gelband H., and S. Stanfield. 2001. The evidence base for interventions to reduce under five mortality in low and middle-income countries. CMH Working paper Series, 2001.

5.2.10. Treatment of Diarrheal Diseases

Deaths from diarrhea are caused by dehydration resulting from loss of water and electrolytes. This section explores the present situation in MP slums, and the most appropriate and cost-effective treatments for diarrhea.

Table 5.8: Child health determinants (hygiene practices, treatment and care-seeking behaviors)

Child Health Determinants	Urban MP, NFHS, 1998-99	Urban MP, Low SLI, NFHS II, 1998-99	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in Urban India, 1992-93	Urban India, NFHS, 1998-99
Diarrheal diseases					
Percentage of children treated with ORS or recommended home fluids	54.8	34.7	49.1	33	58.1
Percentage of small children continued to be breastfed during diarrhea	Na	Na	na	Na	na
Percentage of children whose actual consumption of fluids became less than before diarrhea episode	Na	Na	65.8	Na	na
Care seeking					
Percentage of children taken to a health facility to address danger signals of diarrheal disease (not eating or drinking)	74.9	72.8	28.3	69.2	75.2
Percentage of children taken to health facility for symptoms of ARI (fever, cough, rapid breathing)	71.3	68.2	na	65.6	75.1

5.2.10.1. Oral rehydration therapy

Table 5.8 shows that just over half (54.8%) the children who were sick with diarrhea received some form of ORT (NFHS II, 1998-99), with the corresponding figure for urban MP with a low SLI is 34.7% (Reanalysis of NHFS II, EHP 2003). Despite increased availability and awareness of ORT in India, there has not been a parallel increase in its usage. More disturbingly, MICS (UNICEF, 1998) reports that 65.8% of children actually reduced their consumption of fluids during diarrheal episodes.

To help overcome this, a better understanding of the beliefs and attitudes held by people regarding rehydration during episodes of diarrhea is required.

5.2.10.2. Appropriate feeding practices

Every diarrheal episode leaves a child on the edge of malnutrition, which makes him vulnerable to further disease bouts, leading to ever-increasing malnutrition. During an episode of diarrhea,

nutritional losses occur as a result of decreased food intake, malabsorption and increased catabolism. Appropriate feeding during and after the diarrheal episode (including breastfeeding) can prevent dehydration.

In Indore, it is culturally accepted that what the mother eats will pass into the breast milk, and therefore, she is enjoined, for example, to avoid "hot" or "cold" foods, or not to breastfeed the child when the child is suffering from diarrhea, as it is her milk that is causing the illness. This erroneous belief must be addressed. A study in south Asia[101] revealed that more than two-thirds of mothers considered a high food intake to be a major cause of diarrhea. To address these misconceptions, further investigation of beliefs among the target beneficiaries is clearly warranted.

5.2.10.3. Care seeking behaviors

Data from two studies, NHFS II and the Reanalysis of NHFS II, EHP (2003) for urban MP with a low SLI, revealed that nearly three-fourths of children (74.9% and 72.8%, respectively) were referred to a health facility for danger signs during diarrheal episodes. Though that represents a substantial proportion of the population, use of ORT remains insufficient with prescription drugs more prevalent, even though drugs are not required for the routine treatment of acute watery diarrhea. Such costlier treatments not only reduce the limited funds available for more appropriate treatments, but they can also have adverse effects and actually worsen the disease. Dysentery and cholera, caused by different bacteria, require antibiotics to shorten the duration and diminish the severity of the episodes, but these diseases are common enough to explain the 70% rate for drug usage for diarrheal episodes in these populations.

5.2.10.4. Education of caregivers in diarrhea management

ORT makes treatment at home easier and more effective. The role of the mother (and other caregivers) is important in ensuring proper treatment and monitoring of the child. Therefore, strengthening their capacities in order to do this should be built into the program.

Recommendations for slum programs include:

- The role of private health providers in providing appropriate and inexpensive treatment for diarrhea should be strengthened.
- Drug use recommendations should be actively discouraged.
- Education about appropriate feeding (including breastfeeding) during and after the diarrheal episode should focus on mothers and caregivers.
- Promoting hygienic practices using appropriate media should be encouraged.
- The community and caregivers/families should be encouraged to use continuous Oral Rehydration Therapy during diarrheal episodes.

[101] Nielsen, M. et al. 2002. Childhood diarrhea and hygiene: Mother's perceptions and practices in the Punjab, Pakistan. IWMI.

5.2.11. Acute respiratory infections (ARI)

Infections of the respiratory tract, primarily pneumonia, account for 17% of deaths in under-five-year-olds and are also associated with a proportion of the deaths from measles, pertussis and HIV.

Most factors linked to ARI are preventable. LBW is one important risk factor, causing reduced immunity levels. Other factors include poor nutrition and environmental conditions — e.g., cold, overcrowding, smoke-filled interiors. Once an infection sets in, the disease progresses rapidly. Death often occurs within 2–3 days of the onset of symptoms. Therefore timely recognition of danger signs of ARI is vital.

ARI is a common killer in the slums, and many mothers recognize its symptoms: rapid breathing and with cough. Reanalysis of NHFS II, EHP (2003) found that a quarter (25.1%) of children suffered with ARI in the two weeks before the survey was undertaking in low SLI, urban MP. Seventy-two percent (NHFS II) of children who were reportedly suffering from ARI presented at a health center in urban MP. In low SLI areas of urban MP, the figure from Reanalysis of NHFS II, EHP (2003) was 68.3%. This translates into more than a quarter of all children with symptoms of ARI remaining at high risk.

Priorities for slum programs should be:

- Enhance awareness of danger signals, and the need for prompt medical treatment, among mothers, caregivers, and the primary decision-makers in the household (since treatments may incur expenses).

- Simplify treatment protocols, so they can be delivered locally, in the community.

5.2.12. Malnutrition

Malnutrition includes under nutrition as well as micronutrient deficiencies — with the most important micronutrients being iron, Vitamin A and iodine. Repeated bouts of sickness also aggravate malnutrition. While it claims lives directly, malnutrition also contributes to deaths from infectious diseases. It leads to stunted growth and retards the child from reaching his/her full physical and mental potential. Studies have shown that it is nearly impossible to reverse stunting completely once a child is more than two years old.

In urban areas of MP, about 44% (NHFS II, 1998-99) of children are underweight, with almost half of these children being severely undernourished (i.e., below — 3 SD (standard deviation)). The corresponding figures for low SLI urban MP is 72.4% (Reanalysis of NHFS II, EHP, 2003). Children from households with a low standard of living (29.4 %) are three times more likely to be severely underweight as children from households with a high standard of living[102]. World Bank HNP data and the MICS study also both reveal a grave nutritional situation for children belonging to impoverished families in urban India and MP, respectively (see Table 5.9).

[102] International Institute for Population Services (IIPS) and ORC-Macro. 2001. National family health survey (NFHS-2), India 1998-99: Madhya Pradesh. Mumbai: IIPS.

Table 5.9: Child health indicators

Malnutrition	Urban MP, NFHS, 1998-99	Urban MP, Low SLI, NFHS II, 1998-99	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in Urban India, 1992-93	Urban India NFHS, 1998-99
Percentage of children under 3 years underweight for age – Below –2 SD (includes children below – 3 SD)	44.3	72.4	41.5	67.9	38.4
Percentage of children under 3 years underweight for age – Below –3 SD	19.5	40.3	16.9	31.6	11.6
Iron deficiency Anemia					
Percentage of children (<3) in any grade of anemia	73.7	88.5			70.8
Percentage of children with moderate or severe anemia	50				47.1
Percentage of women (15-49) in any grade of anemia	46.2	55.0			45.7
Percentage of women with moderate or severe anemia	12.5				13.7

Nutritional status as measured by weight for age is the most important and appropriate indicator of child development since it reflects the impact of many factors responsible for child development including food intake and infections conditions. In turn these conditions are influenced by income levels, education of females and other determining indicators (UNICEF, 1985). So, it is useful to note the nutritional status of children with reference to their age in order to plan appropriate interventions (see Table 5.10).

Table 5.10: Nutritional status of children by age in MP, 1998-99

Weight for age Age of child	Percentage < - 3 SD	Percentage < - 2 SD
< 6 months	2.4	16.0
6 – 11 months	17.8	46.7
12 – 23 months	31.4	67.4
24 – 35 months	31.8	67.3

Source: NFHS, 1998-99

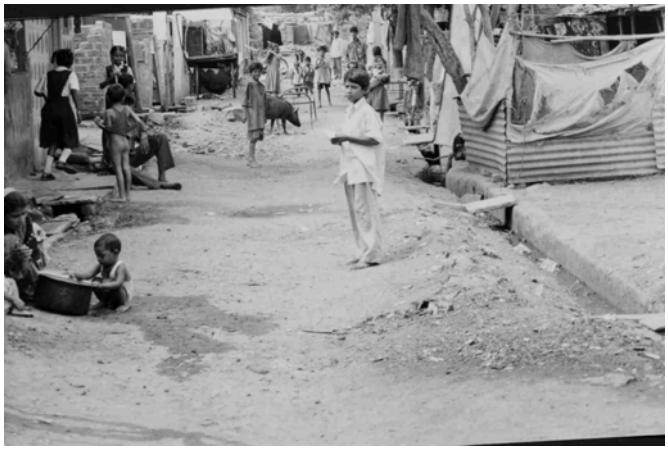
The proportion of children who are undernourished increases rapidly with the child's age through ages 6–11 months. In addition, in the 12–35 months age group, a majority of children are undernourished, with nearly one-third being severely malnourished. This is the time when the child's nutritional requirements increase rapidly and cannot be adequately met by breast milk alone. Even during the first six months of life, when most babies are breastfed, 16% of children are underweight. This may be related to such factors as: maternal nutritional status, birth weight, use of

prelacteal and other foods, and feeding patterns (e.g., feeding on one breast completely to ensure flow of micronutrients from hind milk is a beneficial practice).

In India, iron deficiency anemia is very prevalent among women and very young children. Reanalysis of NHFS II, EHP (2003) showed that 55% of women and 88.5% of children below 3 years of age belonging to low SLI of Urban MP suffered from any grade of anemia.

Slum programs should focus on:

- promoting appropriate and feasible complementary feeding practices that are identified through participatory formative research, thereby improving the nutritional status of mothers and children
- promoting appropriate breastfeeding methods (discussed earlier)
- promoting appropriate complementary feeding practices (discussed earlier)
- providing opportunities for nutrition education that take account of the traditional practices of the population (understood through formative research)
- building linkages with ICDS for better availability and distribution of nutrition supplements



In urban areas of MP, about 44% of children are underweight. Children from households with a low standard of living are three times more likely to be severely underweight than children from households with a high standard of living.

5.2.13. Environmental health conditions

Environmental improvements can reduce transmission of bacteria, viruses and other pathogens that cause most childhood illnesses.

Table 5.11: Environmental health determinants

Environmental health conditions	Urban MP, NFHS, 1998-99	Urban MP, Low SLI, NFHS II, 1998-99	MP Urban slums, MICS, UNICEF, 1998	Indore slums, Poverty and Vulnerability in Indore, Oxfam, 1999	Urban India NFHS, 1998-99
Water Supply and Sanitation					
Percentage of population with access to piped water supply at home	72.6	56.1	32.3	11.4	74.5
Percentage of population accessing public tap/hand pump for drinking water	18.4	24.0	66.6	88.6	15.5
Percentage of population using a private sanitary facility for the disposal of excreta (flush/pit toilet)	64.7	13.3	38.9	35.3	80.7
Percentage of population using a public toilet facility	35.2		61.2	22.0	19.3
Percentage of population not having any toilet facility and using open fields		86.7		42.7	
Percentage of households with low SLI	20.2				14.3

Water and sanitation

Child mortality and morbidity have been strongly associated with environmental conditions – household water and sanitation — in all parts of the world[103]. Diarrhea-related deaths, in particular, drop significantly when environmental conditions improve. Huttly[104] has reported a 20–26% reduction in diarrheal morbidity with improved water and sanitation. There is a noteworthy decline in other waterborne diseases as well. Esray et al.[105] have observed positive results in terms of reduced morbidity and severity of ascariasis, trachoma, schistosomiasis and dracunculiasis. The Reanalysis of NHFS II, EHP (2003) data emphasizes the critical state of environment, health, and

[103] Gelband H., and S. Stanfield. 2001. The evidence base for interventions to reduce under five mortality in low and middle-income countries. CMH Working paper Series, 2001.

[104] Huttley,S.R.A., S.S. Morris, and V. Pisani. 1997. Prevention of diarrhea in young children in developing countries. Bulletin of the World Health Organization, 1997, 75(2):163–174. Geneva: World Health Organization.

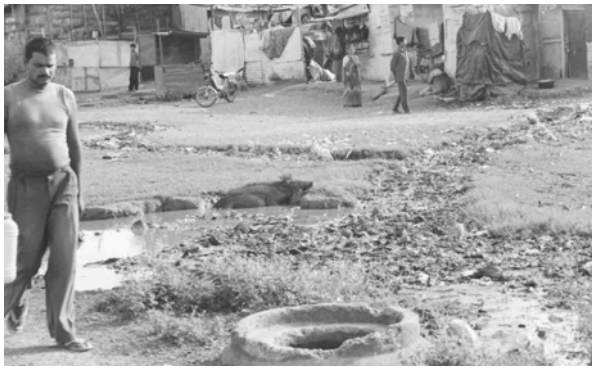
[105] Esray, S.A., J.B. Potash, L. Roberts, and C. Shiff. 1991. Effects of improved water supply and sanitation on ascriasis, diarrhoea, draculuncliasis, hookworm infection, schistsomiasis, and trachoma. Bulletin of the World Health Organization, 1991,69(5):609-21. Geneva: World Health Organization.

sanitation conditions among the households with low SLI of urban MP. It found that only 13.3% of this population use private sanitary facilities (flush/pit toilets) for disposal of excreta, and 56.1 % of the population have access to piped water supplies at home.

A detailed study of Indore slums[106] reveals that only 11% of slum dwellers have optimal water facilities, i.e., piped water supply at home. The majority remains dependent on public taps and hand pumps. One-third of households have toilet facilities; the remainder use open fields or public toilet complexes. Public toilets are usually in an abysmal state and are more unhygienic than open fields.

The water and sanitation situation highlights a number of issues including:

- the critical role of government agencies in ensuring basic water and sanitation services, and therefore in strengthening the capacities of the local urban bodies and other government agencies in providing basic services
- the urgency of prioritizing the needs of the urban poor in city development schemes
- the need to search for and test affordable and appropriate solutions to water and sanitation situations in urban slums
- the need to engage and build ownership in communities regarding infrastructure decisions before suggesting the mechanisms and nature of the improvement in the infrastructure



Few of the urban poor have access to adequate water and sanitation facilities.

5.2.14. Focus group discussions and transect walks–findings

Focus group discussions were conducted in the slums of Indore during July and August 2002 to complement the quantitative data with qualitative information. A description of the methodology and socio-demographic profile of the slums is found in Annexes 4 & 5.

Child mortality

Factors identified by slum women (FGD participants) as causes of child mortality included fever, low birth weight, cold, seizures and premature deliveries.

[106] George, R., B. Rajeev and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Nagpur: Oxfam India Trust.

It should be noted here that the first round of questioning on child mortality initially revealed no deaths had occurred in respondent families in the recent past. Further probing and explanation (i.e., whether children just born or at very young ages had died) usually led to someone remembering such an incident, and then another and another. This may be because infant deaths are so common in day-to-day life that they become unremarkable. This would appear to be a deep-seated coping mechanism, and only in-depth probing succeeds in drawing out the relevant information.

Immunization coverage

The slums which had an Anganwadi center (AWC) reported irregular vaccinations. In other slums, there had been very low (almost no) vaccination coverage. Mothers who reported having their children vaccinated often had vaccinations done when visiting their home villages (usually villages in Maharashtra, a neighboring state).

> During an FGD in Anna Bhau Sathe Nagar, mothers reported that vaccinations were given to most of the children in the community. However, when specifically asked about the seven or eight children (ages two months to four years) present during the discussion, only one child was found to have been vaccinated.

The discussions revealed a willingness to have children vaccinated, and none of the mothers doubted the need for vaccination. However, awareness of vaccination schedules was extremely limited (e.g., if one vaccine is administered many mothers believe the child is fully immunized.) The practice of one vaccination day per month was cited by some women as a problem since it was not always convenient for them to take their children along on the one designated day.

Diarrhea-related practices

Diarrhea incidence was quite high, and mothers reported fever and diarrhea as common ailments. The neighborhood medical store was used when a child has watery stools. The usual treatment given was a pack of “four tablets.” ORT was not provided in any of the slums in which FGDs were held.

Pregnancy-related practices

Antenatal care of any form (IFA, TT, ANC) was not received in the slums that fell outside the ICDS area. None of the women from these slums went to public or private health centers for pregnancy-related matters unless there was an apparent complication.

Women in Panchsheel Nagar, which has an AWC, received tetanus toxoid vaccinations and supplementary nutrition. However, their contact with a health professional began around the seventh month, at which time they would have to register with a government institution if they wanted to deliver in a government health facility.

Delivery-related practices

Place of delivery — Almost all deliveries occur at home in Anna Bhau Sathe Nagar and Ramabai Nagar. Panchsheel Nagar reported a high proportion of deliveries in a public facility. Firoze Shah Gandhi Nagar reported a complete dependence on institutional facilities for delivery. Central

locations, relative economic prosperity, and exposure through other development programs, appear to be the reasons underlying these differences.

Person assisting in the delivery — Traditional birth attendants conduct home deliveries. These are usually untrained elders in the community who have learned the skill through experience and from their predecessors. The usual "dai" (who is considered to be a member of the "lower caste") was not called upon during deliveries in any of the slums, though people were aware of her existence. In the event of complications, a private doctor is called upon in Anna Bhau Sathe Nagar. He charges a substantial fee — Rs. 1000 — to conduct the delivery at home.

Cord cutting — Using a new blade to cut the umbilical cord has become a common practice in the slums.

Neonatal practices

Breastfeeding — Newborns are breastfed after three days. Colostrum, because of its color and from following ingrained customs, is considered bad and is discarded. Prelacteals (e.g., glucose water) are given during these three days. Subsequently, breastfeeding is exclusive and on demand.

> Women in Ramabai Nagar revealed that a mother is given food only three days after delivery, and the infant is also breastfed only after this period. The "thick stale" breast milk is squeezed out and thrown away. The baby, in this interim phase, is fed jaggery water.

Thermal protection — Babies and mothers are bathed immediately after birth. This is the norm in all seasons, and is practiced also for "very small babies" (possibly premature and/or low birth weight). The baby is wrapped in the old clothes of the household. Efforts are made to keep the baby and the house warm to the extent that the family's resources allow.

Identification of risk — Most women identified very small babies as at risk situations. Mothers also brought up the inability to suckle as a problem. They were also aware that cold or winters are difficult for a small baby to withstand. In most cases, high-risk babies have died at home — only a few such cases were first taken to a health center.

Use of modern contraceptive methods

Permanent female sterilization is the only method used. All women reported a complete absence of use of any temporary contraceptive methods (pills, condoms, etc.).

> During one FGD, women jokingly remarked that they breastfeed their first child until the second one is born. If the older child insists or is not sleeping, then breastmilk is offered to them as well, since s/he is still a small child. This continues until they have had the number of children they want, and then they go for sterilization. They usually have the "haath ka operation" — i.e., an invasive surgical operation rather than the laparoscopic method. The surgery is usually opted for when they go to their villages.

Environmental conditions — water and sanitation concerns

In all the slums where FGDs were held, toilet facilities were negligible. People used open fields or vacant plots in nearby colonies. Two of the three slums visited had community toilet blocks but these were not fit for use.

In two slum sites, water was a source of extreme concern. Family members had to walk a distance of 200 m or more to get water (for drinking, bathing and household purposes). Some resourceful families either used a bicycle or used a handcart. Several families reported begging in nearby houses for water.

Successful attempts have been made for collection and subsequent disposal of used water at the household level. However, “kutcha” (makeshift and uncovered) drains flow by all the houses; water accumulates there and provides a breeding place for germs and mosquitoes.

Focus Group Discussion in progress

5.3. Key issues for programming

Reducing child mortality does not require major medical breakthroughs or expensive interventions. Most of the 2.5 million annual deaths in India of children under five can be prevented through behavioral changes and proven cost-effective solutions.

Newborn and neonatal deaths (deaths of babies between birth and 28 days) now account for 60% of all infant deaths and over 40% of deaths among children under five years of age. The causes are linked to times around pregnancy and birth.

Antenatal care

Quantitative data on antenatal care among impoverished groups reflect a large gap in ANC visits and IFA consumption. This is a cause of concern considering the high prevalence of anemia (50%) in women in the reproductive age group. FGDs also revealed that pregnant women go to an obstetrician or health worker only when a problem presents (a common symptom identified was bleeding) or when they needed to register themselves for delivery (i.e., when an institutional delivery was planned).

Critical slum program issues are:

- The need to encourage improved nutritional intake, particularly before and during pregnancy (This could take the form of supplements (when available) and appropriate nutrient-dense food. Skills required are nutrition counseling, and appropriate behavior change communication (BCC) methods)

- The need to strengthen linkages with referral centers to ensure early screening and treatment of complications

Attendance during delivery

Data for urban MP indicate that about 40% of deliveries are conducted by untrained persons. FGDs with slum women and discussions with community volunteers reveal that a large number of births (especially in families that cannot afford hospitalization) take place at home, either with the assistance of TBAs or family members and neighbors. A large number of TBAs are not adequately trained and needless to say, family members are not likely to be trained personnel either.

Slum programs could therefore consider:

- strengthening competence and knowledge pertaining to community level obstetric care of untrained persons who attend to large numbers of births

- strengthening linkages with appropriate referral centers so that they may confidently refer/accompany the woman to a health facility

Birth practices and neonatal health

FGDs revealed that safe birth practices — e.g., using a new blade for cutting the cord or seeking medical care in the event of obstetric complications — have improved as a result of improved access to these safer approaches. However, other harmful practices strongly influenced by beliefs and traditions — e.g., the belief that colostrums is bad and should be thrown away or only initiating breastfeeding after three days — still persist.

Attention should be focused on:

- enabling families to challenge current beliefs and practices, and adopt and maintain child health-friendly behavior

- helping families to identify the at-risk baby (small, preterm, cold-stressed, hypoglycemic) and provide extra care (extra warmth, feeding expressed milk) till they get medical care

- equipping communities with information on the early detection of danger signals in neonates and on the need to seek timely care

Birth Spacing

Minimal effort is currently devoted to prolonging the gap between pregnancies, negatively affecting the chances of survival and optimal growth for newborns. The program should therefore consider:

- increasing family control in planning their children by increasing awareness and dispelling myths related to modern contraceptive methods

- ensuring easy availability of contraceptives through a variety of channels in keeping with the customs of the communities

Immunization

Coverage rates are low, and the drop-out and left-out rates are high. Expansion of services to slum settlements that have not yet been reached is a priority, and follow-up in all areas needs strengthening. Awareness also must be heightened about vaccination schedules, and communities should be enabled to demand vaccination services.

Environmental health factors

Only one-tenth of Indore slum dwellers have piped water supplies at home. FGDs in different slums revealed that the administration had made arrangements for water to be delivered in tankers, but a regular schedule is not followed. Thus a large proportion of slum populations have to travel some distance to get water. Unhygienic conditions persist, leading to a high incidence of diarrhea and other infectious diseases.

Two-thirds of the Indore poor do not have access to a toilet. Public toilets have been installed in several slums, but maintenance has been grossly inadequate.

There is a need to search for and test affordable and appropriate solutions to water and sanitation enhancement in urban slums. At the same time, there is a need to engage communities and build their ownership around infrastructure decisions before suggesting that some infrastructure improvements are in the offing.

Diarrhea

The incidence of diarrhea is quite high in urban MP with a quarter of children experiencing an episode during the two weeks preceding these surveys. This incidence is linked to poor handwashing habits both after disposing of a child's feces and before meals. Though a substantial proportion of children (75%) were referred to a health specialist, ORT usage remains insufficient and prescription drug use instead is the norm.

Recommendations for slum programs include:

- The role of private health providers in providing appropriate and inexpensive treatment for diarrhea should be strengthened.
- Drug recommendations should be actively discouraged.
- Education about appropriate feeding (including breastfeeding) during and after the diarrheal episode should be focused on mothers and caregivers.
- Promoting hygienic practices using appropriate media is necessary.

Chapter 5: Key Points

Data usually reflect average conditions in a city, and thus the (worse-off) status within the urban poor is masked. For example, while under-five mortality for urban MP is at 82.9, the figure is 131.9 for the low SLI in the same area.

This inequality of mortality rates is also seen in all kinds of access to services (e.g., antenatal care, institutional deliveries) and in various health behaviors. This may be attributable to low levels of information and awareness and also accessibility to professional health care among the deprived urban populations.

Though Indore-specific data were not available, the analysis here has been carried out primarily on the basis of data available about the urban slums of Madhya Pradesh (MICS UNICEF data) and the re-analysis of NFHS data in respect to low SLI populations in urban areas. Focus group discussions in slums of the city have helped provide a qualitative understanding of the situation.

The analysis of the range of quantitative data and a review of the factors affecting morbidity and mortality status among urban deprived communities show clearly that improving the given situation does not require major medical breakthroughs or expensive interventions in the form of major new infrastructure projects or extensive medical inputs.

Implications for EHP India

Focusing efforts on the following operational aspects will help to optimize program impact:

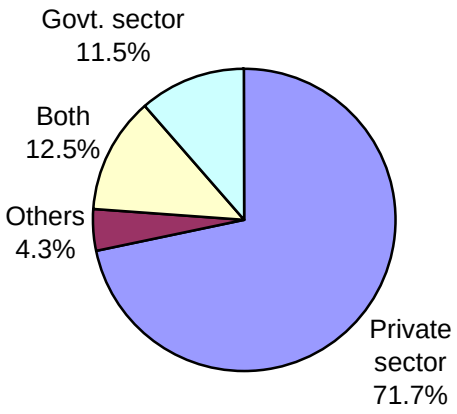
- improving the care of the vulnerable newborns
- promoting good hygiene practices, e.g., handwashing after disposal of feces
- facilitating training and follow-up of key health personnel such as traditional birth attendants and RMPs (unqualified medical practitioners)
- promoting and strengthening linkages between different service providers, e.g., the ANM and the AWW; the traditional birth attendant and the secondary referral facility
- facilitating increased uptake of antenatal and postnatal services

- facilitating increased coverage and follow-up of childhood immunizations
- devoting efforts to improving access to nutrition and food for women and children
- advocating improved water and sanitation facilities in poor urban areas
- building the capacity of local slum-based volunteers to foster desired family level practices and linkages with service providers

6. Assessment of Health Services in Indore

Health services in MP are predominantly provided by the public sector (Department of Health and Family Welfare and the Women and Child Development Department) and private sector agencies (hospitals, nursing homes and clinics). In addition, there is the Employee State Insurance (ESI) hospital and its dispensaries network. Finally, charitable hospitals and the informal private sector primarily composed of unqualified medical practitioners are also significant parts of the system. The private sector surpasses the public system in terms of numbers of health facilities and health expenditures. Figure 6.1 illustrates the situation.

Figure 6.1: Sources of treatment amongst slum dwellers, Indore



Source: Poverty and Vulnerability in Indore, Oxfam (1999)[107]

6.1. Department of Health and Family Welfare

Health facilities in urban areas in the country are not uniformly constituted or structured. Services are provided through a variety of facilities including health posts, post-partum clinics, urban family welfare centers, civil dispensaries and civil hospitals. The district hospital serves both urban and rural populations. Teaching hospitals come under the Department of Medical Education and Indian Systems of Medicine (DMEISM), and serve as tertiary referral centers.

[107] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Urban RCH Proposal. Nagpur: Oxfam India Trust.

6.1.1. Organization of services in Indore

The health service delivery system in Indore city is a multi-tiered system of dispensaries and tertiary referral hospitals that have been organized around administrative wards and zones. The department therefore encompasses one district hospital, one maternity home, two polyclinics, 23 dispensaries (and urban family welfare centers), two nursing homes and four small hospitals. Maharaja Yashwant Rao Hospital is the premier regional institute and is associated with the medical college. Table 6.1 depicts this structure.

Table 6.1: Distribution of public health system facilities in Indore city

S.No.	Zone	Referral Hospital	No. of wards covered
1.	Hukumchand Zone	Polyclinic, Hukumchand UFWC, Juni Indore UFWC, Harsiddhi Polyclinic, Sangh CD, Krishnapura	14
2.	Malharganj Zone	District Hospital CD, MOG Lines Polyclinic, Malharganj UFWC, Rajendra Nagar	21
3.	Sanyogitaganj Zone	Sanyogitaganj CD, Azad Nagar CD, Bhawarkua	12
4.	Nanda Nagar Zone	CD, Vrindavan Colony CD, Aaranya Prastuti Graha, Nanda Naagr UFWC, Mangilal Churiya Ambedkar Nagar Mohta Nagar	22

Dispensaries provide morning and evening outpatient (OPD) services. The dispensary is manned by a doctor, compounder, dresser and a person to manage upkeep. All the polyclinics and dispensaries have facilities for antenatal care, immunization, contraception and basic curative services. The Auxiliary Nurse Midwives (ANMs) usually obtain their supplies of vaccines from these centers for community outreach. Facilities for delivery are available only in the district hospital, M.Y. Hospital, and in the four polyclinics/nursing homes.

A ward medical officer is responsible for service delivery in each ward. S/he is supported by a doctor and an ANM for each area. However, regular community outreach services are not maintained because of the size of the target population (about 20,000–25,000) and because the

health care workers have other duties based on their relationship to their health care institutions. Community outreach therefore often consists of health "camps" (campaigns), usually at an AWC or the community hall, focused on an average population of 8,000–10,000. These are organized in collaboration with a team of medical personnel, all of whom focus intensively on a particular area for a number of days.

Chief Medical Officer

↑

Zonal Officer

↑

Ward Doctor

↑

Lady Health Visitor

(I in each zone)

↑

ANM / MPW

(20,000-25,000 population)

(ANM can often be in direct contact with the ward doctor and LHV can also be in contact with the zonal officer)

6.1.2. Condition of health facilities

Most public health facilities have drinking water and electricity. However, the number and quality of toilets and overall cleanliness in these facilities remain issues. Preparation of the Urban RCH Proposal for Indore[108] entailed an assessment of the quality of care in public health facilities. Some findings are presented in Table 6.2.

[108] Shuruaat. 2001. Urban RCH project proposal for slum dwellers of Indore. Indore: Urban RCH Management Agency, Indore Municipal Corporation.

Table 6.2: Quality of care in government hospitals and dispensaries in Indore

Quality of care indicators	Positive response (%)
Timing of center convenient	23.0
Distance of center convenient	20.1
Availability of doctor/ANM	20.7
Privacy for examination	19.2
Availability of medicine	16.3
Explanation for taking medicine	21.6
Pay money for treatment	5.2
Long waiting period	17.2
Friendly staff	16.9
Effective treatment	20.2
Recommended center to relatives/friends	16.7

Source: Urban RCH Proposal for Indore

The quality indicators listed above, and the low rating given to them by respondents, explains – at least to some degree — the low utilization of government services in Indore.

6.1.3. Implications for the poor

FGDs in slums revealed a preference for the private sector for the reasons enumerated previously. The proximity of private facilities (discussed in the next section), in addition to the possibility of immediate treatment and personal involvement of practitioners, ensure a steady flow of patients. Less than 25% of the city's slum population refer their medical ailments to a public sector facility[109]. Even though the public sector is considered the preferred option for reproductive and infant care, the statistics indicate otherwise. Approximately 48,000 births take place in Indore annually, but only 7,335 deliveries[110] (15%) took place in government health institutions in 2000.

The organization of health services in urban settings is not as systematic as in the rural areas where demography is the guiding tool, e.g., a sub-center for every 5,000 people. The National Health Policy (NHP)-2002[111] envisages the adoption of appropriate population norms for the urban public health infrastructure as well. The structure proposed under NHP-2002 is two-tiered. The primary center is the first tier, covering a population of 100,000, with a dispensary providing an OPD facility and essential drugs and enabling access to all national health programs. The second tier is at the level of the government general health hospital.

[109] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Urban RCH Proposal. Nagpur: Oxfam India Trust.

[110] Shuruaat. 2001. Urban RCH project proposal for slum dwellers of Indore. Indore: Urban RCH Management Agency, Indore Municipal Corporation.

[111] National Health Policy – 2002.

Though the system in Indore has not been planned in accordance with NHP, there are more than 30 facilities in the city, with a population of 1.8 million. Thus the mere provision of more physical infrastructure for OPD services will not ameliorate the situation.

Instead, public sector programs require an in-depth review and a change in attitude and focus. The issue of meeting family planning targets[112] provides a glaring example of what needs to change: with officials under pressure to meet targets, any "poor" person going to a public health facility will be quizzed and pressured about family planning, and treatment of his/her illness will be secondary, if it occurs at all. Another example relates to the daily wage earner who is discouraged from approaching a public hospital (when referred beyond the dispensary level) because of the costs incurred in transportation and long waiting periods. Thus, a poor person prefers to borrow money and go to a private health facility, since that approach is seen as more effective and ultimately, less costly.

6.2. Integrated Child Development Service (ICDS)

The Integrated Child Development Service implemented by the Department of Women and Child Development (under the Ministry of Human Resources Development, Government of India) targets children below six years of age, pregnant and lactating women, women in the 15-44 age group and adolescent girls as "vulnerable groups" in the "urban slums."

The package of services provided specifically for improving maternal and child health are:

- supplementary nutrition for pregnant and lactating mothers
- health and nutrition counseling
- antenatal care — antenatal checkups, immunization and IFA distribution
- referral services

The WCD services in Indore district were initiated in 1988–89 by the establishment of 111 urban centers to be managed by a local NGO, Bal Niketan Sangh. Today, the number of centers across Indore district has grown to 887 and are organized in four zones (3 rural and 1 urban), referred to as blocks. The Indore Urban block provides services through 301 Anganwadi centers (AWCs) spread over 110 slums. Each AWC caters to approximately 1,000 people.

[112] Hindustan Times. October 10, 2002. FP targets go haywire. Bhopal.

6.2.1. Organization

Anganwadi Center — This is the focal point for delivery of services at the community level. Pre-school classes and distribution of supplementary food takes place there on a daily basis. Health check-ups are not uniform across all AWCs, as a link with the Health Department is required in the form of a visiting ANM. As explained earlier, the ANM has a heavy workload, and her visits to the AWC are irregular. The AWC also serves as a venue for meetings and awareness-raising sessions.

Anganwadi Worker — The AWW is a part-time worker. Interacting with the target population on a daily basis, she remains the primary agent for behavioral change at the field level. She runs the informal classes for children and handles the distribution of supplementary food from her AWC. She also identifies malnourished children in the community and helps provide adequate nutrition for them, keeping a record of their growth. A critical duty is coordination with the ANM (Health Department) for health check-ups and immunization of mothers and children.

Helper — Each AWC has a sahyaka, a helper, to support the AWW in his/her functions. In urban areas, the helper is usually a person from the slums where the AWC is located. The sahyaka's involvement and rapport with people in the community is often seen to be strong, and therefore useful.

Sector Supervisor — This is a full-time worker who supervises 20–25 AWWs. S/he visits each AWC within his/her purview at least once a month and monitors progress.

Child Development Project Officers (CDPO) — There is one CDPO for each ICDS project, and s/he manages the entire project as the officer in-charge, assisted by an assistant CDPO.

District Women and Child Development Officer (DWCDO) — S/he heads the organizational structure of ICDS at the district level. The CDPOs of different projects (urban, rural and/or tribal areas) report to her/him on a monthly basis. S/he also participates at meetings of CDPOs and Sector Supervisors on an ad-hoc basis.

ASOs (Assistant Statistical Officers) — provide data and other logistic support to the district office.

6.2.2. Linkages between the Department of Health and Family Welfare and ICDS

The health component of the ICDS program is supported by the Health Department with materials and manpower. Vaccines, medicines, equipment and other health supplies are provided by the Health Department. The Auxiliary Nurse Midwife (ANM), who provides health services through the AWC, is a Health Department employee. In addition, one medical officer from the health infrastructure is the nodal officer for ICDS (see Annex 7 for details).

6.2.3. Analysis of ICDS services in the urban slums of Indore

The ICDS is the main service provider addressing the health needs of pregnant mothers and young children in the slums. FGDs have indicated that that though the poor consult private practitioners for most ailments[113] (in three out of four cases), gynecological, maternal and child health services tend to be ignored unless received from the public sector. Therefore, the extent, quality and gaps in ICDS services become critical concerns for maintaining child health in urban slums.

6.2.3.1. Extent

Table 6.3 demonstrates the imbalance in distribution of AWCs between urban and rural areas (see Annex 8 for state-specific details). Given the longer distances they have to travel, the fact that the rural poor have more facilities can be justified. On the other hand, analysis of the number of facilities per population shows a significantly lower number for the urban poor.

Table 6.3: Distribution of Anganwadi centers in ICDS

		India	M.P.	Indore
Urban population (in millions)		285.35	16.1	1.85
Rural population (in millions)		741.66	44.28	0.74
Urban Poor	In millions	91.31 (32%)*	7.73 (48%)*	0.747 #
	Proportion out of total poor	25%	30%	69%
Rural Poor	In millions*	274.41 (37%)*	18.15 (41%)*	0.3 @
	Proportion out of total poor	75%	70%	31%
Urban ICDS projects	Number of projects	278	20	2 (301 AWCs)
	Proportion out of total projects	6.4%	6.7%	33.3%
Rural ICDS projects	Number of projects	4170 (includes 746 tribal)	278 (includes 84 tribal)	4 (586 AWCs)
	Proportion out of total projects	93.6%	93.3%	66.7%

* Estimates of urban and rural poor have been made by applying proportions of poor populations in the region (as per NIUA Modified Experts Team)6 to the 2001 census figures.

Slum Population in Indore city (this is being considered as a conservative estimate; if the state average of 48% is applied, urban poor in Indore would number 890,000 people.

@ Rural poverty for the state of MP is estimated at 41%, and this has been applied to the Indore rural population figures.

[113] George, R., B. Rajeev, and T. Sarwal. 1999. Poverty and vulnerability in Indore: A research report. Urban RCH Proposal. Nagpur: Oxfam India Trust.

The total rural population of Indore district is 735,010 (as per 2001 census), of which 40% are categorized as "poor." However, there are 586 AWCs in the rural areas, each covering a population of 1,000 or representing approximately 70% coverage. In Indore, ICDS services reach less than half the urban poor.

6.2.3.2. Gaps

Even within existing urban AWCs, inappropriate targeting excludes the most vulnerable. The 301 AWCs in the city are concentrated in 110 slum pockets.

AWCs are located only in "notified" slums. Many of the most vulnerable live in unrecognized settlements that often lack basic water and sanitation facilities.

Assessment of need is not a regular or systematic activity within the ICDS. AWCs continue to operate from the same locality for years, even if slum conditions have improved and there is greater need elsewhere. ICDS officials admit that efforts at relocating centers to more needy areas have failed for a variety of reasons.

Studies of urban slums in India have found that even where they exist, ICDS services fail to reach all the poor within the slum (M. Swaminathan, NIUA, 1998)[114]. A study of the community's involvement in ICDS-served slums in Indore revealed an attendance of 33% at AWCs (E. Khanwalkar, 2000)[115].

Vulnerable people continue to be excluded for numerous reasons, primarily because the target population is quantified at "1,000." If 1,000 people are covered, then there is no need to seek others out. Inconvenient hours (for women working as domestic help, for example) and discrimination (on the grounds of social identity, for example) are other reasons.

6.2.3.3. Quality of health services

Supplementary nutrition (usually a "khichri" or porridge of broken wheat) is regularly distributed to those coming to the centers. The amount of this ration is fixed at 125 single rations (80 gm each) per AWC. Antenatal check-ups, immunizations and IFA distribution for pregnant women are haphazard. While to some degree, the delivery of these services depends on the relationship between the ANM and the AWW, appropriate functioning of these programs is also difficult because of the limited number of ANMs available. Lack of coordination between the timing of the AWW and the visit of the ANM is another contributing factor.

Swaminathan[7], in his study of urban disadvantaged areas, reviewed seven cities — Kanpur, Patna, Bangalore, Ahemedabad, Amritsar, Trivandrum and Nasik. He notes:

[114] Swaminathan, M. 1998. Process and outcome documentation of ECD in urban disadvantaged areas. New Delhi: National Institute of Urban Affairs (NIUA).

[115] Khanwalkar, E. 2000. Community's contribution in ICDS: Indore slums. Indore: Indore School of Social Work.

"It must be understood that ICDS mandate does not lay emphasis on linkages, neither does its structure, nor is it perceived as important by functionaries. Hence the program is driven by its own norms. … Linkages with ICDS were variable from city to city, in some cases quite strong at the field level but in all cases weak at higher levels."

6.2.3.4. Findings from group discussions in the community

Communication gaps among the AWWs, helpers and the community have resulted in a lack of coordination, and even mistrust in some slums. A culture of blame has developed, where the AWW says that the local community does not support the activities of the AWC and where the local community believes that the AWW does keep them abreast of events or when vaccinations are being delivered.

The AWW and the helper are members of AWC-promoted self-help groups (SHGs). In the absence of a consultative and participatory process, transactions involving funds has become an individual rather than group activity, leading to an absence of transparency in these groups.

AWWs spend a large proportion of their time maintaining records. And while the distribution of supplementary nutrition is a regular and ongoing process, preschool education classes for young children are less regular.

People do not depend on the AWC for immunization services as a result of the irregular vaccination schedule and their own unavailability when the ANM actually does arrive.

A summary of opportunities and threats was presented by Swaminathan (1998)[116] and these themes were echoed in discussions with ICDS functionaries in Indore.

Opportunities	**Threats**
Human resource potential	Low pay and motivation of ICDS staff
Scope of linkages, both horizontal and vertical	Poverty and linked programs
Availability of structures	Rigidity of ICDS
Availability of training	Bureaucratic separation, isolation and divisiveness
Availability of information systems	Low priority to Early Childhood Development
Others	Inadequate space
Availability of new sources of funding	Incompetent community mobilization skills
Decentralization of powers	Others
Attitude of corporate sector	Lack of dialogue between stakeholders
Innovative fund raising and partnerships	Slow attitudinal change
People's involvement in planning	No paraprofessional cadre
	Excessive reporting system

6.3. Private sector

A national level analysis of the 52nd round of the National Sample Survey (1995-96) showed that, for outpatient care, about 81% of patients (80% in urban areas) sought treatment from the private/ non-government sector, rather than public hospitals or

[116] Swaminathan, M. 1998. Process and outcome documentation of ECD in urban disadvantaged areas. New Delhi: National Institute of Urban Affairs (NIUA).

PHCs[117]. The total number of private health care providers in MP is estimated to exceed 160,000, when formal, informal and traditional practitioners are included. This is considerably greater than total employment in the public health service sector[118]. Indeed the private health care sector in MP is larger than the public sector in terms of size, activity, volume and value.

According to a recent study, "Dynamics and Structure of Private Health Care in M.P.," carried out by "TARU" on behalf of DFID[119], the largest part of the private health care providers is comprised of RMPs (unqualified practitioners) and Dais or traditional birth attendants (50,000 each). These groups are followed by nurses, technicians and paramedical staff (roughly 30,000), and about 25,000 qualified medical practitioners from various specialties. There are about 3,000 private medical establishments in the state.

6.3.1. Profile of private practitioners

6.3.1.1. Accreditation and regulation of the private sector

With a huge number of informal (untrained) private practitioners, conventional accreditation and regulatory practices provide limited scope and effectiveness. Further distortions and discrepancies in the system exist because a large number of RMPs have received official registration as qualified Indian System of Medicine practitioners, after having acquired fictitious diplomas or ones requiring minimal effort.

On the positive side, many RMPs favor accreditation, certification and training. In fact, a proportion of them have expressed willingness to pay for these services, since they see it as an economically viable proposition.

6.3.1.2. Cross practice by private practitioners

Studies show that there is a high level of cross-practice by Indian System of Medicine and Homeopathy practitioners in the state. Allopathic (modern) medicine remains the dominant practice among both qualified and unqualified service providers. Thirty-nine percent of those qualified in ISM&H practice allopathy regularly and another 22% use it secondarily, especially for acute conditions.

6.3.1.3. Awareness of regulatory measures

There is a low level of awareness of relevant regulations among private health care providers. About two-thirds of Qualified Medical Practitioners (QMPs) were aware of the Consumer Protection Act. However information about the Indian Penal Code, Medical Termination of Pregnancy, and the Medical Council Act was negligible.

[117] NSS Survey, 1995-96 – 52nd round.

[118] Department for International Development (DFID). 2002. Dynamics and structure of private health care in Madhya Pradesh: Summary report. TARU for Department for International Development (DFID).

[119] Ibid.

6.3.1.4. Location preference

Most allopathic practitioners practice in more than one place (typically home, clinic and/or a nursing home/hospital). However, ISM practitioners prefer to practice at their residences. QMPs, operate predominantly from clinics in or next to markets, or in middle to upper class residential locations. RMPs have clinics on the fringes of slums and in other low-income neighborhoods.

6.3.1.5. Motivational factors among public and private QMPs

Major motivating factors for public sector QMPs are greater job satisfaction, economic security, the opportunity to undertake social service, and social recognition. Private practitioners see better career options in the private health sector. Many feel either disillusioned with a government job or with the limited opportunities available in the public sector.

6.3.1.6. Apprenticeship of RMPs

The most common location of apprenticeship of RMPs is with QMPs, as presented in Table 5.4. A significant proportion get their training in nursing homes and hospitals. Only 10% of RMPs do not have any past work experience. It is clear that the RMPs have had considerable on-the-job experience, and planners should not overlook this opportunity.

Table 6.4: Location of RMP apprenticeships

Apprenticeship Location	Proportion of RMPs (%)
Nursing Homes / Hospitals	21
Qualified Allopathic Practitioners	29
Qualified ISM Practitioners	17
RMP/Unqualified Practitioners	21
Traditional Practitioners	3
No apprenticeship done	10

Source: TARU Primary Study, 2002

6.3.1.7. Professional charges

Transparency of pricing is limited across different types of practitioners. However, the general perception is that, with competition, rates remain fairly constant and range between Rs. 10–30 for a clinic-based consultation. Charges may increase depending on the background of the client and the qualifications of the medical practitioner. Allopathic QMPs charge between Rs. 20–50. The burden on poor and vulnerable households remains significant, with the additional cost of medicines being borne by the family even if fees are low. Most RMPs provide credit. Though not uncommon, this practice is comparatively less frequent among QMPs and in private nursing homes and hospitals.

6.3.1.8. Quality of services

Patients rate the quality of services according to:

- the doctor's attitude and behavior
- effectiveness of treatment
- cost

Being located conveniently, and being able to offer quick cures and personalized treatments, are the factors most frequently mentioned in the literature[120] and also the ones that surfaced during discussions with slum dwellers when they described their reasons for choosing one health facility over another. Another reason for the popularity of private practitioners has been their practice of treating patients with injections. Since most of these patients are on daily wages, they cannot afford to stay at home while they're sick and thus often insist on injections in the belief that they would provide a speedier remedy.

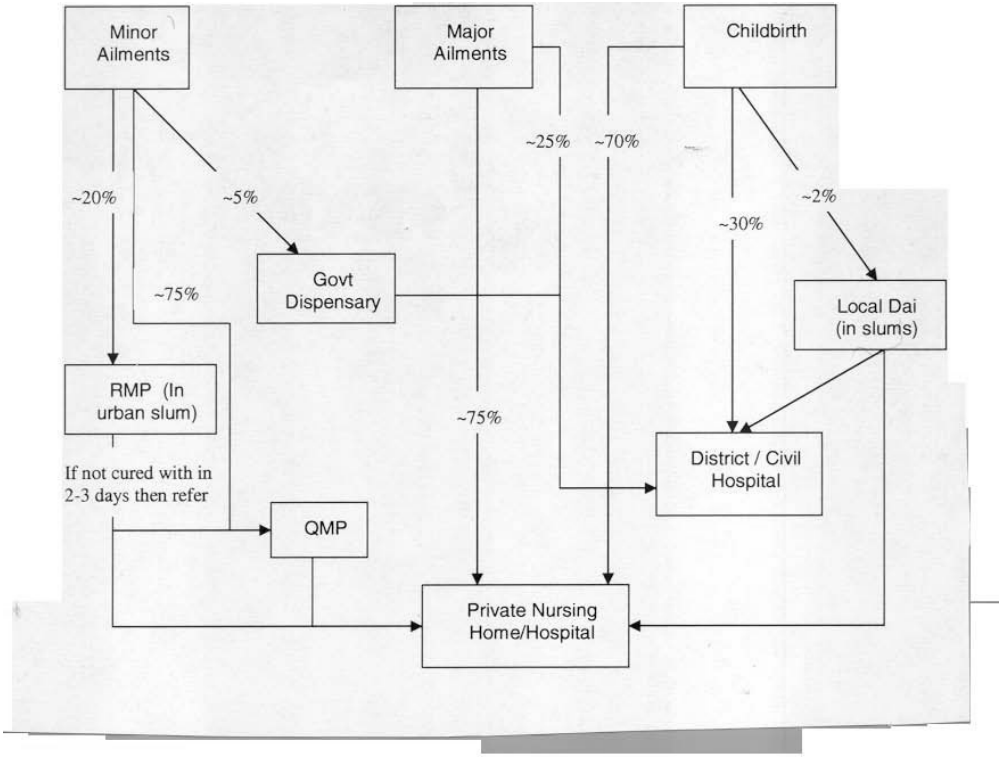
6.3.1.9. Health seeking behavior

The pattern of health seeking behavior in urban MP is presented in Figure 6.2. These data encompass all income groups. Private practitioners are preferred especially for the treatment of minor illness. Source: Dynamics and Structure of Private Health Care in MP, TARU, 2002[121]

[120] Garg, R. 1995. Improving the performance of reference health center: A case study of urban health center, Dharavi, Bombay. Department of Health Studies, Tata Institute of Social Sciences, Bombay, 1995.

[121] Department for International Development (DFID). 2002. Dynamics and structure of private health care in Madhya Pradesh: Summary report. TARU for Department for International Development (DFID).

Figure 6.2: Schematic Urban Health Seeking Behavior in MP



6.4. Key issues for programming

Presently, the poor are reported to be paying less to private providers than at a public health facility when one takes into account the opportunity cost of lost time, which is critical for a daily wage earner. However, this fact does not imply that the poor can easily afford the private sector. An anecdote during an FGD in an Indore slum illustrates this. While describing their situation, a man remarked that they (the poor) keep adding supports to a breaking house "… makan gir raha hain, to teka lagate jao". The point of that observation is that the poor become poorer with every episode of illness since it reduces income and adds to expenses. Possessions are mortgaged in the hope of a quick recovery. Critical issues that emerge from the discussion are:

- It is vital to pay adequate attention to the fact that private providers serve a very large proportion of the urban poor. It might be worth considering the provision of a formal platform to RMPs and Dais. Recognition and motivation coupled with training would enable them to deliver "standard" rational treatment.

- Access to affordable generic drugs (usually less than half the cost of branded drugs) would reduce the burden of medication on the poor.

- Contracting out specific mass-oriented initiatives, such as immunization programs, to the private sector might be useful in achieving higher coverage.

- The private sector could be mobilized to maintain better medical records and disease surveillance. This would enable better information to be collated on the health of those in urban slums.

- Referral protocols should be developed and communication links improved with health posts, dispensaries, private practitioners and tertiary-level hospitals and nursing homes (private and public), to encourage referrals and better utilization of infrastructure.

- Quality of services (attitudinal changes, timing, approachability, and promptness of care) should be improved in public sector institutions.

- Outreach activities of government institutions should be developed to facilitate linkages and enhance service coverage in vulnerable slums.

- Insurance schemes, a health fund or some form of security net should be tested to determine if they could counter the shock faced by poor families during illnesses. These experiments should be well-documented and understood to garner comprehensive learnings.

Rogi Kalyan Samitis are revolutionizing public healthcare in Madhya Pradesh

Source: Stories for Change

Government hospitals in MP are undergoing a sea change. Gone are the pathetic services and repulsive, unkempt environs characteristic of public healthcare facilities. Instead, accolades are pouring in from various quarters. Be it patients shifting from private hospitals to government ones or the recent Global Development Network Award for the pioneering project that's been changing the face of public healthcare in MP over last six years.

The story of change begins with the 1,000-bed Maharaja Yashwantrao (MY) Hospital of Indore. When the hospital was inaugurated way back in 1955, it was Asia's largest government hospital. Decadence slowly crept in, creating an inefficient system with absolutely no finances for upkeep.

Under the Indore collector, S R Mohanty, in 1994 Operation Kayakalp was launched to rid MY of thousands of rodents, and nearly 150 truckloads of garbage and junk. That was also when public participation first came in. When the administration appealed to people for money for the clean-up operation, donations poured in. Within no time Rs 48 lakhs were collected.

The question now was how to keep up the tempo. "The hospital had only bare infrastructure in place. And no funds were forthcoming from the state government. Left to itself, the hospital would have reverted to the old ways," recalls Mohanty.

That was when the concept of the Rogi Kalyan Samiti (RKS) took root. RKS is a people's body consisting of elected representatives, municipal corporation members, donors, doctors and members of the public, who would manage the hospital. The RKS was empowered to fix reasonable user charges and raise funds through loans and grants. It started by introducing a Rs 2 ticket for the OPD (out patient department), which now costs Rs 5. Even specialized services such as a bed in Intensive Care are as low as Rs 150.

Some broad guidelines were laid down for the levy of user charges. Thus, all hospital facilities were to be charged. Persons below the poverty line are totally exempt from any payment. For the latter a mere declaration was enough, without the usual complicated paperwork. Monthly collection from user charges came to around Rs 8 lakhs; earlier it was nil. Money thus collected is distributed to the different departments, for upgrading equipment and employing contractual labour for maintenance.

The success of MY Hospital has led to the adoption of the RKS as state policy by chief minister Digvijay Singh. Thus all over the state, Rogi Kalyan Samitis have been formed in over 2,000 allopathic hospitals and dispensaries, 197 Community Health Centers and in most of the 1,690 Primary Health Centers in the last year. In Mandsaur, a Rs 175 lakh project for modernization of the district hospital has been launched. Total monthly collection in the state through user charges is now estimated at Rs 50 lakhs.

Mohanty says the strength of the RKS lies in the fact that the people can now decide their own priorities. But the greatest success of the RKS lies in bringing about an attitudinal change and boosting the morale of the medical personnel and staff. Even they have begun to donate something for the hospital; like Roop Singh Karode, an accountant with MY hospital, who donated the marble benches for the orthopaedic department.

Chapter 6: Key Points

The health service delivery system in Indore is a multi-tier system of dispensaries and tertiary referral hospitals organized around wards and zones. However, less than 25% of the urban poor use a public health sector facility. In other words, more than 75% of the

urban poor are paying for health care provided by the private/nongovernmental health sector.

The major service provider addressing the health needs of pregnant mothers and young children in poor urban areas is the ICDS. However, AWCs are located only in "notified" slums. This approach excludes the most vulnerable. Even within the "notified" slums, average attendance from the community at the AWC is 33%. In addition, the number of AWCs found in urban settings is much less than the numbers found in poor rural settings.

Lack of coordination between the AWW and ANM leads to inadequate coverage of antenatal check-ups, immunizations and IFA distribution. Some poor communities actually distrust their AWW.

A study of the private health sector in MP revealed that a large proportion of private providers were made up of RMPs (unqualified practitioners) and TBAs.

Implications for EHP India

- Health sector resources need to be reallocated to ensure coverage of the urban poor population.
- ICDS services need to be located in the most vulnerable slums to improve the reach of public health services.
- The quality of services provided should be improved. This will lead to an increase in demand and reduce the current underutilization of public services.
- Improve coordination and linkages between different health service providers, and improve the referral system.
- Include private practitioners (RMPs and Dais) in training programs, vaccinations programs and similar initiatives.

7. Assessment of CBOs & NGOs in Indore

7.1. Civil society organizations in Indore

With fast changing situations and the presence of multiple interest groups in cities, the state and/or city governments appear generally to be limited in their capacity to address the needs of the urban poor. The ability to provide services such as health, education, housing, sanitation has declined even though the ultimate responsibility and accountability for these lie with the state. The role of civil society groups needs to be strategically reassessed in the current climate of increasing privatization and globalization.

Nongovernmental organizations (NGOs) form the core of civil society groups. However, in an urban area, there needs to be an examination of community level collective processes that may have emerged naturally or that have developed to help ensure basic survival in the city. Trade unions can also be seen as people-centered organizations that may play some role. Civil society does not have a uniform face and includes organizations with varied levels of commitment, capacity and vision. There is an inherent complexity here, and donors must understand the constraints and strengths of these stakeholders in order to plan effective programs.

This chapter describes the NGOs in the city of Indore, the CBOs in Indore slums, and the implications of their existence and activities with some options for EHP. The format for information collection on NGOs/CBOs can be found in Annex 12.

7.1.1. Nongovernmental organizations in Indore

NGOs in Indore have varied backgrounds and approaches. The neighboring districts of Dewas and Barwani (Neemad) are areas where significant development programs and tribal movements have also influenced the city's civil society.

NGOs in Indore city have predominantly focused on promoting savings and credit groups. And while there are some other elements occasionally included in their activities, such as vocational training and health camps, these activities are organized more as distinct events, and are not part of a core strategy. However, the presence of NGOs in the slums through self-help group (SHG)-linked work is relevant. Rehbhar Mahila Mandal, State Bank of Indore, Indore Diocese for Social Service and Sewa Bharti are a few such organizations. Additionally, Deenbandhu Samajik Sansthan is an NGO that is focused on advocacy for the housing rights of the urban poor.

Several NGOs have their administrative headquarters in Indore, but the main focus of their work is in rural areas. These are well-established agencies with substantial experience of grassroots work, training and documentation. Examples include Bharatiya Grameen Mahila Sangh, Nagrath Charitable Trust, Lok Biradri Trust, and Vikas Anusandhan Avam Shekhsnik Pragati Sansthan.

Deenbandhu Samajik Sansthan, in Indore, present a different set of skills and experiences as it operates from a "rights" perspective. Its central activities focus on the issues of land rights and housing for the urban poor.

Health specialized agencies, such as Manasi Swasthya Sansthan and the Family Planning Association of India, provide health services to slum dwellers. The former is highly regarded for the quality of its work and its ability to be counted on to provide facilities at the slum level through clinics. The Indore chapter of Family Planning Association of India is undergoing drastic changes internally. However, its hospital and health camps continue to operate. M.P. Voluntary Health Association is a networking organization, providing the state's various groups with support and training on health issues.

There are agencies not native to Indore, such as Friends of Women World Banking (FWWB), World Vision of India (WVI), and the Centre for Community Economics and Development Consultants Society (CECOEDECON) that have been functioning in the city on specific projects. FWWB and WVI have worked extensively at the slum level, and Cecoedecon was involved in documentation exercises for the local government.

Understanding the NGOs

Considerable diversity in NGO activity exists in the city. Differences are seen in terms of funding, objectives, the mission of the NGO, and how it understands or envisages the implications of its efforts. These should be considered when engaging NGOs to carry out work. The work should be tailored to their strengths, and where necessary, additional capacity building to enable the organization to succeed in its activities should be implemented.

The capacity of NGOs to work effectively in urban areas remains, by and large, unexplored. Intensive efforts with the poorest of the urban poor are rare. This is the result of a basic lack of urban poverty alleviation programs, and in Indore, uninvolvement by NGOs in the slum improvement efforts of the late 1990s.

Currently an advocacy and lobbying group to address the needs of the poor at the city-level doesn't exist. Advocacy, as a tool, has been used at state and national levels. However, any sort of combined effort by NGOs to pressurize the local government in Indore to direct resources and services to deprived urban communities thus far has not occurred.

Table 7.1: Information on NGOs based in Indore (Note: This should not be considered an inclusive list of all NGOs in the city)

Name of NGO	Identity	Year of formation	FCRA Registration	Areas of Work	Rural / Urban / tribal	No. of personnel	Activities in field
Bal Niketan Sangh	Institute	1947	Yes	Indore	Rural, urban		Health, education, training
Bharatiya Grameen Mahila Sangh	Society	1969	Yes	Indore, Rau, Manpur, Debalpur	Rural, Urban, tribal	90 full time and 10 part time	Health, education, women's issues, SHG, livelihoods, environment
Center For Community Economics And Development Consultants Society (CECOEDECON)	Society	1981	Yes	Jaipur, Indore	Rural, Urban		Disaster management, watershed management, reproductive health
Deenbandhu Samajik Sansthan			Yes	Indore	Urban	6 full time	Advocacy, documentation on issues around urban poor, particularly housing.
Family Planning Association of India (Indore chapter)		1959	With Headquarters	Indore	Urban	35	Hospital, health awareness, camps, Reproductive and Child Health (RCH) services
Friends of Women World Banking (Details of Indore Services for the Poor Project)	Microcredit Institution	1998	Yes	Indore	Urban	3	Savings groups, capacity building, federation of groups
Indore Diocese Social Service Society	Society	1973	Yes	Indore Dewas Dhar Jhabua	Rural Tribal Urban	61	SHG Income Generation Program (IGP), biogas (fuel made from cow dung cakes), health, education
Kabir Jan Vikas Manch		1998	No	Indore Khategaon	Rural Urban	Broad Part-time and voluntary base	Education, response to area-specific issues, e.g. ,water, ration cards, art; avail govt. schemes
Lok Biradri Trust	Trust	1989	Yes	Indore	Rural Urban Tribal	59	RCH, children-focused activities, training for AWW, credit groups
Manasi Swasthya Sansthan		1998		Indore	Urban		Health services – natural and herbal cures
MP Voluntary Health Association (Networking organization of 400 agencies)	Society	1973	Yes	M.P.		16	Training, advocacy, research, capacity building of NGOs, AIDS helpline

Pushpkunj Family Helper Project	Trust	1979	Yes	Around Indore city	Rural		Health, education, SHGs, IGP, low-cost housing, latrines
Rehbar Mahila Mandal	Registered Mahila Mandal	1991	No	Indore	Urban	2 full-time 16 part-time	SHG, IGP, health camps, oral contraceptives
Sahyata	Society		No	Indore	Govt. hospitals	Part-time staff	Medical help to poor, health camps
SEWA MP	Trade Union	1985		M.P.	All		Union activities, rural development, banking, child care, insurance, legal aid, training, publication
Sewa Bharti	Society						Value education, SHG, Tailoring centers, coaching, bhajan mandlis (groups of people who change bhajams (i.e., songs sung in praise and devotion to the Gods)
Shelter	Society	1998	No		Urban Rural	3 full-time and 5 part-time	Health, education, SHG, IGP, environment
State Bank of Indore	Bank		No	Urban and Rural			SHG
Vikas Anusandhan Avam Shekshanik Pragati Sansthan (VASPS)	Society	1978	Yes	Dhar, Ind- ore, Jhbua Khargone	Rural Tribal		Education, natural resource management, IGP, health
World Vision of India (Details of Indore project)	Indore Urban Area Development Programme		Yes	Indore slums	Urban	11 full time	CBO promotion, health, sanitation, education, IGP, activities with youth
Samarpan Care, Awareness and Rehabilitation Centre	Society	1999	No	Indore	Urban		Mental health

7.1.2. Community-based organizations (CBOs) in Indore slums — capacity and potential

Assessment of community-level processes

Indore has a rich tradition of community-level processes. Slum dwellers have been organized through different efforts (legislation/provisions in government schemes, such as: District Urban Development Authority (DUDA), ICDS; development projects, as IHIP; banking institutions; and large and small NGO initiatives). This has introduced a greater level of consciousness and political thought in the slums of the city. Also since Indore is a city focused on economic activity and competitiveness, there seems to have developed a parallel sense of what can best be called "street-smarts" within impoverished groups in the city. Below are some of the major kinds of community level action in the city, categorized on the basis of their formation:

Patta Act, 1984 (amended in 1998) and Swaran Jayanti Shahri Rozgar Yojana (1997)

The "Patta Act" of Madhya Pradesh is a legislation under which slum dwelling populations could be provided a secure land tenure to be used for their residential purposes. according to this Act, if a person was occupying any government land as on the cut-off dates (has recently been amended to May 2004), s/he is eligible to obtain a temporary lease (could be one year or 30 years) for defined plot. Actually, the Act provides that the lease (i.e., the patta) must be granted the following applicable rules to be implemented through a locally promoted body termed as "Moihalla Samiti" (Neighborhood Committee). The concept of the Mohalla Samiti emerged from elected community-based groups that would be responsible for the development of their areas.

It was in this background that the Mohalla Samitis were created (and not promoted through a process) in a hurry by functionaries from the office of the District Collector. The subsequent procedures also showed discrepancies. For instance, the land leases that are to be granted on the recognition of the Mohalla Amiti are usually done as political favors.

Thus there are Mhalla Samitis formed over the slum clusters, but issues of ownership and clarity of role has not been transmitted to the members of the Mohalla Samitis.

Searan Jayanti Shahri Rojgar Yojana (1997)

This scheme is an amalgamation of the several (earlier existing) Central Government schemes under one umbrella. The implementation of the schemes is built around a key strategy of promotion of women's groups (as neighborhood members, groups and committees) culminating into a broader based community development society. The process of promoting the community development societies has been hurried and non-democratic; attention was not paid to building participation and empowerment of the committees. This has led to disillusion within groups and with the processes by and large.

Interactions with groups developed through this mechanism have uncovered a significant level of cynicism resulting from these experiences. Members of the Mohalla Samitis have expressed their frustrations of having been allowed to "dream big" about what was possible and what could be done. They were given recognition by having their names printed in official documents and even visiting the state capital. But ultimately, they were neglected. The initial interactions also did not encourage ownership (rules and regulations governing the group were essentially dictated by the external group facilitator).

Mahila Mandals associated with Balwadis (DUDA) and Anganwadis (ICDS)

The Anganwadi Worker is primarily responsible for the running of the AWC funded as part of the ICDS. Similarly the balwadi teacher runs a preparatory school (balwadi) initiated by DUDA. The SHG movement in the country has brought formation of SHGs as part of their work mandate. Thus, these two groups of government contractual field staff have been promoting self-help groups in their slums. In most cases, these field functionaries remain a part of the group, and the activities center on their work. The efforts of these groups are primarily focused on savings and credit. Meetings are not held regularly since this is not one of the worker's priority jobs.

SHGs promoted by banking institutions, as State Bank of Indore, FWWB

The State Bank of Indore and Friends of Women's World Banking have promoted groups in the city during the past 5–7 years. These groups function as strong units focused on savings and credit. Members of several of these groups have also reached a higher level of independence and organizational capacity than seen otherwise. However, it must be understood that most of the groups promoted by these organizations belong to what are now the better-off slum communities.

It was also noted during interactions with these groups that many group members are now capable of and are working as group promoters for their own agencies. They also expressed a desire to work for people more vulnerable than themselves, and also perceive development as an effort that goes beyond finances. This sensitivity has led to some remarkable achievements.

The Asra Mahila Mahasangh functions as an umbrella of four area-wise divided federations of women's groups. The leaders of these groups are expanding their efforts, such as initiating literacy classes in a leper's colony and linking with lawyers for cases of domestic violence while keeping their original mandate of savings and credit.

Neighborhood Committees promoted within IHIP

During the Indore Habitat Improvement Project (1989-98), a slum upgrade effort, community processes were given an important role. Basti vikas mandals (157 neighborhood development committees), yuva mandals (150 youth groups) and mahila mandals (150 women's groups) were created during this period. While some of these groups evolved into capable institutions (today some are registered NGOs) and are

engaged in development work in slum communities. However, many of them not really developed much more and have lost their sense of purpose.

Still, members of some of these groups have emerged as active participants in the subsequent community building processes attempted through the other organizations detailed in this report.

NGO-promoted community processes

Several organizations, such as Sewa, Deenbandhu Samajik Sansthan, Bharatiya Grameen Mahila Sangh (BGMS), Pushpkunj Family Helper Project Trust, have been working on building capacity along with service provision. This has led to an emergence of some new thinking about what is possible in the slums. Sewa and DBSS have worked with people enhancing and bringing up community representatives for leadership through the membership with the trade union and the housing struggle respectively. They have mobilized people over a large number of slums. This kind of mobilization has not led to a creation of a formal institution at the slum level, but has done so at the city level, in the shape of a trade union and a housing federation. On a different direction, CBOs promoted by BGMS and Puhpkunj in and around Indore function as community groups that introduce development efforts in the slum. They have a stable organizational history (i.e., regular meetings and an established budget and finance scheme).

7.1.3. Understanding the CBOs

The experience of most of the CBOs has been largely restricted to saving money, lending within the group and taking finances from banking institutions for further circulation. The interactions within their own groups and with each other, as well as with the public authorities and NGO staff have generated a great deal of confidence in their capabilities. As a result, many group members are now capable of and are working as group promoters for their own promoting agencies. These experiences have introduced a heightened level of consciousness and political thought in the slums of the city. It is also quite apparent. Even though the formal systems seem to be unsupportive of many of the needs of the poor, formal systems may be actively working against those needs. The poor groups do manage to sway councilors by working through lower level bureaucracies and by bargaining with their votes for additional resources. This stands in contrast to the efforts of NGOs and trade unions, who often work more through protests and other more direct actions.

In sum, it appears that these community organizations could serve as entry points for initiating efforts to reduce poverty and/or improve health. Several groups have expressed an interest in working on issues other than savings, since they feel they have already done all they could in their own areas already. They also realize that to sustain their identities, they would need to expand their horizons. They have come to understand, through experience, that development is not limited to finances. Since most slums already have a history and tradition of collective efforts, it would be worthwhile for the proposed Urban Child Health Program to build on these structures and further strengthen them.

Table 7.2: Profile of selected CBOs

Name of the CBO	Baba Sahib Mahila Mandal	Ma Navdurga Mahila Samooh	Samta Yuva Vikas Samiti	Savitri Bai Phule Samudayik Vikas Samiti	Amrapali Bachat Samooh	Rehbar Mahila Mandal	Basti Vikas Samooh	Adarsh Swayam Sahyata Samooh	Tulsi Swayam Sahyata Samooh
Name of the slum	Ramabai Nagar	Shivaji Nagar, Mill Area	Buddh Nagar	Panchsheel Nagar	Panchsheel Nagar	Azad Nagar	Chhatrapati Shivaji Nagar	Janakpuri	Sanjay Nagar, Rau
Year of formation	1999	1994	2000	2001	2001	1991	2002	1999	1998
Number of members	11	545	250	11	10	18	11	20	10
Promoting agency	Deenbandhu	FWWB	None	DUDA	DUDA	Indore Developmt.Authority (ODA project)	Deenbandhu	SB of Indore	BGMS
Institutional capacity (presence of office bearers, periodic meetings, maintenance of meeting minutes, determined rules)	No	Yes	Yes	To an extent	To an extent	Yes	Yes	Yes	Yes
Financial capacity (regular savings, loans, bank account, loan-granting mechanism)	No	Yes	No	No	Limited	Yes	Limited	Yes	Yes
Program capacity (plan and implement events, approach private or govt. authorities for services for group/ slum, areas of work)	Moderate	Yes	Yes	No	No	Yes	No	No	Yes

Description of health experience	No	Had invited Manasi Swasthya Sanstha for opening clinic at CBO office	No	Help in organizing health camps - mobilize people and awarenes s building	Mobilize people around health camps	Goli Ke Humjoli partners; Organize health camps	No	No	Awareness activity within group; help NGO mobile medical team, track infant and mother vaccinations
Linkages with government departments	Organized for shifting liquor shop out of basti	Promoted groups around govt. schemes	Limited	Limited though promoted by Govt. agency	Friendly with AWW; Promoted by DUDA	Yes	No	No	For vaccinations and deliveries in public hospital
Exposure visits and training programs	No	Yes	Limited	No	No	Yes	No	No	Yes
General confidence levels	Limited	Yes	Limited	No	No	Yes	No	Yes	Yes
Responsiveness to needs of the larger community	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	Extreme

7.2. Key issues for programming

Direct work in vulnerable slums — There are certain groups that are functioning at a fairly low level if at all — either having completely dissolved or working irregularly. These groups could be revived and strengthened to fulfill child health priorities in their respective slums. However, efforts should focus not only on improving health indicators, but also to build the institutional capacities of these groups to ensure sustainability of programs as well as the identity of the groups themselves.

Implementation of program through experienced CBOs — Some of the stronger CBOs (those who actually see themselves as NGOs) have been involved with urban slum improvement programs in the past that were not directly associated with health. However, CBOs have some of the strengths that will be vital for promoting child health in the slums of Indore. First, their members have a good understanding of issues that impact health and well-being in the slums of Indore. Second, many of these groups have strong leadership, held in high regard by the slum dwellers. Third, they are interested in undertaking efforts beyond their own neighborhoods. Fourth, they have a tremendous capacity for mobilizing people that could be used to further the objectives of improving child health in vulnerable slums. Fifth, many of the CBOs have displayed a commitment to work for the poor and to play a role in improving social indicators. Therefore supporting such CBOs and enabling them to emerge into strong health programming, community-based institutions is highly desirable.

Agencies are not fully representative or inclusive — Some CBOs are not adequately representative of the entire community. Such CBOs are actually institutions having a centralized and powerful leadership, and the CBO is an effort to mask the individual. In such cases, the individual nature of the CBO and the pursuits of these leaders are not clearly seen. The program should see this limitation very objectively and plan for building capacities to address the needs of those members of the CBO itself and the larger community who have not been given the space.

Federating and networking CBOs and NGOs — With appropriate facilitation and exposure, regular meetings at a federated level would enable these organizations to work more closely with the poorest in a more participatory and effective manner. By sharing learnings and creating a group identity, whatever issues that may result from centralized leadership could be addressed. Such networking would also build a capacity for policy advocacy and lobbying on behalf of the interests of the urban poor.

Build the program on the basis of existing experiences — The evolution of the program in Indore has occurred through consultations with all stakeholders – government institutions, CBOs, NGOs and slum-dwellers. Each discussion has been incorporated in building the design for the program. Therefore, the program should continue this consultative process during its implementation. A top-down, purely fund-driven intervention is not likely to serve the interests of the urban poor.

Long term commitment with appropriate capacity building inputs — Most programs in the past in the urban slums of Indore have largely been incentive-based or focused only on service delivery. By the nature of these programs and because the vulnerable were not actively identified, the disadvantaged have continued to remain underserved. This has been further

aggravated by limited time commitments and the need to demonstrate results. While NGOs and CBOs are useful agencies to partner with for an urban health program, three issues are important to bear in mind around that approach. First, a partnership between NGOs and CBOs with a common vision to improve health and well being among the urban poor should be facilitated. Second, adequate capacity building of NGOs and CBOs, essential for establishing these organizations as strong institutions for urban health programming, requires time and patience. Third, selection of partnering agencies should ensure that the most vulnerable are identified and targeted

Chapter 7: Key Points

There is a considerable diversity of experiences available in the NGOs based in Indore. Some have focused predominantly on promoting self-help groups. Several others have their administrative headquarters in Indore even though their focus has been in rural areas. The capacity of NGOs to work effectively in urban health issues remains, by and large, remains unexplored.

Community-level processes have been widely promoted in the city by public and private sector agencies. The experiences of the existing community-based organizations have centered around savings. However, they do have a high level of confidence and leadership and that could be important once these organizations move beyond their current mandates and areas of interest.

Implications for EHP India

- The tremendous capacities of existing approaches in the communities should be used to mobilize people and further the objectives of urban child health in vulnerable slums.

- Institutional capacities of the groups need to be built to ensure sustainability of this program and also of their respective identities. This implies a need to build partnerships between managerially (and programmatically) sound NGOs and motivated CBOs.

- Long-term commitments would be needed for working with the most vulnerable among the various slum-dwelling populations.

8. Lessons from the Indore Habitat Improvement Project

The Indore Habitat Improvement Project for slum upgrading was initiated by the British Government's Department for International Development (DFID) (formerly Overseas Development Authority — ODA) as part of its urban poverty focus. Scheduled to begin in March 1989, it actually began in early 1990 and was completed in June 1998.

8.1. Concept of slum networking

ODA has had a long history in urban poverty projects in India. Recent projects covered the following elements: infrastructure (roads, drains, water, sanitation and street lighting), balwadis (pre-school child care), credit (savings groups), primary health care, community development and the construction of community centers. Indore was the first city in India where the Slum Networking concept as an approach to physical infrastructure was attempted, guided by Himanshu Parikh.

The Slum Networking Concept

Slum Networking is a holistic approach to urban improvement in which slums are seen as an integral part of the city — i.e., as a settlement network that presents an opportunity for change rather than a problem for the city.

The concept of slum networking works at two broad levels – slums and the city:

- At the slum level, it aims at improved quality of life by significant upgrading through engineering innovations, notably the creation of infrastructure and improvement in the overall ambience of the slum environment. These are combined with community development interventions to help ensure sustainability of impact.
- At the city level, the concept aims at making sustainable improvements to the city's infrastructure and environment. Instead of upgrading slums on a slum-by-slum basis, it envisages networking slums so that the matrix of slums becomes an opportunity for augmenting city infrastructure. This is based on the fact that watercourses, which are major locations of slum settlements, also represent the most efficient lines for infrastructure provision. Through concerted improvements in slums, sustainable improvements in the city's environment can thus be secured in a cost-effective manner.

Source: Diacon D, BSHF, 1997

8.2. Slum networking project, Indore

This project was implemented through a tripartite agreement between IMC, IDA and the communities. IDA was the implementing agency, creating infrastructure and mobilizing the "soft" components of the program (health, education and community development). IMC was to take over maintenance of physical infrastructure on completion of the project. The project was completed at a cost of Rs. 605 million for a targeted population of about 400,000 in 183 slums.

The cost of working in Indore in 1992 was Rs. 4,327 per family. This reflected only the cost of infrastructure within the slums. Off-site infrastructure and city level project costs amounted to about 50% of the slum's internal costs[122]. Though figures are not available for Indore, an analysis of project budgets for Bhopal[123] and Vizag[124] show an expenditure, on average, of 10% of the total budget on community development activities, including health.

[122] Parikh, H. and Youth for Unity and Voluntary Action (YUVA). 2000. Project framework report: Slum networking of Bhopal for Government of Madhya Pradesh

[123] Ibid.

[124] Amis, P. 2001. Rethinking U.K. aid in urban India: Reflections on an impact assessment study of slum improvement projects. Environment and Urbanization, 13(1): 101 – 113.

Table 8.1: Details of infrastructure components

Component	Objective	Assumption (as per proposal document for SNP)[125]	Outcome (as per DFID funded post-project assessment[126], also seen in personal visits to slums)
Toilets	Individual toilets for the entire targeted slum population, i.e., 80,000 families	Individual toilets allow for dignity of use and responsibility for maintenance Cost of house to house piped sewerage by networking will be Rs. 1,500 for the line and Rs. 1,000 for the off-site collection and treatment. This cost was the same as a UNDP twin pit latrine, but with added benefits. Credit would be accessible to slum dwellers for construction of toilets with several agencies showing an interest	Only one-third of the households took toilets connected to the underground drainage. Therefore the effective cost trebled over what was planned. Many families did not opt for individual toilets because there was no space for toilet construction and because of water shortages in slums. Credit was not available to slum dwellers for construction of toilets despite substantial efforts to do so
Water Supply	Provision of water for all through public and private connections	Sufficient water supply would remain available in the city	84% of households did not have private water supply 46% reported improvement in provision of water; however quantity and quality remains a source of concern Choking of underground drains; drainage lines overflow
Roads	Roads would serve only as rainwater surface drainage	All kitchen waste would be discharged into underground drainage	Improved accessibility in the slums Improved image of the slum reported by 88% Streets get waterlogged, and slum leaders have actively lobbied for maintenance of roads
Land-scaping	Plantings on the slum lanes - slums no longer an eyesore for a city	People would value plantings and enhance them and maintain the environment.	Slum dwellers indifferent to landscaping Shortage of water Unpaved stretches become slushy, hence people have extended their plinth up to paved roads [Note: plinth?]

During the impact assessment study of DFID-funded slum improvement projects (Vizag, Indore and Vijaywada)[127], the findings reflected the poor's own perceptions. A hierarchical and multi-sectoral concept of poverty was used. The following table reveals the impact based on slum dweller judgments. The greater the number of stars, the greater the impact.

[125] Parikh, H. 1999. Slum networking – An alternative way to reach the poor.

[126] Amis, P. 2001. Rethinking U.K. aid in urban India: Reflections on an impact assessment study of slum improvement projects. Environment and Urbanization, 13(1): 101 – 113; Verma, G.D. 1999. Indore's slum project: A worm's eye view from the ground.

[127] Ibid.

Table 8.2: The impact of different components of Slum Networking Projects on different dimensions of poverty

Dimension of poverty	Roads	Drains	Water	Street Lights	Latrines	Pre-schools (balwadi)	Health
Survival		*	*				**
Security	**	*				**	
Quality of life	***	***	***	**	**	**	*

The study demonstrates that infrastructure components have a direct bearing on quality of life, and are not seen as a survival issue. To a fair degree, the slums have improved based on these indicators, but the related issue of land tenure remains an area of uncertainty.

8.3. Key issues for programming

Three health centers were constructed (in Baan Ganag, Jabrang Colony and Somnath ki Chawl). The structures were built to be used as small hospitals. There was provision for a surgery room, delivery room, gynecological wards as well as other wards. Equipment had also been procured. However, these units now function as dispensaries and only with outpatient facilities. One hundred-three community halls were constructed and function mostly as schools in the slums. These were designed as centers for social and collective activities for the community. These halls could be used for health activities as well.

Neighborhood Development Committees were established for community mobilization and for maintenance of infrastructure. Though broadly scattered now, there are some (as Rehbhar Mahila Mandal) that remain functional. There are also several individuals whose continual exposure to and interaction with government agencies and processes, as well as with necessary training, during that time, transformed them into leaders in many slums. The capabilities of these community-based individuals will help further the objectives of the urban health program.

A large amount of funds was invested in the city for improving living conditions in the slums. Broader engagement of stakeholders (IMC, IDA, NGOs, CBOs) in planning the program design, implementation and follow-up would have been beneficial. Defining roles through a consultative process would have fostered greater ownership of responsibilities among different stakeholders.

Chapter 8: Key Points

The Indore Habitat Improvement project (IHIP) for slum upgrading was initiated by DFID and was implemented between 1990 and1998. Indore was the first city in India where the “slum networking” concept as an approach to physical infrastructure was attempted. The evaluation of the project, based on slum dweller judgments, revealed that infrastructure components have a direct bearing on quality of life, but are not seen as a survival issue. Land tenure still remains an area of uncertainty.

Implications for EHP India

- 103 community halls were constructed by the project and could be used for health activities. Currently they function primarily as schools.

- Community processes initiated in the form of neighborhood development committees have left scattered leadership capacities in the slums that could be tapped for furthering urban health objectives.

- The Urban Health Program planning processes should take into account the views and experiences of the city stakeholders at each level.

9. Recommendations for USAID/EHP India Urban Health Program

The urban poor must be adequately prioritized when allocating health sector resources, both to address the imbalance between rural-urban allocations and within the urban settings themselves. Global experience indicates that standards of health care are more a function of the accurate targeting of expenditures on the decentralized primary sector than a function of aggregate health expenditures[128]. In the current situation, any cuts in public health expenditures will adversely affect the urban poor. There is, therefore, considerable scope for international donor agencies to strengthen their urban-poor focused programs.

The state of health of the urban poor vis-à-vis the rich clearly underlines the importance of targeting resources and efforts where they are most required. This is all the more crucial in urban programming because:

- average statistics (which are the common form of data available) reflect a skewed image of and often completely mask the health of the urban poor

- poor urban dwellers typically reside in underserved and very often unrecognized pockets and therefore are missed by development programs.

As part of this effort, EHP should illustrate the intra-urban differences in child health (e.g., by collating and disseminating urban slum-specific data among policy makers, academics, the general public, media, etc.) and by raising the profile of this issue and getting it on the agenda of influential decision-makers and advocacy groups. This should be done both at the local (i.e., Indore and MP state) level and at the national level.

The health vulnerability assessment exercise has emerged as a valuable tool for targeting efforts and resources. The methodology should be documented for replication, and the final product disseminated widely. This assessment is critical for ensuring focused targeting of limited resources, and also for recognizing that different slums require varying inputs even if the same objective is to be achieved.

Most factors responsible for the vast burden of child morbidity and mortality can be effectively addressed through community level measures and do not require medical breakthroughs or

[128] National Institute of Urban Affairs. 1998. India's urban sector profile. Research Study Series no. 61. New Delhi: National Institute of Urban Affairs.

expensive technology. Programs should focus on building the capacities of local communities to prevent and deal with manageable ailments.

Health services for the urban poor should be reconfigured in order to improve access, coverage and quality. This should include strengthening linkages between health service delivery channels and the community, as well as improving referral systems and involving private practitioners. ICDS services need to be located in the most vulnerable slums to improve the reach of public health services. Improving the quality of services should lead to an increase in demand and reduce the current underutilization of public services.

Efforts need to be devoted to identifying cultural and other barriers to the timely uptake of maternal and child services, including the acceptance of modern temporary birth spacing practices, infant feeding practices, neonatal care practices, etc. Barriers to the adoption of improved hygiene and other preventive health behaviors should also be identified.

There are a number of health issues that should be urgently addressed:

- Minimizing the risks of home delivery by regular and improved TBA training, supervision and support, and by promoting the community's linkages with health facilities for deliveries in institutions

- Improving the care of the vulnerable newborn

- Promoting good hygiene practices (e.g., handwashing after disposal of feces)

- Focusing on the problem of LBW babies: Studies reveal that at least one-third of all infant deaths can be averted with the prevention of LBW and with preventive interventions against the sequelae of LBW during early childhood

- Addressing the issue of under nutrition and malnutrition among mothers and children

There is a good mix of community mobilization and issue-focused program experience available in the NGOs and CBOs in the city. For instance, the majority of the slums in the city have had some history of collective actions, reflected in the presence of CBOs. There is also a considerable level of health knowledge and field experience in the health sector within these Indore-based organizations, even though their work is focused on rural areas. Partnerships should therefore be built between these agencies to improve urban health by reorienting them to urban health concerns.

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Annex 1. List of Vulnerable Slums on the Basis of Child Health in Indore

Extremely healthy vulnerable slums

Map Reference Number	Slum Name	Map Reference Number	Slum Name
47	Badal Ka Bhatta	330	Bheel Basti
63	Nath Ke Dere	331	Kalka Ki Basti
95	Shivaji Market Slum	339	Near Diamond Palace Colony
118	Babu Morai Colony	348	Habib Colony
150	Chandan Nagar	352	Gauhar Nagar
158	Ammar Nagar	357	Taj Nagar
159	Ram Balram Nagar	361	Rajiv Nagar
206	Dashehara Maidan Basti	362	Taj Nagar-B
208	Sudama Nagar Basti	364	Sikandrabad
217	Ahir Khedi	365	Mansab Nagar
220	Gitti Khadan	369	Vinay Nagar
221	Budha Nagar	370	Bangali Basti
222	Rajendra Nagar Basti	376	Jalla Colony
231	Indrajit Nagar	383	Hajari Bag
238	Rahul Gandhi Nagar	384	Mumtaj Bag
239	Sonia Gandhi Nagar	443	Vikas Nagar
240	Jeet Nagar	486A	Sai Vandana Nagar
251	Bhanwar Kuan Basti	486B	Sukhliya Kakad
252A	Bapu Nagar	492	Narwar Khedi
269	Kabristan Area	493	Kumheri Kakad
277	Shanti Nagar	510	Bhangar
279	Adivasi Nagar	511	Shakkar Khedi
297	Bhagwati Nagar	516	Ishwar Nagar
298	Shiv Nagar	519	Rahul Gandhi Nagar
299	Shanti Nagar	520	Bajarang Kakad

302	Bichauli Hapsi Kakad	523	Bapu Nagar
309	Sanvid Nagar	526	Anna Bhau Sathe Nagar
311	Rama Bai Nagar	527	Chikitsak Nagar
312	Bhuri Tekari	528	Chatrapati Nagar
324	Gadraj Nagar	531	Opp. Vijay Nagar Police Station

Moderately healthy vulnerable Slums

Map Reference Number	Slum Name	Map Reference Number	Slum Name
7	Vijayvargiy Nagar	193	Chandra Prabhat Shekhar Nagar
9	Jagannath Nagar	201	Near Jai Rampur Colony
9A	Jagdeesh Nagar	246	Chitavad Kankad
11	Nand Bag	252	Vasant Shah Nagar
13	Roshan Nagar	262	Narayand Mali ka Bagicha
14	Pushp Nagar	263	Miyan Bhai ki Chal
15	Rishi Nagar	272	Phirdaus Nagar

16	Ganesh Bag	286	Yadav Nagar
21	Raja Ram Nagar	366	Sohrab Colony
22	Dashrath Bag	389	Shai Dham Nagar
24	Ganga Bag	390	Juggan Nagar
25	Durga Nagar	394	Chitra Nagar
25A	New Durga Nagar	469	Shivshakti Nagar
26	Kaveri Nagar	470	Shymacharan Shukl Nagar
27	Karma Nagar	471	Pipal ki Chal
30	Radha Krishna Nagar	472	Bohare ki Chal
32	Sheetal Nagar	473	Mali ki Chal
59	Govind Colony	474	Kulkarni ka Bhatta
62	Rambali Nagar	476	Nanda Mali ki Chal
64	Shanti Nagar	489	Shiv Kandh Nagar
78	Shri Ram Nagar	513	Kabeet Khedi
147	Nandan Nagar	514	Lahiya Colony
149	Shrikrishna Nagar	517	Niranjanpur Nai Basti

Marginally healthy vulnerable Slums

Map Reference Number	Slum Name	Map Reference Number	Slum Name
28	Sundar Nagar	295	Indira ekta Nagar
31	Yadav Nagar	296	New Indira ekta Nagar
72	Bada Bangarda	300	Chauhan Nagar
87	Sikandarabad	303	Pipalya Hana Nai Basti
88	Juna Risala	333 & 337	Hina Palace
89	Gareeb Nawaz Nagar	380	Rajiv Gandhi Nagar
90	Bhishti Mohalla	397	Solanki Nagar
117	Panchsheel Nagar	401	New Malwiya Nagar
120	Naya Basera	412	Meghdoot Nagar
127	Harijan Colony	415	Bhamori Kshetra
128	Adarsh Indira Nagar	419	419 Ren-Basera
164	Chanmari Compound	442	442 Amar Tekari
172	Silawatpura	445	445 Gotoo ki Chal
198	Sethi Nagar	447	447 Rustam Ka Bagicha
199	Lodha Colony	465	Shankar Kumhar ka Bagicha
200	Arjunpura	477	Laxman Mali ki Chal
204	Lalbahdur Shastri Nagar	478	Chirad Mohalla
245	Chitawad (Kumhar Bhatta)	479	Mamaji ka Bhatta
267	Shaymacharan Shukl Nagar	480	Rafeeli
268	Azad Nagar	497	Ram Dutta ka Bhatta
282	Musa Khedi Kankad	498	Gauri Nagar
283	Musa Khedi Balai Mohalla	504	Ambe Nagar

Least healthy vulnerable Slums

Map Reference Number	Slum Name	Map Reference Number	Slum Name
1.	Bajrangpura	64	Hammal Nagar
1.	Bajrangpura Kankand	65	Asha Nagar
2.	Tigaria Badshah	66	Pragati Nagar
3	Gangadham	67	Gareeb Nawaj Nagar
4.	Yadav Palace	68	Vandana Nagar
	Surendra Nagar	70	Roop Nagar

	Shubham Nagar	71	Qasam Colony
	Ekta Nagar	74	Chamar Mohalla
12.	Jayram Nagar	75	Pooja Nagar
	Kailashbagh	76	Ram Nagar
	Ravi Nagar	77	Durga Nagar, Bangarda
	Mateshwari Nagar		Vikas Nagar
	Kushwaha Nagar		Mahaveer Nagar
	Vishal Nagar		Suvidhi Nagar
	Govind Nagar Kharcha		Rukmani Nagar
	Sheetal Nagar		Gadrakhedi
	Maharana Pratap Nagar		Arjun Singh Nagar
	Kushtha Aashram		Ravidas Nagar, Juna Risala
	Bhagat Singh Nagar		Harijan Colony, Juna Risala
	Mukherjee Nagar	87.A	Rahi Colony
	Banganga Balai Mohalla	91	Sadar Bazar
	Banganga Sharda Chauk & Satya Sai Bagh Colony	92	Iqbal Colony
	Dhobi Mohalla Banganga	93	Kamathipura
	Gali No. 3, Banganga	94	Subnisbagh
	Dabgar Mohalla Banganga	96	Bhoi Mohalla
	Banganga Kund	97	Bhalekaripura
	Mahesh Yadav Nagar	98	Gafoor Khan Ki Bajaria
	Chhoti Kumhar Khadi	98A	Sikhwal Mohalla
	Banganga Main	99	Ahilya Paltan
	Jayhind Nagar	100	Kandilpura
	Free Ganj	101	Janata Colony (Shramik)
	North Gadra Khedi	102	Piliakhaal
	Badi Kumhar Khadi	103	Sadhana Nagar
	Khasgi Ka Bagicha	104	Sahu Nagar
	Laxmipuri	105	Aaradhana Nagar
	Laxmanpura	106	Sai Ram Nagar
	Mehta Nagar	107	Archana Nagar
	Penjon Nagar	108	Aamrakunj Nagar
	Hemu Kalani Nagar	109	Kanyakubja Nagar
	Valmiki Nagar	110	Akhanda Nagar
58.A	Yadav Nand Nagar	111	Anjani Nagar

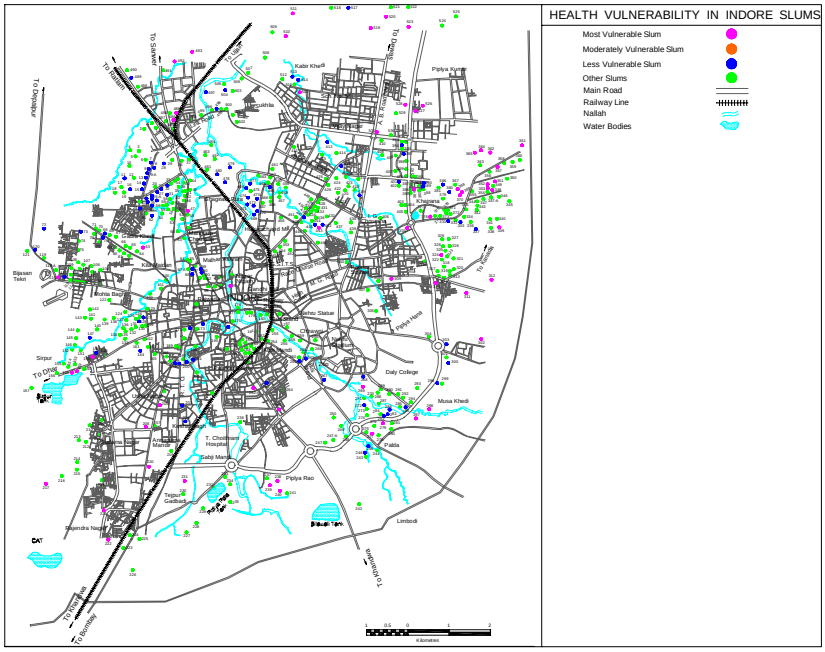
	Govind Colony	112	Sukhdev Nagar
	Arc hana Nag ar	113	Venkatesh Nagar

Map Reference Number	Slum Name	Map Reference Number	Slum Name
114.	Ambikapuri		Kanjar Mohalla
115	Ratanbagh	170	Tatpatti Bakhal
116	Laxmipuri, Near Airport	171	Ravidaspura, Rajmohalla
118.A	Maruti Palace	173	North Harsiddhi
	Gandhi Nagar	175	Rajesh Nagar & Kabootar Khana
	Patel Nagar	176	North Toda
	Manpasand Colony	176A	Rajeev Gandhi Nagar
	Sulfakhedi	177	South Toda
	Tirupati Nagar	178	Anarbagh
	Hukumchand Colony	179	Daulatganj
	Indira Naagra	180	Champabagh
129	Lok Nayak Nagar	181	Raoji Bazar
	Gangabai Joshi Nagar	182	Chamar Bakhal
	Gulabbai Ka Bagicha	183	Katkatpura
	Panchmoorti Nagar	184	Jagga Ka Bagicha
	Hariom Colony	185	Radha Govind Ka Bagicha
	Damodar Nagar	186	Haria Umaria Ka Bagicha
	Ramanand Nagar	187	Ramnath Ka Bagicha
	Raj Nagar	188	Prakash Ka Bagicha
	Jay Bhavani Colony	189	Balai Mohalla
	Nayapura	190	Jabran Colony
	Huzurganj	191	Mominpura
	Ganga Nagar	192	Aalapura
	Dharmaraj Nagar	194	Millat nagar
	Parihar Colony	195	Moti Tabela
	Bholenath Colony	196	Chhatribagh
	Jayshree Nagar	197	Barabhai
	Sahyog Nagar	200	Arjunpura, Lalbagh Ke Samne
	Bajrang Nagar	200A	Baramattha
	Rana Colony	202	Model Village
	ICI Colony	205	Mahavar Nagar

	Bohre Ki Chaal	207	Jansewa Nagar
	Geeta Nagar	209	Dwarkapuri (Slum Pocket)
	Sirpur	210	Harihar Nagar
	Rama Colony	211	Dravid Nagar (Slum Pocket)
	Noorani Nagar	212	Prajapat Nagar
	Mahavar Koli Basti, Near Navdapanth)	213	Sai Baba Nagar
	Haqimi Bagh	214	Vidur Nagar
	Gadaria Mohalla	215	Shri Ram Nagar
	Labriya Bheru	216	Surya Shankar Nagar
	Mali Mohalla	218	Suryadev Nagar
	Samajwadi Indira Nagar	219	Kesharbagh
	Samajwad Nagar	223	Anand Nagar
	Balda Colony	224	Bheem Nagar
	Joshi Mohalla	225	Sanjay Nagar
Map Refer. Number	Slum Name	Map Refer. Number	Slum Name
226	Bijalpur Harijan Mohalla	288	Hetram Ka Bagicha
227	Masania, Bijalpur Area	289	Noori Nagar
228	Bhadkia, Bijalpur Area	290	Alkapuri
229	Martand Nagar	291	Panchsheel Nagar
230	Tejpur Gadbadi	292	New Panchsheel Nagar
232	Arjun Nagar	293	Bhil Paltan
233	Pawan Putra Nagar	294	Satam Park
234	Mahadev Nagar	299	Shanti Nagar
235	Gangaur Nagar	301	Pipliahana Nai Basti
236	Vidhan Nagar	304	Pipliahana Gaon
237	Piplia Rao	305	Chitnis Ka Purva
241	Ekta Nagar	306	Chhoti Gwaltoli
242	Bhavna Nagar and Kankad	307	Badi Gwaltoli
243	Lalbahadur Shastri Nagar	308	Vinoba Nagar
244	Sanjay Nagar, Palda	313	Som Nagar
245	Chitawad Palda (Kumhar Bhatta)	314	Madhav Nagar
246	Chitawad Kankad	315	Kashi Nagar
247A	Himmat Nagar	316	Bhil Basti, Near Bengali Col
248	Triveni Nagar	317	Preeti Nagar
249	Radhaswami Nagar	318	Kailashpuri

250	Kaushalyapuri	319	Shriram Nagar
253	Devshri Harijan Colony	320	Chaitanya Nagar
254	Gadi Adda Harijan Colony	321	Devpuri
255	Luniapura	322	Sooraj Nagar
256	Narsingh Tekri	323	Vinayak Nagar
257	Murai Mohalla	325	Ganeshbagh
258	Kalali Mohalla	326	Sonia Palace
259	Kalali Mohalla Harijan Basti (Kailamata)	327	Sumitra Nagar
260	Keshar Bai Ka Bagicha	328	Sanjivani Nagar
261	Shankarbagh	329	Parvati Palace
264	Bhagwan Deen Nagar	332	Ashraf Nagar
265	Ushaganj	334	Dilip Nagar
266	Parsi Mohalla	335	Khijrabad
270	Indira Chauk	336	Advocate Colony
271	Gop Colony	338	Samrat Nagar
273	Madeena Nagar	340	Aman Nagar
274	Kohinoor Nagar	341	Daudi Nagar
275	Pawanpuri	342	Ali Colony
276	Devnagar	343	Kader Colony
278	Durga Nagar	344	Haroon Colony
280	Babulal Nagar	345	Khajrana Palace Colony
281	Ravi Nagar	346	Iliyas Colony
284	Kharol Mohalla	347	Shalimar Colony
285	Chirad Mohalla & Musakhedi	347A	347.A Silver Colony
287	Hussainee Chauk	349	Ishaak Colony
350	Roshan Nagar	354	Sharjah Colony
355	Khudabakhsha Colony		

Annex 2. Map Showing Health Vulnerability of Slums



Annex 3. India 1992/93 Health, Nutrition, Population and Poverty Total Population

Source: Socio-Economic Differences in Health, Nutrition and Population in India, World Bank, 2000

Indicator	Summery Definition	Quintiles					Population Average	Poor/Rich Ratio	Concentration Index	Conc. Index std. Error
		Poorest	Second	Middle	Fourth	Richest				
HNP Status Indicators	Deaths under age 12 months per thousand births	109.2	106.3	89.7	65.6	44.0	86.3	2.482	-0.14875	0.0553
U5MR	Deaths under 5 years per thousand births	154.7	152.9	119.5	86.9	54.3	118.8	2.849	-0.16942	0.0616
Children Stunted (%)*	Below-2 sd z-score, height for age, children under 4 years	55.6	54.0	48.6	43.3	30.9	47.1	1.799	-0.09698	0.0377
Children Underweight * (% moderate)	Below-2 sd z-score, weight for age, children under 4 years	59.8	59.4	55.3	47.1	34.4	51.9	1.738	-0.09200	0.0382
Children Underweight*	Below-3 sd z-score, weight for age, children under 4 years	29.0	26.4	21.3	16.3	10.8	21.2	2.685	-0.172122	0.0499
Low Mother's BMI (%)	Body Mass Index <18.5	Na	Na	Na	Na	Na	Na	Na	Na	Na
Total Fertility Rate	Births per woman age 15-49	4.1	3.6	3.2	2.8	2.1	3.4	1.952	-0.12492	0.0311
Age Specific Fertility Rate (15-19 years)	Births per 1000 women age 15-19	135	140	117	84	45	116	3.000	-0.19486	0.0663
HNP Service Indicators										
Immunization coverage (%) - Measles	Children age 12-23 months, by vaccination card or mother's report	22.8	28.7	42.4	55.5	71.0	42.2	0.321	0.22355	0.0398

- DPT3		30.8	36.4	52.7	65.8	83.2	51.7	0.370	0.19860	0.0346
- All		17.7	21.7	34.7	48.2	65.0	35.4	0.263	0.26245	0.0457
- None		48.4	40.8	27.5	18.0	7.9	30.0	6.127	-0.26950	0.0843
Medical Treatment of Illnesses Treatment of Diarrhea (%)										
- Prevalence	% 111 in the preceding 2 weeks	10.2	10.4	10.2	10.1	8.5	9.9	1.200	-0.02537	0.0194
- ORT use	ORS, RHF, or increased liquids	29.0	29.8	37.5	40.7	48.3	36.0	0.600	0.10141	0.0220
- Seen Medically	Brought to a health facility if ill	51.8	56.6	60.7	69.1	73.1	61.2	0.709	0.06851	0.0143
- % Seen in a Public Facility	Among those medically treated	16.2	14.2	20.1	16.6	12.9	16.2	1.256	-0.00688	0.0383
Treatment of Acute Respiratory infection (%)										
- Prevalence	%111 in the preceding 2 weeks	7.0	7.2	7.3	5.7	4.2	6.4	1.667	-0.07977	0.0446
- Seen Medically	Brought to a health facility if ill	63.8	60.6	67.4	77.7	85.5	68.6	0.746	0.05734	0.0211
- a/c Seen in a Public Facility	Among those medically treated	18.1	18.1	20.4	19.4	13.6	18.4	1.331	-0.00947	0.0377
Antenatal Care Visits (%)										
- to a medically Trained Person	Doctor, Nurse, or nurse-midwife	24.5	33.5	46.4	65.3	88.6	48.8	0.277	0.24693	0.0455
- to a Doctor		18.5	25.9	36.4	51.4	80.9	39.8	0.229	0.27873	0.00557
- to a Nurse or Trained Midwife	Nurses and nurse-midwives	6.0	7.6	10.0	13.8	7.7	9.0	0.779	0.10526	0.0692
- 2+ visits		33.5	42.7	56.1	71.2	90.4	56.3	0.371	0.19215	0.0367

Delivery Attendance (%)										
- by a Medically Trained Person	Doctor, nurse, or nurse-midwife	11.9	18.2	30.1	47.9	78.7	34.3	0.151	0.35140	0.0638
- by a Doctor		5.2	8.6	16.0	28.7	62.4	21.5	0.083	0.44883	0.0753
- by a Nurse or Trained Person	Nurses and nurse-midwives	6.6	9.6	14.1	19.2	16.3	12.8	0.405	0.18915	0.0530
- % in a Public facility		5.1	8.8	13.4	21.6	29.8	14.6	0.171	0.32107	0.0624
- % in a Private Facility		1.2	2.3	5.4	13.9	40.8	10.9	0.029	0.58704	0.0835
- % at Home		93.2	88.1	80.4	63.9	29.0	73.9	3.214	-0.14942	0.0771
Use of Modern	Currently married persons using a modern method									
Contraception (%)										
- Females		24.9	27.5	36.1	42.0	50.6	36.5	0.492	0.14493	0.0252
Knowledge of HIVI/AIDS	Knows sexual transmission									
Prevention (%)	Routes of HIV/AIDS									
- Females		Na	Na	Na	Na	Na	Na	Na	Na	Na
Number of Household Members		100179	100151	100123	100168	100133	500755			

* Stunting data not available for 5 states namely Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Tamil Nadu and West Bengal. Children from these 5 states are excluded from all childhood nutrition data calculations presented here.

Annex 4. FGD Methodology

FGD Guidelines

Qualitative information was sought on the following themes:

- Practices during pregnancy, with focus on antenatal care, tetanus toxoid vaccinations, IFA consumption
- Delivery practices – place of delivery, profile of birth attendant, delivery cleanliness, handling of complications
- Practices immediate to delivery – thermal protection, birth weight, colostrum feeding, identification of risk, handling of complications
- Infant care – immunizations, nutrition, continued breastfeeding
- Birth spacing – contraception use, associated beliefs
- Health seeking behaviors – for diarrhea, ARI and common ailments
- Identify medical care providers in the public and private sector – preference and reasons
- AWC Services – quality of services, acceptability in community for health services
- Mortality incidence – neonatal, infant and child mortality, factors causing death
- FGD respondent groups

Every group was comprised of 15-20 women of reproductive age. On average there were 2-4 pregnant women and 4-5 mothers of infants in each group. Of the seven slums where FGDs were conducted, six were identified as health vulnerable during the assessment.

Annex 5. Socio-demographic Profile of the Slums (Where FGDs Were Conducted)

Panchsheel Nagar – was established in 1992 when families from three slum sites were relocated here. The slum has a population of an estimated 700 families. Livelihoods include daily wage labor (mazdoori), work in restaurants and teashops and vending from handcarts. In terms of infrastructure facilities, there have been attempts at a park, community toilet, lanes and drains with inputs through the Slum Networking Project. All these are completely dysfunctional today. People use the open fields for defecation. Drainage lines are clogged, with slush water going down towards the houses at the end of the slopes. Public service channels (AWCs, schooling and health camps) function in the slum. There have been no complaints on quantity and quality of water.

Anna Bhau Sathe Nagar (1) – 45 families live in this pocket of a larger slum of the same name. The average size of the family is 6–8, implying a total population of about 300. Resettled on the 15% private land provision, it is located across from what is becoming the premier hospital in Indore, the Bombay Hospital. Men and women rag pick and deal in kabaadi (second hand materials and/or newspapers, etc.). Daily earnings remain uncertain with a range of Rs. 20 to Rs. 80. Infrastructure facilities are nil, and women have to walk an estimated distance of 400 m for water (to be used for any form of consumption).

Anna Bhau Sathe Matang Samaj Nagar (2) – About 275 families were relocated in the early 1990s from a central and 'attention-prone' slum, Shekhar Nagar, to what is now Anna Bhau Sathe Nagar (partly detailed above). Families work as waste collectors. Literacy levels are a low 10%. Water facilities are negligible, with a water tanker coming at irregular interval ranging from a week to 10 days. A community toilet has been constructed by the IDA, but remains unused because of limited water resources. In this area, shortage of water supercedes all other priorities from the point of view of the people living there. Public facilities (health, education) are absent in and around the slum.

Phiroze Gandhi Nagar – A fairly large slum, with a population of 3,500 distributed in four lanes. Livelihoods include work in teashops, restaurants and skilled work in embroidery, tailoring, masonry, party cooking and as domestic helpers. Approach roads and interior lanes are relatively well laid out. Most families have individual toilets. There is also a functional public toilet facility available at the edge of the slum. Majority of the children goes to a private or to a public school. Health facilities in the form of an AWC, ESI dispensary, government polyclinic and private practitioners are used depending on the nature of the ailment and individual preferences.

Rama Bai Nagar – The 115 families living in Ramabai Nagar have been relocated three times in the past 20 years. Devout followers of Buddhism, the group has strong links with their native villages and an ongoing exchange of culture and festivals persists even after many years. The

community has led a successful campaign for the closure of a liquor shop in their community to control the drinking habits of the men. Deprived of all infrastructure and service facilities, the slum is a classic example of why civil groups lobby against incomplete resettlement packages. The slum residents here are living at subsistence levels. The slum has been unable to grow and develop, with visible signs of this being chilldren dropping out from schools, stoppage of AWC services and a 3 km kuchcha patch of road restricting access to work.

Tiliya Badsa Kankad – A small settlement of 30 households, it is on the outskirts of the more recognizable and exposed slums of Baanganga and Nandbagh. On the outskirts of the city, men and women work as laborers in the agricultural fields at an average of Rs. 30 per day. However, there is no certainty of regular work. Though facilities for public health services are on both sides of this pocket (within a radius of 1–3 kms.), people use private practitioners.

Chandra Prabhat Shekhar Nagar – A larger slum, with a population of 5,000, this has a predominant Maharashtrian community. Different pockets of this slum have varying levels of poverty, with many households dependent on ragpicking, domestic help or vegetable/flower vending for their livelihoods. Most of the children are enrolled in formal schools, but drop out in senior classes with high failure rates in Board classes [Note: don't know what this means, but I presume the reader will.]. Alcoholism is extremely high in this slum, and households survive primarily from earnings generated by the women. Chandra Prabhat Shekhar Nagar is one of the IHIP-adopted slums, and has been the focus of attention and help from several NGOs as well. This is evident in a high level of awareness and consciousness among the people about their situation and about efforts to ameliorate it. Three AWCs function in the area, and the public, private and charitable (Choitram Dispensary) sectors are accessed for health services.

Annex 6. Child Health Indicator Table

Child health indicators	Urban MP, NFHS, 1998-99	Indore, District Household Survey, 1999	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in urban India, 1992-93	Urban India, NFHS, 1998-99
Neonatal mortality (for the five-year period preceding the survey)	44.0				31.7
Infant mortality (for the five-year period preceding the survey)	61.9		60 (for 3 year period)	107.7	47.0
Under-5 mortality (for the five-year period preceding the survey)	82.9			142.6	63.1
Neonatal mortality as a proportion of infant mortality (percentile)	71.08				67.44
Causes of death from diarrheal disease, measles, malaria, ARI, HIV/AIDS, TB, Accidents					
Antenatal care					
Percentage of births whose mothers had antenatal visits (minimum of 3)	51.2	35.0	32.6	46.5	69.2
Percentage of births whose mothers consumed iron-folic acid supplements for 3+ months	49.11	51.8	40.3 (50-100 tablets)		72.8
Percentage of births whose mothers received tetanus toxoid vaccines (minimum of 2)	73.7	75.7	89.7		81.9
Percentage of HIV-positive pregnant women at clinics					
Safe delivery					
Percentages of deliveries at home	50.1	37.7	42.7	75.6	34.9
Percentages of deliveries at a health center (public/private/NGO)	49.1	62.3	57.2	24.4	65.1
Percentage of deliveries attended by a trained person at home or at a health facility	61.5	72.0	60.8	45.9	73.3
Child health indicators	Urban MP, NFHS, 1998-99	Indore, District Household Survey,	MP Urban slums, MICS, UNICEF,	HNP for poorest two quintiles in	Urban India, NFHS,

		1999	1998	urban India, 1992-93	1998-99
Birth Spacing					
Birth interval (median number of months between current and previous birth)	31.4				30.9
Modern contraceptive prevalence rate (any method, currently married women)	52.5	67.4		29.1	61.0
Permanent sterilization method rate	37.9	51.1			36.0
Female sterilization method in proportion to total modern contraceptive prevalence method (percentile)	72.19	75.82			59.01
Birth Weight					
Percentage of babies weighed at birth	33.4 + 9 (wgt. not known)		51.1		51.1+8.7 (wgt. not known)
Percentage of known babies with weight < 2.5 kg	11.3		13.3		10.8
Breast feeding					
Percentage of infants breast fed within one hour of birth	12.3		1.8		19.2
Percentage of infants breast fed exclusively up to 6 months	34.5 (all MP)		1.3		19.4 (all India)
Complementary feeding					
Percentage of children given soft solid foods at 6 months	19.6 (all MP)		45.6		23.6 (all India)
Immunization rates					
Percentage of children completely immunized by 12 months	38.1		69.8		51.9
Percentage of children receiving measles immunization by 12 months	50.9				59.7
Percentage of children receiving five doses (other than Pulse Polio) of polio (??)					
Percentage of children < 12 months left out from UIP (Children not receiving DPT 1) {Left-out rate}	19.5			44.4	16.4
Percentage of children dropping out from UIP (DPT 1 to DPT 3) {Drop-out rate} out of total children	25.9		7.2		13.0
Child health indicators	Urban MP, NFHS, 1998-99	Indore, District Household Survey, 1999	MP Urban slums, MICS, UNICEF, 1998	HNP for poorest two quintiles in urban	Urban India, NFHS, 1998-99

				India, 1992-93	
Vitamin A					
Percentage of children receiving at least one dose of Vitamin A in the past six months	18.7				21.2
Diarrheal diseases					
Percentage of children treated with ORS or recommended home fluids	54.8		49.1	33	58.1
Percentage of small children continued to be breastfed during diarrhea					
Percentage of children whose actual consumption of fluids became less than before diarrhea episode			65.8		
Care seeking					
Percentage of children taken to a health facility for danger signals of diarrheal disease (not eating or drinking)	74.9		28.3	69.2	75.2
Percentage of children taken to health facility for symptoms of ARI (fever, cough, rapid breathing)	71.3			65.6	75.1
Percentage of children taken to health facility for symptoms of fever (not accompanied by cough)					
Percentage of children under 3 years underweight for age – Below –2 SD (includes children below – 3 SD)	44.3		41.5	67.9	38.4
Percentage of children under 3 years underweight for age – Below –3 SD	19.5		16.9	31.6	11.6
Iron deficiency Anemia					
Percentage of children (<3) in any grade of anemia	73.7				70.8
Percentage of children with moderate or severe anemia	50				47.1
Percentage of women (15-49) in any grade of anemia	46.2				45.7
Percentage of women with moderate or severe anemia	12.5				13.7

Environmental health conditions	Urban MP, NFHS, 1998-99	MP Urban slums, MICS, UNICEF, 1998	Indore slums, Poverty and Vulnerability in Indore, Oxfam, 1999	Urban India, NFHS, 1998-99
Water Supply and Sanitation				

Percentage of population with access to piped water supply at home	72.6	32.3	11.4	74.5
Percentage of population accessing public tap/hand pump for drinking water	18.4	66.6	88.6	15.5
Percentage of population using a private sanitary facility for the disposal of excreta (flush/pit toilet)	64.7	38.9	35.3	80.7
Percentage of population using a public toilet facility	35.2	61.2	22.0	19.3
Percentage of population not having any toilet facility and using open fields			42.7	
Percentage of households with low SLI	20.2			14.3

Annex 7. Role of the Health Department in ICDS

Source: J.Kishore, 2001 National Health Programme of India

Role of the Health Development

Provides following health services:

- health check-up
- handling referrals from Anganwadi,
- immunizations carried out by female health workers
- health and nutrition education
- continuing education of ICDS staff
- monitoring of the health component of ICDS

Health infrastructure

1. Director, Health Services or Director, Family Welfare and MCH (RCH) are honorary state coordinators of ICDS, who facilitate the implementation of ICDS, ensure adequate supply of medicine, vaccines, equipment, etc., organize training, coordinate activities with ICDS staff and his subordinate.

2. Senior Advisor is a senior official of the Health and Family Welfare department who ensures that ICDS projects originating at the state level are being monitored regularly. Also responsible for continuing education at the sectoral level and submits quarterly reports to the central cell and state coordinator.

3. Official-in-charge Analyser (ODA) is an another official of the health department who ensures submission of state coordinators quarterly reports, assists state coordinator and takes part in training courses.

4. Divisional Adviser is a deputy director or joint director, or additional director who reviews ICDS program implementation, coordinates with district officials and program officials and organizes meetings.

5. Chief District Advisor is the head of the medical and health department at the district (Chief Medical Officer), who organizes and supervises all activities at district.

6. District Advisor is a deputy CMO, Additional CMO, District TB, Malaria or Leprosy Officer who supervises one of the 3-4 ICDS projects in the district.

7. Project Advisor is the official in charge of the community health center who supervises and coordinates continuing education with other medical officers, prepares monthly monitoring reports and attends monthly district-level meetings.

8. Sector Advisor: one of the medical officers of the CHC is designated as sector advisor. In each ICDS project there are 3-4 sectors at the community level. Sector advisors participate in continuing education and arrange monthly meetings with all Anganwadi workers, LHVs,, Mukhya Sevikas, etc.

Annex 8. ICDS Projects in India

Source: ICDS Directory, Ministry of Human Resource Development, 2000

Name of the state	Rural	Tribal	Urban	Total
Andhra Pradesh	200	30	21	251
Arunachal Pradesh	46	-	-	46
Assam	84	21	2	107
Bihar (incl. Jhrakhand)	203	111	9	323
Goa	11	-	-	11
Gujarat	147	44	12	203
Hrayana	111	-	5	116
Himachal Pradesh	66	6	-	72
Jammu and Kashmir	111	-	2	113
Karnataka	166	9	10	185
Kerala	112	-	8	120
Madhya Pradesh	194	84	20	298
Chhatisgarh	48	72	3	123
Maharashtra	209	38	24	271
Manipur	8	23	1	32
Meghalaya	-	30	-	30
Mizoram	-	20	1	21
Nagaland	1	43	2	46
Orissa	150	119	12	281
Punjab	138	-	4	142
Rajasthan	150	28	13	191
Sikkim	4	-	1	5
Tamil Nadu	374	2	55	431
Tripura	17	10	4	31
Uttar Pradesh (incl. Uttaranchal)	532	10	18	560
West Bengal	229	43	22	294
Andaman & Nicobar Islands	3	1	1	5
Chandigarh	-	-	3	3
Delhi	5	-	23	28

Dadra and Nagar Haveli			-	1	-		1
Daman Diu			2	-	-		2
Lakshwadeep			-	1	-		1
Pondicherry			3	-	2		5
Total			3324	746	278		4348

Annex 9. State Incidence of Poverty

Source - Planning Commission, Press Information Bureau, Estimates of Poverty, 1997, GOI, New Delhi.

Number and Percentage of Population below Poverty Line, 1993-94 (Modified Expert Group)						
State/ Union Territory	Rural		Urban		Combined	
	Number (in million)	Percentage	Number (in million)	Percentage	Number (in million)	Percentage
India	244.03	37.27	76.34	32.36	320.37	35.97
State / Union Territory						
Andhra Pradesh	7.95	15.92	7.45	38.33	15.40	22.19
Arunachal Pradesh	0.36	45.01	0.01	7.73	0.37	39.35
Assam	9.43	45.01	0.20	7.73	9.64	40.86
Bihar	45.09	58.21	4.25	34.50	49.34	54.96
Goa	0.04	5.34	0.15	27.03	0.19	14.92
Gujarat	6.22	22.18	4.30	27.89	10.52	24.21
Haryana	3.66	28.02	0.73	16.38	4.39	25.05
Himachal Pradesh	1.54	30.34	0.05	9.18	1.59	28.44
Jammu & Kashmir	1.91	30.34	0.19	9.18	2.09	25.17
Karnataka	9.60	29.88	6.05	40.14	15.65	33.16
Kerala	5.60	25.76	2.05	24.55	7.64	25.43
Madhya Pradesh	21.62	40.64	8.23	48.38	29.85	42.52
Maharashtra	19.33	37.93	11.19	35.15	30.52	36.86
Manipur	0.63	45.01	0.05	7.73	0.68	33.78
Meghalaya	0.71	45.01	0.03	7.73	0.74	37.92
Mizoram	0.17	45.01	0.03	7.73	0.19	25.66
Nagaland	0.49	45.01	0.02	7.73	0.51	37.92
Orissa	14.09	49.72	1.97	41.64	16.06	48.56
Punjab	1.78	11.95	0.74	11.35	2.51	11.77
Rajasthan	9.47	26.46	3.38	30.49	12.85	27.41
Sikkim	0.18	45.01	0.00	7.73	0.18	41.43
Tamil Nadu	12.17	32.48	8.04	39.77	20.21	35.03
Tripura	1.14	45.01	0.04	7.73	1.18	39.01

Uttar Pradesh	49.62	42.28	10.83	35.39	60.45	40.85
West Bengal	20.99	40.80	4.47	22.41	25.46	35.66
Andaman & Nicobar Islands	0.07	32.48	0.03	39.77	0.11	34.47
Chandigarh	0.01	11.35	0.07	11.35	0.08	11.35
Dadra & Nagar Haveli	0.07	51.95	0.01	39.93	0.08	50.84
Daman & Diu	Neg	5.34	0.02	27.03	0.02	15.80
Delhi	0.02	1.90	1.53	16.03	1.55	14.69
Lakshadweep	0.01	25.76	0.01	24.55	0.01	25.04
Pondicherry	0.09	32.48	0.24	39.77	0.33	37.40

Notes:

Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland and Tripura.

Poverty Ratio of Tamil Nadu is used for Pondicherry and Andaman & Nicobar Islands.

Poverty Ratio of Kerala is used for Lakshadweep.

Poverty Ratio of Goa is used for Dadra & Nagar Haveli.

Urban Poverty Ratio of Punjab is used for rural and urban poverty of Chandigarh.

Poverty Line of Maharashtra and expenditure distribution of Goa is used to estimate poverty ratio of Goa.

Neg – Negligible

Annex 10. Draft National Slum Policy

A. Objectives

The main objectives of this policy are:

To create awareness amongst the Public and in Government of the underlying principles that guide the process of slum development and improvement and the options that are available for bringing about the integration of these settlements and the communities residing within them into the urban area as a whole.

To strengthen the legal and policy framework to facilitate the process of slum development and improvement on a sustainable basis.

To establish a framework for involving all stakeholders for the efficient and smooth implementation of Policy objectives.

B. Governing Principles

Slums are an integral part of urban areas and contribute significantly to their economy both through their labor market contributions and informal production activities. This Policy, therefore, endorses an upgrading and improvement approach in all slums. It does not advocate the concept of slum clearance except under strict guidelines set down for resettlement and rehabilitation in respect of certain slums located on untenable sites (see Section C, paragraph 4a).

The Policy embodies the core principle that households in all urban informal settlements should have access to certain basic minimum services irrespective of land tenure or occupancy status.

Cities without slums should be the goal and objective of all urban planning for social and economic development. To reach this goal, it will be necessary to re-vision our urban development processes to make towns and cities fully democratic, economically productive, socially just, environmentally sustainable, and culturally vibrant.

Urban growth and development should lay greater emphasis on equity and distributive justice. This will mean adopting policies and processes that promote balanced, equitable and sustainable development. The Policy aims to support the planned growth of urban areas in a manner that will help to upgrade all existing slums and informal settlements with due regard for the protection of the wider public interest.

The proliferation of slums and informal settlements can be obviated by ensuring continuous supply/recycling of serviced and semi-serviced land suitable for high density occupation by lower income groups. Institutional, planning and fiscal mechanisms should be devised to prevent the idle use of land in urban areas. In those few cases where land needs to be conserved for

future use in the wider public interest, more effective safeguarding measures must be evolved by the land owning agencies concerned.

Urban local bodies should work in collaboration with all other stakeholders to enhance the impact of slum development and improvement activity by building the capacities of the poor and empowering them to improve their own living conditions. Urban management systems need to be improved in three critical areas: i) resource allocation and use; ii) service delivery; and iii) urban governance - democratic, efficient, transparent and gender sensitive.

The poor represent an extremely important element of the urban labor force and contribute substantially to total productivity and labor market competitiveness. It is vital that all ULBs recognize the contribution of the urban poor in helping to build urban prosperity and make sufficient provision for them to have access to affordable land, house sites and services. The present planning and development framework is exclusive of slums and informal settlements. It views slums as "problem areas" requiring corrective action. The legal framework with its origin in the pre-independence socio-economic context requires modifications and progressive change. There is a need for a greater commitment to institutional re-orientation by adopting a more ‘enabling’ approach to the delivery of basic services accessible to the poor through the more effective mobilization of community resources and skills to complement public resource allocations. Major areas of attention include: town planning, land management, poverty alleviation, basic service delivery and capacity building.

Greater participation of communities and civil society in all areas of planning, capacity building and development is envisaged. The 74th Constitution Amendment represents the context within which this Policy document is set, recognizing that it is the ultimate responsibility of States and urban local bodies to interpret and implement this policy to the best of their ability. This Policy reinforces the emphasis in the 74th Constitutional Amendment on decentralised participatory structures such as Ward Committees and Municipal Planning Committees in support of local initiatives by community groups. This Policy stresses, inter-alia, a priority role for local bodies in the discharge of functions listed in the Twelfth Schedule viz: i) slum improvement and upgrade, ii) urban poverty alleviation, iii) regulation of land use and construction of buildings, iv) provision of urban amenities, and v) public health and sanitation including provision of water supply.

In line with the 74th Amendment this Policy presumes that all public land not identified for specific government use should be vested with the ULB.

C. Essential Strategic Interventions

1. "Inclusive" Approach to Definition of Slum/Informal Settlement

While different State laws have adopted different definitions of the word slum, the Census of India 2001 has proposed to treat the following as ‘Slum’ areas: -

All areas notified as ‘Slum’ by State/Local Government and UT Administration under any Act;

All areas recognized as ‘Slum’ by State/Local Government ad UT Administration which have not been formally notified as slum under any Act;

A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

This definition appears to be satisfactory at all India level.

a) In general, all under-serviced settlements, be they unauthorized occupation of land, congested inner-city built up areas, fringe area unauthorized developments, villages within urban areas and in the periphery, irrespective of tenure or ownership or land use shall be covered under the definition of a slum/informal settlement.
b) The criteria for defining a slum/informal settlement shall take into consideration economic and social parameters (including health indicators) as well as physical conditions. Each State/Union Territory shall lay down the norms/criteria for categorising an area as under-serviced and the local body of each town shall list all such areas as slums.

2 Comprehensive Listing of Slums/Informal Settlements

a) For the purpose of providing basic urban services, all under-serviced settlements characterized by poor physical and socio-economic conditions, irrespective of land tenure status and ownership should be identified and demarcated from regular planned neighborhoods inhabited by better off residents. Once identified, these settlements should be listed by the urban local body.

b) Registration of slum dwellers: All people residing in such listed settlements should then be registered with the ULB in order to prevent ineligible beneficiaries being included in development programs and schemes just before the initiation of improvement works or the issue of tenurial rights. The date for the completion of this process will be at the discretion of the ULB. A reckoning date will be required for administrative purposes in order to facilitate annual planning, budgeting and service provision. The register should updated to include subsequent amendments and new registrations lodged with Ward Committees from time to time.

c) Identity Card: A suitable identity card shall be issued to all households in listed slums. The identity card may contain a few details such as household name, address, details of family members etc.

Basic Service Eligibility: Once settlements have been listed in the above manner all registered residents will be automatically eligible to receive basic minimum services/ amenities from the urban local bodies (ULB) pending any more permanent measures taken to upgrade, rehabilitate or resettle the community. Each State and ULB should determine the norms and standards for basic services such as water, sanitation, electricity, health, etc and how these will be delivered to residents of listed settlements.

Other Entitlements: All urban poor, regardless of their land tenure status, shall be entitled to any other special assistance or welfare schemes that are operative within the urban area and/or the State and which are not geographically or spatially determined but targeted to specific poverty groups. These may include schemes for economic support, credit, pensions, insurance etc and services.

3. De-listing

The urban local bodies should de-list those settlements which have been provided with a sustainable level of basic services and where socio-economic indicators have reached defined acceptable norms. ULBs may also consider prescribing a certain period of time (two or three years) for providing basic services under any slum development programs after which, the area should be reviewed for de-listing.

4. Classification of Land Status/Tenability

The land status of all listed slums/informal settlements should be classified by the ULB as either Tenable or Untenable in order to determine whether or not regular planned service provision will be undertaken on an in-situ or re-settlement basis. All listed slums/informal settlements should be considered as Tenable unless the site falls strictly within the definition of Untenability as expressed below:

a) Definition of Untenable Slums/Informal Settlements: A site shall not be declared as Untenable unless existence of human habitation on such sites entails undue risk to the safety or health or life of the residents themselves or where habitation on such sites is considered contrary to "public interest".

The issue of whether a settlement's existence is against public interest shall be decided by the District Magistrate in consultation with the ULB and technical experts, after giving full opportunity to the resident community to express their views, in a public hearing. The process of consultation and public hearing shall be completed within three calendar months from the date of their initiation.

b) Definition of Tenable Slums/Informal Settlements: All listed settlements that do not fall strictly within the category identified above under untenable situations shall be considered 'Tenable', and thus eligible for in-situ upgrading (subject to the settlement of ownership disputes on private land).

5. Granting of Tenure

a) Tenure on Government Owned Land: Tenure shall be granted to all residents on tenable sites owned or acquired by government. Full property rights shall be granted on resettlement and/or rehabilitation sites. Tenure shall be allotted in the joint names of the head of household and spouse, subject to the proviso that single women or single men headed households shall not be precluded from having full tenure rights. Other forms of tenure may also be considered, if desired by the community. This may include: group tenure, collective tenure, co-operative tenure etc.

Conflict Resolution: On lands occupied by Slums/Informal Settlements and owned by Central, State and Local government bodies, Municipal Authorities are to be designated as nodal agencies for initiating the process of resolution of disputes. It will be obligatory for Ministries at the state and central level to participate in these negotiations. The Ministry of Urban Affairs and Employment M(UAE) will play a pro-active role in resolving disputes on such lands owned by Union Ministries so that all basic services, development and resettlement and rehabilitation

(R&R) activities can be negotiated more effectively. The M(UAE) may be empowered to act as an arbitrator between Central Government and local bodies concerning disputes over such lands (owned by Union Government).

b) Tenure on Privately owned lands

Land Acquisition: All Tenable settlements on private land should be acquired unless the ULB decides to pass a resolution otherwise. All States should make immediate provision to streamline and simplify the procedure to ensure the speedy acquisition of land for slums on private land categorized as Tenable. The land acquisition process should be completed within a maximum period of six calendar months from the time of initiating the process.

Negotiated Compensation: The acquisition of land from private parties should be undertaken on a negotiated basis. All the stakeholders (residents, urban local bodies, public agencies, others) may be invited to participate in the negotiation to promote transparency and equity. Funds earmarked from a tax/cess on vacant lands should be drawn from the Urban Poverty Eradication and Shelter Fund (see paragraph 12c) to provide compensation for acquiring private lands on which the slum settlements exist. Compensation may include monetary contributions, sharing of land, lease of land, allocation of an alternate site etc.

c) Residents Association: At the time of granting tenure, it should become a pre-requisite for the residents to form an association/society which must be recognized by the urban local body. This association/society should normally consist of all resident families in that area where each family is represented by one woman.

d) Land Use Classification: Land use for in-situ upgrade projects should be designated as high density mixed use. This will be subject to the condition that any commercial/ industrial/trading ventures permitted on such lands shall only be those which are non polluting, environment friendly and which provide employment to local slum dwellers.

e) Layout Planning: In the in-situ upgrading projects, proper layout planning including plot re-alignment and also preferably equalisation of land/shared land areas should precede the granting of full property/tenurial rights. This should be undertaken on a participatory basis with local residents.

f) Sale of Tenure/Property Rights: A fee should be collected from residents for the sale or transfer of ownership rights based on the following criteria:

a plot area up to a maximum of 25 sq m may be granted at a concessional rate

any area in excess of this may be granted at such rates decided by the ULB

plot sizes may be fixed below 25 sq m if mutually agreed by the community and the ULB

g) Sale of House Plots: While this Policy would like to ensure that, as far as possible, house plots remain with the original allottees, it also recognizes that any over-regulation of the property

market will simply lead to the flourishing of a "black market". With a view to obviate this, the Policy would not wish to prevent any poor household from realizing the value of their asset should they be forced to sell for any legitimate reason (such as loss of income, death, etc) provided that any sale of plot/title meets with the approval of the residents association/ ULB established under c) above and where the property is preferably sold back to the same association/ ULB. The association/ ULB should consider levying a tax/ charge on all such sales to ensure that a proportion of any increase in land value realized from such a sale or transfer is utilised for communal benefit. The levying of taxes or charges by a Residents Association or similar organization will require special legal or administrative actions.

6. Resettlement and Rehabilitation

It is to be emphasized in keeping with the principles of this Policy, that this document primarily endorses and promotes an upgrading and improvement approach to deal with slums and informal settlements as opposed to resettlement. However, where habitation is on a site categorized as Untenable as indicated under Section 4 above, the following guiding principles are enumerated to safeguard the interests of residents in such settlements:

Those residing in listed settlements classified as Untenable are entitled to receive basic minimum services until proper relocation and resettlement provisions have been established and met. All States/ULBs must draw up comprehensive resettlement and relocation guidelines for urban dwellers and all relocation or resettlement of dwellers residing in Untenable sites shall be implemented strictly in accordance with such guidelines which should ensure that:

a) Alternatives to resettlement should be fully explored before any decision is taken to move people.

b) Relocation distances should be minimized to reduce the impact on livelihoods.

c) Resident dwellers must be provided with some choice of alternative sites and where feasible, an alternative rehabilitation package.

d) All resettlement sites should be adequately serviced and provision should be made for public transportation prior to settlement.

e) The livelihoods of affected people must be sufficiently compensated within a fixed period.

f) Participation of primary stakeholders, particularly women, in planning and decision making is a pre-requisite for any resettlement process.

g) Women’s particular needs and constraints must be specifically addressed.

h) Any urban development project that leads to the involuntary resettlement of communities must make provision to cover the costs of R & R.

i) All stages of the resettlement process including the transition and follow-up periods should be closely monitored and supervised by the ULB with community representatives. (Also see section 16 on monitoring and evaluation)

Translating these principles into action envisages:

full, accurate and detailed baseline inventories of all assets including livelihoods

community mobilization

timing of the interventions to reduce dislocation and discomfort especially during periods of inclement weather

communication at all levels to ensure transparency

mobilizing support of the local media to assist the process

co-ordination of multiple ministries and convergence of various programmes

participation of the host community at all stages of the process

granting land tenure rights

monitoring and evaluating

7. Planning for Integration

a) Modify Existing Planning Framework: All existing planning instruments such as Master Plans, Land Use Plans etc should be modified to ensure that slums and informal settlements can be properly integrated into the wider urban area. In order to achieve this objective it will be necessary to:

i) Ensure that all Master Plans and Land Use plans allow for high density, mixed use (for micro-enterprise) land occupation in all slums/informal settlements. This will ensure that every ULB designates sufficient and more appropriate (higher density lower cost) living and working space for the urban poor within the urban area.

ii) Master Plans and Land Use Plans should also ensure that all new land development schemes make sufficient provision for land to house low income workers as required by such schemes.

iii) All plans and other regulatory instruments must provide sufficient flexibility to modify layouts and building regulations in line with more realistic density/ mixed use requirements.

The powers to implement such changes outlined in i - iii above should be vested in the ULB within parameters laid down by State governments.

b) Integrated Municipal Development Plan (IMDP): All ULBs should begin to work towards the formulation of an Integrated Municipal Development Plan. The principle objective of this plan is to ensure that the ULB has an adequate and sustainable level of infrastructure and services for all its residents and that such infrastructure and services are planned and delivered in an equitable

manner. In order to achieve this objective it will be necessary to identify the capital and recurrent requirements and costs for the city as a whole (e.g., bulk water supply) as well as the specific wards and neighborhoods within the city (secondary and tertiary water supply). The plan should prioritize ways and means of narrowing the gap between the better serviced and less well serviced (slums) areas of the ULB.

c) Convergence: The IMDP process assumes the implementation of the 74th Amendment and embodies the principle of convergence of activities and funds to achieve more efficient and equitable urban development. The IMDP will incorporate existing plans and reflect schemes and budget allocations as follows:

Master Plans/Land Use Plans and other statutory instruments

Urban Development Plans & schemes

Urban Poverty Alleviation Plans & schemes

Departmental Plans & schemes in the ULB area

d) Dynamic Multi-Year Planning: The IMDP outlined in b) above should be undertaken as a dynamic process which will be updated and reviewed every three years. The overall plan should then be implemented through Annual Action Plans and budget allocations so that development work can be taken up in a phased manner. These Annual Action Plans should reflect plan priorities based on the level of service deprivation or service gaps pertaining in the wards and neighborhoods.

e) Bottom-Up Planning: Planning should begin at the micro-level with each urban poor area drawing up a list of existing services and identifying gaps and deficiencies. This activity should be undertaken by the community using participatory planning techniques and each plan should include a clear prioritization of needs and an indication of different stakeholder contributions towards costs. ULBs will be required to submit evidence of community participation in planning service provision.

8. Environmental Improvement

The Provision of physical infrastructure components such as water supply, drainage, sanitation, improved access, electricity etc, should support the ultimate objective of improved quality of life. The evidence from existing slum improvement projects clearly shows that an improved physical environment greatly facilitates the integration of the settlement in the wider urban area and at the same time, contributes to improved livelihoods and health and well being of the community.

a) Approach
i) Community Based Approach: All physical upgrading and improvement in informal settlements should adopt a Community Based Approach with the active involvement of members of the community at every stage of design, implementation, and maintenance of services and assets. Community structures and systems should reflect local conditions and preferences rather than conform to any uniform pattern. Communities have an important role to play at all stages of

service delivery in terms of location of the service points, day-to-day functioning of the service and guarding against its misuse. Communities should be encouraged to contribute land and resources to help establish community centers and to promote the collection of user charges to contribute to the operation of certain services.

ii) Target women and children: There is a need to target women and children directly in the design and implementation of physical infrastructure and the delivery of social and economic services. Infrastructure users, especially the urban poor and women are central to the sustainability of any investment decisions related to infrastructure.

iii) Service delivery on individual household basis: Wherever possible, the delivery of basic services such as water, sanitation and electricity should be provided on an individual household basis and may even precede the granting of full tenure rights. Individual connections will improve operations, maintenance, and facilitate recovery of user charges and thus improve the overall environment.
iv) Contracting - out: Wherever possible works should be undertaken by communities/CBOs under appropriate supervision of ULBs. Such works must be done according to departmental norms and procedures with proper muster rolls maintained and other stipulations to be observed. Services may also be contracted out, where appropriate, to NGOs and other private companies. Solid waste management has already been successfully contracted-out by many ULBs. Similarly, the maintenance of pay and use toilets has also been contracted-out to NGOs and community based organizations (CBOs). State enactments/ procedures dealing with improvement works should be modified to allow the implementation of such works to be undertaken on a contract basis by the community/CBOs.

Physical Infrastructure Development:

The guiding principles and expected outcomes to be kept in focus while planning and implementing the following basic infrastructure and services are outlined as:

i) Water supply: Quantum, duration, timing and water quality are the four critical factors in planning water supply delivery. Dual and standby systems, such as piped supply supported by local hand-pumps should be considered as a means of helping to address these four factors.

The norm for provision of public water supply stand post is suggested to be one source for 25 persons.

Even where individual water tap connections are provided, it may be desirable to install hand-pumps or community storage facilities to offset poor frequency of supply and inadequate storage capacity at individual household level.

It is desirable that the collection of user charges and the maintenance of assets should be undertaken by community groups on behalf of the ULBs.

ii) Sanitation: ULBs should avoid constructing community latrines within slum/informal settlements as these quickly degenerate on account of poor operations and maintenance (O&M) thus becoming counter productive to public health. Where there is insufficient space for individual sanitation options (mostly where on-site disposal systems have to be adopted) group

or cluster latrines with clearly demarcated and agreed household responsibilities for O&M may be a suitable alternative option.

The norms for cluster latrines, at the rate of one seat for 50 persons, is suggested, with adequate institutional arrangements for maintenance and upkeep with the involvement of community. Experience in Pune where such cluster latrines have been constructed at an average cost of Rs 40,000 per seat, have shown encouraging results.

It is vital that any community wide sanitation programme be preceded by an awareness campaign designed to raise demand for the implementation of specific sanitation options. This would greatly facilitate all subsequent O&M activities as would also assist the process of raising financial contributions. Many members of the community, especially male members, do not perceive sanitation as a clear priority need. This needs to be addressed before embarking upon the installation of sanitation.

Considering the limitations on improving sanitation in many towns due to the absence of underground drainage and sewerage systems, low cost sanitation options, particularly twin pit pour flush latrines may be a more appropriate and cost effective option for slums duly keeping environmental safeguards in mind. Efforts should be made to popularize and facilitate the introduction of such systems wherever appropriate. The tenurial status and likelihood of a settlement getting relocated at some point in the future should not deter promoting such systems since the benefits of such environmental improvement far exceed the initial investment incurred.

iii) Pedestrian and Vehicular Access Ways: Paved access for pedestrians and/or vehicles will greatly improve overall accessibility. Paved access will encourages investment in the community and promote physical integration with neighboring areas. It may also help to improve social integration within and between communities. Paved access will also greatly facilitate the introduction of other related infrastructure such as storm water drains, underground drainage, water supply, electricity and collection/removal of garbage. Paving would also help in maintaining a clean environment and help reduce flooding and water stagnation. Paved access ways also facilitates the use of such facilities for social activity, extension of household activities and space for economic activity.

iv) Storm Water Drains: Drains in slums serve the dual purpose of carrying sullage water from individual houses as well as draining storm water. It is crucial to integrate the outfalls of such drains with the city's main drainage system. The planning of slum drainage should be fully integrated into the planning of neighboring systems as well as the city as a whole.

v) Electricity: Individual house connections will greatly enhance the comfort and safety of living and working conditions for residents. The mere provision of street lighting without formal household connections leads to illegal tapping and loss of revenue and at the same time causes unplanned loading of the system and fire hazards. Community management systems for collection of user charges will facilitate improved revenue recovery and reduce revenue losses.

vi) Solid Waste Collection: Sustained awareness campaigns and provision of waste collection receptacles will facilitate a cleaner environment. Urban Local Bodies could organize 'clean slum competitions' and institute prizes to create more awareness and encourage the community groups

to maintain a clean environment within their localities. At community level, management systems that employ private sweepers by collecting monthly charges may also be adopted.

9. Improving Access to Social Services

Basic services of health, education and access to credit are crucial for human capital development and reduce the incidence of poverty. Improved access to social services would also help building up the capacities of poor and empowering them to improve their own living conditions and quality of life. Effective delivery of these services would also reduce social inequities and promote integration of people residing in slums into the social and economic networks of the city as a whole, thereby enhancing the overall productivity of the city. Various physical infrastructure components such as water supply and sanitation have a direct bearing on improving health conditions in slums. This section outlines a number of complementary services where ULBs should actively seek to improve access for the urban poor.

a) Health Services:

Wherever health services and national health programs have been devolved to city level following the 74th Amendment, ULBs must build health management capacities to improve service delivery to the poor.

i) Participatory Health Delivery : All promotive, preventive and curative health services for the urban poor should be implemented on a participatory basis with active community involvement and support. All required training and basic infrastructure should be arranged through convergence with departmental schemes.

ii) Demand for Health Services : The community should be mobilized to create demand for better preventive health services and to access these services in a more effective manner. Hygiene behaviour changes should be promoted as an integral part of the sanitation services outlined in section 8 b) ii above. An emphasis should also be placed on health education for STD/ HIV prevention, as well as measures to combat alcoholism and violence. ULBs should establish a network of community health workers/ volunteers to facilitate this process through health promotion activity.

iii) Private Sector Partnerships : ULBs may consider establishing formal partnerships with private medical practioners to undertake the delivery of curative services in slums. Such partnerships could provide greater outreach of services at low cost. Traditional systems of medicine may also be used where this expertise is available.

iv) Health Insurance to Widen the Access to Curative Health Care: ULBs should encourage communities to participate in health insurance schemes in conjunction with the Saving and Credit society component of the Swarna Jayanti Shahari Rozgar Yojana (SJSRY) scheme and any other scheme for widening access to curative health care.

b) Education:

Attention and efforts should be focused on increasing the school enrollment at primary level, reducing school drop-out rates particularly for girls and supplementing formal school education with coaching assistance to assist slum children join the formal schooling system. The following specific measures will facilitate this process:

i) Primary Education: ULBs should identify all informal settlements that are inadequately served with pre-school and primary school facilities. Funds should then be made available under NSDP and other departmental programs to address this problem on a priority basis with the most underserviced areas receiving priority assistance. Multi Purpose Community Centers (MPCC) may also be used for primary education where necessary.

ii) Pre-Schools and Non Formal Education: ULBs should actively promote pre-school/creche facilities and non formal education focusing on literacy and vocational training. Multi Purpose Community Centers (MPCC) may be used for pre-schools/creches facilities, non formal education classes, adult education, recreational activities etc. It is to be emphasized that community management and control on the use of community centers is desirable to avoid misuse of this facility.

iii) Community Management in Education: Mobilizing the community and use of resource persons from within the community to supervise and monitor the educational activity would greatly enhance the delivery of this service. Contributions by way of space and building would build stakes of the community in the process of creating awareness and demand for this service.

iv) Education Incentive Scheme: Innovative incentive schemes may be established for those communities that show good performance in improving school attendance particularly in relation to the female child in both the formal and non-formal systems.

v) Literacy: A strong emphasis should be placed on developing literacy skills especially for women and children. The ULB should ensure that all slum development schemes are properly integrated into state and national literacy initiatives and campaigns. Community halls and other public spaces may be used for holding literacy classes. NGOs wishing to participate in literacy schemes for slum dwellers should be given access to such halls and other facilities. vi) Day Creche Facilities: ULBs should make provision for establishing day creche facilities in all slums to enable women to participate more fully in the labor market. Community halls may be used for such purposes and parents may be encouraged to contribute to the cost of running and maintaining such facilities.

c) Child Labour and Child Rights

ULBs should be active partners in the implementation of the international convention on child rights and should ensure that every child has access to a sufficient range of educational and vocational training. At the same time ULBs should discourage child labor through the implementation of penalties and fines and the withdrawal of licences for employers found to be using child labor without making proper provision for education or training.

d) Public Distribution System (PDS):

State Governments and ULBs may consider granting Community Development Societies licences to operate Fair Price Shops where such societies have been set up and are seen to be running effectively. This will have the dual effect of strengthening the CDS structure and maximiszng public satisfaction and welfare.

10. Municipal Services to be brought under Consumer Protection Act

It will be desirable to bring Municipal Services under the Consumer Protection Act to monitor quality and reliability of basic infrastructure services delivered at settlement level. This should be uniformly applied irrespective of tenure and land status of the settlement, with a specific mandate to monitor absolute levels of service coverage and differential levels of service availability throughout the ULB area. It is recommended that a special consumer panel be established in each municipality comprising members from different settlement categories (in proportion to their total number in the population) with authority to report to Council.

11. Economic Empowerment

a) Financial Services for the Poor

The poor primarily require mechanisms that will encourage savings for small lump sums that can be used for a variety of consumption (including emergency) and production purposes. These mechanisms can also be used for credit purposes based on group (solidarity) lending principles which involve incremental borrowing against social collateral (peer pressure). Such approaches have been seen to be far more successful ways of providing the poor with convenient access to credit on a sustainable basis (good internal discipline and low rates of default) than many of the subsidized schemes run by government which suffer from low levels of credit discipline, poor rates of repayment and high levels of leakage. Savings and credit groups can be further strengthened and supported through networking of such groups with each other to form a federated structure that may also access formal sources of credit.

ULBs should identify organizations with expertise in group based savings and credit to promote financial service initiatives in slums wherever possible. The ULB may also wish to consider using such organizations and methodologies to implement government sponsored credit schemes such as SJSRY. To facilitate this process, it is recommended to create an apex body of saving and credit groups at city and state level. Possibility to enlarge the saving and credit services by contracting out to authorized financial intermediaries in the private sector shall also be explored.

The guiding principles for organizing savings and credit groups shall include: the group to identify its own members, help develop their own rules and regulations, encourage them to take decisions in terms of money to be saved, periodicity of savings, the purpose for which the money can be lent, amount to be lent, interest rates to be charged, repayment period etc. Any imposition or interference in this process will promote dependency and affect their confidence levels in terms of taking decisions and implementing the activities. The organizers of the community should also help people to acquire capacities in terms of maintenance of accounts, monitoring savings and loan programs etc. to ensure that the discipline is established and sustained.

Economic Support/Enterprise Development

There is a need for ULBs to support interventions designed to address livelihood needs of the urban poor. This will include:

the provision of vocational training facilities

implementation of savings and credit schemes for self-employment

addressing constraints in the labor market

providing improved access to raw materials and marketing support

legal rights and redress systems

It would be desirable for the ULB to involve the private sector in such initiatives wherever possible.

12. Financing Sustainable Slum Improvement & Services

a) Resource Mobilization: Positive and pro-active interventions for enlarging the resource base shall include a series of initiatives at Central/State/local levels:

i) State Financing: A Slum Development Fund (SDF) should be created at state level to support slum development activities taken up by ULBs. The SDF shall include:

Contribution from Central devolution of funds from Planning Commission and as earmarked by Central Finance Commission.

Bilateral/ Multi-lateral funding (directly to SDF or town specific)

Contribution from States own revenue resources

Municipal Convergence Funding : At Municipal level a variety of sources of funds could be converged to finance slum development as indicated in each ULB’s Integrated Municipal Development Plan and Annual Action Plan. These sources may include:

Transfers from the State Slum Development Fund

Private contributions (with tax concessions) from business, industry and trade

Contributions from other domestic donors

Contributions from the Shelter Fund to finance shelter needs in slums

Matching contributions from community resource through CDSs

Revenues from a Vacant Land tax

Special Cess on new layouts (for slum development)

Revenues from any other taxes/cess or service charges

ULB priority sector allocations under the category of SC/ST/BC

Contributions from the general municipal fund as decided by the ULB

Percentage contribution from MPs/ MLAs/ Councillors funds.

Role of the Private Sector: It may be desirable to leverage additional resources for slum improvement by involving the private sector in certain projects which will utilize revenues from the commercial development of high value inner city slums for resettlement and rehabilitation schemes which will result in bringing about a substantial improvement in the physical, economic and social quality of life of slum dwellers.

Any private sector development scheme must strictly comply with State resettlement and rehabilitation guidelines and must be approved by the ULB after full consultation with the community. Only those schemes which will cover the full cost of R&R and associated services (transportation, communication etc) should be considered by the ULB. The ULB must satisfy itself that any land development and R & R scheme will produce a clear win/ win situation for all parties but most particularly for the slum community.

Construction programs by government agencies tend to have excessive time and cost overruns. To avoid this and provide greater accountability and competitiveness such projects would be best assigned to the private sector.

iv) Private Sector Funding: The contribution of slum dwellers in helping to maintain the productivity of local business, industry and trade is substantial. ULBs should take initiatives to mobilize resources from the private sector either for the adoption of specific development works at slum level in accordance with the priorities identified in the Municipal Slum Development Plan (MSDP) and Annual Action Plans (see Section 7 above) or through direct contributions to the ULB convergence fund. State governments and ULBs may consider introducing fiscal incentives such as tax exemptions etc as an incentive to mobilizing contributions.

v) Institutional Finance: ULBs may also consider other means of attracting capital for investment in city and slum infrastructure such as raising bonds and institutional loan finance. A refinancing scheme may be extended (in line with NHB refinancing) to facilitate city governments to raise funds from identified commercial banks.

Extending Tax Base: Slum areas, particularly those which have been provided with services should be de-notified (refer to earlier point No.3) and brought under the net of municipal taxes. A Consolidated Service Tax (as part of Property Tax family) on properties located in slums (Tenable and Untentable) should be levied to raise resources from the users. Similarly, other land based taxes on specific developments such as illegal sub-division (regularized-unauthorized) should be applied to recover costs on the basis of paying capacities and used to cross-subsidise the development of slums. These could include:

Betterment Levy

Valorization

Exactions

Impact Fees

The levying of such taxes may require the modification of State Municipal Acts.

User Charges: At the administrative and political level any unwillingness to charge for services delivered should be discouraged. The standard and effectiveness of service delivery can only be improved if sufficient funds are recovered from the operation of services. ULBs may consider cross-subsidy from user charges where appropriate. It may be important to utilize the services of private agencies and CBOs in this process.

viii) Community Cost Sharing: Slum improvement projects should encourage contributions from the community right from the beginning as a means of sharing costs and extending works from the stage of prioritizing/inclusion of slums for service delivery to further stages of assessment of needs and demands followed by planning and implementation. The cost sharing approach enhances commitment and self-reliance.

Selling of Land Title: ULBs may consider selling of title on an installment basis as a means of raising capital for upgrading and improvement as also to meet the expenses for operations and maintenance. Regularization and grant of tenure should be linked with (a) loans to beneficiaries for meeting the costs (partially) on infrastructure provision, and (b) mobilization of community resources (as done under Madras Urban Development Project - MUDP). In this regard community/collective collateral may be used as security to finance subsequent provision of infrastructure.

Improving Creditworthiness of Slum Dwellers

Improving slum dwellers creditworthiness will help in accelerating the flow of private funds for slum development especially if this results in the coverage of the large group of ineligible households under formal financing schemes. This would not only provide an additional flow funds for shelter and other infrastructure but would also have the additional benefit of ensuring greater programmes ownership, sustainability and effectiveness. Making slum dwellers creditworthy, establishing funding mechanisms with transparent subsidy arrangements and innovations are important issues which require policy interventions. The nature of financial intermediation should be such that it encourages suitable local financial institutions to work alongside the ULBs (e.g., SEWA Bank).

a) Making Slum Dwellers Creditworthy: Savings and credit at the group level (see section 11 a) with upward linkages to formal sector finance will have a substantial impact on overall slum development and urban poverty alleviation.

i) Financial Discipline : This process would require support for establishing grass roots financial discipline and group capacity building which could be undertaken by specialist savings and credit organizations. Financial institutions should also be allowed to cover the non-eligible

segment through acceptance of community and collective collateral in line with HUDCO scheme for NGOs.

ii) Social Collateral: Institutional mechanisms should be evolved in line with Community Development Societies (CDS) system to mobilize community based resources to be linked as collateral to extend institutional loans.

b) Rational use of Subsidies: Subsidies in slum improvement programs have become an all-encompassing feature firmly based on a welfare state approach. Even though subsidies for genuinely poor households are inevitable as a means of fulfilling their access to basic shelter and services, it has become imperative to make a shift towards establishing more sustainable financing mechanisms with the participation of the users to bring about desired change.

iii) Firstly, this shift could be facilitated by quantifying/making explicit the quantum of subsidies and also making them more transparent.

Subsidies can also be used as cash security to leverage more funds for slum development.

Subsides could be rotated as revolving funds rather than being simple one time grants

iv) Subsidies could be used as partial captive recovery as has been done in some of the housing projects

Some specific suggestions to reduce and rationalize the inherent subsidies may include the following measures:

Reforming Subsidies

Provision of individual household services such as water supply, electricity and sanitation would facilitate recovery of user charges and wherever these services are to be subsidized they can be quantified and used judiciously.

Subsidies could be more clearly focussed on specific components such as roads, drains and other social infrastructure facilities such as pre-school provision, nutrition programs to children and pregnant women, managing primary health care centre and a host of such other related activities of common benefit or benefiting specific individuals or groups.

Subsidies should be discouraged in employment generation schemes, economic support programs, and housing/shelter upgrades. Here access to affordable and efficient loans will be more important.

Strengthening Municipal Governance and Management

a) Urban Governance: The nature of urban governance has important implications for national slum development policy which requires the adoption of new approaches to urban management

and urban poverty alleviation. Urban governance should be defined as the relationship between civil society and the municipality/ULB. This implies a shift, away from a perspective that defines infrastructure and services provision as exclusive concerns of government, to a new perspective that acknowledges the potential role, responsibility and impact of civil society. Civil society groups include: civic associations, community groups, women's groups, social movements, non-governmental organizations, community based organizations, private sector etc. etc. These groups already play a significant role in areas such as housing development, sale and rental of land, transportation and enterprise.

The 74th Constitutional Amendment Act shall form the basis for converging new partnerships and creating an environment wherein the urban local body as the city government will have the prime responsibility as a coordinator. One of the important features of the 74th Amendment is the constitution of Ward Committees which should be extended to cover local bodies of all sizes. In particular community structures of the poor should nominate Ward Committee members rather than political parties.

In keeping with the spirit of the 74th Constitutional Amendment, the activities which are hitherto performed by state level agencies like Slum Clearance Board, Housing Board etc., needs to be operated through the local body. Till such time the institutional restructuring is not fully accomplished, the local body in each town shall mandatorily be consulted and shall guide all activities of such state level agencies particularly with regard to provision of amenities and services.

Capacity Building: A series of capacity building initiatives should be promoted to enable ULBs to effectively carry out slum development in accordance with National Slum Development Policy. This should include skill development, financial administration and management and human resource development.

i) Skill Development shall be taken up under a three tier training strategy covering:

Seminars for senior level functionaries (both officials and elected representatives)

Mid carrier training at decentralized locations

on-the-job training.

Skill Areas

Listing of slums and identification of eligible households

Classification of Slums

Assessment of overall requirements for slum development in the town and preparation of IMDP

Mobilization of Slum Community in a three tire structure in line with CDS.

Preparation of Annual Action/ Investment plans

Development of projects for in-situ development and resettlement of slums

Identification of modes and modalities to involve Private Sector, NGOs etc. in the implementation of IMDP

ii) Financial Management: This component will be essential to the implementation of improved financing of slum development. It will be necessary to build financial management capacity in a number of areas such as:

Asset Management - development of inventory, classification, valuation, assessment of returns and mobilisation strategy.

Financial Planning - normative budgeting and investment Planning

Accounting and internal control - application of double entry accounting, reporting and recording formats and timely auditing

Borrowing and Debt Management - updating of debt register and optimum recovery from assets created by debt

Automation - asset, receivable, payable accounting, budgeting.

Property Tax Reforms

Public Private Partnerships.

iii) Human resource Development: Human resource management and development shall cover the promotion of specific cadre under community development cell within ULB to prepare, implement and monitor IMDP at town level. The deployment of cadre at ULB level shall be for a minimum prescribed period so as to have continuity in the slum development activity.

iv) Multi-lateral and bi-lateral Cooperation should be promoted to have Financial and Technical support to carry out capacity building and develop a backup of research, evaluation and impact assessment studies for dissemination in a wider context of skill development. This should be taken up by direct contribution to slum development funds as well as implementation of demonstration projects.

c) Partnerships: In order to realize the above suggested changes, it will be necessary to consider practical ways of developing partnerships with civil society groups for the improvement of informal settlements. Partnerships need to be institutionalized and not person based. For achieving this, there is a need to create a mandate for partnerships and recognize capacity building as a thrust area in programs with definite budgets and plans. Capacity building should be applicable across the board to communities, officials, NGOs, non-officials (elected representatives) and all stakeholders.

Partnership Principles: Important guiding principles for partnership development shall include:

i) widening the base to include a wide variety of community organizations like youth groups, Mahila Mandal, saving and credit groups, association of interest groups/trades etc; and give the interlinking responsibility to the community development unit;

ii) the nature of financial intermediation should be such that, it facilitates creation of community based financial institutions suitable to local needs and situations;

iii) women should share decision-making with the local body, so as to learn to do the same on their own when they become more active as members or managers in local CBOs;

iv) invest in capacity building in respect of various activities and ensure dovetailing of training with the activity itself; for instance Balwadi teachers may require skill training and encouragement for the innovative use of using local materials and models in the day-to-day teaching activity;

v) CBOs must have a choice to select from a range of technical or professional expertise in legal, infrastructure, sanitation, and other aspects with local body assistance.

vi) Develop flexible instruments to facilitate infrastructure development to be demand driven and evolving.

d) Community Development: To give a focus and direction for establishing partnership arrangements, in particular between the communities and the departments of the local body, a nucleus of community development unit has to be established in each and every local body. This unit should take a lead role in converging all activities of slum development through community organisations, NGOs and other civil society actors.

Shelter Upgradation

This section of the Slum Policy is intended to emphasize the fundamental importance of empowering and enabling the urban poor to fulfil their own housing needs just like other city dwellers by facilitating access to serviced land, home loan financing and other technical and institutional support.

Given the magnitude of urban poverty and the availability of public funds is neither practical nor desirable to provide free housing for all the urban poor, especially since this would undermine the inherent capacity of most slum dwellers to provide for their own shelter needs within an enabling policy framework. Consequently, this Policy is committed to a shelter upgradation approach that will enable, support and extend individual and community initiatives for housing provision.

This policy envisages the primary role of the ULB in shelter upgradation as one of addressing and resolving the following critical bottlenecks:

Land for Affordable Housing: This can be facilitated by modifying planning legislation and planning instruments (Master Plans etc), as indicated in Section 7, to regularize the concept of high density, mixed use occupation for slum areas. This will have the effect of helping to keep land costs down and ensure that the market for land in slum areas will be determined by high density, low income characteristics and not subject to widespread commercial speculation as elsewhere in the urban area.

b) Security of Tenure: The lack of security of tenure is one of the major reasons why poor households are unable or unwilling to engage in shelter upgrades. The possibility of future eviction and or resettlement is a distinct disincentive to investing private money for improved dwellings. At the same time, without proper tenure and thus collateral, households are unable to access formal sources of loan finance for housing. This policy is designed to address the issue of improving land tenure for the poor through the new provisions laid out for Granting of Tenure (see Section 5 above). These provisions will expedite the process of obtaining greater security of tenure for all slum dwellers on government land categorized as Tenable and will also speed up and improve the process of land acquisition and negotiated compensation on Tenable settlements on private land by adopting innovative methods such as land sharing arrangements and increased FSI/ FAR by way of compensation.

Rationalization of Norms and Standards: Whilst making endeavors to formalize and regularize the concept of higher density, mixed use occupation of land in existing slum areas, certain minimum norms governing dwelling space should be specified by each State/ULB. Such norms and standards should be redefined so as to allow for high density, low cost housing units with provision for adequate access, ventilation, light, safety and privacy. Provision for a range of plot/ house options to accommodate varying needs would be desirable.

d) Creative Incremental Unit Design and Layout Patterns: Innovative designs and layout patterns such as cluster planning (see Indian Standards: Requirements of Cluster Planning for Housing - Guide; IS 13727: 1993) which maximize the use of common open spaces are to be encouraged. There should be flexibility for dwelling units to expand incrementally in keeping with a family's changing requirements and economic situation.

The options of planned upgradable sites with minimum service provisions, core and skeletal housing/site and services on small parcels of land adjoining such developments will facilitate supply of affordable housing in the cities.

e) Community Participation: Participatory approaches to housing design and alternatives for housing improvement and development both in-situ and in resettlement areas should be evolved through a process of dialogue. A range of supporting measures to facilitate more effective participation in shelter upgrades might include:

i) Improved Market Information: This is required to bridge the gap in information about market conditions in terms of availability and prices of both land and housing. Compiling systematic information and exchanging the same will be useful to both potential buyers and sellers (including private and public agency) and will ultimately lead to market efficiencies.

Cost Effective Technology: Technical assistance is required to enable households to have access to better technology and materials at cheaper prices through better information, design advice as well as a better assessment of costs of shelter upgrades and provision of household level basic services. Local and outside experts can be invited to build this capacity. Establishing housing guidance centers and utilizing the existing building centre network is recommended for this purpose.

iii) Legal Services: Legal services are required for determining the status of different housing options and land parcels. The need for reliable and affordable legal services is substantial. The main legal services that ULBs should make available to the community would relate to information on planning laws, building regulations and bye-laws. In particular this would consist of making communities more aware of the modified planning laws and redefined house plot/ building norms and standards.

iv) Training, Documentation and Advocacy: The concept of "Housing Clinics" where practical training is imparted to grass roots leaders is recommended to enable them to act as key sources of information in relation to points i-iv above. Documentation support like training materials, pamphlets and booklets to support the training efforts in housing clinics is necessary.

f) Project Planning and Management: All potential housing development schemes need to be undertaken on a project basis. This would facilitate identifying the opportunities that exist and also identify and mobilize opportunities for developing fundable projects. Project management services to prepare feasibility reports and other project documents is an important service that needs to be strengthened. Demand for such services is often felt by the individual members, community groups, NGOs and even some of the government/semi-government agencies.

g) Financing Shelter Upgrades: Given the absence of long term (mortgage) finance for low income housing, this Policy encourages States and ULBs to seek new ways of financing shelter for the urban poor. This may include:

Creation of a Revolving Shelter Fund: This fund should be created from the current minimum 10% allocation of NSDP funds earmarked for housing. This revolving fund should be linked to community savings and credit initiatives with appropriate safeguards. This would then provide an immediate cash injection into a new system of informal housing loans operated on group/ solidarity lending principles. Such monies would be far more accessible to the poor households than the present system of institutional finance.

ii) Partnership with Savings and Credit Societies: ULBs may consider placing such funds with a savings and credit organisation capable of supporting group based approaches in an effective manner.

iii) Leveraging Additional Funds: An apex body of savings and credit groups at city and possibly even State level may then provide funds to lending institutions at neighborhood/ area level which are capable of promoting sustainable housing finance on the basis of innovative loan repayment mechanisms with low default rates. This will entail providing training to borrowers, supporting group savings and lending, peer monitoring and the establishment of flexible repayment

schedules/ installments. Such lending institutions should leverage additional finance for housing finance from formal banking institutions.

iv) Loans and Guarantees: In addition to supporting group savings and lending mechanisms a cash loan facility will be established to enable poor residents to access to housing finance with government guarantees.

Innovative Lending Methods: Increased access to institutional funds for housing would be facilitated by a combination of the following measures:

better targeting of groups and individuals who can establish their creditworthiness through participation in savings and credit groups

utilizing subsidies as security against loans

institutional interventions through local bodies and other government departments which agree to take up housing development on their own land

vi) Targeting EWS/ LIG Housing Schemes: EWS and LIG housing schemes should be targeted at registered slum dwellers. In-situ upgradation should be given priority within such schemes.

vii) Private Sector Participation: It is imperative that the housing stock for poorer families be increased. This Policy advocates exploring ways of achieving this objective. Existing land owners, NGOs or CBOs, for example, may be encouraged to undertake upgrading as per norms and standards defined provided that any increase in house values and rents be formally agreed with the community and the ULB prior to works being undertaken.

Monitoring and Evaluation (M&E)

M&E is a tool for effective objective-oriented management of development projects and programs aimed at benefiting the poor and disadvantaged groups. In order to find out the extent to which the programs and projects of each strategic intervention under the National Slum Policy are being implemented and whether defined policy objectives are being achieved, a system of monitoring and evaluation shall have to be established at different levels of government with the Department of Urban Employment and Poverty Alleviation, Ministry of Urban Affairs and Employment, Government of India at the apex level.

A well defined monitoring and evaluation framework should be developed for every essential strategic intervention by utilizing different performance indicators to evaluate and assess the changes that take place as a result of implementing the programme and project under this policy. It is also considered essential to ensure that the monitoring systems provide feedback for further developing and improving this policy framework and that a learning process takes place so that implementation and management of various slum development programs and projects can be improved in future.

Programs and projects for implementation of this policy should include firm arrangements for monitoring not only during implementation but also after that to be sure of the result of how the situation develops after each strategic intervention. Monitoring may render essential information and highlight the necessity to adjust the strategic interventions under the slum policy and its different programs to meet the stated objectives. Adequate provisions shall be needed for monitoring and evaluation of the various slum policies and programs.

A common management information system in respect of each of the identified activity shall have to be developed and put into place to be implemented for effective follow up actions so that field functionaries of the concerned departments, at the State and local levels report and fill up same set of forms at the grass root level.

Provision should also be made to ensure participation of the community in monitoring and to use the response as a constructive resource for improvement. Feedback of the community is considered the best yardstick to assess the general satisfaction with any slum programme or project. Participatory monitoring can be achieved through including community representatives in the monitoring team, regularly consulting key-person in the community or regular surveys among those covered under different projects/programs.

For all slum development projects specially relating to resettlement and rehabilitation an extensive ex-post evaluation of the project should be made a clear part of the project. The project completion report should evaluate the outcome of relocation and its impact on the beneficiaries/resettled households for their standard of living. Results appearing from evaluations may be crucial information for the planning/implementation of other such projects within the city or State as well as out-side the State. The information is also essential to build up experience. It is necessary for ULBs to conduct ex-post evaluations at different time intervals (say, after one year and five years) since some impacts are only recognizable after considerable time. Of the parties affected by the implementation of such projects, those interested in evaluation should be the State Governments, ULBs, affected residents, affected business, CBOs and NGOs. Of these, NGOs may be considered for a leading role for evaluations while ULBs may play the leading role in implementation and monitoring of all such projects.

Monitoring and evaluation teams should be staffed with multi-disciplinary background with economic, sociological, anthropological and technical expertise including specialists on gender aspects. The evaluation teams need the credibility that their findings will be taken seriously, and the ability to communicate that will make their findings effective in improving performance.

Monitoring and evaluation of resettlement projects should also be linked into the overall monitoring and evaluations process of the ‘push’ projects (Projects which pressurize resettlement for other use of the land in public interest).

A well functioning monitoring and evaluation system is the best insurance that various interventions under this policy will be implemented and that there will be learning process. Much of the slum development is still "trial-and-error". M&E, therefore, as an aid to the learning process must be seen as an integral part of projects and programs of slum development and is essential to build up the institutional capacity that is necessary to manage the slum problem on a sustainable basis in our cities.

Monitoring and Evaluation – Action Points

Each intervention, programme or project under this policy shall need a monitoring and evaluation mechanism. Based on the guiding principles given above, key points necessary to design and build effective monitoring and evaluation into various projects of strategic interventions for achieving the objectives of the National Slum Policy are given as under:-

Monitoring and evaluation should be built into every programme and its management from the beginning in terms of clear responsibilities and budgets.

Ensure that procedures and conditions are connected to the results of monitoring and evaluation.

Try to ensure that monitoring and evaluation is carried out by credible bodies. These may include both the communities affected themselves and independent third parties.

Monitoring and evaluation should allow both immediate feedback to action and more considered reflection and response.

Monitoring should be frequent in the early stages, but requires follow up over an extended period until the desired and acceptable levels of project programme objectives are achieved.

D. Immediate Steps Required

All State Governments should establish a working group to ensure that institutional arrangements, legislative frameworks and other necessary actions achieve conformity with the National Slum Policy.

All States that have not formulated a Slum Act should consider formulating and notifying an Act which reflects the current Policy principles and guidelines.

It is essential that States re-examine the implementation of the relevant sections of the Slum Act with a view to ensuring that the land acquisition procedures in respect of slums and informal settlements are simplified to ensure the speedy resolution of disputes and negotiations and that the proceedings should not last longer than a period of six calendar months from initiation.

States should take immediate action to ensure that all laws relating to encroachments on government land are revised and modified in the light of the National Slum Policy.

States should take immediate action to compile clear guidelines on resettlement and rehabilitation (R&R) in accordance with the principles laid down in Section C.6

States should identify the main training and capacity building requirements for the efficient implementation of the National Slum Policy and devise a programme of action to address skill gaps and needs.

ULBs must compile a comprehensive list of all slums/ informal settlements in the urban area within a period of one calendar year from the announcement of this Policy and must establish a

system for the on-going registration and issuing of identity cards for all urban poor households regardless of their current tenurial status in accordance with Section C.2

ULBs must ensure that the land status of all listed slums/informal settlements is classified as either Tenable or Untenable strictly according to the definition outlined in this Policy in Section C.4

Wherever slums/informal settlements are classified as Tenable, the ULB must facilitate the granting of tenure on all government occupied land and initiate acquisition proceedings and/ or negotiations on all privately occupied land in accordance with Section C.5

ULBs should take necessary action to formulate an Integrated Municipal Development Plan which will converge all development activities and resources to provide a clear picture of the different levels of infrastructure and services in the ULB area and the relative gap or deficiency in infrastructure and services between the better serviced and under serviced wards and neighborhoods. As a priority the IMDP should then propose actions and financial allocations to reduce this gap as far as possible in accordance with Section C.7 of the Policy.

ULBs should also take action to modify their bye-laws and building regulations so as to facilitate the implementation of the National Slum Policy Section C.7

ULBs should implement slum development and urban poverty programs in conformity with this National Slum Policy emphasizing the principle of community participation in all aspects of policy implementation. Each ULB must establish concrete structures and systems for ensuring community participation in environmental improvement, social development and economic development for the urban poor.

ULBs must take immediate action to identify specific financial resources that may be converged for slum development in accordance with Section C.12 of this Policy.

ULBs should identify any competent organizations/agencies with expertise in group savings and credit schemes that would be able to work in the ULB area to promote financial services for the poor including the operation of a revolving shelter fund using the minimum 10% housing allocation under NSDP.

E. New Initiatives Proposed by Government of India

Valmiki-Ambedkar Malin Basti Awas Yojana (VAMBAY)

Incorporating some of the important features being outlined in this policy document a loan cum subsidy central sector scheme is being firmed up for launching soon. As announced by the Honorable Prime Minister for Independence Day, 2001, the scheme will be taken up with Central Government Subsidy of Rs. 1,000 crores and a loan component from HUDCO of Rs. 1,000 to Rs. 2000 crores for construction of 4 lakh dwelling units for slum dwellers. The maximum cost of a dwelling unit to be financed will be Rs. 60,000 in the six mega cities, Rs. 50,000 in cities with population more than one million and Rs. 40,000 in other urban areas. There will be

provision for upgrading existing slum tenements and also for basic amenities like water supply and sanitation.

Nirmal Bharat Abhiyan – A Sub-component of VAMBAY

To integrate sanitation as part of the housing development and to achieve cent per cent sanitation coverage in all the state capitals and cities having more than one million people, this sub-component of the above programme is intended to be launched. New individual toilets or conversion of existing toilets into sanitary latrines and community based group toilet scheme in slum areas will be financed under this scheme. Effluents and wastes from such toilets constructed under this scheme will be used for production of manure, vermiculture, biogas etc. In the first year one lakh toilet seats in 10 cities on a demand driven basis with an outlay of Rs. 400 crores is being launched soon. The outlay will consist of Rs 200 crores subsidy from Government of India under the Valmiki-Ambedkar Malin Basti Awas Yojana (VAMBAY) and the balance amount as loan from HUDCO. To start with, pilot projects will be initiated in Delhi, Mumbai, Kolkata, Chennai, Hyderabad, Bangalore, Ahmedabad, Chandigarh, Lucknow and Guwahati. The most novel features are – (a) maintenance of community toilet blocks by community based groups elected from among slum dwellers themselves; (b) family pass for each slum household @ Rs. 20 per month per family for daily use of such toilets.

F. Illustrative feedback from slum dwellers

Areas of concern expressed by representatives from slum communities of Bangalore, Cuttack, Bhubaneshwar, Pondicherry and Tirupattur who attended the World Habitat Day celebrations at Vigyan Bhawan on October 1, 2001, are briefly enumerated below:

Water

Non-availability/poor availability of water for general use, and potable drinking water, are critical areas of concern. Residents at Bangalore get water on alternate days, or even once in three days, that too at odd hours which are not certain. This means variable waiting time from a minimum of I hour to 3 hours. Drinking water is bought by almost all for Re.1 per pot. Residents of Bhubaneshwar and Cuttack reported minimum waiting periods of one hour of waiting and insufficient number of borewells. (Ratio of I for 110 families in Cuttack). In Tirupattur, water is supplied once a week, at odd hours, and rationed @ of 6 pots per family. The residents walk 1to 1.5 miles for this, spend several hours, and the men accompanying the women often lose the next day’s wages, due to loss of sleep and strain.

Community initiatives include a borewell built completely with community money in one settlement, maintenance and monitoring a limited number of taps by the community etc.

Toilets and Sanitation

In all instances, the slum dwellers reported inadequate, poorly maintained toilet facilities. The situation in the Orissa settlements appears the worst, with the women having to walk I ½ km to the jungle in Bhubanehwar, and 4-5 km to the river bank in the case of 10-12 `basties’ in Cuttack. In Pondicherry, the Government is reported to spend about Rs.50,000/- every year on maintenance of community toilets, but the cleanliness and usability has improved only after the

community has come forward to participate in maintenance management. In Tamil Nadu, in several settlements, the community and the Government are coming together to build and maintain community toilets.

In several instances, as in Bangalore, communities have contributed funds on a matching basis or totally to build community toilets. For a monthly collection of Rs. 20/-, the community groups maintain these toilets.

Access to Credit

The presence of private moneylenders was reported from every settlement. They exploit the slum dwellers, and charge an interest of anything between Rs.10/ to Rs.25/- per month for every Rs. 100/- lent, depending on the desperation of the loan seeker. In southern states, the interest is deducted at source, with the slum dweller getting only Rs.950/ in hand for a 1,000/-rupee loan (the cut being as much as Rs.200/- in some cases). Similarly, for a loan of Rs. 5,000/-, the beneficiary gets Rs. 4,000/- in hand and pays Rs. 500/- weekly for 20 weeks.

The positive feature is the presence of several thrift and credit groups/societies run by women members. A daily collection is made, with some members having responsibility for a particular number of families. From this corpus, loans are given for medical emergencies, pregnancies, payment of school fees, petty businesses, rickshaw purchase and repairs, and other welfare reasons, as well as for house construction in some instances. In Tirupathur , nine housing loans have been given, and repayment is on a daily basis for 15 years, in Cuttack, Rs 15/- per day is being collected separately towards a fund for housing. In almost all instances, these groups have succeeded in drastically reducing the loans advanced by private moneylenders and putting them out of business.

Housing

In Bangalore, one example is that of Mahila Milan, who have taken up the task of constructing 240 houses in Mandya. As a rough estimate, the typical EWS unit when built by the government agencies costs approx. Rs.70,000/- because of the intermediate contractors and other procedures, whereas the same unit of equivalent area costs around Rs30,000/- when they do it themselves. They appear to have successfully evolved a system of `community-contracting'.

Community achievements in other areas

In Koramangala, Bangalore, one major achievement has been the ongoing construction of a foot-bridge across a sewage drain, which will save the residents a lot of walking to reach the nearest public transport point. Rs 5.00 lakhs has been raised from the community, with a matching contribution from the Corporation.

Spending Rs.8000/- to Rs.9000/- out of the collective money, Mahila Milan in Bhubaneshwar has constructed a school shed. They have employed a private teacher and a girl to help organize the activities.

This document is available on the following websites
http://urbanindia.nic.in
http://www.hudco.org
http://www.bmtpc.org
http://www.niua.org

Annex 11. Child Health Indicators

Reanalysis of NFHS II by EHP (2003)

Health indicator	URBAN				RURAL			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Mortality								
Neonatal mortality (for the five-year period preceding the survey)	69.7	47.3	23.2	44.0	62.2	56.1	49.8	57.8
Infant mortality (for the five-year period preceding the survey)	99.4	63.3	36.6	61.9	94.3	95.2	73.2	92.5
Under-5 mortality (for the five-year period preceding the survey)	131.9	91.4	41.0	82.9	174.1	146.1	88.2	152.2
Malnutrition								
Percentage of children under 3 years underweight for age – Below –2 SD (includes children below – 3 SD)	72.4	46.5	25.6	44.3	59.9	61.2	41.1	58.4
Percentage of children under 3 years underweight for age – Below –3 SD	40.3	20.4	6.6	19.5	27.8	26.9	12.6	25.7
Percentage of children under 3 years undernourished (stunted) for age – Below –2 SD (includes children below – 3 SD)	60.6	43.0	23.9	39.8	58.5	54.7	38.2	54.3
Percentage of children under 3 years undernourished (stunted) for age – Below –3 SD	44.8	17.1	8.7	19.6	33.0	32.4	16.6	30.9
Child health determinants								
Breast feeding								
Percentage of infants breastfed within one hour of birth	8.2	9.7	18.8	12.3	8.6	9.7	10.1	9.3
Percentage of infants whose mother squeezed first milk from	74.5	68.6	64.8	68.7	71.1	71.4	76.9	71.8

breast								
Percentage of children 0-3 months old who are exclusively breastfed	63.3	52.3	37.0	51.3	68.6	72.9	40.0	68.2
Complementary feeding								
Percentage of children 7-9 months old who receive breast milk and solid/mushy food	53.3	56.7	83.6	63.4	29.8	27.3	67.8	54.2
Immunization rates								
Percentage of children completely immunized among 12-23 month old children	20.6	37.3	58.8	41.2	10.8	17.1	40.2	17.0
Percentage of children receiving measles immunization among 12-23 month old children	43.1	46.7	74.2	55.3	22.1	28.5	64.1	29.7
Percentage of children left out from UIP (Children not receiving DPT 1) among 12-23 month old children	25.2	22.8	6.2	17.4	54.2	40.4	13.1	42.9
Percentage of children dropping out from UIP (DPT 1 to DPT 3) among 12-23 month old children	36.1	26.8	15.2	24.9	26.1	26.2	24.0	26.1
Vitamin A								
Percentage of children 12-35 months of age who have received at least one dose of Vitamin A	26.6	36.0	40.0	35.3	14.1	21.4	45.6	21.1
Percentage of children 12-35 months of age who have received at least one dose of Vitamin A within last 6 months	7.8	20.5	22.8	18.7	8.5	14.3	28.2	13.5
Morbidity								
Percentage of children suffering in past two weeks from:								
ARI	25.1	23.4	21.5	23.4	31.2	31.2	28.7	30.9
Fever	36.3	30.1	29.2	31.1	31.2	30.7	32.5	31.0
Any diarrhea	30.7	28.8	20.9	26.6	20.5	23.6	25.0	22.4
Percentage of mother who know about ORS	59.9	69.8	84.2	72.6	43.6	51.2	77.3	50.8
Percentage of mother who know two or more signs for medical treatment of diarrhea	24.0	27.4	30.4	27.9	26.7	31.3	30.5	31.7
Percentage of children taken to health facility for diarrhea	72.8	74.4	77.3	74.9	41.5	57.5	77.8	54.2
Percentage of children treated with ORS or recommended	34.7	41.9	44.4	41.6	22.0	29.4	39.4	27.9

home fluid								
Care seeking								
Percentage of children taken to health facility for symptoms of ARI (fever, cough, rapid breathing)	68.2	71.8	74.0	71.3	46.0	59.2	71.4	55.1
Antenatal care								
Percentage of births whose mothers consumed iron-folic acid supplements for 3+ months	61.1	71.9	78.4	74.3	73.4	78.3	73.8	76.0
Percentage of births whose mothers received tetanus toxoid vaccines (minimum of 2)	55.0	71.9	88.7	73.7	39.7	51.9	79.4	49.8
Percentage of births whose mothers had antenatal visits (minimum of 3)	32.0	46.5	70.8	51.2	14.1	23.1	46.4	21.8
Birth Spacing								
Birth interval (median number of months between current and previous birth)	31.7	31.0	33.1	31.4	29.3	30.0	31.0	29.8
Modern contraceptive prevalence rate (any method, currently married women)	39.1	51.3	64.8	52.5	35.5	41.4	54.2	39.3
Permanent sterilization method rate	34.4	41.7	52.2	40.2	33.6	38.3	44.0	37.2
Female sterilization method in proportion to total modern contraceptive prevalence method (percentile)	85.6	80.8	61.9	72.2	91.0	90.2	80.3	89.1
Safe delivery								
Percentages of deliveries at home	73.8	56.2	25.5	50.1	90.8	87.0	67.4	86.5
Percentages of deliveries at a health center (public/private/NGO)	24.8	43.8	73.3	49.1	7.9	11.2	32.2	12.1
Percentage of deliveries attended by a heath professional at home or at a health facility	38.1	55.9	85.4	61.5	14.1	20.1	51.1	20.9

Annex 12. Format for Information Collection from CBOs and NGOs

For Community-Based Organizations

Contact details

Name of CBO: _____

Year of formation: _____

Registered or not: _____ Year of registration: _____

Promoting Body: _____

Contact people: _____

Address: _____Phone No.: _____

Slum / Slums members reside in: _____

Membership details:

No. of members_____ Women _____ Men _____

Relationship with Agencies:

Promoting agency's brief description: _____

_____

_____

Present relationship with promoting agency: _____

_____

_____

Relationship with any other external agency: _____

_____

_____

Part of any federation: _____

_____
_____

Institutional Capacity of the Group:

Do you have specific office bearers? _____

_____

What is the process for selection of office bearers? _____

_____

Does the group meet regularly (specific meeting dates, venue, etc.)? _____

_____

_____

Are the meeting's minutes recorded? (please describe this)_____

_____
_____

Are there any rules (written or assumed)? _____

_____

Financial Capacity of the Group:

Do the group members save regularly? _____

_____

Does the group have its own fund (description)? _____

_____

Does the group have a bank account (who operates, etc.)? _____ _____

_____

Have the group members taken loans (and returned regularly)?_____

_____
_____

Has the group taken any external loan? _____ _____

_____

Loan giving mechanisms: _____

_____

Program Capacity of the Group:

Has the group carried out any activities as support to any agency and independently (description): _____

_____

_____

Has the CBO had any interactions (irregular or formalized with any government officials (e.g. AWWs, CDS):_____

_____

_____

Specific areas of work of the CBO: _____

_____

Has any group member stood for any election: _____

_____

Other notes

What is the economic background of the group members: _____

_____

_____

Any other impressions: _____

Nongovernmental Organizations

Please furnish the following information about your organization. This would be very useful in framing the Urban Health Program for the city.

Contact details

Name of organization: _____

Year of registration: _____

Nature of organization: Society_____ Trust_____ Company_____

Contact person: _____

Address: _____

Phone No.: _____

Fax No: _____

E-mail address: _____

Staff details:

No. of workers_____

Full time_____ Part time_____ Voluntary_____ Women workers_____

Skills available in the organization (e.g. Medical, Social work etc.): _____
_____
_____
_____
_____

Vision of the organization: _____

_____
_____
_____
_____

Work areas of the organization:

Rural_____ Urban_____

Specific locations:
_____

_____

Focus areas of work: (Please tick.)

Education

Health

Income generation

Micro Credit/ SHGs

Women's Issues

Community Development

Water and Sanitation

Environment

Research and Documentation

Training

Advocacy

Any Other (please describe) _____

Experience:

Please detail experience in Urban issues, if any: _____

_____
_____
_____
_____

Please detail experience in Health issues, if any: _____

_____
_____
_____

Objectives of the health program:
_____

_____

_____

Processes used: _____

_____

_____

History of collaboration with the government:

Which programs: _____

_____

Which departments: _____

Do you extend field level support to any government agency (e.g., community mobilization/vaccination coverage support to the health post, or support to government school, etc.) Please describe.

_____

_____

_____

Urban Health Program:

Willingness to collaborate in the Urban Health Program as partner: _____

_____

Strengths and limitations of the organization for the above:

Strengths: _____

_____

_____

Limitations/areas for support: _____

_____

_____

Any other notes/additional information:_____

_____

_____

Signature: _____

Designation: _____

Date: _____