



USAID
FROM THE AMERICAN PEOPLE



Review of PSI Research on Private Sector Providers:

KEY FINDINGS, LESSONS LEARNED AND RECOMMENDATIONS

Nirali M. Shah

This document may be freely reviewed, quoted, reproduced or translated, in part or in full, provided the source is acknowledged.

Recommended Citation

Shah, N.M. (2011). Review of PSI research on private sector providers: Key findings, lessons learned and recommendations. Washington, DC: PSI.

Ordering Information

This publication is available for electronic download at: <http://www.psi.org/resources/publications>.

About the Author:

Dr. Shah is the research advisor for reproductive health at PSI. She has been at PSI since 2010, and prior to that, was a consultant with Broad-Branch Associates, specializing in health systems and results based financing in developing countries. Dr. Shah's received her Ph.D from the Johns Hopkins Bloomberg School of Public Health in 2010.

For more information about this paper contact:

Nirali M. Shah, Ph.D.
1120 19th Street, NW, Suite 600
Washington, DC 20036
niralishah@psi.org

Acknowledgements

We would like to acknowledge all of the PSI research managers and teams who worked on the wide variety of research reviewed in this report, for their contributions to PSI's understanding of the private sector, as well as members of the Research and Metrics team who reviewed and assisted in these studies. Special thanks to the United States Agency for International Development (USAID) for funding this study.

Support for International Family Planning Organizations (SIFPO) is a five-year program funded by the United States Agency for International Development (USAID) aimed at improving PSI's capacity in family planning programming worldwide. Working in partnership with IntraHealth International and the Stanford Program for International Reproductive Education and Services (SPIRES), PSI's vision is to significantly scale up delivery of high quality FP products and services to address unmet need in an increasingly targeted and cost effective manner. PSI will emphasize increasing access, expanding contraceptive choice and developing local leadership.

To access the capabilities of SIFPO, USAID missions and bureaus can buy into the cooperative agreement.

This analysis is made possible by the support of the American people through USAID, under the terms of Cooperative Agreement No. AID-OAA-A-10-00030. The contents of this case study are the sole responsibility of PSI and do not necessarily reflect the views of USAID or the United States Government.

© Population Services International, 2011

Population Services International (PSI)
1120 19th Street, NW, Suite 600
Washington, DC 20036



TABLE OF CONTENTS

3	Executive Summary
3	Introduction
3	Background
7	The Review Process
8	Results of the Review of PSI Provider Research
12	Lessons Learned
13	Recommendations
16	Conclusion
18	Annex
18	Annex 1: PERForM Framework
19	Annex 2: List of Provider-Focused Studies Reviewed
22	Annex 3: Quantitative Studies Collecting Data from Providers
24	Annex 4: Qualitative Studies Collecting Data from Providers
26	Annex 5: Studies Collecting Data from Mystery Clients
28	Annex 6: Client Exit Interviews
30	Annex 7: Mixed Methods Studies
33	References



EXECUTIVE SUMMARY

Working in partnership with the public and private sectors, Population Services International (PSI) delivers life-saving products and services as well as behavior change education in more than 60 low- and middle-income countries across the globe. PSI's evidence-based interventions target both the consumers and providers of health services, in a wide range of health areas including child survival, reproductive health, HIV, malaria, tuberculosis and maternal care. This review of PSI's research studies with private sector providers and social franchises synthesizes findings from 10 years of formative, monitoring and evaluation research from 14 countries, and presents lessons learned and recommendations for future research.

The main area of investigation was reproductive health and family planning (27 of 31 studies). Six of these studies also covered other health areas, such as child health, diarrhea and malaria, and service delivery through social franchising. Of the remaining 4 studies, one looked at provision of HIV/VCT services, one assessed the quality of health services and infection prevention, one looked at the motivation for involvement in social franchising, and one assessed the provision of TB services within a social franchise.

PSI has implemented an array of qualitative, quantitative and mixed-methods studies to identify barriers to optimal provider performance, provider adherence to recognized standards, and levels of provider knowledge, quality of care and client satisfaction. As a private sector leader in low and middle income countries, PSI uses this information to identify the behavioral and contextual factors that influence provider performance, and ability to deliver care according to PSI's quality standards.

Recommendations for PSI's future work with providers and franchises include expanding the geographic and health area scope of research, assessing correlation between provider behavior and interventions, and contributing to the peer reviewed literature on provider behavior and motivations with regard to high quality provision of essential health services. A full list of recommendations begins on page 13.

INTRODUCTION

For more than 40 years, Population Services International (PSI) has supported the expansion of health markets to serve poor and vulnerable populations worldwide. Working in partnership with the public and private sectors, PSI delivers life-saving products and services as well as behavior change education in more than 60 low- and middle-income countries across the globe. Its programs target a wide range of health areas including child survival, reproductive health, HIV, malaria, tuberculosis and maternal care. PSI is unique among international NGOs in its emphasis on social marketing – the application of business marketing principles to generate demand and influence the health-seeking behavior of consumers. It also harnesses the power of markets to optimize distribution of health products and services. Moreover, PSI stands out for its commitment to use rigorous research to drive its programming, a thoughtful set of innovative interventions that are conceived and then continually refined through formative, monitoring and evaluation research.

In recent years, PSI expanded its intervention repertoire to include health service delivery, acknowledging the dual role played by health care providers as both suppliers of health care (products as well as services) and implementers of behavior change. It also recognized that successfully strengthening health systems demands effective training and support of health workers, prompting PSI to embark on its social franchising initiatives. This perspective, coupled with PSI's proven capacity to develop sound, evidence-based interventions for consumers, situates PSI as a major player in the provision of health care services in low- and middle-income countries. Its long history of implementing operational research also positions PSI well for undertaking studies on providers who operate in these health systems. This paper showcases PSI's leadership in this arena, summarizing and critically assessing its provider research studies to date, identifying improvements to its research approaches, and sharing recommendations that its internal staff, implementing partners and the wider development community can use for defining future directions in this nascent field.

BACKGROUND

PSI'S ENTRY INTO PRIVATE SECTOR HEALTH SERVICES

PSI's involvement in health service delivery stemmed from the recognition that demand generation for health care products and services on the consumer side is only one component of an effective health care program. Providers who offer high-quality, efficient care, including education about these products and services, is another essential component. In addition, some highly desirable interventions for PSI's target populations, including long-acting contraceptive methods, male circumcision and treatment of certain diseases such as TB and HIV, require direct involvement by providers. Thus, beginning in 1995, PSI widened its scope of work to

include provider services under its umbrella. It now could address both sides of the client-provider relationship, applying its insight from 25 years of consumer-focused programs to build capacity on the provider side. While primarily focused on physicians, PSI's work in this field has touched a wide range of provider types, from the trusted midwife discussing family planning options to the community health worker (CHW) manning the rural health post, and from the specialist physician to the local pharmacist whose dispensary of advice is often the first- and only line of care in developing nations.

PSI has focused its work on providers in the private sector, largely because this sector is where PSI could most easily contribute its expertise and meet health system needs. Traditionally, donor inputs into a developing country's health system have been limited to the public sector, even though private sector providers are widely acknowledged to be integral, often stepping in where the public sector is unable to provide adequate access to services (WHO, 2003) (Hanson, Gilson, Goodman, Mills, Smith, Feachem, et al., 2008). Private providers deliver the majority of outpatient health services, including curative care for young children, family planning and malaria treatment (Peters, Mirchandani, & Hansen, 2003) (Waters, Hatt, & Peters, 2003). It also attracts the greater share of clients. The majority of the poor in the developing world seek health services from the private sector, much of it from unregulated private clinics and shops selling pharmaceuticals (WHO, UNICEF, & PSP-One, 2007).

In some cases, the private sector offers higher quality care, though these findings vary by country and by assessment criteria. For example, a study in Tanzania comparing quality of antenatal care between public and private providers found private ones were significantly better on 12 of 16 technical aspects of quality assessed, with no significant difference between the two types in another four aspects of quality (Boller, Wyss, Mtasiwa, & Tanner, 2003). By contrast, a childhood diarrhea treatment study in Mexico discovered that public providers were significantly more likely than private ones to prescribe correct hydration therapy and give correct advice on diet according to WHO guidelines (Bojalil, Guiscafre, Espinosa, Martinez, Palafox, Romero, et al., 1998). Nevertheless, a growing body of evidence shows that public sector care can be inefficient, of low quality and not preferred by consumers (Rowe, de Savigny, Lanata, & Victora, 2005). Organizations like PSI, therefore, fill a critical need in the overall system by providing high quality products and services at affordable prices, backed by a reliable supply chain.

PSI'S SOCIAL FRANCHISING MODEL

In order to meet these needs, PSI adopted a social franchising model for private health care delivery. In this system, PSI organizes private health workers into networks, called social franchises, which provide standardized and quality-controlled health care to clients. To establish this quality, PSI sets standards based on international guidelines; equips its providers with regular training, equipment and supplies; and monitors the level of care through rigorous quality assurance mechanisms as well as routine support and supervision. This quality, in turn, creates informed demand among clients for the health services and products distributed, whose supply chain is regulated and often subsidized by PSI. All franchisees are branded, helping instruct clients

where to reliably obtain this high-quality healthcare. Note that most PSI providers operate within a social franchise, with a few exceptions that vary based on the needs and preferences of the country. These non-franchised providers are still affiliated with PSI, receiving a package of interventions that consist of one or more of the franchised program inputs described above.

Currently, PSI and its local affiliates support 31 provider networks in sub-Saharan Africa, Asia and Latin America, serving more than 13.5 million people. Various medical services are provided, ranging from family planning to maternal care and from HIV counseling to diarrheal disease treatment. Franchises can incorporate multiple levels of care, including physicians, nurses, pharmacists and, in a few countries, community health workers. This diversity has enabled PSI to greatly expand its reach and improve access for underserved populations. Moreover, PSI's support of socially franchised providers has led to a new suite of interventions and program strategies, including training, medical detailing, non-financial incentives, results-based financing, targeted media such as medical magazines, and demand creation through channels other than mass media.

The evidence base established thus far supports PSI's social franchising strategy. Initial studies suggest that social franchising can improve access for the poor and quality of care via the private sector (Lonroth, Aung, Maung, Kluge, & Upleakar, 2007) (Tsui & Myint, 2006). Moreover, a recent two-country study found that franchised private facilities had significantly greater quality than other private providers, although neither of the private provider types matched the better quality found in government facilities of these two countries (Shah, Wang, & Bishai, 2011).

Further research is needed in this nascent field, however – studies that will lead to the more important effort of improving and expanding social franchising programs. PSI's body of research reviewed below is only one of many contributions needed. One critical need concerns the major aspects of social franchising that affect its ability to strengthen health systems and improve its clients' quality of life. The Social Franchising Metrics Working Group, of which PSI is an active member, has identified four major social franchising pillars: quality of care, cost, access to care and equity, meaning the delivery of franchised care to the poor and vulnerable. Published studies have echoed the importance of these pillars, urging researchers to generate evidence on the holistic effectiveness of social franchises, particularly cost-effectiveness, health outcomes, quality of service, geographic and financial access, and client satisfaction. (Shah, et al., 2011) (Koehlmoos, Gazi, Hossain, & Rashid, 2011) (Patouillard, Goodman, Hanson, & Mills, 2007).

To date, quality of care is the pillar that many private provider interventions emphasize. Three reviews, focusing on equity, reproductive health services and informal providers¹ found that training interventions, including the provision of job aids and reinforcement with printed materials, were the most popular (Peters, et al., 2003) (Shah, Brieger, & Peters, 2010) (Patouillard, et al., 2007). Other quality of care intervention categories noted by these authors include social franchising, various supervision strategies, and social

1. Informal providers are non-qualified medical practitioners

marketing and branding of products, the second most popular intervention category.² Combining training with one or more of these other strategies, such as supply provision, financing or social marketing, increases the magnitude of its effects on provider behavior and provider knowledge (Shah, et al., 2010) (Rowe, et al., 2005). While these studies offer useful insights for intervention design, the main conclusion drawn from these reviews of private provider research is that gaps in the literature still exist. The current body of knowledge imparts an insufficient understanding of provider motivations or behavioral correlates – essential knowledge for defining the interventions that will generate sustained performance and clinical quality improvements. Many studies assess output and proximate measures such as knowledge or perception, rather than outcome and impact measures, such as correct diagnosis and treatment, or population health measures. As a result, the link between a provider's increased knowledge and translation of that knowledge into improved patient outcomes is lacking. Furthermore, as noted above, insufficient attention has been given to research outside of provider quality of care. To successfully expand the wider body of knowledge, future provider research efforts, including PSI's, should ultimately encompass the other three pillars of social franchising.

PSI'S RESEARCH AND EVIDENCE-BASED PROGRAMMING CAPACITY

PSI's provider-focused research and programs draw on the evidence-based programming process and tools developed for its long-standing, client-focused interventions. For over 40 years, PSI has built its human resource and information management capacity to conduct operational research that informs social marketing program design, identifies barriers to product and service uptake, and demonstrates associations between exposure to PSI interventions and resulting behavior change. Organizational guidance, toolkits, training and supervision have strengthened the skills of PSI staff around the world, many of whom already possess

strong academic foundations in rigorous social science and public health research methods.

Armed with these skills, PSI's global research staff regularly performs formative, monitoring and evaluative studies on its consumer programs, using representative population samples and rigorous data collection and analysis methods. It also conducts qualitative research to help develop interventions and marketing plans. To estimate program impact, PSI employs standard health metrics including 1) number of deaths averted, 2) Contraceptive Years of Protection (CYPs); 3) number of Disability Adjusted Life Years (DALYs) averted, and 4) cost per DALY analysis of the sale and distribution of health-related products and the provision of client services. As a result of these efforts, PSI produces research data that is reliable and results that matter.

These research results drive PSI's consumer-focused—and now its provider-focused—interventions by revealing how these initiatives change target audience behavior. In applying PSI's behavior change framework, called PERForM, and marketing planning process, known as DELTA, programmers and marketers understand audience needs and motivations, identify behavioral gaps and devise strategies to overcome these gaps.

PERForM, or a performance framework for social marketing, links a social marketing intervention with behavior changes in product and service use and improved health status. As shown in the schematic in Annex 1, PERForM connects the goal (improved health and quality of life) with the purpose (risk-reducing behaviors and use of products/services), outputs (e.g., the opportunity, ability and motivation to use a product/service), and activities (the social marketing intervention). Data gathered on the target audience's outputs – its opportunity, ability, and motivation to perform the desired behavior – shapes intervention design (Chapman & Patel, 2004), by feeding into the DELTA marketing planning process for designing program strategies. Through DELTA's situation and gap analysis, marketing staff, health specialists and researchers devise evidence-based strategies to close behavioral gaps. At the same time, staff identify additional research needed to successfully implement these strategies. Thus, research both precedes and results from the DELTA process.

Solidly designed, evidence-based programming emerges as well.

Examples of PERForM Factors Affecting Provider Behavior*

Opportunity: Stocked supply of rapid diagnostic kits for malaria

Brand Attributes: Packaging of PSI injectable contraceptives

Brand Appeal: Identity of "Freedom 5" IUD

Social Norms: Pro-natalist views in wider society

Ability: Provider skill in counseling clients about HIV testing

Knowledge: Provider familiarity with treatment side effects

Self-Efficacy: Provider's confidence in performing male circumcision

Social Support: Level of support to provider from PSI field office or affiliate

Motivation: Desire to greet all clients in a friendly manner

Attitude: Regard for providing clients with method or treatment choice

Beliefs: Hormonal family planning methods can lead to sterility

Risk: Perception that poor hygiene will not harm their practice

*See Annex 1 for PERForM Conceptual Framework

2. The three reviews identified the following private provider interventions, all targeting quality of care: training; social marketing and branding of products; contracting out (from the public to the private sector); social franchising; regulation (laws and rules that the private sector must abide by); accreditation (creating licensing bodies for private sector providers); financing (such as subsidies, tax incentives, vouchers or grants); supply provision (including pre-packaged doses); supervision (including direct supervision, supportive supervision, and participatory problem solving); and the creation of referral systems.

PSI'S PROVIDER RESEARCH

PSI applies these programming frameworks and its years of experience conducting consumer health behavior research to its work supporting private providers and social franchising. It collects data using methods PSI honed for its consumer research, including

quantitative surveys and qualitative interviews of the target audience (providers in this case), as well as using consumer informants through mystery clients and exit interviews. PSI utilizes the PERFORM framework to create a theoretical model for the desired provider behavior change and applies the DELTA planning process to develop specific strategies that will improve the provider's performance in delivering care.

Thus, PSI researchers have sought to understand the context in which providers operate and the factors that contribute to social franchising success, much like they did for consumers and its social marketing approach. An emphasis is placed on the behaviors and contextual factors that influence provider performance—namely the factors governing a provider's opportunity, ability and motivation to deliver health care according to PSI's quality standards. To date, PSI has implemented a variety of research studies to identify:

- Barriers to optimal provider performance;
- Provider adherence to recognized standards; and
- Levels of provider knowledge, quality of care and client satisfaction.

PSI's focus on these contextual factors of private provider behavior further demonstrates PSI's leadership in private sector health care in low- and middle-income countries. According to the literature search on private providers conducted for this review, the body of knowledge on these motivations and factors is inconclusive. Thus, even though the provider research field is relatively new to PSI, its choice of research questions—shaped by frameworks devised for its consumer research—has helped it stand out.

More provider-focused research is needed, however, as the following pages will show. New research needs have emerged as PSI has increasingly become involved in health services provision, supporting health workers who provide voluntary counseling and testing (VCT) for HIV, long-acting reversible contraception and male circumcision. These needs will continue to evolve as PSI enters service delivery in other health areas and expands the reach of its social franchising programs. As noted above, additional research needs have also emerged in the area of social franchising.

ABOUT THIS REVIEW

This review of the research on PSI private health providers is the first comprehensive analysis of the studies undertaken so far. Initiated with USAID support under the Strengthening International Family Planning Organizations (SIFPO) award, this review consolidates this important body of research findings on private health providers into one overview, synthesizing the findings into a road map for PSI's future research in this area. After describing observations about the

research questions, methods and content, this review identifies gaps and lessons learned. It also shows where PSI successfully applied the rigorous methods it honed for client-focused research to this burgeoning field of provider research. Most importantly, this review shows where PSI needs to improve its research approaches in order to successfully translate findings on paper into effective actions in the field. Such improvements are critical for elevating provider performance as well as for broadening PSI's social franchising focus from quality of care to the other three key pillars of access, equity, and cost-effectiveness.

Observations of PSI's provider research are presented in four sections: Methods, Summary of Findings, Lessons Learned and Recommendations. An Annex contains a more detailed overview of the study content, organized according to the five research methodologies primarily used in the provider research to date. Additional resources referred to in this paper may be found in the Annex as well.

While meant to be read as a whole, this document is designed for a reader who may wish to focus on only one section. For example, researchers who seek to understand the current state of PSI's provider research, such as new staff, may benefit from the summary of findings as well as from the more detailed study summaries in the Annex. Senior management, however, may use the list of recommendations as a blueprint for forging and refining a strategic plan for provider research, as well as for improving and expanding PSI's research capacity overall. It is hoped that other health service delivery organizations and implementing partners will also benefit using the findings described below to improve their own work and ultimately, enrich the wider discourse on how to optimize private health care delivery for the populations most in need.

THE REVIEW PROCESS

The process of collecting information on PSI's provider research studies involved multiple steps and key informant discussions with PSI researchers throughout PSI's extensive network of country platform offices. In 2010, the review team³ contacted PSI's eight regional researchers⁴ to request basic information (study title, country, research period, and objectives of the research) on all provider-related studies conducted in the countries they support. This basic information formed an initial list of PSI provider research. Next, the author cross-checked this list with the research database at PSI headquarters in Washington, D.C., to identify additional documentation, such as study designs, final reports, and presentations. With these new materials, she expanded upon the original list of PSI provider research and compiled a database. Finally, the regional researchers and country-level research managers reviewed the completed database to add any missing items. The author excluded provider studies if the final report did not contain information on study objectives, sampling methods, sample size, and results, or if the study design was not available. Of the 49 provider research studies identified, fewer than 10 were excluded from the review because of insufficient documentation. The reviewers excluded another ten studies because they were implemented in 2011. For a list of the studies included in this review, see Annex 2.

3. Three PSI staff conducted this review over the course of 12 months. Two initially started compiling the research reports in early 2010 and speaking with PSI research staff regarding these studies. In April 2011, the reproductive health research advisor assumed the lead on the project, completing the data compilation and analysis in June 2011. The reproductive health research advisor is the author of this review.

4. Regional researchers (RRs) are PSI international staff who support the research efforts of four to eight countries, building capacity to conduct and use research. These regional researchers also assist country-level research managers with study designs, development of research instruments, submission of documents to ethical review boards, data analysis, and interpretation of results.

To analyze these 31 studies, the author extracted pertinent data from each one, entering it into an Excel spreadsheet. In addition to the basic information noted above, she entered the following: research methods, sample size and sampling details, data analysis methods, selected study results, and programmatic recommendations and conclusions, if available. Beyond simply recording this information, the author critically assessed the methods, findings, and analysis of the data. She also assessed the utility of each report, determining whether the report offered suggestions based on the findings, or if the findings appeared to be 'actionable' for programming.

Note that the findings presented in this review are descriptive only; they do not reanalyze data, conduct meta-analyses of outcomes, or comment on statistical significance. Instead, this review summarizes the designs and key findings of different types of provider studies, reflects on lessons learned, and makes recommendations on future directions and improvements in provider research and social franchising.

RESULTS OF THE REVIEW OF PSI PROVIDER RESEARCH

The review process yielded a number of key insights and observations about PSI's body of provider-focused research to date. These observations are summarized below in the following subsections: historical development, regional distribution, areas of investigation, research questions, types of providers, data collection and analytic methods, and key findings.

HISTORICAL DEVELOPMENT OF PSI PROVIDER RESEARCH

From 2002 to the end of 2010, PSI carried out research on health care providers in 14 countries; the first study was conducted in Nepal in 2002 (Figure 1). Beginning in 2008, provider research activity increased sharply within PSI field offices, prompted by the recognition that a sophisticated understanding of provider behavior and motivations is essential for optimizing health care delivery and strengthening health systems. This growth also coincided with an expansion of PSI's social franchising interventions and the start of the Women's Health Project, a donor-funded program in 15 countries that seeks to reduce unintended pregnancies and maternal mortality among low-income women of reproductive age. With its current emphasis on reproductive health services delivery, PSI is projected to implement 39 provider-related studies in 2011. Plans for many other studies in 2012 and beyond are currently under way.

REGIONAL DISTRIBUTION OF PSI PROVIDER STUDIES

Of the 31 studies included in the review, 21 were conducted in the Asian region (seven in Myanmar, five each in India and Cambodia, two in Nepal, and one each in Pakistan and Russia). Two studies took place in the Latin America and Caribbean region, each covering the three countries of El Salvador, Guatemala, and Nicaragua; for each study, the design and findings from the three countries were presented together. Eight studies were carried out in five African countries (one each in South Africa and Uganda, and two each in Madagascar, Nigeria, and Zambia). See Figure 2 below for a breakdown of the regional distribution of PSI's provider research.

FIGURE 1: NUMBER OF PROVIDER RESEARCH STUDIES PER YEAR AT PSI

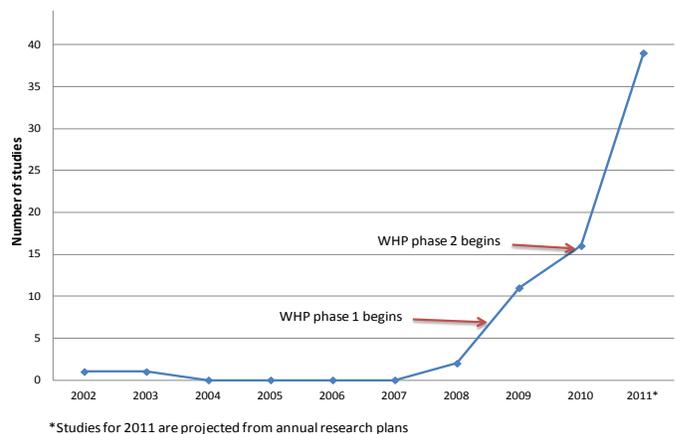
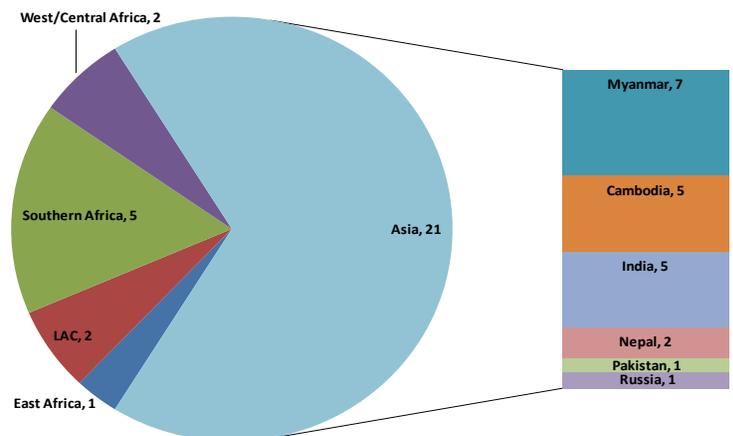


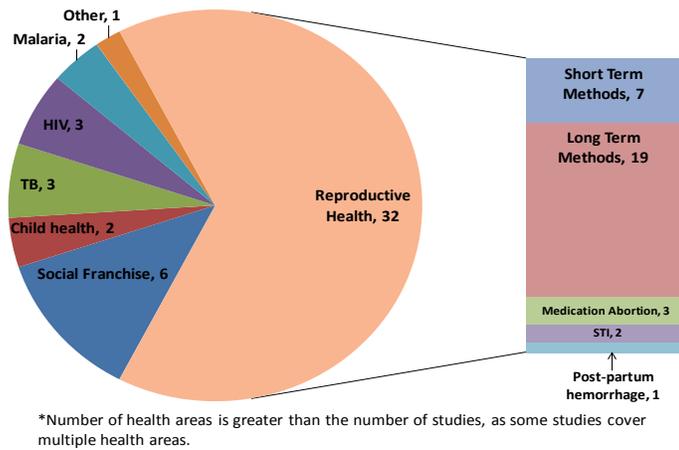
FIGURE 2: GEOGRAPHIC DISTRIBUTION OF PROVIDER RESEARCH STUDIES



AREAS OF INVESTIGATION COVERED BY PSI PROVIDER STUDIES

PSI's provider research studies range in purpose from assessing basic facility quality and commodity availability to measuring provider knowledge and provider views on specific health topics and interventions. Reproductive health and family planning is the main area of investigation in 27 of the 31 provider research studies. Six of these SRH and FP studies also covered other health areas such as child health, diarrhea and malaria, as well as an investigation into service delivery through social franchising. Of the four studies that did not focus on reproductive health or family planning, one looked at the provision of HIV/VCT services, one assessed the quality of health services and infection control, one looked at provider motivation for joining a social franchising network, and one assessed the provision of TB services within a social franchise. See Figure 3 below for the distribution of PSI's provider research by health area.

FIGURE 3: HEALTH AREAS OF PSI PROVIDER RELATED RESEARCH



A large proportion of studies on reproductive health and family planning (61%) assessed the motivating factors, uptake barriers and outcomes related to long-acting reversible methods of contraception, primarily IUDs. Since delivery of these types of contraception requires the services of trained health workers and as the main focus of the Women’s Health Project, these long-term FP methods easily became the chief area of investigation in PSI’s provider research.

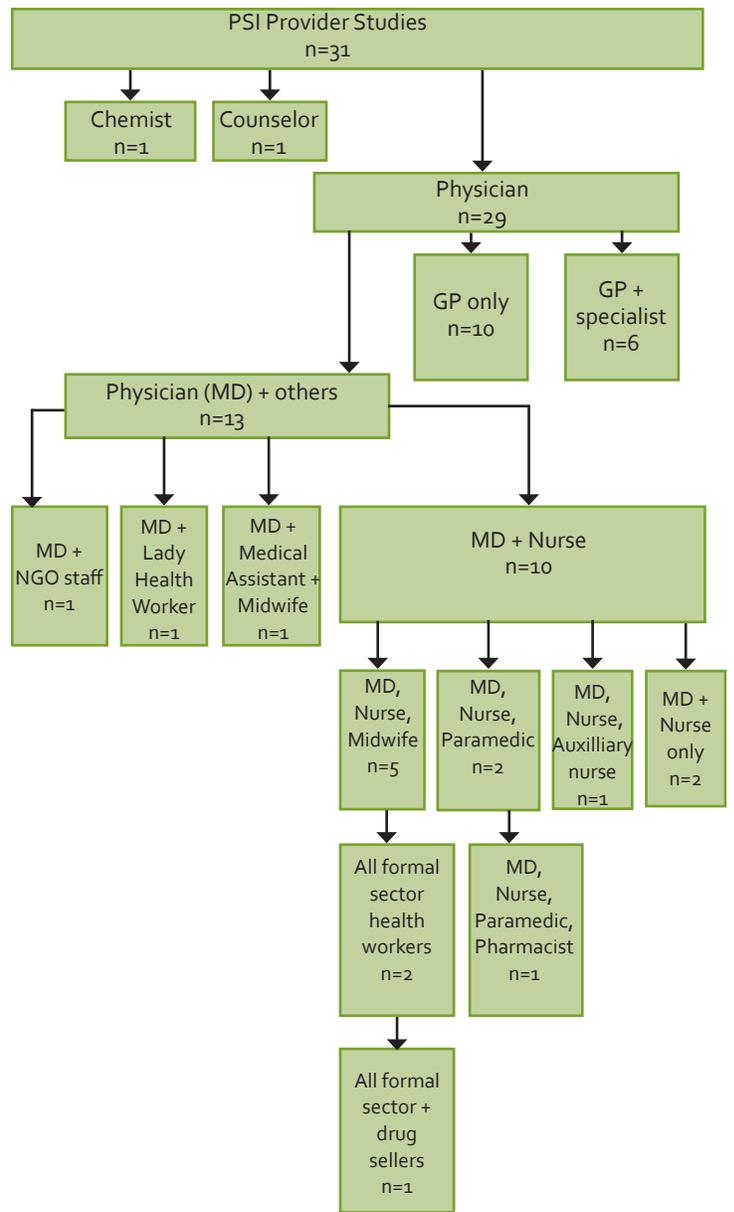
RESEARCH QUESTIONS IN PSI PROVIDER STUDIES

PSI researchers explored various research questions in their studies concerning provider behavior and social franchising. For example, researchers examined how providers delivered different aspects of service quality, including the client-provider interaction, health information shared, and the appropriateness of the clinical services. Quality of care—and client satisfaction with this quality—was assessed for various health interventions, including FP methods, and the diagnosis and treatment of STIs, including VCT services. Researchers also sought to understand the providers’ level of knowledge about and attitudes toward various modern contraceptive methods, as well as provider perspectives on why women may or may not wish to choose IUDs. Other research questions focused on the factors associated with provider productivity, providers’ motivation to join a social franchise network, and client choice of FP method.

TYPES OF PSI PROVIDERS INVOLVED IN PROVIDER RESEARCH

While all of the PSI studies looked at outcomes related to private health care providers, there was substantial variation in the types of providers engaged in PSI’s service delivery interventions (see Figure 4). Among the 31 studies reviewed, researchers centered on physicians in all but two studies; these two surveyed pharmacists in one and counselors in the other. Sixteen of the studies focused exclusively on physicians (general practitioners as well as specialists), while the remaining thirteen studies also incorporated a variety of other health workers. The flow chart in Figure 4 depicts the different provider types assessed across the 31 studies. In this figure, “n” represents the number of studies involving those particular types of providers.

FIGURE 4: FLOW CHART OF PROVIDER TYPES USED TO INFORM STUDIES



The variation in provider type reflects the differing local contexts for health care delivery in which PSI works. The composition of a health care team varies according to locality, with certain tasks assigned only to physicians in some countries while these same procedures are routinely and successfully performed by nurses, midwives or other types of health workers in other countries. In many parts of Africa, for example, IUDs can be inserted by trained nurses. By contrast, OB/GYNs⁵ or specially trained medical doctors perform this procedure in most parts of Asia by. Additionally, some family planning as well as disease prevention and treatment products are available at the retail level through pharmacists, so pharmacists serve as providers as well.

5. Obstetrician/Gynecologist

PSI DATA COLLECTION AND ANALYTIC METHODS

PSI used a variety of methods to assess provider-related outcomes in its research, employing quantitative and qualitative methodologies as well as gathering data from a variety of informants. Of the 31 PSI provider studies included in this review, 21 are quantitative, 6 are qualitative, and 4 are mixed method studies. Studies with quantitative methods used a structured questionnaire to gather data or obtained information through the closed-ended questions included in a qualitative semi-structured interview guide. Qualitative studies relied mostly on in-depth interviews of informants for data collection, although one study facilitated focus group discussions. Mixed method studies used a combination of qualitative and quantitative methods to gather information.

In addition to varying research methods, PSI researchers used different kinds of informants during data collection. Researchers collected data directly from providers as well as learned the client perspective through client exit interviews and mystery clients. Client exit interviews are interviews held with actual patients after their visit to a health provider. Details about their consultation, including their perceptions of their interaction with the provider and the quality of care given, are discussed. Mystery clients are fake patients who visit providers to secretly observe a provider and report about the interaction and the quality of care afterwards. Mystery client surveys provide a window into the client experience; they help PSI staff understand if messages transmitted to providers through training and other interventions are being retained and implemented. All three types of informants discussed their clinical experiences on the specific health topics outlined above. Doing so enabled researchers and programmers to gain a nuanced and more well rounded picture of provider behavior and the quality of social franchising care.

Table 1 shows the different types of informants used in this review's set of studies, organized by research methodology. Sixteen investigations solicited information from providers while 15 others examined the client experience, nine through mystery clients and six through actual clients.

TABLE 1: INFORMANTS USED IN PSI PROVIDER RESEARCH STUDIES, BY RESEARCH METHOD

Type of informant	Research Method			
	Quantitative	Qualitative	Mixed	Total
Provider	12	4		16
End user (Mystery client)	4	1	1	6
End user (Client exit)	4	0	1	5
Provider + Mystery client	0	1	1	2
Provider + client exit	0	0	1	1
Mystery client + client exit	0	0		0
Provider, mystery client, client exit	1	0		1
Total	21	6	4	31

PSI researchers preferred quantitative methodologies more often than qualitative or mixed method approaches, with 21 of the 31 studies

being quantitative. Of these 21, over half (13) centered on providers alone; the remaining eight incorporated client exit interviews or mystery clients. Most of the six qualitative studies also focused solely on providers, with the exception of two that used mystery clients. The four mixed method studies enrolled either clients or mystery clients alone, or combined these informants with providers.

Based on the division of research methodology by informant type seen in Table 1, the provider research studies in this review can be categorized into five types according to methodological approach:

1. Quantitative studies that sampled and interviewed providers;
2. Qualitative studies that sampled and interviewed providers;
3. Studies that utilized mystery clients to assess providers;
4. Studies that utilized client exit interviews to assess providers; and
5. Mixed-method studies that use quantitative and qualitative methods.

The annex presents descriptions of each of these five types, and summarizes the PSI provider studies that correspond under each one. Each summary in the annex provides greater detail on study objectives, sampling design, methodology, data analysis, and key findings than is explained here. See Annex documents 3-7.

Sampling and Sample Size

Researchers applied a variety of sampling methods to identify potential study participants. Most of the quantitative surveys relied on probability samples, including a census, a simple random sample, samples stratified geographically, and samples of populations proportionate to size. Some studies used Lot Quality Assurance Sampling (LQAS), randomly selecting providers or clients per area. Two quantitative studies used a convenience sample⁶ of providers, while three studies used a combination of sampling techniques to enroll exposed and unexposed providers into a study that used control groups. Qualitative studies usually relied on purposive sampling to find their interview and focus group participants.

Sample sizes for the quantitative studies ranged from 41 participants (convenience sample of providers in Cambodia) to over 1300 respondents (clients participating in exit interviews in Nepal). Three of the provider-only quantitative studies enrolled over 1100 providers, though the median sample size for quantitative studies sampling providers was 150. Sample sizes for qualitative studies ranged from 10 to 32 informants. Studies that used mystery clients usually only assessed each provider in the sample only once; only two of the nine studies conducted two observations per provider.

Analytical Approaches

Most studies in this review did not engage in rigorous or complex data analyses, even when

6. A convenience sample is a non-probability sample drawn from an easily accessible population. It may not be representative of the population of interest, which are providers in this case.

the sampling design afforded researchers the opportunity to do so. Instead, the majority of quantitative studies in this review used univariate or descriptive statistics, a requirement for the handful of LQAS studies, but not for most of the quantitative studies using different sampling techniques. Three studies sampling providers used regression analysis (logistic, linear and/or multinomial) to examine the factors associated with provider productivity with IUDs.

Studies sampling providers and clients limited their findings to univariate analyses despite having the sample size and statistical power to apply multivariate techniques. Six of the provider-only quantitative studies restricted analysis in this manner. For example, two very large studies in India and Nepal collected data on over 1200 providers; unfortunately, the researchers did not reap the benefits of such large sample sizes in the analysis, reporting only descriptive statistics instead. Thus, the datasets went largely unused. Similarly, a mixed methods study in Zambia sampled 120 clients over six sites, a design that may have allowed for some comparison between sites. The study report did not present this more meaningful analysis, however.

Like this Zambian study, many of the studies in this review did not use these comparison groups, either control groups whose results could be compared with providers exposed to PSI programming, groups from a different strata in the dataset, or time-based comparison groups used in a multi-round study. If research teams did incorporate comparison groups into the study design, they often failed to utilize these useful tools during analysis, by not testing for differences between them. For example, only four of the 13 quantitative studies sampling providers had control groups, with outcome differences between the exposed and unexposed tested in only two of these four studies. Myanmar and Nigerian researchers conducted multi-round studies but they did not test for a significant variation over time between the groups in each round. Similar limitations are seen in a mystery client study that used a comparison group as well as some client exit interviews studies that stratified their initial samples, but did not present stratified analyses in the findings. The large Nepal study mentioned above did indeed stratify the data into comparison groups, but as suggested above, the researchers did not perform statistical tests. So, while the opportunity existed to compare provider service quality, researchers did not seize it.

A few studies undertook more complex analyses in error, because the research teams had not initially designed the sampling strategy in a manner that would allow for accurate comparisons and statistical testing. For example, one study of providers in Myanmar tested for differences in outcomes between two regions even though the sampling frame was not stratified and the study did not actually have adequate power to accurately determine differences. The researchers did not take this analysis into account when designing the study and calculating the sample size.

In terms of qualitative research or the qualitative part of mixed method studies, researchers employed diverse analytical approaches. They used thematic coding, a situation analysis based on a SWOT (Strengths, Weaknesses, Opportunities, Threats) framework, and a matrix analysis. Note that the study reports described the analytical approaches in only three of the five qualitative studies, and even so, all of these descriptions are not complete and clear.

KEY FINDINGS FROM PSI PROVIDER RESEARCH

PSI's research efforts on the quality of service delivered by franchised providers yielded various findings that assisted programmers and marketers in developing and improving health service delivery and social franchising interventions. Highlights of these findings are listed below, categorized by major emergent themes from the body of provider research reviewed here. For more detailed findings, refer to the study summaries by methodology in Annex 3-7.

Note that it is difficult to compare the findings between studies, unless they were results from multi-round studies where noted. The level and manner of training providers as well as the performance standards varies from country to country. In addition, studies on the same topic (e.g. client education on contraceptive methods) also did not employ the same measures as each country's research team, either in terms of the study questions or any scoring scales used.

Quality of Care Delivered by Providers

- Provider compliance with standards on privacy, product storage, and client interaction is generally high (India, 2009; Madagascar, 2009; Myanmar, 2010; Nepal, 2003).
- Provider compliance with correct clinical examination standards could be improved (India, 2008; Myanmar, 2010; Madagascar, 2009).
- Providers participating in medical detailing intervention do not appear different from non-detailed providers in quality of pill and injection service provision (Cambodia, 2008).
- Providers' promotion of informed contraceptive choice is variable, ranging from 55% to 95% across four studies (Cambodia 2008; Madagascar 2009; Myanmar 2009; Nigeria, 2010).
- When providers counseled clients on FP methods, they did not discuss all methods equally, with long-acting methods being discussed more frequently as well as in more depth. In one study, 91% of clients reported learning about IUDs and 87% heard about implants from their providers. However, among short-term methods, 60.1% of clients were informed about the oral contraceptives, 48.8% heard about contraceptive injectables, 30.9% discussed the female condom, and only 28.5% talked about the male condom as an FP method (Zambia, 2010).
- Provider knowledge of IUDs contains inaccuracies, including beliefs that an IUD cannot be inserted during menstruation; is an abortifacient; increases the risk of contracting an STI; may become displaced; and is not suitable for nulliparous women (PASMO, 2009; Pakistan, 2009; Cambodia, 2010).

Client Satisfaction

- Client exit interviews revealed very high levels of satisfaction with their experiences receiving care from PSI's private providers
 - Over 98% of clients in one mixed methods study were satisfied with the services received, and most would recommend the method they received to a friend or sister (Zambia, 2010).
 - Clients using long-acting reversible family planning methods express high levels of satisfaction, with over 90% of clients in one study reporting they are satisfied or very satisfied with their method (Myanmar, 2009).

- Studies in Myanmar, Nigeria and Zambia revealed little correlation between client satisfaction and other measures of service quality such as privacy, record keeping, the provision of appropriate health information, methods choice, and follow-up care.

Provider Barriers and Motivators to Promote IUDs

- Providers perceive a variety of barriers to increased provision of IUDs, including lack of training, lack of confidence in carrying out the insertion or explaining the method to clients, existing beliefs of IUDs being dangerous for women, and fear of possible damage to the provider's reputation. (Cambodia, 2010; PASMO, 2009; Pakistan 2010).
- PSI-trained providers showed greater knowledge about IUDs and cited fewer barriers to their provision than non-trained providers. (PASMO, 2009; Pakistan, 2010).
- Provider participation in a socially franchised network or IUD trainings increases provision of IUDs. (Pakistan, 2010; Uganda, 2010).
- A social franchise provider network is a sustainable way of providing long-term methods of family planning to clients (Uganda, 2010).

Provider Perceptions of Social Franchising

- In studies that assessed provider satisfaction, the majority of respondents said they were satisfied with their involvement with PSI's social franchising program and the training, supplies, and benefits they receive. (Myanmar, 2009).
- Providers feel motivated to join a branded social franchise network by the training and support provided, as well as the ability to reduce some program costs and more easily offer services for low-income clients (South Africa, 2010).

LESSONS LEARNED

Based on the findings in this review, PSI has established itself as a major contributor in provider research, examining many important research questions on provider behavior and employing diverse approaches to answer those questions. However, the reviewer identified a number of areas for improvement. Some of these issues are already known by staff who are working to promote capacity building among researchers in PSI field offices.

- **PSI is capable of undertaking research with a variety of provider types, in a broad range of settings.** PSI staff have sought information from physicians, nurses, midwives, paramedics, chemists and other types of formal sector health workers, in challenging settings including Pakistan, Myanmar, and El Salvador.
- **PSI's provider research to date has primarily focused on only one health area, despite the fact that PSI implements service delivery interventions in a variety of areas.** Reproductive health and family planning is the dominant health area covered by PSI provider studies, with 27 of the 31 studies focused on this area. This focus was largely driven by the initial concentration of PSI's service delivery and social franchising programs in reproductive

health and family planning. The Women's Health Program also required PSI to better understand how providers delivered RH and FP care and the barriers they faced in doing so. Thus, PSI's other main program areas, such as child survival, have yet to benefit from the insights learned from provider research studies.

- **PSI's provider research shows limited geographic scope, despite the worldwide reach of PSI's efforts with social franchising.** A disproportionate number of the studies were implemented in Asia (21 of 31 studies), with most of the work occurring in just three Asian countries: Myanmar, India and Cambodia. Only eight studies were carried out in all of Africa, in just five countries. Given that 13 African country platforms have social franchises and are involved in work with providers at some level, PSI has an opportunity to greatly expand the geographical reach of its research here.
- **PSI research on private providers does not focus on a specific program intervention as studies in the peer-reviewed literature do.** Instead, PSI provider research is more descriptive in nature, investigating outcomes such as provider knowledge and quality of care, or factors associated with a desired provider behavior, such as training and increased self-efficacy. Studies in the literature utilize comparison groups to evaluate programs, a level of provider research that PSI has not yet attained.
- **PSI provider research and programming currently emphasizes increasing provider knowledge and/or changing provider behavior as opposed to the larger goal of improving client health.** Many studies assess output and proximate measures such as knowledge or perception, rather than outcome and impact measures, such as correct diagnosis and treatment, or population health measures. As a result, the link between a provider's increased knowledge and translation of that knowledge into improved patient outcomes is lacking.
- **The published literature has thus far given insufficient attention to the motivations and factors that influence provider behavior.** Such research is essential for defining the intervention prototypes that will generate sustained improvements in provider performance and clinical quality. PSI's emphasis on provider motivations and behavioral correlates in its research to date—and its use of this data in shaping its programming—places it in a unique position to fill this gap. PSI's ability to contribute and shape the evidence base will only increase as it improves and expands its provider and social franchising research based on the recommendations noted in this review.
- **Client exit interviews and mystery clients have proven successful in assessing provider-client interaction.** Use of these informants has presented PSI researchers with the client perspective on provider service, an invaluable tool in understanding the quality of care delivered. Researchers and programmers have been able to learn how health education and product messages are retained and communicated by the providers PSI trains and supports. In some cases, they have also learned how the providers carry out basic clinical protocols, such as patient history taking and hygiene practices. Such information would not be so easily attained by sampling providers alone.
- **Not all of the provider studies include information on sample size calculations or sampling rationale.** While the sample size, or actual number of interviews conducted, is present in all of the

studies in this review, some studies did not adequately explain the reasoning behind the sample size choice.

Moreover, the final data analysis reports are not always clear if the sample size used was in concordance with the original intention. In some cases, the sample sizes presented in the study design, and those reported in the final analysis, were inconsistent. However, a reason for the change was not presented.

- **Many PSI studies actually enroll far greater numbers of providers than is common in the published literature.** PSI sample sizes ranged from 41 to 1300 in its quantitative studies, with an average of 150 subjects enrolled in studies sampling providers. By contrast, studies in the published literature used smaller samples. In some ways, this finding could be seen as an advantage for PSI, as studies with larger samples lend themselves to more robust and defensible conclusions. However, PSI may also be doing unnecessary work if the added statistical power is not merited for the research question and analysis plan.

- **PSI research teams do not always choose the most useful analytical approaches, or use the chosen method appropriately.** With a few exceptions, the majority of provider research studies apply the simplest analytical methods to report results, even though the dataset is robust and diverse enough to merit using more complex analyses. Eighty percent of the quantitative studies (20 of 25) relied exclusively on univariate descriptive statistics to report the research results, despite having the statistical power to compare providers across regions, professional characteristics or intervention groups.

Sometimes, more complex analyses are implemented incorrectly, yielding invalid or less interesting results. For example, in one quantitative study investigating the differences between Myanmar providers located in two geographic areas, the findings were erroneously stratified even though the sampling frame had not been divided in this manner. Other studies either stratified findings or set up comparison groups correctly, but failed to test for differences between the groups. Two of the four quantitative studies sampling providers that had control groups did not test for differences in outcomes.

Of the eight studies using Lot Quality Assurance Sampling methods, the study documentation indicates that only four used these methods appropriately. The other LOAS studies used this method when it was not appropriate for the study objectives, or did not indicate the target level of the indicator during analysis. For example, in a report from a Madagascar study on reproductive health and HIV discussing whether their clinics met the minimum standards of care, the researchers failed to describe these minimum standards for provider performance, leading to difficult interpretation of the findings for someone not familiar with local performance benchmarks. In a successful LOAS design, targets need to be set a priori, and defined in the report.

These study design decisions and analytical errors limit the usefulness of the data, diminishing the types and strength of the conclusions drawn.

- **PSI provider studies rarely utilize comparison groups, making it impossible to judge if the intervention resulted in a change in provider behavior, knowledge or outcome.** As a result, the utility

of PSI studies for measuring success and guiding future programming is lessened considerably. Unlike studies in the published literature, few PSI studies used control groups, or compared the outcome in question with another provider population. For example, of 25 quantitative studies included in this review, only six compared the intervention group with a control group of non-network or non-trained providers. Instead, PSI provider studies are, mostly, confined to baseline or single point-in-time evaluations of the quality of services or client satisfaction. This finding is in contrast to other types of studies conducted at PSI, most importantly the TRaC study, a repeated cross-sectional survey of clients and consumers that routinely uses comparative analysis.

- **PSI provider studies do not often test the association between exposure and provider behavior, a standard component of PSI's consumer TRaC studies.** Only two studies in the review examined this link: A study in Pakistan used regression analysis to test if franchise participation was correlated with outcome; and a study in PASMO (El Salvador, Guatemala and Nicaragua) tested whether provider training is associated with positive provider perceptions of IUDs. Moreover, as noted, the majority of PSI's provider research to date has not included the comparison groups that can show the association between exposure and behavior.

Failing to examine this association is an easily missed opportunity given that provider behavior change interventions are much better targeted than consumer interventions. Unlike mass media interventions that reach many outside the target audience and yet may influence only a few, provider interventions such as individual training can impact 100% of the target audience, with a guarantee that 100% of those receiving the intervention are in the target audience.

- **Little is known about the utility of the research to the PSI platform and to the larger PSI network after it has been completed.** While it is common practice within PSI for research results to be presented and interpreted in discussion with program implementers, the details of these discussions and the conclusions drawn from the research results are often not preserved in a written report or submitted to headquarters. Because of such omissions, it may be difficult for readers to know if the research results were "useful" to the program implementers. Additionally, such omissions eliminate a channel of learning and sharing between PSI programs.

RECOMMENDATIONS

To address the concerns outlined above, PSI is encouraged to implement the recommendations below. Some steps are already underway or designated to begin within the next year.

- **Widen the scope of social franchising research beyond quality of care to investigate the other three pillars: cost, equity and access.** Existing studies, including this review, demonstrate the accomplishments and gaps to date in measuring and understanding the quality of care provided by social franchises. However,

as noted by the Social Franchising Metrics Working Group⁷, and in peer reviewed articles, research in the other three pillars is essential in order to fully maximize the promise of social franchising (Shah, Wang & Bishai, 2011) (Koehlmoos, Gazi, Hossain, & Rashid, 2011) (Patouillard, Goodman, Hanson, & Mills, 2007).

PSI has already undertaken one study related to access, the 2010 mixed methods study on access to care among female sex workers in Russia. Also, there has recently been growing interest within PSI to identify which interventions are most cost-effective and if franchises are able to serve the poor. This interest, combined with PSI's existing research capacity and the knowledge gained from its quality of care studies, will enable it to easily undertake studies on the other three pillars.

Note that this expansion into the other social franchising pillars may not involve studies that target providers directly. Instead, researchers may need to undertake investigations regarding health policy and systems infrastructure, or even studies among clients themselves.

- **Identify research questions that target programmers' needs, sharing deeper insight into provider behavior and the social franchising model.** The utility of a study almost always hinges on the usefulness of the research question. If the wrong question is asked, the results can hinder thoughtful decision making and program design. Thus, study design starts with identifying the question first—a step that needs to be reinforced with PSI field teams who sometimes choose their methodology before clearly defining what they need to know.

Client satisfaction and perceived quality of care is one area that requires a more nuanced understanding. PSI research to date has found high levels of client satisfaction even when the quality of care is relatively low. Thus, research needs to better identify what makes a client satisfied. Researchers conducting client exit interviews should consider asking specific questions about what aspects of the visit resulted in the high satisfaction rating or which aspects of the visit were most important to the client. Formative qualitative research could also be undertaken to understand client expectations for quality service. Additionally, interventions could educate clients on clinical aspects of quality service, in order to incentivize providers to improve their quality. Note that PSI plans to issue best practices on measuring client satisfaction within the next year as part of its ongoing technical assistance to its field researchers.

Additionally, PSI is moving towards standard clinical quality scoring. Future research could assess the impact of this standard scorecard on provider performance as well as consider the feasibility of a standard scoring system for non-clinical measures of quality. These non-clinical measures could then be assessed in conjunction with the clinical ones. Finally, research could examine PSI's external quality audit system, aiming to understand how it can be representative of the franchise, and thus a viable tool for

measuring clinical quality. Such research would help refine and align PSI's quality of care measures across its programs.

PSI also has an opportunity to expand existing knowledge on the strategies that optimize private sector health care delivery in low- and middle-income countries. Staff should consider research questions that evaluate initiatives where PSI has demonstrated leadership, such as social franchising, branded products, supply provision and supportive supervision.

- **Ensure provider research evaluates intervention outcomes by assessing their impact on provider behavior as well as patient outcomes.** PSI research teams should move beyond measuring outputs such as provider perception and begin evaluating outcomes. It is vital to understand if changing provider behavior has any impact on our end goal of improving patient health. To accomplish this, PSI researchers need to include comparison groups in study designs, evaluate providers before and after an intervention, and combine PSI survey data with routinely collected statistics from a country's health infrastructure (e.g., MOH data, DHS surveys).
- **Train and instruct research teams to design studies and employ analytical approaches that best match the study objectives and will yield the most robust and useful results.** For the studies reviewed in this paper, the programmatic utility could have been improved if statistically valid comparisons across groups were presented for many studies. Sampling design is one area for improvement as shown in this review. Since the characteristics of samples help define the value of the results, it is essential that researchers fully understand how to appropriately design a sampling strategy. They need to understand the value of comparison groups, know how comparative analysis impacts the sample size calculation, and be proficient in accurately defining the sample so that appropriate subjects are enrolled. In addition, a critical examination of the assumptions used in sample size calculations should also be undertaken, to ensure that the advantage of increased statistical power is worth the added cost.

During data analysis, researchers need to know how to accurately do comparative analysis. They should be able to identify where statistical comparisons would be a useful analysis, understand how to include comparison groups in regression analyses, and know how to compare data from multiple study rounds in which sample sizes and other parameters may have changed. Two of the best studies in this review, a quantitative study of provider perceptions on IUDs from Latin America, and a quantitative study of the impact of franchising on provider knowledge and productivity with regard to IUDs from Pakistan, demonstrated precise research questions, strong analytic methods and comprehensive reports on the study findings.

Researchers also need to be well versed in the array of basic statistical tests used to determine differences in outcome. They also need to understand how to accurately draw valid conclusions from their data. For qualitative studies, researchers need to pay careful attention to sample sizes because results obtained from small samples may not adequately reflect viewpoints extant.

7. The Social Franchising Metrics Working Group supports building better measures of social franchising performance indicators and better systems for indicator tracking, and implementing these metrics in programs worldwide. It is chaired by Dr. Kim Longfield, Director of Research and Metrics, PSI. <http://www.sf4health.org/workinggroups>.

To achieve these improvements, PSI headquarters should empower its research teams with a set of best practices for provider research. Topics such as the matching of methodologies, sampling strategies and analytic tools to study objectives need to be clearly described, along with tips on how to identify appropriate research questions. In addition, best practices for each of the research methods highlighted in this review need to be issued. To ensure these best practices are implemented properly, field staff and partners will need to be trained. Doing so will facilitate the development of a provider knowledge base that is targeted, comparative, cost-effective, organized and accessible.

- **To align provider research throughout PSI, headquarters should provide its field offices with standardized guidelines on research design and practices.** Standardization enables comparison of results and, over time, enables analysis of trends, ultimately informing the design of successful health programs. To aid this alignment, toolkits, model questionnaires, sample reports and study designs need to be developed for provider research, as already exists for PSI's consumer research. The issuance of the aforementioned provider research best practices will also further this standardization.

PSI is already in the process of aligning its provider research. During 2011, the Research & Metrics team will disseminate best practices and recommendations for qualitative research on health providers and measurement of client satisfaction. It is also working on revising and creating toolkits to help platform researchers write better study designs and reports. Furthermore, guidelines and sample modules for some research questions are being created, with more to be developed over the next few years.

Within the PSI social franchises, researchers are beginning to adopt a more standard suite of data, primarily patient demographics, patient history, cost of care, and the types of procedures and prescriptions issued. The franchises are also developing more standardized indicators by which program results are assessed. Doing so will enable PSI to better measure its effectiveness with social franchising and allow for more cross-program comparisons.

These changes will initially increase demand for PSI's services in guiding, implementing and evaluating research on health providers. In the long term, the development of these standardized tools and processes will lessen the need for this guidance due to increased provider research capacity in the field.

- **Encourage researchers to design studies with mixed method and multiple informant approaches.** Employing multiple data collection methods, particularly information gathering from different types of informants, generates a richer picture of provider behavior and the social franchising model. These mixed method studies combine quantitative and qualitative data, illustrating aspects of the research topic that are more difficult to capture through numerical measures. Triangulating data from different informant types also enables comparisons of the perspectives of different actors in the health care delivery system. As a result, researchers and programmers can better appreciate all facets of the

provider-client experience and design more effective programs.

One of the best studies in this review used multiple sources of information for triangulation. The 2011 study in Uganda on the Women's Health Project (Mayega, Ddamulira, & Kirunda, 2011) is PSI's best example of a comprehensive provider research study. It examines the entire service provision arena, using information from providers, clients, potential clients (household interviews), and program implementers.

Mixed method studies can also provide cost savings. Qualitative interviews with providers can be triangulated with quantitative client exit interview data to understand provider service quality without doing a large-scale study of providers.

- **Limit the use of qualitative studies to formative research, early assessments of interventions, and as part of a mixed method program evaluation, not as the sole method used to evaluate provider programs.** Qualitative studies are best used for formative research such as determining the scope of a problem or the type of intervention to be used. They are also useful for conducting early assessments of interventions, thus enabling adjustments to be made that will improve the likelihood of success. In addition, qualitative research is a useful tool to enhance the interpretation of quantitative survey results, and to answer some important program evaluation questions, such as perceived benefits of training, or membership in social franchises.

Accordingly, it is recommended that the use of qualitative research be eliminated with real clients or mystery clients when assessing perceptions of provider quality. Typically, these informants are not trained to make subjective judgments and observations on interactions with providers, particularly regarding a provider's clinical skills and adherence to standard diagnostic and treatment protocols. Thus, it is better to use closed-ended questions or limited open-ended questions—not the open-ended questions found in qualitative research—when conducting exit interviews or de-brief discussions with real clients and mystery clients.

- **Guide platform office staff in the appropriate use of mystery client studies.** Research teams often use mystery client studies as one method of obtaining invaluable information on providers' quality of care. Unfortunately, these studies are difficult to execute well. The mystery clients themselves have to be well-trained, able to reflect the normal patient demographics for each provider, and be a credible recipient of the service they are seeking. Moreover, research questions using mystery client studies must be narrow and well-defined, focusing on limited permutations of service provision. For PSI, mystery client studies may be better suited for judging provider adherence to protocol and accurate information delivery in studies on pharmacists and drug vendors, rather than physicians or other health workers who deliver clinical care. The amount of information that an actor must memorize may be considerably less, and the actors will not need to fake symptoms, leaving him open to detection by the physician.

Mystery clients still have their place in provider research, however. They are a cheaper alternative to direct observation of providers and they may introduce less bias into the data. Unlike

the observed simulated patient doll currently being used in Myanmar, mystery clients are more realistic, so providers are less likely to alter their service quality and perform better than usual. Moreover, mystery client responses may be more reliable than their client exit interview counterparts because mystery clients have been trained in what aspects of the interaction to observe and recall.

- **Improve the documentation of PSI research, from initial design to completion, including a post-study evaluation of its utility.** Such documentation verifies the validity of the research results and informs the designs of future projects implemented by PSI and other organizations. It also helps ensure that data and its accompanying institutional knowledge are passed along to colleagues when researchers transition off teams.

In reports on study findings, PSI should encourage researchers to provide complete information about their sampling methods and study procedures, including documenting any discrepancies in execution from the original study design. Researchers should also describe any logistical issues or outside events that may have introduced bias. Doing so enables other researchers to better interpret the meaning of the results, and apply any learnings or limitations to future study designs.

A study utility assessment will enable researchers and programmers to reflect on their investigation after the study is finished. By doing so, they can understand whether a specific study's research question and methods yielded the results they needed and/or intended, as well as how the implementation could have been improved. For example, the study utility assessment will evaluate if the sampling scheme was too ambitious, logistically challenging or not ambitious enough. These lessons will inform future provider studies as well as those conducted beyond PSI, particularly when other organizations are moving into new arenas and need values for variables in sample size calculations.

Note that this post-study evaluation does not need to be formal; rather, it can be a brief half-page to one-page summary of post-mortem discussions typically held between researchers and programmers after the study finishes. A form can be created to facilitate easy documentation and to ensure standardized responses for future comparison across studies.

Members of PSI management teams are aware of gaps in documentation, and are working to develop a strategy that explicitly encourages country-based researchers to be complete in their reporting on provider research. PSI's rollout of "Dataverse"—a central repository of study documents—will help consolidate and preserve information about each study, including study design documents and changes to the dataset.

- **Improve the regional distribution of its provider research to better reflect the areas where PSI is enhancing the service delivery of private sector providers.** Doing so will ensure that more countries' social franchising networks and individual providers benefit from evidence-based programming. Note that a number of studies are planned in Africa in 2011. In addition, PSI is in the process of conducting research on reproductive health providers in Benin, Cameroon, Laos, Mali, Tanzania, and Uganda, countries

that are mostly newcomers to PSI's provider research.

- **Expand the health areas covered by PSI provider research.** To date, the majority of PSI provider research studies target providers of reproductive health services. However, PSI service delivery extends beyond family planning into many other health areas such as male circumcision and malaria and TB treatment, a trend that will continue in the future. To maximize the impact of this service delivery, PSI needs to conduct provider research in these health areas, and apply its findings to the design and improvements of these interventions.

Some of this expansion is already under way. Some countries, notably Myanmar, have successfully leveraged their provider networks to study multiple health areas. Other platform teams intend to broaden their provider research topics in the near future, as many of PSI's social franchises plan on expanding their offerings to include curative care for children, HIV voluntary counseling and testing (VCT) and, in a few cases, provision of antiretroviral therapy (ARVs). Madagascar has also recently expanded its qualitative provider research agenda to understand the factors associated with community health workers' promotion of health education messages and product sales, as well as their use of referrals for community members to link to the health infrastructure.

- **Conduct more studies on non-physician providers.** Most PSI studies have targeted physician providers, despite the large number of service delivery interventions that involve providers other than physicians. Future investigations should focus more attention on the behavioral correlates and performance of nurses, midwives, pharmacists and community health workers. Since these providers often serve on the frontlines of health care delivery, especially with the increasing acceptance of task-shifting, it is essential to develop a body of knowledge about these types of providers.
- **Publish and disseminate its findings on the motivations and factors that influence provider behavior.** PSI's provider research, to date, has emphasized provider knowledge and perceptions as well as barriers that hinder performance – research foci that have been insufficiently documented in the literature. PSI has an opportunity to fill this gap with important contributions.

CONCLUSION

This review of PSI's provider research to date demonstrates the utility of synthesizing results and reflecting on how the research process can be improved. By summarizing and critically assessing its body of work, this review offers a snapshot of what studies have been done and their implementation methods, a useful tool for understanding PSI's strengths and identifying gaps. The compilation of lessons learned provides a blueprint for the most appropriate ways forward, recommendations that will benefit its internal staff and implementing partners as well as the wider development community.

As PSI continues expanding into new areas of health care delivery, the instruction and insight provided by this overview will improve the design of new interventions and their associated research studies. Such improvements can help ensure that program evaluations go beyond standard output measures as donor organizations currently demand.

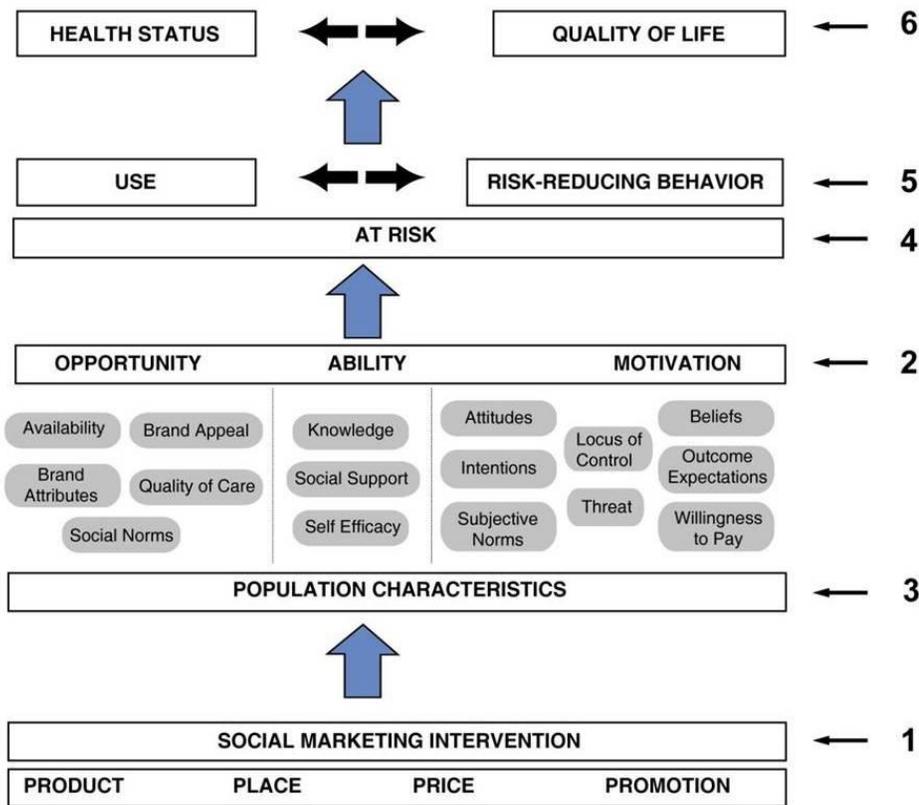
While at times critical of PSI's provider research, this review also celebrates PSI's leadership in this nascent field. It describes how PSI has applied its research capacity and years of experience developing client-focused social marketing interventions to the provider side of health care. PSI is clearly not a novice among the organizations carrying out research on health care providers. Such experience enables PSI to easily translate its formative, monitoring and evaluative research into targeted interventions, as well as to recognize and effectively respond to its research and programming gaps. PSI's experience also provides a framework that guides its research, helping it focus on the factors that influence provider behavior. It demonstrates how PSI has looked beyond simply measuring provider knowledge to determining their perceptions and motivators of productivity, and the levels of client satisfaction engendered as a result. Such studies fill a gap currently lacking in the published literature.

Finally, this review shows where PSI has begun to expand its research questions to explore access to care, one of the key social franchising pillars that has largely been ignored so far, as social franchising research, including PSI's, has concentrated on quality of care. PSI's continued leadership in exploring all of the key pillars will broaden our understanding of provider behavior and social franchising, leading to better and more efficient health service delivery, and ultimately, higher quality of life for populations around the globe.



ANNEX

ANNEX 1: PERForM FRAMEWORK



This framework demonstrates how PSI (1) delivers products, services and information (2) to enable (3) poor (4) and vulnerable populations (5) to change their behavior (6) and lead healthier, happier lives. PERForM connects the goal (improved health and quality of life) with the purpose (risk-reducing behaviors and use of products/services), outputs (e.g., the opportunity, ability and motivation to use a product/service), and activities (the social marketing intervention).

ANNEX 2: LIST OF PROVIDER-FOCUSED STUDIES REVIEWED

Three studies can be described as true mixed method studies. These studies differed in objective and methods used, and are further described below.

Basic Study Information				4. Research/M&E Goal/ Objectives
1. Study Title	2. Year(s) data collected	3. Country		
Mystery Client survey among medical detailing providers (MDP)	2008	Cambodia		To assess provider knowledge, and quality of service provision as per medical detailing training, including product availability and price
Provider satisfaction survey	2009	Cambodia		To measure satisfaction of franchise providers, on a variety of topics; to investigate determinants of low IUD insertion rates.
Current Practice of Medical Abortion	2009	Cambodia		To understand the current situation regarding abortion and MA in PSI Cambodia networks.
Provider productivity study on IUD provision in Cambodia	2010	Cambodia		To identify factors correlated with different levels of provider productivity; develop screening questions and training tools to predict and maintain productivity.
Formative research on discontinuation and side effects of long-term birth spacing methods (LTMs)	2010	Cambodia		To understand, from providers, why Implant is preferred over IUD and to explore reasons that women are scared of using IUD
Current practices of IUD insertion among physicians in Central America	2009	El Salvador, Guatemala and Nicaragua		To identify beliefs to reinforce and change related to provision of IUD by providers; identify behaviors and attitudes among adopting and non-adopting providers related to providing IUD
IUD's perceptions in central America: El Salvador, Guatemala and Nicaragua	2009-2010	El Salvador, Guatemala and Nicaragua		To determine baseline levels of IUD perceptions and attitudes among family planning providers
Qualitative study among health care providers and chemists to explore barriers and triggers pertaining to injectables as a contraceptive method	2010	India		To understand perceptions of injectables among providers; to identify the motivators and barriers to use; to understand practices regarding promotion of injectables.
KAP survey with providers	2009-2010	India		To provide current levels of IUD recommending practice and provider biases for IUD among PSI network and non-network providers
Mystery Client Surveys	2009-2010	India		To monitor increase in network providers' desired behavior and related quality parameters pertaining to IUD
Family planning study measuring medical abortion drugs recommending behavior and related triggers and biases among chemists in 3 project states for project WHIP	2009-2010	India		Establish current levels of practice of pharmacists and measure their knowledge, attitude, belief and beliefs relating to MA
Simulated patient study of health care providers in AP, TN, Karnataka and Maharashtra (Round 3)	Round 3 - 2008	India		To measure performance of Key Clinic providers in delivering quality services for men with STIs.

Mystery Clients for assessing the quality of services provided by TOP Réseau (FP, STI and counseling services) and TOP Réseau Plus (HIV testing service)	2009	Madagascar	Mystery Clients for assessing the quality of services provided by TOP Réseau (FP, STI and counseling services) and TOP Réseau Plus (HIV testing service) To evaluate quality of VCT, Male STI and FP services at franchised facilities
Determinants of productivity of the Profemina network provider survey	2010	Madagascar	Find determinants that correlate with a provider doing a medium or high number of monthly insertions; develop screening questions from the determinants to recruit new providers and predict provider productivity; develop training or any other tools to improve or maintain provider productivity
MAP study Sun Quality Health Clinic Network	2009	Myanmar	To assess coverage and quality of products from several health areas in 4 supervision areas; To assess quality of services according to criteria which are not product specific in 4 areas.
MAP study evaluating the availability of RH, Malaria, Pneumonia, STI and Diarrhea products in SOHC in Myanmar	2010	Myanmar	To assess the availability/coverage of PSI products in the SQH clinic network; to assess quality of products in terms of proper storage, etc; to assess the general quality of services provided by SQH clinics
Mystery Client Survey: Monitoring the FP services of Sun Quality Health Clinics	2010	Myanmar	To assess quality of STM FP services, identify areas for improvement and monitor performance
Behavior, attitudes and perceptions towards IUD among private providers in Myanmar	2010	Myanmar	To collect the rate of provision of IUD services at private health care providers; to find out the level of positive perceptions of IUD; to identify knowledge of IUD among private providers
The assessment of the perception of TB patients on quality of care	2010	Myanmar	To assess the quality of care provided by Sun franchise to TB DOTS patients; to identify areas for improvement; to determine the costs incurred by patients.
Impact evaluation of the Sun Quality Health Franchise in Myanmar	2009?	Myanmar	To build the evidence base on the effectiveness of social franchising, findings here report on 2 of 5 study objectives: Incentives for providers to join and remain members of SQHF and how does joining SQHF affect volume, composition of services and revenue of medical practice
Clients' perception on the long term method service	2009-2010	Myanmar	Assess the LTM users' perception on quality of care; track any changes of user perception on quality.
Clinical Study of Kathmandu Valley	2002	Nepal	Health facility assessment survey of drug stores/dispensaries and the private clinics in Kathmandu valley.
PSSN/SEWA/Sangini survey report	2003	Nepal	To provide baseline indicators for franchise intervention and to provide guidance for integrating all three networks under single brand.

Assessing the quality of family planning services using client exit interview study	2009	Nigeria	To assess providers quality of service, including technical competence, counseling, safety and privacy; To measure client satisfaction.
Assessing the long term method of family planning services: evidence from exit interview and direct observation study	2010	Nigeria	To assess providers quality of service, including technical competence, counseling, safety and privacy; To measure client satisfaction.
Changes in Provider Knowledge, Attitudes and Behavior Associated With Greenstar Network Participation in Pakistan	2009-2010	Pakistan	Examine private providers attitudes and practices to IUD recommendation and insertion; assess effect of Greenstar membership on recommendation practices
Assessment of the availability of medical services for most-at-risk populations in Krasnodar and St. Petersburg	2010	Russia	To assess availability of medical services for MARP; evaluate attitude of staff to target audience, specifically CSW; to compare behavior of 'trusted' and regular doctors to providing services to MARP
Exploring motivations amongst service providers for joining a branded reproductive health network.	2010-2011	South Africa	Identify motivations for becoming a member of a RH network; understand medical practitioners' expectations of such a network; obtain a deeper understanding of the context in which medical practitioners work, and the challenges they face in providing RH services
Process evaluation of Women's Health Project	2010	Uganda	To assess program performance; success of communication strategy for demand creation; contextual factors which affected program implementation; provide recommendations for future interventions
Evaluation of Quality of VCT Services Offered In Some New Start Centers in Zambia	2009	Zambia	1. To assess adherence to VCT procedures 2. To assess the quality of counseling and client satisfaction of service delivery 3. To assess the "quality" of customer care from the reception through getting the results and referrals 4. To assess client perception regarding counseling and testing at NewStart centers 5. To assess client perception regarding privacy and confidentiality of services 6. To highlighting the common and distinctive characteristics of the VCT centers
Exit interviews among IUD and Implant clients in Lusaka and Kitwe district	2010	Zambia	To assess client perception of service quality, including counseling, methods choice, and factors leading to decisions to choose long acting method

ANNEX 3: QUANTITATIVE STUDIES COLLECTING DATA FROM PROVIDERS

The majority of quantitative studies conducted by PSI platforms used providers as the sample, with 13 of 21 studies collecting data from these informants. One of these studies also included mystery clients and client exit interviews, but only the results from the provider portion of the study are discussed here.

The studies cover all PSI health areas except HIV. Eight of the 13 studies focus solely on reproductive health and three more address reproductive health along with other health areas. Another study looked at incentives for providers to join and remain in the social franchise, and a final study was a health facility assessment of clinics. Of the eleven studies pertaining to reproductive health, six assessed providers' experiences with IUDs, beyond product availability. Note that PSI researchers assessed provider productivity and provider knowledge and attitudes only in terms of IUDs and other long-acting family planning methods. Five of the 13 studies looked at general measures of clinic quality such as cleanliness, recordkeeping, waste disposal, and provision of informational materials. These studies were only done in two countries, Myanmar and Nepal.

Objectives of Studies

- Measure provider satisfaction with the social franchise, or his/her motivation to join the franchise
- Understand provider knowledge, attitudes and perceptions regarding IUDs and other long-acting methods for family planning
- Identify the factors associated with provider productivity in the provision of IUDs
- Assess the quality of facility services, including product availability, storage, equipment, and cleanliness

Sampling Designs Used

These quantitative surveys utilized a number of sampling methods, with most relying on probability samples. Ten studies used various types of probability samples, including a census of providers, a simple random sample of franchised providers, samples stratified geographically, and sampling provider populations proportionate to size based on caseload or location. Two studies used Lot Quality Assurance Sampling (LQAS), randomly selecting 19 providers per assessment area. Two other studies used a convenience sample⁸ of providers, administering the questionnaire at a meeting, or during a routine visit to the provider.

Three studies used a combination of sampling methods for different groups of providers. For example, a study in India used a simple random sample of network providers stratified by geographic area as well as a purposive sample of control group providers. In Pakistan, researchers chose Green Star social marketing franchise providers by simple random sample after stratifying by productivity; on the other hand, control group providers were located randomly, and selected if they were within 2 km of sampled Green Star social marketing providers.

Sample sizes in these studies ranged from 41 providers (the convenience sample in Cambodia) to over 1100 providers in each of three studies (2 in India and 1 in Nepal). The median sample size for quantitative studies that sampled providers was 150.

Data Analysis Approaches

The majority of quantitative studies on providers used univariate or descriptive statistics. While univariate analysis was required for the two LQAS studies, six other studies confined their analyses to this method despite being able to undertake more complex analyses. Two very large studies in India and Nepal with over 1100 respondents each were among the six that reported descriptive statistics alone.

Three studies on IUDs, including one of the large studies conducted in India, used regression analysis (logistic, linear and/or multinomial) to examine the factors associated with provider productivity with IUDs, defined specifically as how providers followed PSI recommendations on IUD usage. These studies also explored the differences between providers who inserted many IUDs (high productivity) with those who inserted only a few, if any (low productivity). Of these three studies, two had control groups. Only one study, in Pakistan, used regression analysis to test if participation in the franchise (or intervention) was correlated with outcome, which, in this case, was the number of IUD insertions during a certain time period.

Many of these quantitative studies did not use comparison groups, or the researchers did not test for differences between them when comparison groups were part of the design. Only four of the 13 studies had control groups, of providers who were either not part of the social franchise network or not trained by PSI. Of these four studies, only two tested for differences in outcomes between control and intervention groups. The large Nepal study mentioned above did stratify findings by provider affiliation but did not test for differences between the strata. Another study, in Myanmar, tested for differences in outcomes between two regions. However, the sampling frame was not stratified and the study did not have adequate power to accurately determine differences between the two strata. The researchers did not take this analysis into account when designing the study and calculating the sample size.

8. A convenience sample is a non-probability sample drawn from an easily accessible population. It may not be representative of the population of interest, which are providers in this case.

Key Findings

Major findings from the studies are presented below according to each of the themes in the study objectives. Note that the objectives varied from study to study.

Provider satisfaction:

- In studies that assessed provider satisfaction, the majority of respondents said they were satisfied with their involvement with PSI's social franchising program and the training, supplies, and benefits they receive.
- In Myanmar, 52% of providers reported that their income has increased after joining the Sun Quality Health network.

Provider knowledge, attitudes and perceptions of IUDs:

- Accurate knowledge about the IUD among providers is still low.
- Knowledge is greater among providers who have received PSI training in El Salvador, Guatemala, Nicaragua, and Pakistan, than those who have not received training.

Provider productivity in educating and administering IUDs to patients:

- Participation in a socially franchised network or IUD trainings increases provision of IUDs. In India, network providers are significantly more likely to recommend IUDs than non-network providers (29% vs 21%).
- Despite having received PSI training in IUD insertion, few providers reported providing these to patients. In Myanmar, only 21% of surveyed providers eligible to insert IUDs actually did insert these contraceptive devices.
- Many barriers to IUD provision were reported by study respondents:
 - Some providers had heard of women having bad experiences with the IUD, making them less inclined to provide this family planning method to their clients.
 - Other providers reported not feeling confident inserting IUDs despite having received training on this procedure.
 - Some providers found it difficult to explain the method to clients.

Quality of facility services:

Overall, the findings were mixed in the five studies that focused on this theme. The findings below used aggregate measures of the quality of services, reflecting the scores on several study indicators concerning facility quality and quality of care.

- In Myanmar, 55% of providers met the standards for greeting clients in a friendly manner, providing privacy in consultation, engaging in recordkeeping, and having products as well as information materials available.
- In Nepal, provider and client exit interviews revealed that less than 50% of providers met the standards for facility cleanliness or record-keeping. However, 25-30% of clients did not have privacy during consultations.

ANNEX 4: QUALITATIVE STUDIES COLLECTING DATA FROM PROVIDERS

Five of the 31 studies in this review used qualitative methods to assess aspects of provider behavior. All of these studies center on reproductive health, covering various topics such as IUD insertions, promotion and provision of short-term family planning methods, and prescription of medication for abortion. Researchers focused particularly on provider perceptions of the various modern contraceptive methods promoted by PSI. Three studies in four countries looked at provider's motivations and barriers to IUD provision specifically. Each study enrolled providers as respondents, although one of the studies supplemented its findings with mystery client visits. The provider-focused findings from this study are discussed here.

Objectives of Studies

- Understand provider perceptions, beliefs, and motivations for prescribing modern contraceptive methods.
- Examine providers' perspectives on why women may or may not choose the IUD as their preferred method of contraception.
- Identify factors related to provider productivity and motivations for joining a socially franchised network.

Sampling Designs and Methodologies Used

Four of the five qualitative studies used in-depth interviews with providers. The fifth study, carried out in Cambodia, used focus groups. Some providers were associated with the PSI social franchise network while others were contracted through NGOs. To recruit study participants, researchers used purposive sampling, relying on key informants to identify providers who were willing to be interviewed or join the focus groups. Sample sizes ranged from 10 to 32 persons.

Most studies were centered in just one country, but one study in Latin America enrolled providers from three countries (El Salvador, Guatemala and Nicaragua), reporting both country-level and combined findings. This study stratified providers according to four different criteria: provision of IUD (or not), gender of physician, physician specialty (GP or OB/GYN), and sector (public, private or NGO). One provider in each of the 24 resulting categories was interviewed.

Data Analysis Approaches

Researchers described their analytical approach in only three of the five studies. One thematically coded the interview transcripts using 10 themes while another applied a SWOT (Strengths, Weaknesses, Opportunities, Threats) framework to do a situation analysis. A third study used a matrix analysis of findings, dividing providers into three levels of productivity (low, medium, high) and comparing their responses. Note that the researchers did not fully describe how they undertook this analysis in their findings report.

Key Findings

Major findings from the qualitative studies are presented below according to each of the themes in the study objectives. Note that the objectives varied from study to study.

Provider barriers to IUD provision:

- A lack of provider confidence in inserting IUDs and educating clients is one major barrier to providing IUDs.
- Inadequate training in how to administer IUDs is another barrier among providers.
- Providers in Cambodia reported a lack of confidence in using IUDs.
- In Latin America, public sector providers reported a high workload, resulting in limited time for IUD insertion and the requisite training. Private and NGO sector providers had more time per patient, as well as sufficient time for trainings.

Provider motivators and barriers to dispensing injectable contraception:

- In India, researchers found providers were motivated to promote injectables because they are easy to administer as well as safe and effective for lactating mothers.
- However, Indian providers identified some side effects of injectables as barriers, expressing concern that amenorrhea and irregular bleeding frighten patients. Another barrier is that injectables are not viewed as being as profitable as IUDs.

Provider perception of demand-side barriers to IUD usage:

- Providers believe clients are reluctant to use IUDs because of their husbands' resistance to the method.
- Providers perceive their female clients have misconceptions about IUDs, such as the IUD can travel in the body, leading to lower interest in using this method.
- Providers think female shyness about exposing themselves to male doctors during IUD insertion is another barrier to usage of IUDs.

Provider motivations to participate in a branded social franchise:

- In South Africa, providers felt that joining a branded social franchise network would enable them to more easily provide services for low-income clients, by reducing some program costs.
- Another motivating factor for South African providers is the training and support received as a benefit of network membership.

Challenges of Using Qualitative Studies with Providers for Provider Research

A major challenge in using qualitative methods with providers is the inability to compare results across contexts. Qualitative interviews may address divergent topics from one setting to another, or even from one interviewer to another depending on the comprehensiveness of the discussion guide. Qualitative studies also typically use a much smaller sample size than quantitative studies, limiting the validity of the findings as representative of the general study population.



ANNEX 5: STUDIES COLLECTING DATA FROM MYSTERY CLIENTS

Mystery clients collect both quantitative and qualitative data while visiting providers. In addition to observing the provider, mystery clients can also assess the appearance of the facility, the provider's history taking and manner of communicating, and some easily observable and basic clinical steps such as hand-washing. Mystery clients are typically inappropriate informants to assess clinical quality, as they are not trained health care workers.

Nine of the 31 studies in this review used mystery clients to gather data and assess the quality of care provided. Of these nine studies, two are mixed methods studies that are not described here (see the Russia and Madagascar studies in Annex 7 below). Six of the mystery client studies examined reproductive health services, while the remaining study evaluated the quality of VCT services for HIV. One study used simulated clients – clients who have real symptoms and a confirmed diagnosis already, and who are trained to observe and report on the quality of a provider's care, including history taking, examination, diagnosis and treatment. This study was the only one (among all 31) that looked specifically at provider interactions with male clients.

Objectives of Studies

- Examine various aspects of service quality, such as privacy, history taking, and available supplies, pertaining to the provider-client interaction.
- Determine the level of provider knowledge of oral contraceptives and injections.
- Assess the quality of care provided for oral contraceptives and injectables.
- Understand provider practices regarding the promotion of injectables as a contraceptive method.
- Examine the quality of counseling given about IUDs.
- Evaluate the quality of service provided when diagnosing and treating men with STIs.
- Assess the service quality provided for voluntary counseling and testing for HIV.

Sampling Designs and Data Collection Methods Used

PSI's mystery client studies in provider research used a variety of sampling techniques. Four of the seven surveys (one each in Cambodia and Myanmar, and two in India) used Lot Quality Assurance Sampling (LQAS), sending one or two mystery clients to each of the 19 providers selected per assessment area. The other three studies sampled providers using various means, one of which conducted a census of providers while another used purposive sampling. One study did not report its sampling strategy. Sample sizes ranged from eight mystery clients assessing the promotion of contraceptive injectables in India, to 511 mystery clients observing family planning providers in Nepal. Only two of the seven studies conducted two observations per provider; most of the studies assessed each provider in the sample only once.

In Nepal, mystery clients in a family planning study acted out one of two prescribed scenarios: a breastfeeding mother of a three-month-old infant seeking healthy timing and spacing of pregnancy, or a mother of three children who wants to stop child bearing. They observed their wait time, the provider's history taking and counseling, the choice of methods provided, and other aspects of quality. For a Cambodia family planning study, clients presented as either seeking the pill or seeking an injection; they assessed the quality of care, including how the provider explained the method's advantages and disadvantages.

Researchers collected data on the mystery client-provider interactions using quantitative and qualitative methods. Two of the four LQAS studies used a qualitative structured interview guide to de-brief the mystery clients' visits, while the other two used a quantitative survey.

Data Analysis Approaches

PSI researchers employed various methods when analyzing the data gathered from mystery clients. Researchers applied univariate analysis to the data, presenting just descriptive statistics. Only one study, a multi-year study in India assessing the quality of STI care provided to men, conducted significance testing, comparing data from different rounds of the study. Some studies used control groups, comparing network and non-network providers, although the researchers often did not apply the statistical tests that produce meaningful results from these comparisons. For example, in a family planning study in Nepal, non-statistical comparisons between network and non-network providers were made on history taking, wait time, counseling, methods choice, and other aspects of quality. In a Cambodian study on an intervention that included medical detailing⁹ and compared detailed and non-detailed providers, researchers found higher scores among detailed providers, but could not make statistical comparisons between groups because the sample size was too small.

9. Medical detailing is an intervention used by PSI to inform and educate health service providers about particular products, services, or topic areas. In a medical detailing intervention, providers are periodically visited by a PSI or franchise representative, who delivers products and equipment, provides up-to-date information about the subject, and answers any questions the provider may have.

Key Findings

Major findings from the studies are presented below.

Promotion of informed contraceptive choice:

- Providers' promotion of informed contraceptive choice is variable, ranging from 55% to 95% across four studies.

Compliance to clinical examination standards¹⁰:

- Overall, compliance to correct clinical examination standards was low, and always less than the desired standard.
- In Myanmar, a study using LQAS methods found that no area met the performance target for five of the six domains for family planning quality.¹¹
- Cambodian providers who had been exposed to PSI's medical detailing intervention scored higher than unexposed providers on their determination of clients' medical eligibility seeking oral contraceptives and injections.

Explanation of the advantages and disadvantages of a modern contraceptive method:

- In Nepal, none of the providers observed by the mystery clients mentioned if the contraceptive methods protect the client against STIs and HIV.
- Only about 50% of Nepalese providers who suggested tubal ligation as a permanent contraceptive method informed the client that she would never become pregnant again.

Challenges of Surveying Mystery Clients for Provider Research

Although mystery clients are a popular methodology among PSI research teams, it can be challenging to successfully use these clandestine data collectors to assess provider quality of care and adherence to protocols. Challenges arise during study design and mystery client recruitment, as well as during data collection following the mystery client interaction with the provider under study.

For the study to work properly, the profile of the client must be clearly defined (e.g. age, medical conditions, other demographic factors) as well as the script that the client will follow. Once defined, mystery clients must be trained to execute the role naturally, which can be a challenge. It can also be difficult to identify appropriate actors in the first place. Ideally, mystery clients are recruited from a population similar to the provider's normal clientele so as not to arouse suspicion and alter his or her behavior. In small communities, recruitment is particularly challenging because outsiders are easily spotted.

Accurately capturing mystery clients' observations and experiences with the provider can also prove challenging. Mystery clients may not readily recall the details of a client-provider interaction, adding bias to the dataset. This recall bias may be exacerbated if the study uses open-ended questions for debriefing the mystery client. Open-ended questions are useful for gaining some understanding of the client experience, but they usually lack the precision of a quantitative survey. A thorough and systematic survey questionnaire asks mystery clients to respond to the details, not generate them from memory as qualitative study instruments demand.

10. Provider performance standards for clinical examinations are typically set by the country platform teams implementing the intervention. These standards are based on evidence-based guidelines provided by PSI headquarters.

11. The domains of family planning quality are method choice, information provision, technical competence, etc. (Bruce, 1990). Each domain will have a set of clinical examination standards.

ANNEX 6: CLIENT EXIT INTERVIEWS

Client exit interviews are held with patients after their visit to a health provider. Ideally, client exit interviews are conducted immediately following a patient visit; however, they can be held up to a few months afterwards to assess long term satisfaction, adherence or side effects.

Seven of the 31 provider research studies in this review used client exit interviews as a data collection method. Two of these studies combined information from exit interviews with information from other sources such as providers or mystery clients. One study used mixed methods, and is described in Annex 7 below. Studies using client exit interviews took place in Myanmar (2), Nepal, Nigeria (2), and Uganda, focusing on the quality of care provided in either reproductive health or tuberculosis care. The two studies from Myanmar, one examining TB care and the other investigating family planning services, were executed over several rounds. However, only the final round of each study was counted for the purposes of this review.

Objectives of Studies

- Examine how providers deliver different aspects of service quality, including the information given to clients, appropriateness of clinical services, mechanisms for follow-up care, and client-provider interaction (provider interpersonal relations).
- Assess client satisfaction with the provider guidance and clinical care given for long term family planning methods.

Two studies, held in Myanmar and Nigeria, centered on this last objective.

Sampling Designs and Methodologies Used

Five of the six client exit interview studies used only a quantitative survey with clients to gather data on service quality. The other, a 2010 Nigerian study on the quality of family planning services combined client exit interviews with direct observation of the doctor-patient interactions.

Sample sizes for these studies ranged from 100 to over 1300 clients, identified through a variety of sampling techniques. One of the studies used a variation of the LQAS technique, interviewing 19 clients per sampling area. Both studies from Myanmar randomly sampled 10% of recent clients at the respective clinics, selecting 10% of all patients who initiated TB treatment in the three months prior to the survey round, or 10% all clients seeking long term family planning methods in one month prior to the survey round. For each round of these studies, researchers visited the residences of those sampled to enroll and interview study participants.

Data Analysis Approaches

PSI researchers used descriptive statistics when analyzing the data gathered through client exit interviews.

Although some samples were stratified for data collection, stratified analyses were not presented in the study reports. Some countries such as Nigeria and Nepal had the opportunity to compare provider service quality in different regions or strata, but did not.

Some country platforms implemented multi-round studies, allowing program and research teams to easily view changes over time, as well as measure the impact of certain quality improvement messages. Myanmar researchers conducted two multi-round studies while the Nigerian team implemented one. However, none of these three studies that could conduct statistical analyses of these changes actually did test for a significant variation over time.

Key Findings

Major findings from the client exit interview studies are noted below, grouped according to the themes in the objectives of the studies.

Client satisfaction:

- Client exit interviews revealed very high levels of client satisfaction.
 - The two rounds of the Nigeria study showed that over 95% of clients would recommend the long-term method service to a friend.
 - In Myanmar, 99% of clients in each round were satisfied or very satisfied, over four study rounds.

Quality of provider services:

- A 2003 study in Nepal reported that 25-30% of clients reported little or no privacy during pelvic exams, poor record keeping, and inappropriate disposal of medical waste.

Relationship between quality of provider services and client satisfaction:

- Studies in Myanmar, Nigeria and Zambia revealed little correlation between client satisfaction and other measures of service quality such as privacy, record keeping, the provision of appropriate health information, methods choice, and follow-up care.
 - While 99% of clients from Myanmar expressed satisfaction with their IUD services, the proportion of clients who receive information about side effects is declining over time. The proportion of clients who learned heavy menstruation is a side effect of IUDs dropped from 90% in round 1 to about 50% in round 3.

- While over 80% of clients received counseling about at least one family planning method other than the IUD, the majority were counseled about a short-term method, such as pills or injections. Less than 20% received counseling from providers about implants, another effective long-term method.
- In the 2009 family planning study in Nigeria, only about half of the providers asked clients certain key specifics when they took patient histories. Among the clients choosing implants, 57% were asked about their history using contraception, while 44% were asked if they had experienced bleeding between menstrual periods.
In addition, only 71% of IUD clients and 57% of implant clients were told to return to the facility if they experienced warning signs. Less than 10% of the clients who chose implants were told that this method does not provide STI protection.
- In the 2010 round of the Nigeria FP study, many more providers asked clients about key details of their reproductive health history. Among the clients using implants, 96% were asked about previous contraceptive use and 75% were asked if they had noticed bleeding between periods.
Also, significantly more implant clients than IUD clients received appropriate care from their providers. Nearly all implant clients were given follow-up information (99%) and learned that their family planning method does not protect against STIs (98%). On the other hand, the proportion of IUD clients who received these two types of information was 60% and 22%, respectively.

Challenges Using Client Exit Interviews for Provider Research

Client exit interviews are a popular and valid method of understanding some aspects of the client-provider experience, such as Bruce's six domains of quality as well as client satisfaction. However, PSI research teams still face challenges when utilizing this method.

One major challenge of client exit interviews is determining the quality of a provider's clinical skills. As shown by Bruce, clients can provide insight into some measures of quality, particularly those related to doctor-patient interaction, health education and non-clinical protocols such as record-keeping, privacy and hygiene practices. However, it is very difficult to accurately assess the clinical quality of the service via exit interview. As clients are rarely health care providers, typical clients do not have the training and knowledge to make an informed judgment of how the provider diagnoses and treats the patient's condition. One solution is to pair exit interviews with direct observation as the Nigerian team did in its 2009 study. However, direct observation is costly and the presence of an observer can change provider behavior and bias results. It is also essential to triangulate the reports from the client and the observer on the provider interaction in order to produce meaningful results; the Nigerian researchers failed to include this comparison of findings in their analyses.

Another challenge with client exit interviews is recall bias. Common to many retrospective studies, recall bias pertains to the bias that a respondent has when remembering information in the past. Thus, clients may not accurately remember the details about his visit to a provider, including the instructions and health information given, facility cleanliness and the provider's bedside manner. As a result, researchers may not have full confidence in the study informant's data, particularly when the exit interviews are not immediately following the provider visits. The studies in Myanmar and Uganda interviewed clients 1-2 months after their provider visits.

ANNEX 7: MIXED METHODS STUDIES

Of the 31 studies included in this report, four can be described as true mixed method studies. These studies used both qualitative and quantitative methods to gather information from the study informant. Furthermore, researchers sought information from multiple types of clients and providers in order to gain a richer perspective. In two of these studies, PSI researchers supplemented their provider and client data with surveys of the health facilities or the product distribution system. The study implemented in Uganda in 2010 (Mayega, Ddamulira, & Kirunda, 2011) was the most thorough and far-reaching of the four, and among the most comprehensive included in this review.

As each study differed significantly in study objectives and design, each one is summarized separately below.

2010 Study on Access to Health Services by Female Sex Workers in Russia

Study Objectives

- Assess the availability of medical services for most-at-risk populations (MARPs), in this case, female sex workers.
- Evaluate attitude of providers towards female sex workers.
- Compare the behavior of 'trusted' and regular doctors ('non-trusted') in providing services to MARPs.

Sampling Design and Methodologies Used

A quantitative survey of 39 medical facilities in two cities was conducted, collecting a variety of binary indicators on accessibility and infrastructure, the health information available to clients, confidentiality, and referral services. This survey was complemented by 26 mystery client visits, and 13 qualitative interviews with street-based sex workers to assess the client experience with providers. In addition, the sex workers were asked about their comfort visiting different facility types (such as public clinic, private clinic, hospital, etc.), as well as their perceptions on the accessibility of health care services. Note that this latter question concerned accessibility in general, and was not connected to a specific provider visit that the FSW had in the past.

The study report did not clearly explain how the mystery clients were selected or what sampling strategy was used.

Data Analysis Approaches

The quantitative data from the medical facility survey was reported as descriptive statistics by city, without cross-tabulation by facility type. The study report did not state how the researchers analyzed the mystery client and FSW interviews. The overall analysis synthesized the results from the three data collection techniques, using a 'case study' method.

The analysis made comparisons between 'trusted' and 'not trusted' doctors, however these designations were not clearly defined. Comparisons between 'trusted' doctors' medical institutions and those of 'non-trusted' doctors were not made, however.

Key Findings

- The services provided by 'trusted' doctors were more likely to meet patient needs.
- 'Trusted' doctors did not judge patients based upon their occupations.
- 'Trusted' doctors appear to provide more reliable medical information according to mystery client survey results.

2010 Study on Long-Term Family Planning Methods in Zambia

Study Objectives

- Assess client perceptions of the quality of family planning services received.
- Identify the factors influencing the client's choice of a long-term family planning method.

Sampling Design and Methodologies Used

Researchers employed exit interviews to gather data from clients using long-term family planning methods, using a semi-structured interview guide that collected both quantitative and qualitative data.

While the study report did not describe sample size, clinic selection or recruitment strategy, it did note that the researchers enrolled 120 participants at six sites.

Data Analysis Approaches

The information gathered from the closed-ended questions was tabulated as descriptive statistics. Qualitative responses to the open-ended questions were thematically coded and then representative quotations were selected for each theme, as thematic statements. The mixed method approach allowed data analysis to incorporate thematic statements with the quantitative results to illustrate those aspects of quality that are more difficult to capture through numerical measures. These aspects included manner of client reception by the family planning counselor, client perception of confidentiality, and the reasons why the client decided to obtain a long-acting family planning method.

With a sample size of 120 clients over six sites, some comparison between sites may have been possible. This analysis was not presented in the study report, however.

Key Findings

- When providers counseled clients on FP methods, they did not discuss all methods equally, with long-acting methods being discussed more frequently as well as in more depth. 91% of clients reported learning about IUDs and 87% heard about implants from their providers. However, among short-term methods, 60.1% of clients were informed about the oral contraception, 48.8% heard about contraceptive injectables, 30.9% discussed the female condom, and only 28.5% talked about the male condom as an FP method.
- Over 98% of clients were satisfied with the services received, and most would recommend the method they received to a friend or sister.
- A key study recommendation was to increase the emphasis on method choice when training and supervising providers, particularly since many clients visit the facility with a contraceptive method already in mind.

2009 Study on Quality of Top Reseau Centers in Madagascar

Study Objectives

- To measure service quality of doctors in Top Reseau franchises when encountering youth for Family Planning and STD treatment services.
- To measure service quality of counselors in Top Reseau Plus franchises for HIV counseling and testing.

Sampling Design and Methodologies Used

This study used Lot Quality Assurance Sampling (LQAS) to select 19 doctors from the Top Reseau network. Each doctor was visited by two different mystery clients – a young woman seeking family planning services, and a young man seeking treatment for a STD. It also conducted a census of counselors in the Top Reseau Plus network, and surveyed all of them with a mystery client. It is not clear if the same mystery clients were used for HIV and Family Planning or STD services. The mystery clients completed a quantitative questionnaire, indicating if certain standards were met by the doctor or counselor during the visit, and also completed an open-ended (qualitative) questionnaire regarding their observations.

Data Analysis Approaches

For each of the three mystery client types, a rubric of indicators, scores, and minimum standards was described. For example, 5 items were scored in the domain of “Client welcome”, of which 3, indicated by an asterisk * were required for the provider to meet the minimum standard.

1. *Wear a white shirt
2. *Say hello
3. *Close the door
4. Offer the client a seat
5. Ask about the reason for the visit

Data was then tabulated, and number of providers meeting each criteria, and the corresponding LQAS probability of success was reported. For HIV counseling and testing, real percentages were reported as the sample was a census of all counselors.

In addition to the descriptive statistics, observations on the service experience were listed. The manner in which the qualitative data were analyzed is not described in the study documentation, and where both critiques and recommendations are provided, it is unclear if the recommendations come from the mystery clients, or data analysts.

Key Findings

- Only one of 19 providers met all minimum standards for FP service provision.
- 16 of 19 providers (95% via LQAS method) explain all methods of FP.
- No provider met all minimum standards for male STD treatment, and only one provider met all minimum standards associated with prescribing STD treatment.
- Only one of 20 counselors met all minimum standards for VCT, with 1 of 20 meeting pre-test counseling minimum standards, and 16 of 20 meeting post-test counseling minimum standards.

2010 Study Evaluating of the Women’s Health Project in Uganda

Study Objectives

- Assess the performance of the Women’s Health Project (WHP) in improving the quality of provider services, including training providers on IUD insertions; in increasing IUD provision by providers; and in generating client-side demand for long-term family planning methods.

- Evaluate the communication strategies for demand creation of WHP services.
- Understand the contextual factors that affected program implementation.
- Determine client and stakeholder perceptions about family planning products promoted by the program.

Sampling Design and Methodologies Used

This study employed both quantitative and qualitative data collection methods to gather information from various types of informants. Researchers conducted a quantitative survey with providers, clients, and households as well as in-depth qualitative interviews with providers and WHP program staff. Study instruments posed questions on the same subject to different informants to ensure the qualitative and quantitative data could be triangulated. For example, to determine which communication channel prompted the client to visit the provider for a long term family planning method, researchers asked clients via exit interview, and also asked providers their opinion during an in-depth interview. In addition to investigating client motivators and the quality of care received, the research team also assessed the product distribution system, using clear indicators of stock outs along with in-depth qualitative discussions with program staff on challenges in this system.

A research agency sampled providers, clients and households in each of the five regions of Uganda. Within each region, two to three districts were selected. Then, Lot Quality Assurance Sampling was used to select 19 respondents for each analysis area. Analysis area differed by respondent. The study sampled 19 providers per region (83 providers total), 19 households per sub-county (with two sub-counties per district, a total of 380 households), and all family planning clients receiving services over a four-day period at two clinics per sub-county in the selected districts. In total, 373 clients were reached.

Data Analysis Approaches

The final evaluation combined descriptive statistics obtained from the different respondents with record review, in depth interviews with village health workers and key providers, and MIS data to assess if project objectives were achieved.

Key Findings

- Based on the project workplan and MIS data, many key project objectives were met and exceeded. For example:
 - No facilities reported stock-outs of IUDs, exceeding the target level of 85% of facilities without stock-outs.
 - 389 private providers were trained in administering misoprostol for post-partum hemorrhage, post abortion care and other indications, far exceeding the target of training 200 private providers.
- The observed IUD and implant contraceptive prevalence rate in target communities was 4.4% and 3% respectively, compared to national rates of 0.2% and 0.3%, respectively.
 - Providers reported that the poor ability of illiterate clients to understand the written information on various FP methods delays the process of decision making.
 - Client exit interview data showed that 75% of clients were told what to do if they experienced side effects; 80% reported that the health worker explained how the method they chose works or is used; and 83% reported they were given information on different methods.
- The effectiveness of the village health team in mobilizing the community and generating demand for WHP services was mixed
 - The village health team reached only 20% of the target population with key messages as compared to mass media, which touched 90% of its target audience.
 - Only 41% of the village health workers felt they had a significant role in demand generation.

REFERENCES

- Bojalil, R., Guiscafne, H., Espinosa, P., Martinez, H., Palafox, M., Romero, G., et al. (1998). The quality of private and public primary health care management of children with diarrhoea and acute respiratory infections in Tlaxcala, Mexico. *Health Policy and Planning*, 13(3): 323-331.
- Boller, C., Wyss, K., Mtasiwa, D., & Tanner, M. (2003). Quality and comparison of antenatal care in public and private providers in the United Republic of Tanzania. *Bulletin of WHO*, 81(2): 116-122.
- Bruce J. (1990). Fundamental elements of the quality of care: a simple framework. *Studies in Family Planning*, 21(2): 61-91.
- Chapman, S., & Patel, D. (2004). *PSI Behavior Change Framework: Bubbles*. Washington, D.C.: PSI Research Division.
- Hanson, K., Gilson, L., Goodman, C., Mills, A., Smith, R., Feachem, R., et al. (2008). Is private health care the answer to the health problems of the world's poor? *PLoS Medicine*, 5(11): 1528-1532.
- Koehlmoos T, Gazi R, Hossain S, Rashid M. (2011). *Social franchising evaluations: a scoping review*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Lonnroth K, Aung T., Maung W, Kluge H., Upleakar M. (2007). Social Franchising of TB care through Private GPs in Myanmar: An Assessment of Treatment Results, Access, Equity, and Financial Protection. *Health Policy and Planning*, 22 (3) 156-166.
- Mayega, R., Ddamulira, J., & Kirunda, B. (2011). *Process evaluation of the Women's Health Project*. Kampala, Uganda: PSI.
- Mills, A., Brugha, R., Hanson, K., & McPake, B. (2002). What can be done about the private health sector in low-income countries? *Bulletin of the World Health Organization*, 80(4): 325-330.
- Patouillard, E., Goodman, C. A., Hanson, K. G., & Mills, A. J. (2007). Can working with the private for-profit sector improve utilization of quality health services by the poor? A systematic review of the literature. *International Journal for Equity in Health*, 6(1): 1-11.
- Peters, D. H., Mirchandani, G. G., & Hansen, P. M. (2003). Strategies for engaging the private sector in sexual and reproductive health: how effective are they? *Health Policy and Planning*, 19(suppl 1): i5-i21.
- Rowe, A. K., de Savigny, D., Lanata, C. F., & Victora, C. G. (2005). How can we achieve and maintain high-quality performance of health workers in low-resource settings? *The Lancet*, 366(9490): 1026-1035.
- Shah, N. M., Brieger, W. R., & Peters, D. H. (2010). Can interventions improve health services from informal

private providers in low and middle-income countries? A comprehensive review of the literature. *Health Policy and Planning*, 26(4): 275-287.

Shah, N. M., Wang, W., & Bishai, D. M. (2011). Comparing private sector family planning services to government and NGO services in Ethiopia and Pakistan: how do social franchises compare across quality, equity and cost? *Health Policy and Planning*, 26(suppl1): i63-i71.

Tsui AO, Myint Y. (2006). *The impact of franchising reproductive health services on client services use in Ethiopia, India, and Pakistan*. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health.

Waters, H., Hatt, L., & Peters, D. (2003). Working with the private sector for child health. *Health Policy and Planning*, 18(2): 127-37.

WHO. (2003). *World Health Report 2003: Shaping the future*. Geneva: World Health Organization.

WHO, UNICEF, & PSP-One. (2007). *Public Policy and Franchising Reproductive Health: Current Evidence and Future Directions – Guidance from a technical consultation meeting*.