

QUALITY MEASUREMENT IN FAMILY PLANNING:

Past,
Present,
Future

Papers from the
Bellagio meeting
on Family Planning
Quality in October 2015

2016



EDITORIAL TEAM

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INTRODUCTION

Dominic Montagu^{1,2} & Kim Longfield³

The past: The elusive nature of quality

“Those who cannot remember the past are condemned to repeat it,” said George Santayana more than 150 years ago. In the world of family planning (FP) this is amply demonstrated, as each new generation of implementers and donors discovers anew the importance of quality measurement for monitoring performance, increasing access and choice, strengthening adherence to standard delivery protocols, and ultimately aiding in the protection of human rights.

Over the past 40 years, the landscape of FP has evolved dramatically, driven by growing attention to client-centered care, client rights, and the value of complete information and client engagement [1-4]. The expansion of FP services during the same period has improved our collective understanding of how quality affects health-seeking behavior, particularly for preventative services [5, 6]. We have learned that quality and price are equally important determinants of use for commodity-based methods of contraception, such as pills and condoms, and that quality alone is what matters for patients seeking long-term methods such as intrauterine devices (IUDs), implants, and sterilization [7-9].

Translating these insights into programmatic practice has been, and remains, a challenge [10-12]. Merely discussing the quality of programs or assessing facilities requires a vocabulary that has often confounded researchers and practitioners. Specialized skills are likewise often needed to evaluate clinical quality, client and provider behavior, and system functioning. Quality is a multifaceted construct, and as a result, its achievement is often elusive in practice and equivocal upon examination.

Family planning quality gained renewed attention thanks to the realization that meeting maternal

health goals within the Millennium Development Goals (MDGs) (2000-2015) was dependent upon increasing the use of FP. The Sustainable Development Goals (SDGs) (2016-2030) now clearly highlight the importance of FP, which is one of nine sub-goals within health. Beginning in 2012, the Family Planning 2020 (FP2020) initiative galvanized donors, implementation agencies, and governments in both high- and low-income countries to work toward ambitious global goals for expanding access to FP methods, increasing the number of new adopters, and ensuring new adopters could continue with their chosen methods.

Adoption and continuation of FP both require quality, and in the past decade the importance of measurement, with its consequent need for agreed-upon metrics against which progress can be judged, has gained recognition. “Accurate and timely health data are the foundation to improving public health,” said Margaret Chan, Director-General of WHO, in 2014. “Investing in measurement is an investment in health, and countries that build and strengthen local capacity are better positioned to achieve greater long-term success and better health outcomes.”

The provision of FP services has become increasingly well studied and the management of delivery has become more professional over the past 40 years. Beginning in the 1990s, a number of organizations around the world began to offer services through a mix of directly operated clinics and associated networks of co-branded clinics operated by private providers [13]. This system of “social franchising” expanded in the 2000s, and the organizations managing franchises became increasingly attentive to the need to assure the quality of care provided in clinics. In 2015 alone, social franchises contributed nearly 13 million couple-years of protection (CYPs) globally [14]. This has required data, skilled research teams,

and franchisors with the capacity to analyze, understand, and base decisions on evidence for improving services.

In late 2015, a group of social franchisors, researchers, policy makers, and implementers came together for three days at the Rockefeller Center in Bellagio, Italy. Our goal was to simplify the measurement of quality and more easily capture data to inform decision-making among FP stakeholders. Learning from social franchisors' experience was opportune for advancing the field and finding an approach that could be applied in different clinic-based settings.

The papers that follow are the result of that meeting and provide the background for a pilot to follow. They draw, nearly universally, on the conceptual model for measuring healthcare quality put forward by Avedis Donabedian in 1988, and the framework for understanding the elements of FP provision developed by Judith Bruce and Anrudh Jain in their seminal papers of 1990 and 1992 [15-17]. Together, the Donabedian and Bruce/Jain models provide a basis for discussing and understanding the components of FP quality, and consequently for measuring it.

The present: The state of quality measurement today

The twelve papers in this book address key aspects of the state of quality measurement for FP. They are arranged in three groups. The first group examines the importance of quality measurement in FP and why more work is needed. The second group reviews experiences with measuring quality to date. The final group of papers discusses key considerations for making progress in quality measurement and achieving the goals outlined within the SDGs and FP2020.

The importance of quality to family planning and why more work is needed

"The evolution of strategies and measurement methods to assess the quality of family planning services" by Cuéllar, Quijada and Callahan summarizes the history of measurement and standards for FP quality in low- and middle-income countries (LMIC) since the 1960s. Chapman and Montagu build upon that history in their article "Steps toward improving quality of care in private

franchises" and argue that a hybrid approach is needed. A hybrid approach would incorporate the best of both holistic and targeted methods to advance quality measurement for FP among social franchises, and perhaps more importantly, would serve as a model for quality improvement in the health sector overall.

Experiences with measuring quality to date

Using data from a range of countries in Asia and Africa, lead authors Olulo, Buyungo, Wanderi, Rizvi, RamaRao, Gul, Ahmed and Jain illustrate how data can be used to measure the quality of FP delivered through social franchises, and discuss the benefits of and challenges to this endeavor.

The utility of quality measurement is the focus of the first two papers in this group. The experiences of the SafeCare accreditation initiative in Kenya are described by Olulo, Veen, Schellekens, Peeters and Spieker in "An innovative public-private approach for benchmarking quality of healthcare: Implementing SafeCare in 556 healthcare facilities in Kenya, 2011-2016." The authors demonstrate the utility of quality standards, assessments and scoring methodology for measuring and monitoring changes in FP quality, and discuss how data will be useful for improving the quality of FP on a national level. Similarly, in "Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015", Buyungo, Rizvi, Wanderi and Leisher provide recommendations for social franchises seeking to measure and improve quality. Recommendations are based on Buyungo's, Rizvi's and Wanderi's experiences implementing measures within ProFam in Uganda, R-FPAP in Pakistan, and the Tunza franchise in Kenya, respectively.

The focus then shifts to measuring specific aspects of FP quality. In "Constructing indicators for measurement and improvement of the quality of family planning programs: An example using data on choice from the Philippines, 1997-1998", RamaRao and Jain describe creating indicators to measure FP quality from data that are generated from health facility assessments such as situation analysis. They illustrate analyses that can be performed on these indicators and how program managers can use results to improve performance. While their focus is on client choice

at both facility and client levels, Gul, Siddiqui, Nasar, Shaikh, Gardezi and Balal use more recent data to examine the relationship between the technical quality of FP and client volume in their paper “Social franchising for improving the clinical quality of family planning services and increasing client volumes at privately owned clinics: Evidence from the Suraj social franchise network, Pakistan, 2013-2014”. Ahmed and Eldridge then examine what qualitative data on interpersonal relations between providers and clients reveal about the quality of care, drawing from a wide range of examples in their paper “Quality in social franchises: Challenges of improving interpersonal relations, with qualitative data from Asia and Africa, 2015”.

The last paper in this group, by Anrudh Jain, “Examining progress and equity in information received by women using a modern method in 25 developing countries”¹, uses an FP2020 indicator, the Method Information Index, to assess the quality of one element of information exchange between providers and clients—information on methods. Jain also illustrated the potential of this indicator to facilitate key analyses, such as the differences in quality and equity between countries and over time. By examining these differences and changes, it becomes possible to understand and address the drivers of quality and equity where needed.

Key considerations for making progress in quality measurement

The final group of papers in the book begins with “Family planning quality assessment tools used in low- and middle-income countries: Review for application in clinic-based services”, by Sprockett. The author provides an overview of tools that have been used to measure FP clinical quality which can be applied in LMIC. Sprockett also assesses tools’ adherence to an agreed set of principles from the Bellagio meeting.

Chakraborty, Mehra and Poyer provide a user’s perspective in “Options for measuring the quality of family planning programs: The experience of social franchisor Population Services International”. They describe the tools that PSI has implemented

for quality measurement within social franchises in 25 countries and reflect on their strengths and challenges.

In “The quality of healthcare: Measurement of improvement or measurement *for* improvement?”, Barker reviews and compares FP quality control and quality improvement approaches, with a focus on LMIC settings and characteristics of the ideal quality measurement approach.

The book concludes with “Benchmarking to assess quality of family planning services: Construction and use of indices for family planning readiness in Kenya with data from 2010 and 2014” by Bellows, Behl, Abuya, Muriuki, Bajracharya and Choi. As in the paper by RamaRao and Jain, these authors illustrate the creation of a common metric to measure FP service readiness, but take the example a step further and demonstrate how the metric could be used to benchmark quality results against national data.

The future: New ideas, new metrics

Taken together, the papers in this book provide a comprehensive summary of measurement issues for clinic-based FP quality. Evidence from forty years of implementation and quality assessment show the great amount that has been learned about quality measurement, assurance and improvement. The same evidence shows how much remains to be done to assure that past lessons are incorporated into current practice.

The 2015 Bellagio meeting capitalized on the renewed interest in FP funding, services, and accessibility that followed from the 2012 Family Planning Summit in London to advance work toward a simplified measure of quality. Partners from eight agencies agreed to work together in 2016 and 2017 to link existing facility-based measures of readiness to both near-term measures of client engagement and longer-term measures of contraceptive use and continuation. Other measures of quality will continue to be important and measured, such as choice, client empowerment, and the safety of the services provided. A simplified measure of facility readiness and client engagement is only the first

¹ Reprinted here with permission from *International Perspectives on Sexual and Reproductive Health*.

step in making comprehensive quality assurance, including these other critical aspects of care and patient experience, the norm.

Measuring quality is neither simple nor static, and will not on its own lead to quality improvement, but it is a critical first step, and something that implementers, researchers, and policy makers

should strive to do intelligently, pragmatically, and collectively. This publication provides the context, summarizes the experience, and forms the foundation for an effort in this direction.

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PART ONE:

THE IMPORTANCE OF QUALITY TO FAMILY PLANNING





1 The evolution of strategies and measurement methods to assess the quality of family planning services

Carlos Cuéllar¹, Caroline Quijada¹, & Sean Callahan¹

Introduction

Quality of care is an increasingly critical issue as the development community and country governments focus on attaining Universal Health Coverage (UHC) and including the diverse and largely unregulated private health sector in that effort. The private health sector comprises a vast number of independent standalone providers, many with weak ties to the overall health system. The result is outdated skill sets, little understanding of standards and norms, and few opportunities for supportive supervision. Social franchising is one promising intervention for increasing the quality of health services. This approach creates an overarching network that brings independent providers together under a common brand, principles, and operating procedures [5].

While quality is a major tenet of social franchising, there are as yet no universal standards for quality improvement measurement or methods. This paper seeks to provide a historical perspective on the evolution of quality standards and measurement among health programs in low- and middle-income countries (LMIC) in order to inform efforts to define universal quality standards in clinical social franchises. To do so, we review:

1. The evolution of the concept and definition of quality: How has quality been defined within the health sector and how has this definition changed?
2. The evolution of quality assurance approaches: What strategies have been used in LMIC?
3. The evolution of quality measurement methodologies in the health sector: What approaches have been and are currently being used, and how?

4. The evolution of the use of quality assurance approaches and measurement methodologies in family planning and social franchises: What are the different strategies employed by franchises and networks globally?

Methods

We conducted a desk review of the global literature including peer-reviewed journals and programmatic reports. Using EBSCOhost, JSTOR, Google Scholar, and the USAID Development Experience Clearinghouse databases, we searched for key terms related to:

- The history of quality measurement, assurance, and improvement;
- The development of quality-of-care standards; and
- The evolution of indicators used to measure quality of care.

We paid special attention to the literature on family planning and social franchises related to these issues. While the review focused on family planning service delivery in LMIC, additional searches were carried out to include relevant information from Organization for Economic Cooperation and Development (OECD) countries and upper-income settings. Ultimately, 71 references of sufficient technical quality were included in the review [3, 6-39].

Evolution of the concept and definition of quality in healthcare

While there has been much agreement on the importance of ensuring high quality services as part of healthcare programs, there has not been consensus on a definition of quality [40-43]. Historically, healthcare quality has focused on

clinical care and the development of standards of care for hospital settings [1, 41]. The perspective of the person interested in quality services (for example, healthcare provider, client, manager, policymaker, or donor) typically dictated how quality was defined.

In 1966, Avedis Donabedian published his landmark article, “Evaluating Quality of Medical Care” [43], in which he laid out a concept of “quality” comprising three dimensions: structure (the setting in which care takes place), process (whether what is known to be “good” medical care is actually practiced), and outcomes (the effects of healthcare on patients). The Donabedian model influenced much of the early work on healthcare quality in the United States, Europe, and LMIC. In a subsequent paper (1980), Donabedian stated that “the quality of technical care consists [of] the application of medical science and technology in a way that maximizes its benefits to health without correspondingly increasing its risks. The degree of quality is, therefore, the extent to which the care provided is expected to achieve the most favorable balance of risks and benefits” [44].

In 1988, the WHO defined healthcare quality as “proper performance (according to standards) of interventions that are known to be safe, that are affordable to the society in question, and that have the ability to produce an impact on mortality, morbidity, disability, and malnutrition” [45].

In 1990, Judith Bruce developed a framework for assessing family planning quality from the client’s perspective. The Bruce framework includes the following elements:

- choice of methods;
- information given to users;
- technical competence;
- interpersonal relationships;
- follow up/continuity; and
- the constellation of services.

Like Donabedian, the framework also incorporates three vantage points from which to view quality: the structure of the program, the service-giving process, and the outcome of care, particularly with respect to individual knowledge, behavior,

and satisfaction with services [46]. Under the Bruce framework, however, this third vantage point places a greater emphasis on the client perspective. The framework has guided international family planning work since its development, and continues to be the standard [47, 48].

The Quality Assurance Project (QAP) was the United States Agency for International Development’s (USAID’s) flagship program for improving the quality of healthcare in LMIC. The University Research Company (URC) implemented the program from 1990 to 2008. QAP was implemented around the globe to improve quality of care, and URC published extensively on its efforts to improve quality of care in LMIC. In 1992, the QAP project defined quality as including eight dimensions [49]:

1. *technical competence*: delivering healthcare in compliance with standards of care;
2. *access to services*: delivering healthcare that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need;
3. *effectiveness*: delivering healthcare that complies with the evidence base and results in improved health outcomes for individuals and communities, based on need;
4. *interpersonal relations*: delivering healthcare with trust, respect, confidentiality, and courtesy, and with effective communication between providers and patients;
5. *efficiency*: delivering healthcare in a manner that maximizes resource use and avoids waste;
6. *continuity of services*: delivering the complete range of health services that a patient requires without interruption, cessation, or unnecessary repetition of diagnosis and treatment;
7. *safety*: delivering healthcare that minimizes risks and harm to service users;
8. *amenities*: delivering healthcare with features that will enhance the client’s satisfaction and willingness to return to the facility.

These dimensions guided the development of methodologies and tools for much of the early period of QAP implementation.

In 2006, the WHO framed quality within a whole systems perspective and reflected a concern for the outcomes achieved for both individual service users and whole communities. The working definition suggested that a “health system should seek to make improvements in six areas or dimensions of quality.” Those dimensions were: effectiveness, efficiency, accessibility, acceptability/patient-centered, equity and safety [50]. Several of these, including the focus on patient-centered care, were influenced by the Bruce framework and largely reflect QAP’s eight dimensions.

The World Health Organization’s (WHO’s) 2003 global review of quality in healthcare services pointed out that there is no international classification of quality measurement tools for healthcare [51]. Yet the notion of quality improvement in healthcare is common and typically involves a cyclical process of defining standards, measuring against them, and implementing change. The concepts that define quality in healthcare and the thinking behind them vary between countries and over time. In general, the focus has moved from institutional regulation toward integrated health system development (see Figure 1). The same report stated that this variation reflects a shift in the focus of healthcare policy—such as

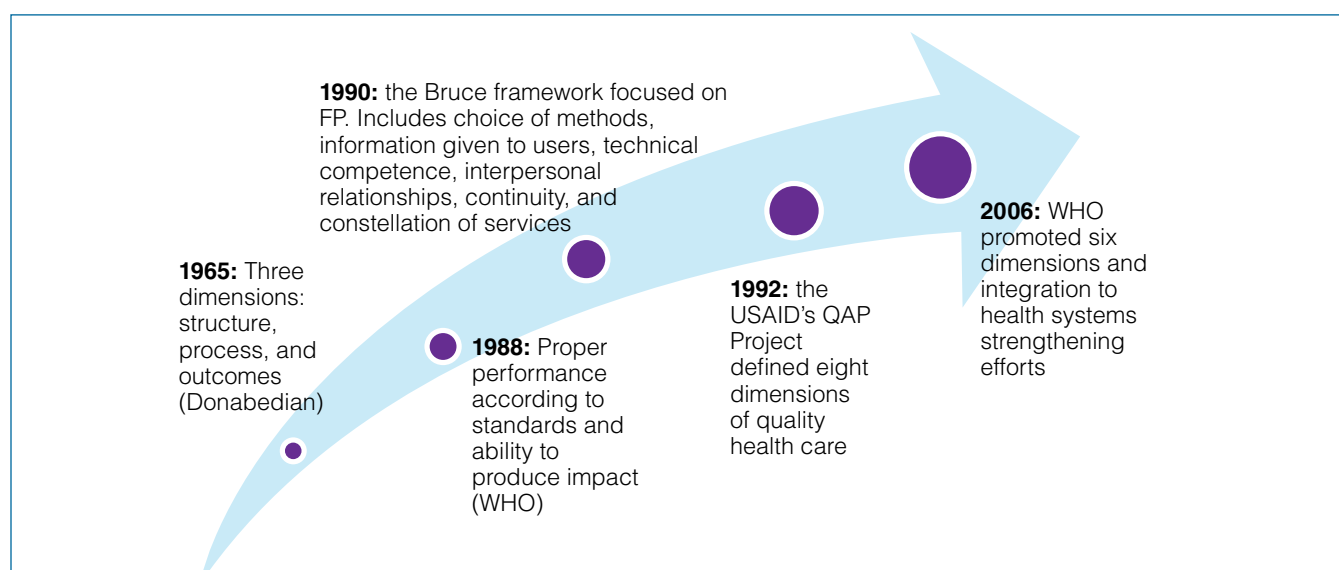
from hospitals to networks and primary care—and in perceptions of what constitutes quality in healthcare.

Evolution of quality assurance approaches

Donabedian inspired the *Quality Assurance* (QA) concept which examines healthcare quality as a product of structure, process, and outcome. QA involves setting standards or guidelines based on good practice, monitoring compliance, and taking action when providers fail to meet standards.

Beginning in the 1980s, the quality movement that had established itself in industry and manufacturing started to influence the healthcare sector. The quality assurance and improvement concepts of Joseph Juran and W. Edwards Deming (plan-do-study-act) and comprehensive quality management approaches such as Total Quality Management found their way into the daily operations of healthcare organizations [52]. The introduction of these methodologies motivated regulatory agencies, third-party payers, and users themselves to demand reliable quality assurance systems that brought not just better healthcare worldwide but also access to higher quality information to assist with making choices about healthcare facilities and providers [53]. *Quality Control* (QC) was the early and relatively simple QA strategy that aligned quality with compliance

Figure 1: Development of the concept of “quality” in healthcare: from institutional regulation to integrated health system development



and used predefined, measurable standards. The focus was mainly on algorithmic and predictable tasks such as laboratory tests. Under the QAP, quality control was linked with monitoring to enable healthcare workers and managers to determine the level of compliance with standards. Development of such monitoring systems was first done in Bolivia, Ecuador, Honduras, and Nepal [54].

In the late 1990s, the emphasis moved from assurance of compliance with standards toward active efforts to identify weaknesses and areas for improvement. In contrast to QC, *Quality Improvement* (QI) identifies gaps in healthcare quality, addresses them, and monitors results. The *Continuous Quality Improvement* (CQI) concept emerged as a more active and uninterrupted process aimed at addressing gaps and inefficiencies. CQI addressed some of the fragmentation issues that early QA programs experienced; it assumed that there is always room for improvement and that improvement is a dynamic, evolving, and fulfilling process.

During this period, healthcare reforms in many LMIC spurred initiatives to address the issue of healthcare quality gaps and spiraling costs. New methods of payment for services such as insurance schemes emerged. Private sector providers started to gain more recognition and play a more active role in improving the quality of their services, and governments and healthcare managers renewed their efforts to find systems and strategies to assess quality. During this period, QAP supported work to create and redesign processes for delivering health services with the goal of increasing quality of care and thereby improving health outcomes. The project focused on a number of issues, including obstetric services in Guatemala, Bolivia, and Honduras, and maternal and newborn care in Ecuador.

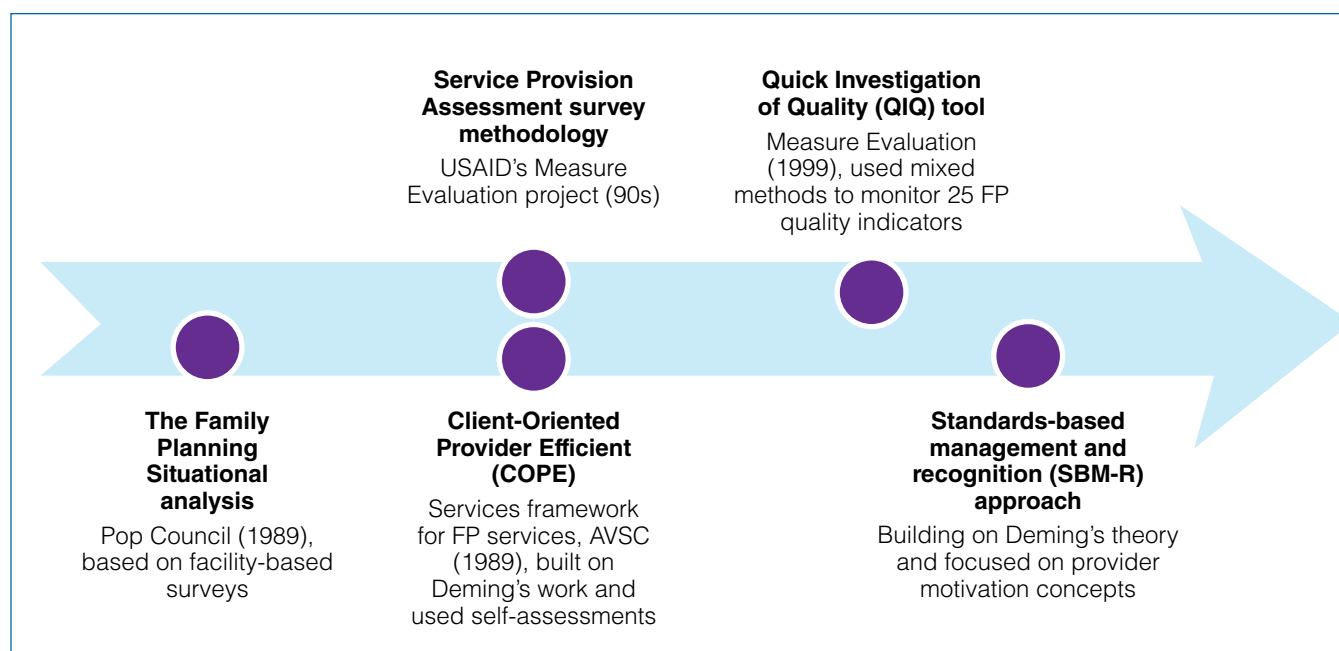
In 1995, the International Society for Quality Assurance (ISQua) was established in Melbourne, Australia, with the mission of inspiring, promoting, and supporting continuous improvement in the safety and quality of healthcare worldwide. ISQua has grown into a network that spans 100 countries and five continents. In addition to sharing knowledge and providing technical assistance,

ISQua serves as an “accreditor of accreditors,” reviewing, strengthening, and approving the healthcare standards of local organizations that accredit providers, external evaluation programs, and quality surveyor training programs. As of mid-2015, 32 local organizations around the world had active (non-expired) ISQua accreditation. In 1998, the Joint Commission, an independent accreditation nonprofit working in the United States to continuously improve healthcare for the public, expanded worldwide with the establishment of the Joint Commission International (JCI), which aims to help international healthcare organizations, public health agencies, health ministries, and others evaluate and improve the quality of patient care and enhance patient safety.

In 1998, QAP began adapting the *Improvement Collaborative Approach*, a continuous quality improvement method originally developed in the United States in 1995 by the Institute for Healthcare Improvement, for use in LMIC settings. The collaborative approach brings together teams of stakeholders from different sites in a series of structured meetings known as collaboratives, which typically last nine to 18 months. At these meetings, the teams share their experiences implementing an agreed-upon QI intervention and identify lessons learned from their program sites. The collaborative approach enables quick dissemination of best practices to all participating sites and creates an opportunity to achieve results over a relatively short time period [55]. Between 1998 and 2009, USAID funded 81 collaborative interventions in 16 LMIC across a range of health services, including family planning and reproductive health, HIV and AIDS, and tuberculosis. These interventions were seen to improve quality quickly [56].

Evolution of quality assessment methodologies

In general, quality assessment is the measurement of the quality of healthcare services in a given individual facility or healthcare network against a set of standards. The aim of the quality assessment is to measure the difference between expected and actual performance, and the extent to which a service has achieved a desired quality standard. Quality standards, the definition of

Figure 2: Quality measurement: from facility-based surveys to comprehensive multi-disciplinary measurement

which requires a rigorous consultation process, are an explicit, predetermined set of expectations of a service's acceptable performance level. Standards aim to promote a consistently high level of quality across services, achieve quality outcomes for clients and communities, guide staff in service development, and enable quality improvements, evaluation, and accountability.

There are a number of approaches that have been developed to measure the quality of health-care in LMIC settings (see Figure 2). Among the earliest for family planning is the situational analysis, developed by the Population Council in 1989 (see Box 1). The situational analysis highlights the effectiveness and importance of using facility-based surveys in evaluating quality [41].

In 1989, the Association for Voluntary Surgical Contraception (AVSC, now EngenderHealth) developed the Client-Oriented Provider Efficient (COPE) Services framework for family planning services. The COPE framework built on Deming's work on quality improvement, using self-assessments rather than outside evaluators to help clinic and hospital staff improve the quality of their family planning services and use their resources more efficiently. An assessment by AVSC found that in Africa, the COPE framework led to many improvements in quality, including decreased

client wait times, increased staff morale, and increased client satisfaction. However, it was less successful at addressing issues related to staff and commodity shortages, staff training, and facility upgrades [57].

Another approach, the Service Provision Assessment survey, was developed under the Measure Evaluation project, a USAID-funded initiative to generate evidence and data that could be used to strengthen health systems. This approach entails the collection of facility-based data for family planning, safe motherhood, and other health services. In 1999, to complement these assessment approaches, the Measure Evaluation project developed the Quick Investigation of Quality (QIQ) tool, which uses mixed methods (interviews, audits, and direct observation) to monitor 25 indicators of quality care in clinic-based family planning programs (see Annex 2.1).

Developed by Jphiego (originally called the Johns Hopkins Program for International Education in Gynecology and Obstetrics) in 1997, the standards-based management and recognition (SBM-R) approach also builds on Deming's work. Incorporating the concept of provider motivation and acknowledging the importance of recognition, SBM-R modifies the "plan-do-study-act" approach, replacing "act" with "reward". SBM-R includes four

BOX 1
Measurement of healthcare quality in Kenya: Situational analysis

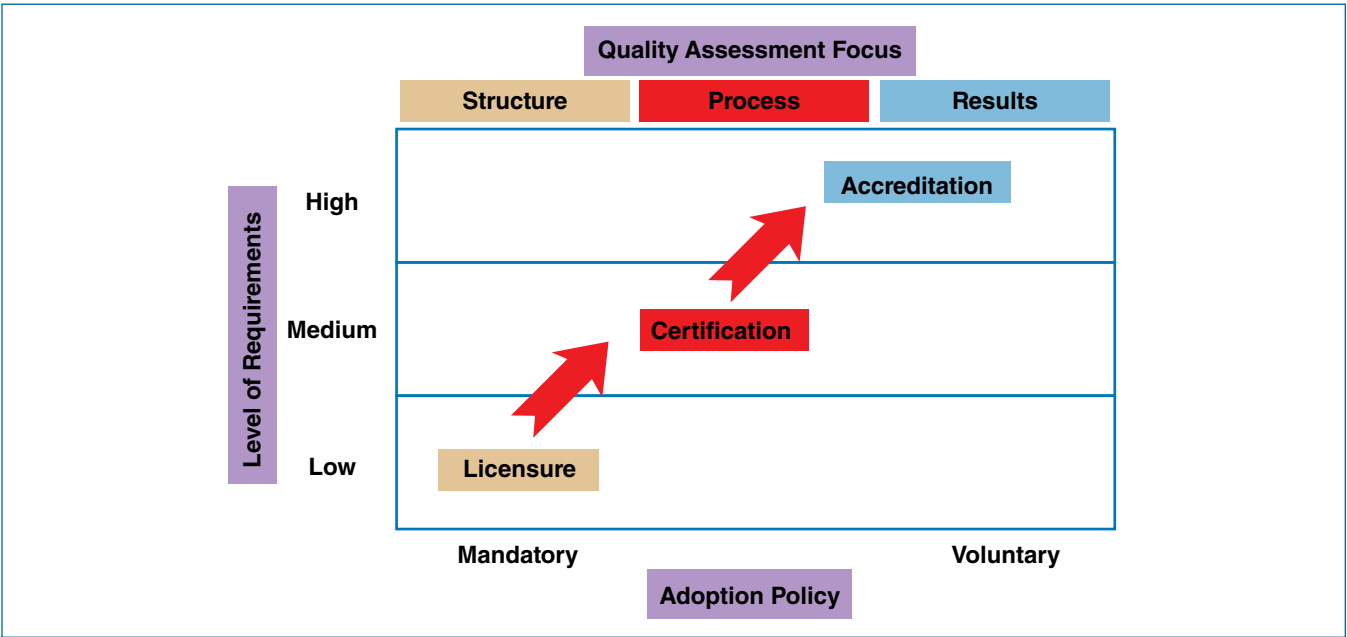
Kenya provides an early example of the use of situational analysis to assess the quality of family planning services. Despite the development of an integrated family planning and maternal and child health policy in 1967, Kenya has had a high birth rate and low contraceptive prevalence for many decades. Repeated evaluations of the family planning program labeled it as “weak,” “unsuccessful,” and characterized by “poor performance” throughout the 1980s. To understand key challenges to the program’s success, the Population Council used the situational analysis framework to assess quality in 1991. This attempt simplified existing approaches to focus on key indicators that would measure how well the “family planning subsystem” functioned. The six factors in the Bruce framework were reviewed: method choice, information given to clients, provider competence, client-provider relations, follow-up mechanisms, and appropriate range of services. By narrowing in on a smaller number of indicators, the team was able to evaluate a larger number of health facilities to help identify system-wide issues with Kenya’s family planning program. To that end, the evaluation team visited a sample of 100 public hospitals, clinics, and dispensaries to observe client-patient interactions and review their records. Using their adapted methodology, the team found a much more successful program than they had anticipated. Eighty percent of facilities offered some family planning services—mainly oral contraceptives, condoms, and Depo-Provera—but commodity stock outs and weak efforts to educate clients on side effects were common. Overall, the situational analysis approach proved moderately effective. The study team was able to visit a large number of facilities and identify systemic issues that needed to be addressed. However, anecdotal evidence raised concerns that providers were changing their behaviour during facility visits to boost their quality scores. *(adapted from [4])*

steps (setting standards, implementing according to standards, measuring progress, and rewarding achievements), and focuses on evidence and standardization of processes and care. It also focuses on health worker motivation, which differentiates it from earlier approaches.

Currently, some of the most widely used quality

assessment approaches at the systems level are *accreditation*, *certification*, and *licensure*. Each of these approaches uses published standards to determine the level of quality a healthcare organization or an individual in the organization has achieved. All are elements within an overall quality assurance framework that supports the delivery of responsive, quality health services

Figure 3: Quality assessment approaches at the systems level (adapted from [58])



(see Figure 3). The purpose of each is different, so selection and/or sequencing in any given situation requires careful consideration.

Licensure involves a government authority granting a health organization or an individual health practitioner permission to operate. Licensing regulations aim to ensure that a healthcare organization or individual provider meets minimum standards to protect public health and safety.

Certification is a process whereby either an authorized government or non-government organization certifies that an individual or an organization meets predetermined quality standards or criteria. The terms “accreditation” and “certification” are often used interchangeably; however, in general, accreditation applies only to organizations, whereas both organizations and individuals may attain certification. When an individual receives certification, it generally means that he or she has received additional education or training or demonstrated a special competency beyond that required for licensing.

Accreditation, as defined by A.L. Rooney and P.R. van Ostenberg, “is a formal process by which a recognized body, usually a non-governmental organization, assesses and recognizes that a health care organization meets applicable pre-determined and published standards. Accreditation

standards are usually regarded as optimal and achievable, and are designed to encourage continuous improvement efforts within accredited organizations. An accreditation decision about a specific health care organization is made following a periodic on-site evaluation by a team of peer reviewers, typically conducted every two to three years. Accreditation is often a voluntary process in which organizations choose to participate, rather than one required by law and regulation” [53]. Although a diverse range of definitions exists to describe the accreditation approach [59], there is a consensus that it involves an external and voluntary assessment of a healthcare institution’s performance against predetermined, objective, and measurable standards, where these standards focus on healthcare services’ quality and safety, and where services are re-evaluated periodically. In consequence, accreditation not only fosters, but also requires, a process of continuous improvement.

Evidence from Egypt, Lebanon, South Africa (see Box 2), and Zambia shows that accreditation and certification of healthcare facilities can significantly improve staff motivation, patient satisfaction and clinical outcomes [1, 60-63].

Although accreditation’s value is undisputed, certain factors determine the readiness of an entity—be it a national or regional government,

BOX 2

Measurement of healthcare quality in South Africa: Accreditation

South Africa is a leader among lower- and middle-income countries in developing and using accreditation systems to improve the quality of its healthcare. The Council for Health Services Accreditation of Southern Africa (COHSASA) serves as an example of how a private actor can successfully establish and implement a new accreditation program. COHSASA is a non-profit organization based in Cape Town whose purpose is to ensure high quality healthcare at its (historically private) member facilities. To facilitate its success, the organization adapted a set of quality standards from ISQua and the Joint Commission International to fit the South African context, rather than developing their own. COHSASA staff provide significant support to participating facilities, working with them to explain the standards and implement self-assessments to measure performance. The results of these assessments highlight key areas for improvement and form the basis for a quality improvement program. COHSASA staff provide technical support for up to two years to help facilities improve their performance in the identified areas. After this period of initial assistance, a second team of evaluators from COHSASA conducts an external accreditation visit. Those facilities that meet a substantial majority of the quality standards receive accreditation (either full or partial). Once accredited, facilities implement a “standards maintenance program” to ensure continued high performance. (*adapted from [1-3]*)

a nongovernmental organization (NGO), or a healthcare facility—to implement an accreditation program, and there are numerous examples of unsuccessful attempts. Some of the factors that determine a country's or entity's readiness to institute an accreditation program include:

- the requirements and criteria for licensure or certification;
- the requirements for re-licensure or re-certification;
- the government's view of the role of the private sector in accreditation;
- the commitment of participating organizations' leaders (whether in the government or the private sector);
- the degree of understanding of the length of time and resources required;
- whether resources are in place for data collection and analysis;
- previous experience with self-evaluation and external evaluations;
- the degree of understanding of costs of accreditation and the willingness and ability to financially sustain the program; and
- whether or not there are incentives for participation [64].

Two additional elements are essential in determining organizations' readiness for, and the potential for long-term sustainability of, a new accreditation program. One is organizations' introduction to the concept and practice of QI. Accreditation evaluates not just the capability of a healthcare organization to provide care, but more importantly, the quality of that care. Therefore, the concept and practice of QI must be introduced and understood, and QI implemented, prior to developing an accreditation program. The other element is the presence of a stable public-private organizational structure over the long term. Perhaps the greatest risk to long-term sustainability is if accreditation is exclusively a government responsibility, and the government is subject to frequent leadership changes, particularly at the ministerial level.

Quality assessment in family planning networks and social franchises

Ensuring quality of care is an essential component of the business of all family planning provider organizations operating as either networks or social franchises. In both cases, the perception of quality of services by actual and potential customers is an intangible value that affects brand equity. The power of brand equity resides in its ability to attract clients, increase the business, and make it financially sustainable/profitable. Brand equity and healthcare quality are particularly important given that fee-for-service is by far the most common payment scheme in both family planning healthcare networks and privately owned clinics that operate as franchisees. High brand equity and high quality of services increase users' willingness to pay and the likelihood of their becoming regular users. Therefore, ensuring quality healthcare services is not just ethically correct, but essential to the viability of family planning networks and social franchises, and hence an integral component of their business models. Additionally, the need for a reputation for quality can serve as a counterweight to the profit motivation and lack of oversight that are among common concerns raised about the private healthcare sector.

The family planning and reproductive health community began to emphasize quality of care during the 1990s. Since the 2000s, the Bruce framework has guided quality improvement approaches in family planning networks and social franchises. This focus on quality required the development of a means of measuring it which is comprehensive enough to cover client-provider interactions and adherence to clinical standards as well as motivating providers to take advantage of investments in quality measurement (e.g., advertising quality to increase client volume) [47, 65]. Measuring quality is challenging because of its complexity and subjectivity. The effort to advance quality measurement has led to the development of a large number of indicators. A task force created to explore the measurement of quality in 1990 (the Subcommittee on Quality Indicators in Family Planning Service Delivery) identified more than 200 indicators of quality in family planning services. Consequently, the EVALUATION Project convened a working group of researchers to

study quality of care, which reduced the list to 42 process indicators (see Annex 2.2) [66]. Later on, the MEASURE Evaluation project developed the QIQ, a practical approach to monitoring quality of care (Evaluation (1991-1997) was a predecessor project to MEASURE Evaluation). Quality of care and family planning service delivery specialists selected 25 indicators that in their opinion most directly affect the quality of outcomes in terms of clients' behavior, such as improved continuity in contraceptive use. To collect data on the 25 indicators, MEASURE developed three instruments: a facility audit with questions for program managers, observation of client-provider interactions and selected clinical procedures, and exit interviews with clients departing the facility [67].

As part of the quality movement, all private family planning provider networks and social franchises developed their own quality improvement systems, which include a wider range of interventions that respond to their unique needs. These "internal" quality improvement systems complement the external quality assessments (licensure, certification, and accreditation) or simply government supervision or inspections that are part of some host country regulatory environments. Unlike the traditional view in the public sector, quality in the private sector encompasses a broader view and scope, and quality improvement includes not only elements related to adherence to clinical standards and overall user satisfaction but also elements that determine the financial success of the clinics themselves.

Most family planning provider networks' and social franchises' quality management systems apply various methods to assess a set of distinct yet interconnected dimensions of quality. For example, the Private Sector Partnerships-One (PSP-One) project developed the Private Health Sector Quality Improvement Package in 2007, which identified six dimensions of quality of both managers and providers [68]:

- *Physical environment*: The provider's ability to provide a safe environment for healthcare, including equipment, supplies, and medicines, and the condition of the clinic's infrastructure. For family planning networks and franchises, it also means that facilities' appearance meets or exceeds user expectations and standardized branding requirements;
- *Technical competence*: A provider's performance; determines whether acceptable or agreed-upon standards are met. Direct observation and audits supported by a standard checklist are the most common means of assessment. A rigorous franchisee selection process using clearly defined criteria is a strong predictor of clinic success in this dimension [69];
- *Continuity of care*: Includes client follow-up, ensuring repeat visits with the same provider, flow of client records, and functional referral systems. The capacity to maintain a critical mass of users is essential to long-term clinic viability;
- *Management*: Providers' capacity to plan, organize, implement, and maintain effective delivery services. Management includes using data for decision-making and proper tracking of finances and supplies. It also comprises the provider's ability to assess the different quality dimensions, interact with supervisors or auditors, and identify and apply corrective measures;
- *Marketing*: Providers' knowledge of the people in their communities and how effectively they market their services to retain current clients and attract new ones. Most family planning provider networks and social franchises measure and monitor user satisfaction through exit interviews and mystery client surveys. The marketing dimension also includes pricing and pricing strategies, given that most provider networks and social franchises operate on a fee-for-services basis;
- *Business practices*: Includes a provider's goals, financial management practices (including record keeping and costing/pricing systems), resources for adequate financing, and allocation of resources. Good business practices will enhance value for money and brand equity.

In general, the indicators that emerged from these dimensions aim to measure quality (both clinical and as perceived by users), find gaps in quality, and track improvements in quality in individual practices. Assessment can be done through either self-assessment or assessment by the franchisor or the provider-network managing entity. In general, self-assessment followed by a supervisory visit is more common in provider networks, while external quality audits and supervisory visits are common practice in social franchise outlets.

Assessing the effectiveness of the different quality improvement approaches is an area that needs further research, but reviewing some examples can provide interesting insights. In 2010, PSP-One conducted a pre-test, post-test quasi-experimental panel design study among 300 midwives who were members of the Uganda Private Midwives Association. The midwives who had received training in the use of a QI package reported that it was easy to use. In some clinics, midwives received training in the use of the self-assessment tool and in developing action plans. Of those clinics, structural and process attributes of quality improved only among those in which the midwives' supervisors also received training to identify practical solutions to the problems that the self-assessments had identified. The authors concluded that the combination of providers' self-assessment with supportive supervision had an impact on both the structural and process attributes of quality of care and services, including infrastructure, the availability of services, and business practices (structural attributes), and counselling and technical aspects of service provision in family planning and antenatal care (process attributes). However, the authors acknowledged that the study was not designed to determine which aspects of the supervisors' role was most important in enabling midwives to improve the quality of care, nor to assess the relative importance of supervisors' problem-solving approach and midwives' having someone with whom to discuss their root-cause analysis and action plans [70].

In 2013, a mixed-methods study on quality assurance in 50 social franchises sought to "understand the quality assurance systems currently utilized in social franchises, and to determine if there are shared standards for practice or quality outcomes that exist across programs" [71]. The study included three data sources and levels of investigation: 1) self-reported program data; 2) scoping telephone interviews; and 3) site visits and in-depth field interviews with franchisor staff and franchisee clinic operators. Five components of the quality assurance framework were investigated: recruitment, training, monitoring of clinical and non-clinical quality, monitoring of client experience, and the feedback loop. The study identified and studied "high performing" franchises that had comprehensive quality assurance programs. Social franchises were found to understand quality assurance as a goal incorporated into all areas of franchise operations, including recruitment, training, monitoring of provider performance, monitoring of client experience, and the provision of feedback. According to the study authors, these findings are the first evidence to support the 2002 conceptual model of social franchising, which proposed that the assurance of quality is one of the three core goals of all social franchises (the other two are assuring the availability of services and assuring the use of services). However, while quality is important to franchise programs, the quality assurance systems of the 50 franchises studied are not reflective of best practices in quality measurement or quality improvement. The study also concluded that future research is needed "to better understand the details of quality assurance systems as applied in social franchise programs, the process by which quality assurance becomes a part of the organizational culture, and the components of a quality assurance system that are most correlated with improved quality of clinical care for patients".

Conclusions

Over the past 50 years, the concept of quality in healthcare, quality improvement approaches, and quality measurement methods have evolved to become central to the global health community agenda. This has been due in part to an increased focus by country governments on developing and implementing strategies to achieve UHC goals related to increased access to health services and improved health outcomes. While stakeholders in many countries recognize the role of private healthcare providers in improving quality of care, the challenge of understanding and applying a common measure and strategies to ensure quality of services in the private sector remains.

Within the health sector, family planning has often been at the forefront of private sector engagement. Family planning-focused private provider networks and social franchises have joined the quality movement and been a key part of its evolution over the past 25 years. These same networks and franchises have often gone further than traditional public sector actors, developing a much broader concept of quality of care that includes expanded methods to define and use quality standards. These

methods are similar across networks and franchises and comprise multiple dimensions to cover the complexity of private facilities whose viability depends on users' willingness to pay and providers' ability to retain and grow their clientele. The quality improvement systems of provider networks and social franchises coexist with external quality assessment methods (licensure, certification, and accreditation) and government supervision.

Going forward, several areas of research will be important for informing ongoing work on quality measurement and improvement, especially related to the effectiveness and sustainability of certification and accreditation programs. Stakeholders will need to determine how best to use such programs to integrate private provider networks and social franchises into the overall health system and how to institutionalize a culture of quality among private providers, as well as improving their understanding of the impact of quality improvement systems across the different dimensions of quality, and of correlations between quality improvement systems and health outcomes in private provider networks and social franchises.

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2 Steps toward improving quality of care in private franchises

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Introduction

The private sector plays a major role in financing and delivering healthcare in low- and middle-income countries (LMIC) [1]. Because of this, the quality of privately provided services is of major concern to healthcare consumers, regulators, and policy makers. Consumers tend to focus on the visible—patient experience quality—while regulators and policy makers tend to focus on the less visible—safety and clinical quality.

Yet the quality of healthcare provided by private providers, clinical or otherwise, is often uneven. For instance, private primary care facilities and providers generally score low on indicators of safety and overall clinical quality, and no better than the public sector [2]. At the same time, these same private facilities are often rated higher than public facilities on indicators assessing drug availability and client satisfaction, possibly helping to account for the high demand for private sector services in much of the world. Improving the quality of private healthcare is essential for reducing unnecessary deaths, ensuring better health, and improving the quality of life in low- and middle-income countries.

Clinical social franchising is a public health intervention that seeks to take advantage of the popularity of private healthcare provision while assuring the clinical quality of services delivered by the private sector. It entails the creation of networks of private sector healthcare providers in LMIC which are used both to subsidize the provision of services of public health importance (such as contraception or tuberculosis treatment) and to improve training and assure adherence to best practices as a condition for network membership, thereby improving clinical quality [3, 4]. In

essence, franchisors take on a role for their franchised providers that is akin to, and supplemental to, the regulatory oversight role that government plays for all providers. Social franchise programs present a unique opportunity to explore different approaches for quality assurance in an environment that is well-documented, more accessible than the wider private healthcare sector, and more open to change than either the wider private healthcare sector or the public healthcare sector.

Quality improvement entails a measurable change in the care that is provided, and the extent to which social franchising can improve the quality of care hinges upon how accurately, effectively, and efficiently the quality of the care provided via social franchises can be assessed. Current methods for quality assessment vary greatly from country to country, program to program, and year to year within the same program. Most are multifaceted and are often based on holistic approaches to facility assessment which are ambitious, expensive, and offer minimal guidance for follow-up. This not only limits their utility within social franchise programs, but also means they are unlikely to be a useful model for quality measurement within the broader health sector.

In this paper we argue for the use of a new, hybrid approach that can not only address the challenges of quality measurement within social franchises, but also advance quality of care throughout the entire health sector: moving beyond holistic approaches to build on the successes of targeted approaches to quality measurement which have been validated and shown to correlate with health outcomes.

Holistic approaches to measuring quality of care in social franchises

There is a growing trend in the use of holistic approaches to measuring quality of care at both facility and health system levels. Prominent examples of the holistic approach include the Whole System Measures indicators, a balanced, validated, and parsimonious set of indicators which were developed and promoted by the Institute for Healthcare Improvement in the United States [5], and the 2015 commitment by the World Bank, World Health Organization, Gates Foundation and other partners to promote the use of cross-cutting measures for quality of primary care at both facility and national levels [6].

At the facility level, national comprehensive hospital accreditation schemes have been the norm in all high-income countries for decades, and have become increasingly common in middle-income countries since the 1990s. Subjective assessments are becoming rare. The use of well-defined, measurable, replicable assessment standards for both hospitals and smaller facilities is increasingly common, including those incorporated into the measurement tools of assessment agencies such as the Joint Commission International (JCI), the International Standards Organization (ISO 9004), and SafeCare.

The vast majority of social franchises assess quality of care holistically at the facility level, using indicators related to facility readiness, provider competence, adherence to protocols, patient safety, and client satisfaction [7, 8]. Social franchisors often use these facility-level assessments as the basis for franchise-wide quality assurance systems, aggregating facility-level data to monitor and plan improvements across their clinical network [9]. Franchise programs are also increasingly working to link their internal quality measurements to national standards, and are becoming more transparent with their findings. Twenty of the 64 franchises operating in LMIC report that their quality assurance systems share assessment components with the public health system, using one or more national standard indicators as part of their own facility-level monitoring, and reporting results to national authorities [8]. Recently, franchises in the Philippines and Kenya

reported using nationally standard facility-level quality of care indicators as part of accreditation efforts aimed at linking their franchisees to national health insurance systems [10, 11]. Globally, all 64 social franchises operating in LMIC now report the scope and frequency of their quality of care assessments to the Clinical Social Franchising Compendium, which is an annual review of service provision and program performance in the field compiled by the University of California, San Francisco [8].

Despite its popularity, however, the high costs of holistic assessment present an ongoing challenge for franchise programs, and limit the wider applicability of lessons learned from these approaches. Costs are often difficult to assess with accuracy, but estimates range from US \$5,000 for a bi-annual assessment of a ten-bed hospital with SafeCare in Kenya to \$150,000 for a JCI assessment of a 300-bed hospital in Thailand [12, 13]. Studies of two franchise programs both found nearly one-half of each program's budget was spent on holistic quality assurance activities [8]. Even for social franchise programs, which highlight quality as a selling point to patients, providers, and donors, the costs of holistic quality measurement and the subsequent quality assurance activities throughout an entire facility can be difficult to cover, and they are prohibitive for non-franchised (and thus unsubsidized) clinics. Whether the price of holistic quality assurance is justified for social franchises, or indeed for donors, governmental vertical-program bureaus, or non-governmental organizations (NGOs) with a service-specific focus, is uncertain. High levels of resource allocation for quality assurance could be justified if this were linked clearly to quality improvement. Yet there is insufficient evidence that franchises' efforts on quality assessment have in fact led to better outcomes [7, 14, 15].

The targeted approach to measuring quality of care

In contrast to the holistic approach, "targeted assessment" of quality of care entails the measurement of only a subset of the full set of indicators applicable to a given facility. These measures are often disease- or condition-specific. Whereas holistic approaches usually address all clinic or

hospital services, targeted approaches usually assess only one area of care such as maternal health or family planning. Further, whereas holistic approaches usually address both structural and process indicators of quality, targeted assessments typically focus on one or the other. For example, one common structural indicator used by family planning providers measures the availability of contraceptive methods in a clinic. Because having a choice of contraceptives has a proven association with increased use and fertility reduction, this indicator is frequently used in targeted assessments as a predictor of outcome effectiveness [16].

Targeted assessments, though narrowly focused by definition, can nevertheless yield important and useful insights into aspects of quality care for a clinic or provider. Das *et al.* [17] assessed two process indicators—provider competence (proper diagnosis) and provider effort (time spent)—and found that they are associated: the more competent the provider, the more effort s/he exerts. In contrast to holistic measures which are currently the norm, targeted measures for quality of care can not only be easier and cheaper to ascertain (since data collection is less onerous), but also provide data that is more actionable—easier for users to understand, and hence easier to translate into guidance for quality improvement.

Choosing indicators

If more targeted measures are to be adopted, then the immediate question is “what shall be measured?” An indicator is a measurable element of performance for which there is evidence or consensus that it can be used to assess quality of care and change in quality of care over time [18, 19]. As stated by the Institute of Medicine [20], indicators of health service quality should have a positive, causal relationship with desired health outcomes, where health outcomes are measured at the individual level for facilities and at the population level for health systems more generally. Where systematic reviews reveal uncertain or mixed conclusions regarding the appropriateness of a given indicator, then consensus statements based on expert opinions, Delphi techniques, the RAND appropriateness method, or guideline review criteria can be instructive [21, 22].

Qualitative studies based on real-life critical incidents and adverse events, though not systematic, can also be used to generate potential indicators.

One challenge of indicator selection specific to social franchises is that indicators must be sufficiently broad in scope (*i.e.*, focused on infection prevention generally, rather than a specific metric such as “duration of time instruments left in boiling water”) to allow for an evolving program focus as well as to assure stability, since any variation in measurement of a narrowly-focused indicator (such as a shift from boiling sterilization to autoclaves) could limit programs’ capacity to confidently track changes over time and benchmark franchise performance against other private or public facilities.

Within the widely-used Donabedian framework for quality measurement, indicators can measure structural components of quality (what infrastructure, staff, and supplies exist in a facility), process components of quality (what actually happens at the facility: what is done, when, by whom and to whom in the process of care), or outcomes (how the patient fares following care). These dimensions of care are widely understood, but how they translate into specific measures that correlate with one another remains hotly debated [23].

Most *structural indicators* measuring inputs to social franchises are considered necessary but not sufficient to measure quality of care, with process variables often confounding associations between structure and outcome to the extent that it is not possible to know whether structural indicators are independently predictive of a given outcome [16, 24-26]. The exception is choice of contraceptive method, for which there is ample evidence of predictive validity for outcomes: Hotchkiss *et al.* [27] found a significant positive effect of the availability of the pill in local pharmacies and the level of family planning infrastructure and equipment on use of modern contraceptives, and Magnani *et al.* [28] found a significant positive effect of the number of methods available in local facilities on subsequent contraceptive use among non-users.

Process indicators also have a high degree of predictive validity for outcomes, and hence

constitute the preferred type of indicator for targeted assessments [17, 26, 29]. Cotten *et al.* [30], for example, found a positive association between clients' receiving adequate counselling on side effects and contraceptive continuation in The Gambia and Niger. However, process measurement can be costly and face resistance from practitioners, hence process indicator data can be difficult to collect. Recent experimentation has shown possible ways of reducing these costs (using less expensive exit interviews rather than patient observation, for example); however, as Onishi *et al.* [31] showed, exit interviews do not provide reliable measures of provider performance, confirming earlier studies [29]. There are no shortcuts for measuring process.

Outcome indicators are useful if they can be measured in ways that control for socio-demographic and other contextual factors [22]. However, Peabody *et al.* [29] argued that while useful in the aggregate, at the individual or group level they are not an accurate measure of quality due to the "quality conundrum" in which a patient may receive poor quality care but recover fully, or receive high quality care but not recover. Outcome measures relating to patient-centeredness, such as patient-reported feelings of being well-treated, are considered more useful for decision-making than outcome measures related to specific actions, such as filling in complete patient records [32-34], in part because of evidence that patient-centeredness indicators have predictive validity for health outcomes. For example, Koenig *et al.* [35] found a significant positive effect of women's perceptions of service quality on both adoption and continuation, consistent with Jain (1989). A positive association between clients' receiving their chosen method and contraceptive continuation was found in Indonesia [36].

The default for implementers concerned with quality and short on good guidance is to measure holistically across all three dimensions, or at least structural and process components of quality, and hope that the two together will predict outcomes. Yet given the rarity of many patient care procedures and adverse events, and the time required to wait for their appearance, measuring processes is expensive, and measuring outcomes is nearly impossible. A more feasible quality measurement method would be to identify a structural measure

predictive of process and outcomes, or failing that, a single process measure predictive of outcomes. While it is difficult to imagine this degree of focus working for the full range of services offered by even solo practitioners, it is conceivable within a narrow service area—family planning for example—according to the accumulated experience of social franchise provider networks.

Once potential indicators are identified, they must be assessed against key criteria for use, including validity, reliability, cost, ease of collection, and acceptability [18, 25]. An indicator is said to be reliable if it provides stable results across various populations and circumstances, and when measured by different people or at different times. Cost and time for data collection are minimized if the given indicator is already being routinely reported through information or adverse event reporting systems, and increase if the indicator is being collected via such methods as observation, vignettes, surveys, exit interviews, random sampling, or "whole system" (holistic) measures [25]. Indicators must also be pre-tested to gauge their acceptability at facility level among providers and those collecting the data. Finally, the indicators must be valid: they must truly reflect the domain they seek to assess.

Operationalizing indicators: The use of standards and benchmarks

There are challenges in measuring any one dimension of quality. But even more challenges are added when measures must be translated into feedback for action by clinic managers or providers. Standards and benchmarking are two common approaches to using indicators for provider and facility quality improvement. A standard is a level of compliance with an indicator, set prospectively, stipulating a level of care or performance that a provider or facility must strive to meet [37, 38]. For example, a counseling standard could be to assure that 75% or more of women receiving family planning report during exit interviews that they had been informed of alternative methods.

Standard setting is usually contextual and can be contentious, requiring value judgements in terms of what the facility or system can afford, efficiency considerations, and cultural expectations. Standard setting for indicators is inherent to

accreditation [39] and offers a common score, a benchmark, by which managers can assess their own performance. A benchmark is based on a comparison of indicator levels across providers, facilities or systems, and is interpreted relative to a set standard.

There is nothing inherently different in how holistic measurement approaches and targeted measurement approaches apply standardization and benchmarking of indicators. In practice, however, establishing agreed common measures with equivalent methodologies for data collection and scoring is very hard. The minutiae of accurate measurement are exacerbated by the emotional and complex demands of cross-program, cross-country, and cross-cultural compromise, agreement, and enforcement of a shared standard. Building consensus on a standard for a small set of targeted measures in a single service area is difficult but imaginable. Building consensus on a standard for measures covering structure, process, and outcomes across the full range of health services and ancillary systems offered by a health facility would be immeasurably more complex.

Conclusion

Quality of care measurement today finds itself on uncomfortable middle ground between holistic measures and targeted assessment, lacking the balance of Whole Systems Measures indicators as well as the potential for focus that targeted assessment offers, and often functioning with lower levels of rigor than are possible with either. Even when properly implemented, holistic approaches to measuring quality are costly, and hence holistic measures are collected only infrequently, and by their very nature include so many parameters that it is difficult to know which matter most and why, so data does not easily translate into action for quality improvement. Meanwhile, most targeted assessments by small health facilities focus on structural indicators such as the availability of infrastructure and qualified providers, which are easy to measure, addressing some of the shortcomings of holistic approaches. Yet while structural quality is a prerequisite for improved health and satisfaction outcomes, it is rarely a predictor of them, and is thus insufficient as a proxy for quality [40].

Quality measurement is currently less than ideal, but the social franchising arena presents an opportunity for improvement. Social franchising is the fastest growing market-based intervention in health in LMIC [41]. Hence, a quality measurement system which proves effective and affordable within social franchises could serve as a model for quality measurement in the larger world of care provision in the private-for-profit and public health sectors. Such a system would combine the best aspects of targeted approaches, including affordability and practical, action-oriented guidance, with the comprehensive feedback that holistic approaches provide, to create a hybrid approach enabling programs to respond with action for quality improvement. The narrowness of focus would allow users to easily see the effect of program changes via changes in measurement scores, while dramatically reducing the time and cost required for measurement. Quality measurement could then truly become a rapid-feedback loop for continuous quality improvement, rather than what it often is today—a highly expensive process which, because of its intrusiveness, cost, and complexity, takes place annually at best, and is thus regarded more as a tool to identify and punish poor performers than a source of guidance for quality improvement.

Social franchising offers a special opportunity to explore new options for quality measurement within the narrow but well-documented area of clinic-based family planning provision. If franchises can meet these requirements for quality measurement, they could not only address the shortcomings of their current quality assurance methods but also provide a model to standardize, benchmark, and replicate targeted measurement across a wide range of settings. In doing so, franchises could influence measurement in many health service areas, driving a much-needed shift away from the desirable but costly, imprecise and impractical holistic measures common today, toward a new hybrid model of measurement in which correlations between structure or process and outcomes of importance are established through research, and where the measures used thus have the potential to both assess and influence quality of care.

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PART TWO:

EXPERIENCES WITH MEASURING QUALITY TO DATE





3 An innovative public-private approach for benchmarking quality of healthcare: Implementing SafeCare in 556 healthcare facilities in Kenya, 2011-2016

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Background

Health systems in sub-Saharan countries continue to be underdeveloped and underfunded. With the near absence of regulatory frameworks that could help to measure and enforce adherence to quality standards, patients and finance organizations face uncertain availability and quality of health services [1-7]. This uncertainty means that potential funders are hesitant to invest in the health sector, and patients are unwilling to pre-pay for healthcare through risk pooling. In turn, low utilization and a lack of reliable income keep healthcare providers from investing in the quality, scope and scale of their services. This perpetuates a vicious cycle of poor supply of, and demand for, healthcare.

Breaking this cycle requires transparency about the quality of care. Patients need to know what quality of care they can expect at a given facility; investors need data on quality to assess medical, financial and accountability risks when considering long-term investments; insurance companies need this data to determine which providers their customers should use and to implement pay-for-performance schemes; data on quality and risks can also assist governments and donors in deciding how best to allocate their scarce resources to improve quality [8] and lay the groundwork for a regulatory framework. Yet data on quality of care is often of poor quality or lacking entirely.

SafeCare, a formal collaboration between PharmAccess (headquartered in the Netherlands), the Joint Commission International (JCI, USA) and the Council for Accreditation of South Africa (COHSASA), was created to address the need for

transparent, independent ratings of African healthcare providers. It consists of a set of International Society for Quality assurance (ISQua)-accredited quality standards and a grading process that allows even very weak facilities with severe shortages in equipment, infrastructure and other resources to demonstrate quality improvements by focusing on key areas of quality, safety, and risk. Since its launch in 2011, SafeCare has rapidly developed strategic public and private partnerships to help support local ownership and sustainability of its approach in Kenya, Tanzania, Nigeria, Ghana and Uganda. The goal of this paper is to report data on healthcare quality and quality improvement from SafeCare healthcare quality assessments in Kenya in order to illustrate how SafeCare's standards and stepwise certification methodology can contribute to standardizing quality assessment and increasing transparency of quality of care.

Introduction

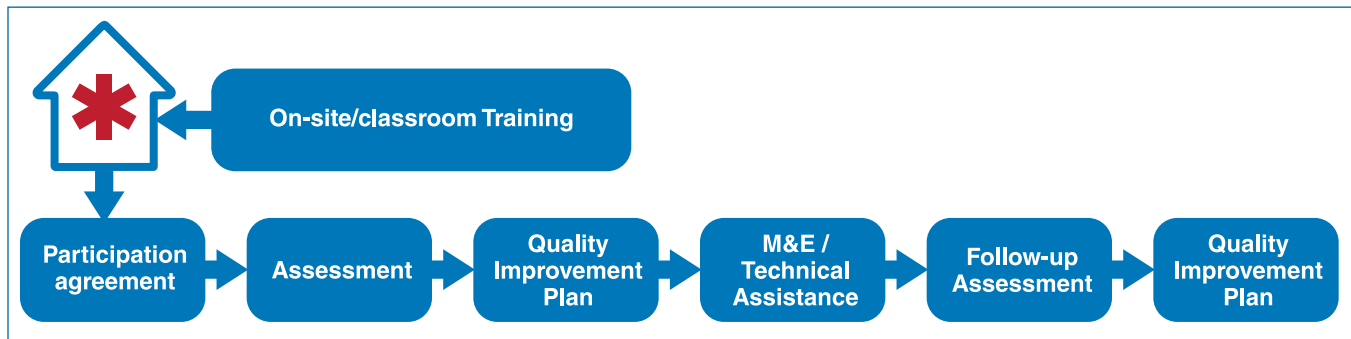
The government of Kenya aims to improve access to quality of healthcare, but as in many low- and middle-income countries (LMIC), ensuring high-quality healthcare in Kenya is a major challenge. Universal Health Coverage (UHC), one of the new Sustainable Development Goals, has been adopted as an important national priority in the Constitution of Kenya 2010. The Constitution tasks the government with responsibility for ensuring the right to health, meaning equitable, affordable and quality health services for all citizens, as well as overseeing the setting and enforcing of quality standards for health services, while Kenya's 47 counties have regulatory power over health services provision. The National Hospital Insurance Fund (NHIF), a publicly-owned insurance corporation that provides insurance to

adults who work in the formal sector, is the key mechanism for the realization of Universal Health Coverage in Kenya. Kenya also has numerous policies and components of the legal framework that support its goal of health for all, including the Kenya Health Policy (KHP) 2012-2030, the Kenya Vision 2030, the Kenya Quality Model for Health (KQMH), the Health Bill 2012 (awaiting completion), the draft health financing strategy and the Kenya National Health Sector Strategic Plan III 2013-17 (KNHSSPIII). But although quality of health services is implied in all these documents, they are currently under review by stakeholders to clarify what needs to be improved regarding quality and health service delivery.

Regulation of basic safety of healthcare in Kenya is done through *licensing*, which aims to ensure patients are not harmed while seeking and receiving health services. *Licensing* is officially mandatory for all providers and healthcare professionals, and used to be done by different professional bodies including the Pharmacy and Poisons Board, the Medical Practitioners and Dentists Board, the Nursing Council of Kenya and the Medical Laboratory Technicians and Technologists Board. Until recently, these bodies visited facilities to inspect specific departments at different times without consulting each other, resulting in multiple uncoordinated visits and duplication of efforts. Whereas some professional bodies had a tool for assessment of specific departments, others did not. Facilities could be closed due to a problem in a specific department without being clear about what they had done wrong and how they could have avoided the fault. Starting in 2011, however, the International Finance Corporation (IFC) and other stakeholders including PharmAccess embarked on a journey together with these bodies to develop a joint inspection checklist combining all their requirements; the checklist was finalized in 2015 and is to be used starting in 2016 as a national tool by all the professional bodies during coordinated inspection visits to both private and public healthcare providers as a requirement of licensing. This will greatly help to streamline the inspection process, increase transparency of the assessment criteria, enhance accountability between inspectors and health facilities, and ensure compliance with minimum licensing standards for quality, including patient safety.

Joint inspections have commenced in three counties as a pilot initiative, in preparation for national rollout. A pool of inspectors has been trained by the IFC Health in Africa initiative team together with the Ministry of Health, boards and councils to undertake this role. These inspectors will be employed by the Ministry of Health and seconded to work at boards and councils, with plans under way to include inspection teams in each county; inspection visits and collect data will be coordinated by the Ministry. Despite this progress, though, the capacity of the Ministry of Health to implement regular supervision and support visits and enforce licensing requirements is limited. Moreover, the same enforcement mechanisms do not always apply to both public and private facilities. In practice, due to resource limitations, public health facilities have been essentially excluded from the requirement to comply with minimum standards for licensure, leading to asymmetries in the sector. This is currently being addressed with the joint inspection tool which will apply to the public sector.

Accreditation of healthcare providers in most countries is a voluntary process managed and implemented by non-government organizations that provides incentives for better healthcare provision. It is often used as a marketing tool to attract more patients, or is made mandatory for contracting by insurance companies. In Kenya as of 2016, only the Aga Khan Hospital had been accredited by the Joint Commission International; few other Kenyan hospitals have yet embarked on this journey. The NHIF has a department responsible for accreditation of its contracted providers; however, there is as yet no independent Kenyan accreditation body for hospitals and clinics. The draft Kenya Health Bill acknowledged the need for an independent body to manage certification and accreditation for the health sector, and the Kenya National Accreditation Services (KENAS), a semi-government parastatal body, has been mandated by an Act of Parliament to fulfil this role, with SafeCare selected as one of the systems to be used for certification and accreditation. KENAS will not implement hospital accreditation itself, but rather will regulate all organizations willing and able to do so, to ensure consistency across all accreditation systems used. PharmAccess is currently in the process of being accredited by KENAS to use SafeCare as one of the official

Figure 1: SafeCare work flow (M&E-monitoring and evaluation)

certification methodologies for the Kenyan health market. This will formally institutionalize the SafeCare standards and stepwise certification methodology that have been implemented in the past several years in Kenya.

Methods

Selection of facilities

The 556 participating facilities were recruited mostly from partner organizations that PharmAccess works with, such as KMET (Kenya Medical Education Trust), PS Kenya, Marie Stopes Kenya, NHIF service providers, and facilities that have benefited from loans from the Medical Credit Fund (MCF, www.medicalcreditfund.org), a revolving fund dedicated to financing quality improvement needs in the health ecosystem. In addition, some independent public and private facilities signed up to join SafeCare without being recruited. Participation was voluntary, with facilities selected based on the scale of their services (general care only; specialist centers such as diagnostic centers were excluded), the number of daily patient visits (at least ten per day), and willingness to participate. Implementation of the SafeCare program for most facilities (including assessments, training and technical support visits) was financed through donor funding from the United States Agency for International Development (USAID), the UK's Department for International Development (DFID), the Gates Foundation, and the Dutch Ministry of Foreign Affairs; NHIF, in partnership with IFC (under the Health in Africa Initiative), financed NHIF-contracted facilities; and some facilities were self-financing.

The SafeCare assessment process

Facilities enroll in SafeCare through the signing of a Participation Agreement. Assessors then periodically measure facilities' quality during one- to two-day assessments, including an initial baseline assessment and follow-up assessments. Quality improvement plans are created after each assessment and technical support provided as needed (see Figure 1). Assessments are implemented by qualified SafeCare assessors, individuals who have successfully completed the ISQua-accredited training curriculum. This consists of a one-week classroom training and the completion of at least two quality assessments under the supervision of senior assessors who are trainers. Assessors receive an annual refresher training from these trainers. In Kenya, 203 people have undergone assessor training, of whom 96 graduated to qualified assessor (see Box 1).

A facility's first assessment is performed to evaluate the providers' baseline level of services and identify priorities for quality improvement. The providers receive a detailed assessment report with recommendations, which they translate into a quality improvement plan to implement over the next one to two years with the support of the SafeCare assessor. Criteria with which facilities are judged non-compliant, and which represent a high risk in terms of safety, quality, or financial sustainability, are identified as the highest priority for resolution. For facilities that are just starting their improvement journey, a basic assessment is done which covers just 25% of the standards; advanced baseline assessments are done for facilities that have already been working on quality improvement prior to joining SafeCare. The option for a basic baseline assessment was

BOX 1**Technical assistance partners**

SafeCare is implemented in partnership with Kenyan-based Healthcare networks such as the Kisumu Medical Education Trust (KMET), Population Services Kenya (PSK), Family Health International (FHI360) and Marie Stopes International (MSI). These partners bear a significant part of the responsibility for recruiting health-care facilities into the program and supporting them to implement Quality and Business Improvement Plans. Upon qualification, they also perform SafeCare assessment visits. They employ the quality and business advisors who are trained in the SafeCare methodology. They also help participating facilities to meet the quality standards through training modules, on-site facilitation, best-practice examples and guidelines, and standard operating procedures (SOPs). PharmAccess builds their capacity and monitors their quality, awards the actual certificates, maintains standards and software, and facilitates the policy environment.

instituted in response to early feedback that some facilities were overwhelmed by their first SafeCare assessment reports.

A quality improvement plan is created by the SafeCare assessor after the baseline assessment, in order to begin implementing quality improvements. An essential part of the plan's implementation is the creation of a "quality team" including the facility's key staff, usually the medical director and department heads, with a quality champion among the staff spearheading the implementation process. The members of the quality team are responsible for the effective implementation of the plan in their respective departments. The health facility also receives a quality management training by SafeCare assessors in a classroom setting or on-site.

Quality and business advisors of PharmAccess or one of its technical implementing partners visit participating healthcare providers approximately every quarter to measure the extent to which the quality improvement plans are being implemented, identify bottlenecks, and provide support to find solutions. These advisors have access to an online library with guidelines, checklists, protocols and other materials which the facilities can use to increase their adherence to the SafeCare quality standards. After one to two years (depending on the facility's progress), a second assessment is performed to quantify changes in performance and identify priorities for further improvement.

SafeCare standards, scoring, and data

The SafeCare standards for quality assessment cover the full range of clinical services and

management functions (www.safe-care.org), including 13 areas of service delivery or "service elements":

- Management:
 1. management and leadership;
 2. human resource management;
 3. patient and family rights and access to care;
 4. management of information;
 5. risk management;
- Clinical:
 6. primary healthcare services;
 7. inpatient care;
- Clinical support:
 8. operating theatre and anesthetic services;
 9. laboratory services;
 10. diagnostic imaging services;
 11. medication management;
- Ancillary:
 12. facility management services; and
 13. support services.

Adherence to standards is measured by assessing each service element against a number of scoring criteria, which are measurable elements that define specific requirements. Each criterion is marked as "not compliant", "partially compliant" or "fully compliant", or a mark of "not applicable" is given if the service measured by the criterion is not provided at a given facility. This mark is then translated into a numerical score. Certain criteria

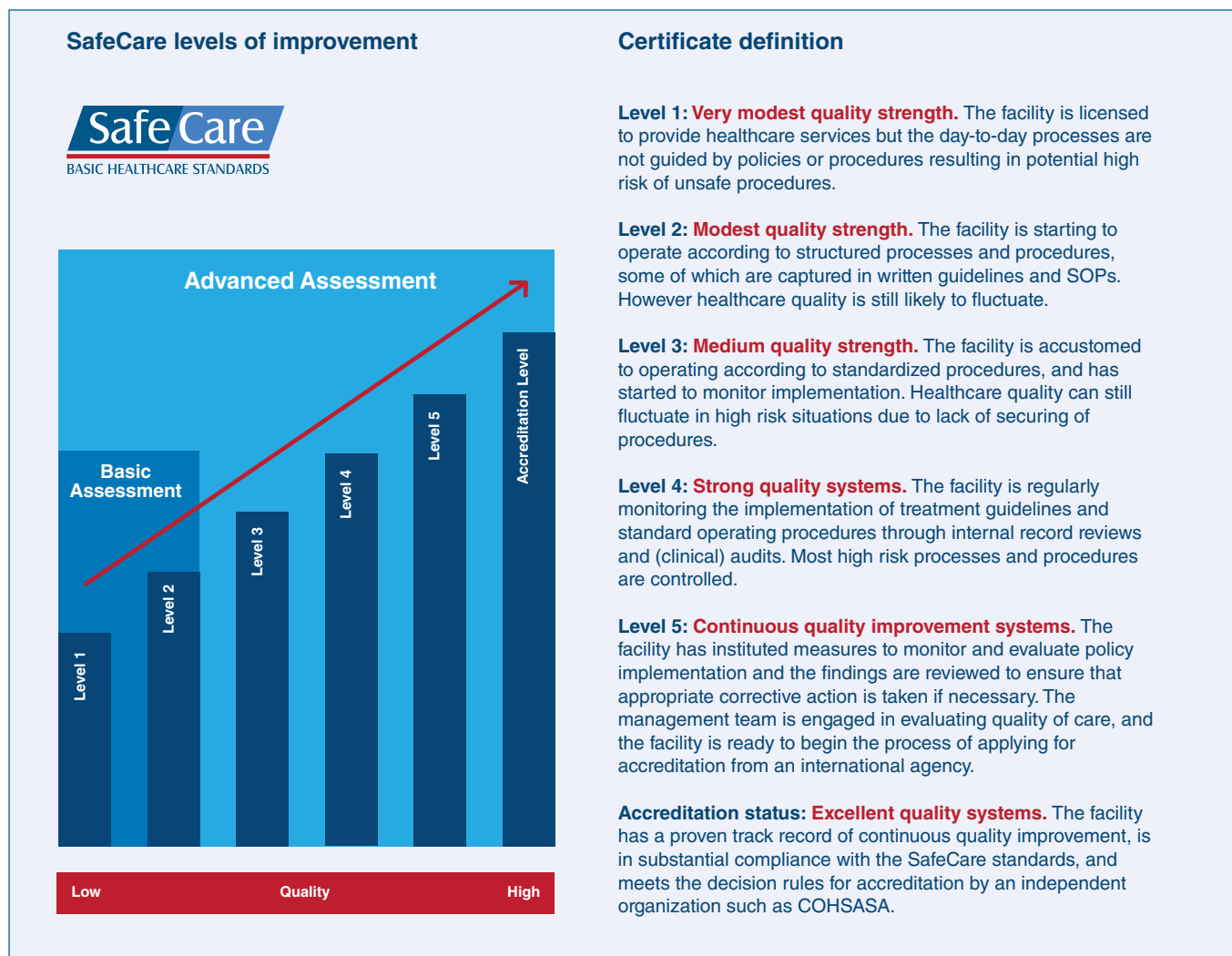
are considered to be “critical”, however, so they affect the average score more than others. Based on this proprietary system of weighted scoring, facilities are assigned 1) a single assessment score between one and 100, and 2) assessment scores for each of the 13 service elements, also ranging between one and 100.

A certification committee consisting of PharmAccess experts then reviews the results and assigns a SafeCare certification level based on a proprietary calculation system (see Figure 2). This SafeCare Certificate is awarded locally to acknowledge the provider’s progress on the quality journey. The only facilities that are assigned level 0 are those that have not been assessed because they do not have an overall license and are thus not operating within the legal framework; in such

a case, the facility is advised to get licensed. There are five “levels of improvement”, with the highest (level V) indicating a provider’s readiness to apply for international accreditation. An international accreditation is only obtained when JCI, COHSASA or another accreditor awards a facility an additional mark of quality.

SafeCare also periodically collects survey data from providers, including type and number of patients, services and staff, and commonly treated ailments. This provides useful information on the scale and scope of services and context, as well as highlighting opportunities for benchmarking with other facilities. No patient-sensitive data is collected at any time.

Figure 2: SafeCare levels of improvement (in Kenya the levels are awarded as “stars”, with one star for the lowest level and five stars for the highest)



Data management

All assessment data are captured by SafeCare assessors using AfriDB 2.0 software that runs on tablets and laptops, and are subjected to a structured online review and approval process by data reviewers in the Kenya PharmAccess offices. Reviewers look for inconsistencies in scoring and check to see whether comments and improvement suggestions are clear and comprehensive. The system accommodates offline data capture in the field, facilitates online communication between surveyors in the field and quality managers at PharmAccess, and provides immediate results once data are uploaded to the server. Monitoring is thus web-based and centrally coordinated.

Data in this paper was collected between 2011 and 2016.

Results

Number and type of facilities assessed

SafeCare, in collaboration with its technical assistance partners, performed 712 assessments on 556 health facilities in Kenya between 2011 and the end of 2015, of which 556 were first assessments, 135 second assessments, 18 third assessments and three fourth assessments. The number of assessments per facility is determined by the length of time the facility has participated in

the SafeCare program; some facilities dropped out either voluntarily or due to the cessation of donor funding for the costs of participation. (Average costs of an annual cycle can range between US \$2,000 and \$4,000 per facility depending on size, location and number of supporting activities provided to the participating provider.)

Quality assessment scores at baseline

The average total facility score at first assessment was 37 out of 100, with a range of 16 to 80. Average scores on individual service elements varied from 21 to 44 points (see Figure 3). The highest scoring elements were “patient rights and access to care” and “diagnostic imaging services”, while the lowest scoring were “risk management”, “human resource management” and “management of information”.

Quality score change between baseline and second assessment visits

A total of 78% of facilities had a higher overall score during their second assessment than their first (see Figure 4). High performers (27% of facilities) had an increase of at least 20 points, while average performers (51% of the total) had an increase of one to 20 points (all of the facilities had at least one point of improvement). A total of 23% of facilities had decreased quality scores

Figure 3: SafeCare score averages and ranges for each service element at first assessment, 556 Kenyan facilities, 2011-2016

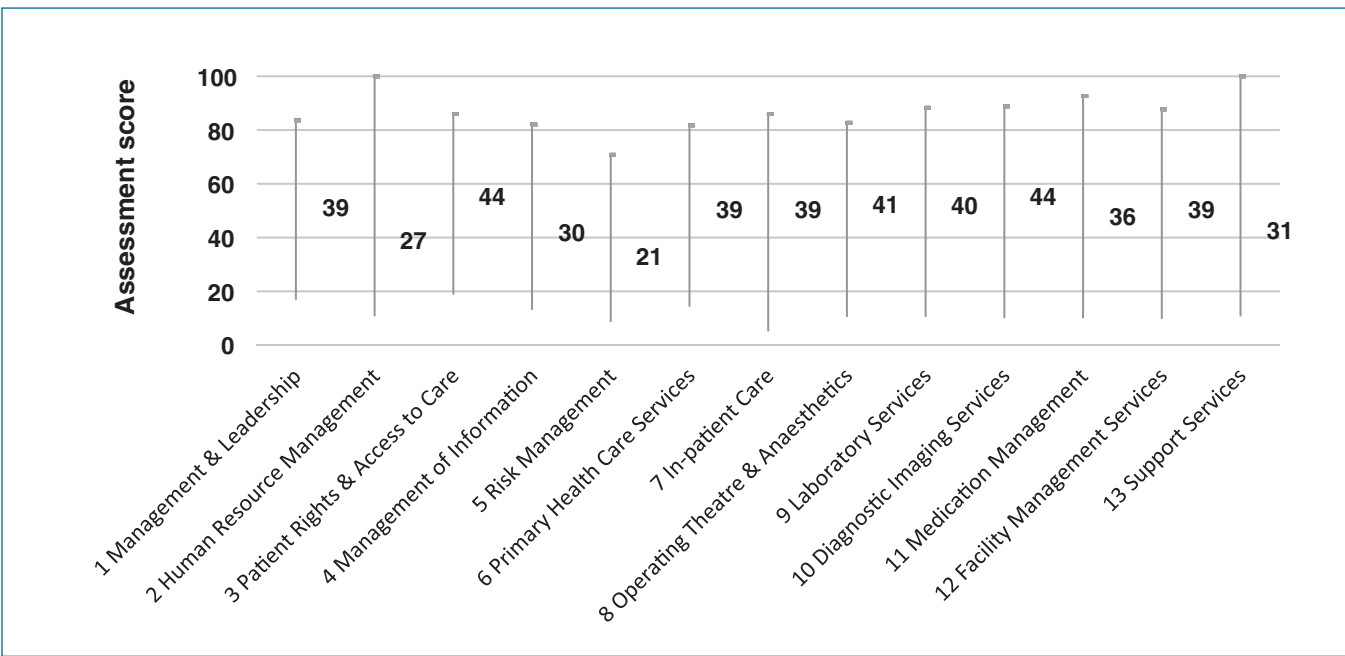
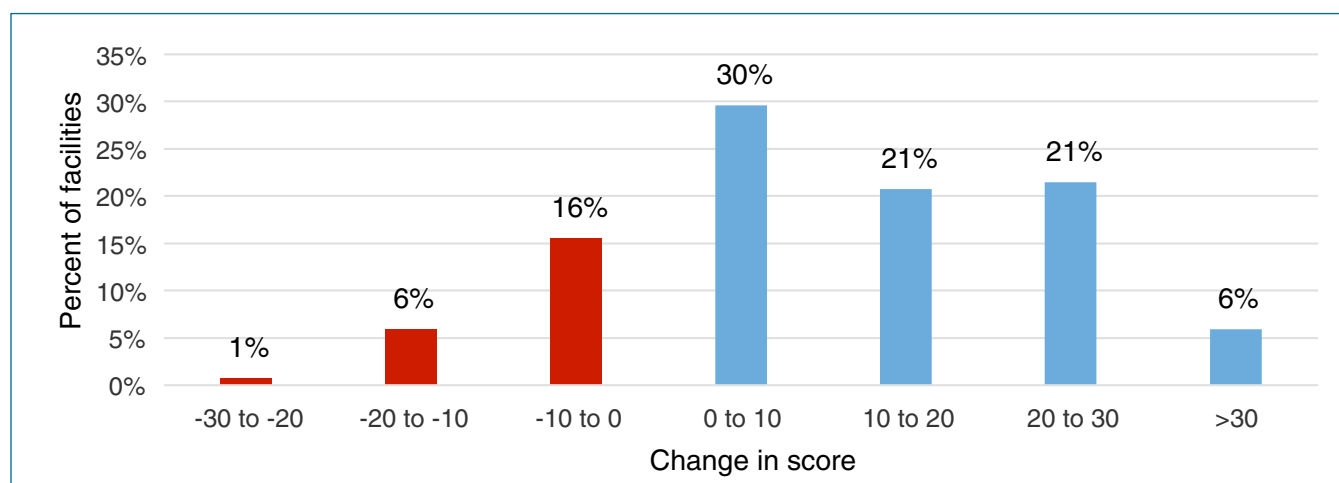


Figure 4: SafeCare score averages and ranges for each service element at first assessment, 556 Kenyan facilities, 2011-2016



between their baseline and second assessments. The time range between the two assessments was 18-24 months (data not shown).

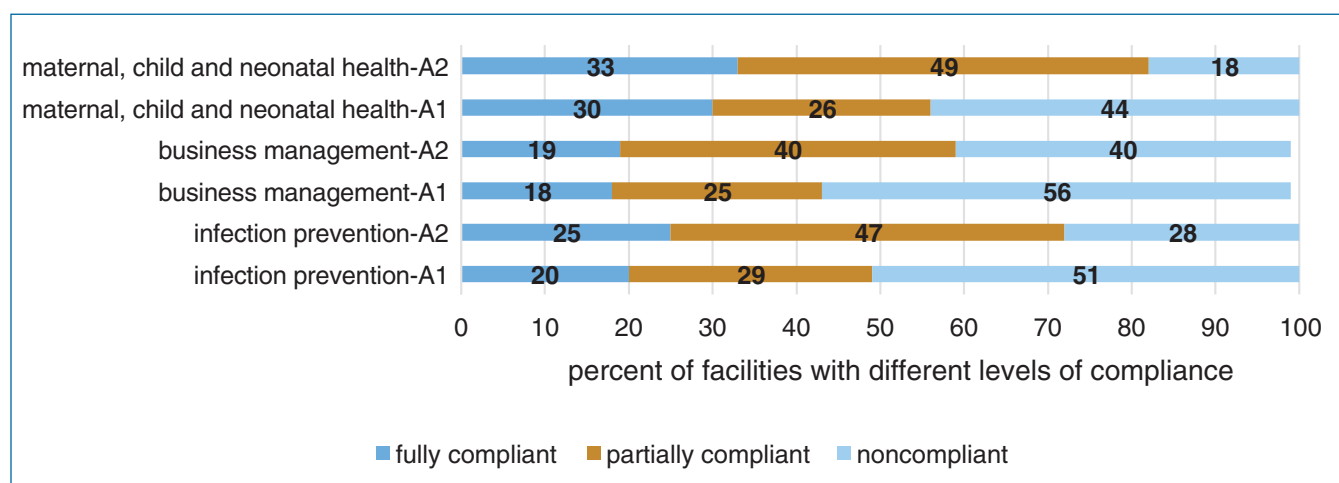
For the three service elements with the greatest improvement, there were significant decreases in the percentage of facilities that were noncompliant, from 44% to 18% in the area of maternal, child and neonatal health, from 56% to 40% in the area of business management, and from 51% to 28% in the area of infection prevention (see Figure 5).

Discussion

Over a five-year period, PharmAccess and its partners successfully implemented the health-care quality assessment and improvement scheme called SafeCare, producing standardized data on baseline quality and quality changes for a substantial percentage of Kenya's healthcare facilities.

High-performing facilities (showing significant improvement in quality over the baseline scores) are awarded the status of "center of excellence" to highlight their achievement with external stakeholders. High performance was most likely due to sufficient human resources, skills and motivation, and to the appropriateness of the regular support

Figure 5: Three areas in which facilities increased their adherence to SafeCare Standards between first and second assessments (A1 and A2, respectively)



provided to these facilities (training, assessment, improvement plans and regular monitoring and support visits which include business and quality capacity building by either technical implementing partners or PharmAccess staff). “High performers” can serve as examples to motivate intermediate performers by demonstrating that higher quality of care is possible and may result in more patients and higher revenue.

Facilities with intermediate improvement may have had fewer or less-skilled staff or high staff attrition (a challenge throughout the Kenyan health system where the ratio of doctors and nurses to patients is insufficient), more limited skills or more limited financial means than high performers; overall, it remains unclear why some facilities face these issues. Although this group has the potential to improve, it needs additional support, which may require external funding to address specific challenges.

The main concern is related to facilities whose scores decreased from baseline; they may not have the potential and/or willingness to improve. There may be multiple explanations: low patient numbers leading to low revenue, or limited staff and other resources. The support provided by technical assistance partners has apparently been insufficient to overcome key bottlenecks; it may also be that improving the quality of care is not a priority for them. Initially, low-performing providers receive a warning. After two warnings, a facility is normally removed from the SafeCare program, but as of this writing, no Kenyan facility has yet been deregistered.

The SafeCare levels (similar to the star ratings used in the hospitality industry) can be used not only to assess quality changes within individual facilities, but also to benchmark a facility’s performance against that of its peers. The levels also facilitate comparison of clinical performances and gaps and challenges in care between countries and between regions. Further, SafeCare scores can lead to increased financial investment. Links between quality improvement targets and financial investment or access to credit can increase providers’ motivation to improve the quality of their services, thereby also potentially increasing the number of patients served, as well as facilities’ efficiency. Indeed, the partnership between

SafeCare and MCF benefits banks as well as health facilities; the rigorous SafeCare assessments and technical support provided have helped strengthen the MCF loan portfolio, which has an average repayment rate of more than 97% (www.medicalcreditfund.org).

Despite successes in the implementation of SafeCare, difficulties remain. The main challenge is sustainability. A sustainable, self-financing quality assessment system requires sufficient local capacity to ensure local ownership and keep costs low. However, qualified medical or paramedical staff are required in order to conduct SafeCare assessments, which take at least one to two days, often requiring travel, so the cost of assessments is significant. In Kenya, donors still largely finance these costs, but co-financing of quality improvement (meaning that facilities would bear some of the costs themselves), and ultimately paying for assessment completely through user fees, is central to sustainability. This can only happen, however, if facility owners are convinced that quality improvement is worth the price. One way of promoting co-financing is to strengthen the link between achieving a high-level SafeCare certificate and the subsequent social and financial benefits (more patients, negotiated insurance contracts, awards and recognition amongst peers). Importantly, the NHIF in Kenya already requires facilities to participate in SafeCare once they have been contracted to offer services to NHIF insurance clients, which is a critical step in incentivizing facility owners to strive for certificates.

Another challenge relates to health outcomes. According to Donabedian principles, good health can be achieved when the quality of the structure, process, and outcome of healthcare service delivery is secured at every level of treatment. The SafeCare model rewards quality achievement during the whole improvement process, but achieving at least a level four or five is likely to be necessary to affect health outcomes for patients. It is therefore crucial that both enforcement and incentive mechanisms guide facilities on their journey towards excellence.

Studies now are under way in collaboration with the London School of Hygiene and Tropical Medicine to better understand the health outcome and

socioeconomic impact of the SafeCare program. One issue that will be explored is how SafeCare participation affects both the business performance of high-performing facilities and the social status of their owners. It is possible that being recognized as providing better care can not only increase patient utilization of a given facility but also affect the owner's social status as a leader in his or her field.

Informal observation suggests that improvements in assessment scores are mainly due to the intrinsic motivation of healthcare providers. As with any program or study that involves scoring, there will always be people who score very well, as well as people who score in the average range. Motivation to perform well can be stimulated by (financial) incentives, but as long as no proper enforcement mechanism is in place, there will always be providers who are not motivated to do better for their patients.

Conclusion

The availability of quality healthcare providers is fundamental to achieving better healthcare for the Kenyan population. Better data on quality, such as that produced by SafeCare, will help the Government of Kenya to allocate scarce resources more efficiently for quality improvement. Improvements in healthcare quality can yield numerous benefits, with increased access to health services that are safe, effective, and patient-centered.

It is PharmAccess' vision, through policy and advocacy engagement with the Kenyan government and other stakeholders, to help set up the local Kenyan accreditation body as a key component of work to improve the quality of healthcare nationwide. In essence, the strengthened capacity of public and private partners to use SafeCare methodology (including the Ministry of Health and the NHIF), and the assessors trained by PharmAccess, provide a blueprint for institutionalization of the system. Once the independent body has been set up, it will become responsible for standards setting and assessment, centralizing SafeCare assessment data from PharmAccess' existing and future partner organizations, issuing certificates of improvement or accreditation status, and assuming a central role in incentivizing care. The role of PharmAccess will then

focus on providing updates on standards and systems, helping to monitor the quality of assessments done by the central accreditation body that will be accredited by KENAS to certify and accredit hospitals and partner organizations, and ensuring ISQua accreditation of standards. PharmAccess also plans to create a south-to-south learning network linking Kenya to other African countries embarking on the same quality journey, such as Tanzania, Nigeria, Uganda and Ghana. It is important throughout that the Kenyan government play the role of steward and regulator of the healthcare system which will be enforced by KENAS, as private healthcare providers increase their capacity to deliver healthcare and increase the sector's effectiveness and efficiency.

The NHIF has incorporated SafeCare standards and other quality models into its decision-making process to award and renew contracts with healthcare facilities. Moreover, NHIF staff members are being trained and certified to conduct SafeCare assessments at facilities already enrolled in NHIF as well as prospective new facilities; for facilities to renew their NHIF contracts, they must comply with quality standards and thresholds set by NHIF. From 2016 onward, NHIF plans to reward facilities that achieve higher SafeCare levels through formal recognition, and possibly pay for performance to create further incentives for high quality service delivery. Similar to the situation in other developing countries, in Kenya there is a need to optimize coverage of quality services; the process of improvement and scaling up must be based on sound local strategies for quality management in order to achieve the best possible results.

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4 Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015

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Introduction

For the 3.5 billion people in low- and middle-income countries (LMIC) who often rely upon the private sector for their healthcare, quality is a crucial issue [1]. The private sector delivers approximately 60 percent of healthcare services annually, including 35 percent of family planning services [2-4]. Yet it is often unregulated and subject to abuse due to lack of resources by regulatory authorities to cover many of these small enterprises. The consequences of low-quality family planning and other key healthcare services can include poor service provision, which may lead to poor health outcomes. One approach to improving the quality of private sector healthcare is social franchising, a model that harnesses the power of the private sector while supporting governments to maintain standards and hence quality. Quality is theoretically embedded within social franchises, yet efforts to define and measure quality as a means to improving it continue to be a challenge. The aim of this paper is to describe how three social franchises support, monitor and measure quality, and to provide recommendations for other franchises based on these social franchises' experiences.

Description of the social franchises

Kenya: The Tunza Family Health Network

Over one-third of all the 9,600 healthcare facilities in Kenya are private. These private providers serve close to half the population, covering a broad socio-economic range. The quality of services in many small- and medium-sized private facilities is below acceptable standards. This is partly due to weak systems for regulation and oversight, and a lack of capacity building for private service providers.

The Tunza Family Health Network social franchise was launched in December 2008 with the support of donors and the international non-governmental organization Population Services International Kenya (PSI Kenya), now known as PS Kenya, to address these issues and, more broadly, to help develop a strong private healthcare sector in Kenya. The objective of the Tunza SF is to provide quality, affordable and accessible services that respond to the healthcare needs of the Kenyan population, in line with the country's priorities for child and reproductive health, malaria and HIV. The Tunza SF is intended to contribute to a better coordinated private sector that operates with harmonized service delivery standards, cost effectiveness, and high-quality metrics and data collection tools [5].

PS Kenya is a Kenya NGO and PSI network member who manages the Tunza Family Health Network in Kenya. They use the "fractional" model of social franchising whereby existing health providers enter into contractual agreements with the franchisor to deliver a specified package of services in accordance with franchise standards under a common brand, a far more cost-effective approach than building and setting up new facilities. Tunza franchisees are medical practitioners running licensed and operational private practices who are willing to abide by franchise standards and sign franchisee agreements. By agreeing to serve as a Tunza franchisee, a provider gains access to both didactic and on-the-job training, supportive supervision, support to implement demand creation activities, and subsidized family planning commodities. Since 2008, the Tunza network has grown from 93 to 309 clinics (as of July 2015), covering about 10% of all private sector facilities in the country in 36 of the country's 47 counties, and offering eight services in

Table 1: Selected characteristics of social franchises for healthcare in Kenya, Uganda and Pakistan, 2016

	KENYA	UGANDA	PAKISTAN
NAME	Tunza	ProFam	R-FPAP
FRANCHISOR	Population Services Kenya (PS Kenya), a Kenya NGO affiliated with the global PSI network as an independent network member	Programme for Accessible Health Communication and Education (PACE) with support from Population Services International	Rahnuma Family Planning Association of Pakistan, a member association of IPPF working across Pakistan through a network of service delivery outlets
MODEL	fractional	fractional	fractional
YEAR STARTED	2008	2008	2015
AIMS	<ul style="list-style-type: none"> • Provide quality, affordable and accessible services, in line with the country's priorities for child and reproductive health, malaria and HIV • Contribute to a more coordinated private sector 	<ul style="list-style-type: none"> • Deliver high quality and affordable health services to Ugandans who use the private sector • Contribute to a reduction in maternal morbidity and mortality • Contribute to a growth in contraceptive prevalence rate (CPR) 	<ul style="list-style-type: none"> • Expand access to a range of sexual and reproductive health services among poor and underserved communities in a cost-effective model
TARGET	Private sector clients	Private sector clients	Poor & underserved
GEOGRAPHIC RANGE	36 out of the 47 counties	60 of 112 districts covering all regions apart from Karamoja subregion	Working nationwide, but 4 districts only for pilot phase
STAGE	Mature (no pilot phase)	Mature	Pilot complete; expanding
NUMBER OF CLINICS	309 as of July 2015	216 as of June 2015	30 franchisees in pilot phase providing comprehensive SRH services including FP; 40 more added in expansion phase. Also working with 2,173 private practitioners (including the 70 franchisees)
SERVICES OFFERED	<p>SRH:</p> <ul style="list-style-type: none"> • Family planning; • CCSPT; • HIV testing, counseling (HTC) and treatment; • Voluntary Male Medical Circumcision (VMMC); • Safe Motherhood Services (ANC, skilled delivery and perinatal care) <p>OTHER:</p> <ul style="list-style-type: none"> • Integrated Management of Childhood Illnesses (IMCI); • Tuberculosis (TB) screening and treatment; • Screening and management of hypertension 	<p>SRH:</p> <ul style="list-style-type: none"> • Family planning (IUDs, implants, oral contraceptives (OCs), injectables, etc.); • maternal health services (antenatal care, • child delivery, post-natal care services); • CCSPT 	<p>SRH:</p> <ul style="list-style-type: none"> • Long-acting and reversible contraceptives (LARCs, e.g., IUDs); • IPPF's Integrated Package of Essential Services (IPES): counseling, contraception, safe abortion care, sexually transmitted infections (STIs)/reproductive tract infections (RTIs), HIV, gynecology, obstetrics, sexual and gender-based violence (SGBV), cervical cancer screening through Visual Inspection by acetic acid
NUMBER OF CLIENTS PER YEAR	1,450,000	~119,399 (FP, CCSPT clients in 2015)	~26,200 (30 franchisees)

sexual and reproductive health and other areas (see Table 1). The current quality assurance mechanism for the Tunza network brought Quality Assurance Officers (QAOs) into a new system called the Health Network Quality Improvement System (HNQIS). (QAOs had been in existence prior to the establishment of the SF as part of a paper-based quality assurance system.)

Uganda: The ProFam social franchise

The Uganda Demographic Health Survey (UDHS) 2011 found a 34% unmet need for family planning among women. Traditionally, Uganda's family planning method mix has been dominated by injectable methods, with longer-acting and reversible contraceptives (LARCs), such as intra-uterine devices (IUDs), constituting less than 2% of methods selected. A situational analysis by the Programme for Accessible Health Communication and Education (PACE) in 2008 showed that the private sector had limited competence to provide IUDs. Introduction of IUDs into the family planning service mix required that outlets develop and maintain the capacity to deliver these services. Other key health challenges in Uganda include the fact that only 48% of Ugandan women attend four or more antenatal (ANC) visits, and only 57% of births take place in a health facility [6]. The 2013 Annual Health Sector Performance report shows that cervical cancer accounts for 30% of bed occupancy at the national referral hospital's gynecological ward [7].

As of 2012/13, the private healthcare sector constituted 24% of the 6,229 government, non-governmental organization (NGO) and private hospitals/clinics registered by the Ugandan Ministry of Health [8]. However, the majority of private sector facilities are not registered, and thus would not have been captured by this statistic. The Uganda National Household Survey 2012/13 shows that overall, the private sector was the first source of treatment for 59% of the population, with 37% seeking medical care from private hospitals/clinics and 35% from government health centers as the first source of treatment [9].

PACE is a Ugandan NGO and an affiliate of Population Services International (PSI). PACE, with support from PSI, supports a network of 216 private facilities in 60 of Uganda's 112 districts, distributed across the country under the ProFam

social franchise, which was set up in 2008 to deliver high quality and affordable health services to Ugandans who use the private sector, and which aims to contribute to a reduction in maternal morbidity and mortality.

The ProFam franchise model is the same as that of the Tunza network described above. ProFam clinics offer IUDs in order to increase family planning choices for clients, as well as other sexual and reproductive healthcare services (see Table 1). In 2012, ProFam services were expanded to cover maternal health services and Cervical Cancer Screening and Prevention Therapy (CCSPT). The quality assurance mechanism for the ProFam network is called the Quality Improvement Plan (QIP).

Pakistan: The R-FPAP social franchise

At 35%, the Contraceptive Prevalence Rate (CPR) in Pakistan is a long way from the national target of 55% by 2020 [10]. Socio-cultural, economic and geographical barriers, lack of trained providers, and irregular supplies all contribute to this low uptake. Overall, 80% of healthcare is provided by private facilities, and just 20% is from the public health sector [11]. While 70-80% of the population seeks care in the private sector, only 40% of family planning services are delivered through this channel [11]. This reflects an unwillingness to pay for what is perceived as a non-essential service, as well as a lack of supply by private for-profit providers who do not see the revenue-generating potential in family planning services. High levels of stigma, as well as lack of awareness, also limit uptake of Sexual and Reproductive Health (SRH) services in Pakistan. For example, just 2% of women self-report cases of sexually transmitted infections (STIs), as compared to an estimated 17% of women suffering from STIs, and among those who did report an STI, 51% did not seek care, while 41% sought care from the private sector [12].

The Rahnuma Family Planning Association of Pakistan (R-FPAP), an International Planned Parenthood Federation (IPPF) affiliate, launched its social franchise in 2013 with the support of IPPF. Building on R-FPAP's existing relationships with private providers, the goal was to expand access to a range of sexual and reproductive health (SRH) services among poor and underserved

communities through a social franchising network with mid-level private providers (e.g., Lady Health Visitors (LHVs), who receive 24 months' training from government Institutions and are allowed to provide FP and SRH services in basic health units, a type of government health facility in rural settings).

A 15-month pilot phase with 30 franchisees in four districts was completed in 2015. Most of the pilot franchisees had been providing general health services and short term family planning and ante-natal services with a generally low quality of care. In the pilot phase they were trained to add more FP and SRH services and increase their quality of care. They were also trained to record data. R-FPAP is in the process of scaling up to work with a wider network as well as an expanded package of services, including a wider range of family planning methods, such as long-acting and reversible contraceptives (LARCs), as well as services within each of the categories included in IPPF's Integrated Package of Essential Services (IPES) (see Table 1). As of 2016, the expansion has added 40 franchisees to the network. In contrast to the Kenya SF model described above, R-FPAP works only with mid-level service providers, mostly in rural settings, and provides a wider range of services.

Addressing quality challenges within social franchises

Kenya: The Tunza Family Health Network

PS Kenya has continually provided capacity building support focused on improving the quality of service delivery to the Tunza franchisees. This includes regular deployment of Quality Assurance Officers (QAOs) to undertake quality assessments and provide feedback and coaching for weak areas of service delivery. Quality assessments include observation of providers while they are providing clinical services to determine their competency and customer relation skills; of facilities to assess patient safety and compliance with regulatory requirements related to, *inter alia*, infection prevention, waste management, and confidentiality; and of record keeping (crucial for the continuum of care for patients).

In order to address challenges with quality assurance, PSI Global Services worked closely with

PS Kenya to create the Health Network Quality Improvement System (HNQIS) in 2015. HNQIS is designed to support quality improvement in all health areas in which network providers supply services. The franchise defines quality based on several dimensions: technical competence, client safety, informed choice, continuity of care and privacy, confidentiality, customer experience, data management and equity. Assessments are completed using structured questionnaires, and ultimately determine the need for routine support supervision or follow-up on areas identified as weak. Assessments had been taking place prior to the HNQIS, but were paper-based and not as comprehensive as the HNQIS, which includes feedback, automated scheduling of appointments, and on-the-spot scoring.

HNQIS was the result of PSI's years of experience implementing vertical and integrated service delivery for private providers in several social franchises. It is an electronic tablet-based tool consisting of four modules on planning, quality assessment, provider improvement and performance monitoring, and is used in combination with outcome data and client exit surveys to comprehensively assess quality and provide feedback to managers and practitioners for improved service delivery. The system is fully functional without internet connectivity, operating off an Android application linked with the information management system District Health Information Software 2 (DHIS2).

Figure 1: Factors determining assessment schedules

		CLIENT LOAD	
		LOW	HIGH
QUALITY OF CARE	Class A- High	6 Months	
	Class B- Medium	3 Months	1 Month
	Class C- Low		

- *Planning module:* All QAOs conduct quarterly assessments of Tunza franchisees. These results are used to develop facility-specific improvement plans. This module automatically schedules assessments based on where support is needed most (as assessed by a quality score) and where it will have most impact (as assessed by client load) (see Figure 1). The module divides providers into

those who have never been assessed, those with overdue assessments, those scheduled to be assessed in the current month, and those scheduled to be assessed in future months. Each health area (family planning, integrated management of childhood illnesses—diarrhea, pneumonia and malaria, skilled delivery, antenatal and postnatal care, HIV testing and treatment, cervical cancer, and hypertension) is assessed independently for quality and client load, but just one planning report is produced for each QAO.

- *Quality assessment module:* This module enables QAOs to assess clinical procedures in each health area through case observation or simulation. If there is no patient onsite to observe during the assessment, the QAO presents a fictional case scenario and asks the provider to explain in detail how he or she would manage the case. An assessment score is automatically generated on-site, and performance is subsequently rated good, satisfactory, or poor. The module enables consistent scoring of all health areas to allow comparability within and between network providers.
- *Provider improvement module:* This module ensures that provider feedback following a quality assessment is consistent, rather than relying on the subjective opinions of the QAO. The module highlights the key areas of weakness identified during the assessment, and displays tailored feedback scripts that take into account both how procedures should be undertaken (as per protocols) and why this is important. This places all the information required to improve the provider's performance in one place. Eventually, PS Kenya plans to replace feedback scripts with short videos to improve and simplify feedback.
- *Performance monitoring dashboard module:* This module consists of a dashboard tailored to meet the needs of the QAO, with a range of charts, maps and tables highlighting trends and overall performance of all the providers for whom the QAO is responsible. Dashboards can also be used to present relevant data collected through other channels, such as client load data. The main purpose of this module is to facilitate the use of data in QAO decision-making. It offers the QAO an oppor-

tunity to track the return on his or her support over time and decide whether a different approach is required.

Initial implementation of the HNQIS was split into two phases. Phase one (August-September 2015) involved a baseline assessment of all network providers using an assessment module in order to determine performance benchmarks. Phase two involved full roll-out of the four-module system, and is ongoing as of the writing of this paper. HNQIS has become a driving force in PSI Global to generate evidence to improve quality of care, and PS Kenya is leading the way (it is the first country-based PSI affiliate to use this system). If the initiative continues to be successful, it will help ensure improved targeting of support (through better planning and resource allocation), strengthened onsite capacity building efforts (through assessments and feedback provision), and improved tracking of returns on investment over time (through continuous monitoring), helping ultimately to achieve the overall franchise objective of delivering quality services to clients and strengthening the private health sector. In family planning, for example, effective counselling can reduce discontinuation, and if this is identified as a key gap among providers, then targeted capacity building efforts in this area could have favorable outcomes.

Uganda: The ProFam social franchise

Since the establishment of ProFam in 2008, quality assurance has been core to the network's functioning. In 2008, the focus was on family planning, including LARCs which were a new service for the franchisees. The key components of the initial quality assurance system were provider training and field supervision and mentoring visits, using a set of structured paper-based tools administered by Quality Assurance Officers (QAOs) during facility visits through observation or interview. The tools covered infrastructure assessments, provider competence checks and client safety. The QAOs would then manually review site performance and provide relevant support through coaching and mentorship.

Challenges related to staffing, skills, attitudes, resources and infrastructure occurred through 2012, but on a relatively small scale. With the addition of maternal health services in 2012, however,

these issues multiplied. In 2014/15, PACE introduced an integrated quality improvement plan (QIP) that covers family planning, maternal health and CCSPT, to address the ongoing challenges to quality of care at all ProFam facilities. It integrates some of the old quality assurance activities such as initial training and support supervision with new activities such as annual assessments and planning. For instance, all QAOs conduct quarterly assessments of ProFam sites. These assessments are then used to develop facility-specific improvement plans.

The QIP is based on the Jhpiego SBMR (standards-based management and recognition) model that is a cyclic process of identifying gaps and coming up with interventions to address the gaps. Its overall goal is to systematically address areas that need improvement and to continuously track efforts and service quality at both the facility and network levels. The first step in planning for change was to determine the key components of quality of care and develop relevant protocols. The components are five global standards widely regarded in the medical community as being essential to quality of care: informed choice; privacy and confidentiality; technical competence; client safety; and continuity of care. With technical support from the Association of Obstetrics and Gynecology of Uganda (AOGU), PACE adapted quality assurance (QA) protocols for each health service (family planning, maternal healthcare, and CCSPT) from national and international guides.

The QIP used elements of the previous quality assurance system to create a comprehensive crosscutting system that included all relevant health areas. It assesses facility-level items such as physical and material resources (space, equipment, etc.) and provider qualifications, including service-specific assessments of provider practices; for example, for LARCs, the assessment asks, “Does the provider correctly: 1) counsel clients, 2) conduct pre-insertion tasks, 3) assess clients for medical eligibility, etc.” PACE identified specialists to work with the QA team to develop a training plan for new franchised services which did not have protocols. Working with recognized experts was key in getting the training curricula approved by the Ugandan Ministry of Health (MOH).

The PACE quality management team is led by a quality assurance specialist (QAS) who is supported by Regional Health Services Coordinators (RHSC) and quality assurance officers (QAO). All team members have medical qualifications and practicing experience. The providers and clinic owners are also involved in addressing quality needs. The quality management team is supported by the AOGU.

When a new service is introduced at ProFam, the PACE quality team is the first to undergo training to provide that new service. Family planning trainings last for ten days and require staff to competently perform five IUD insertions. CCSPT and maternal health training are at least five days. Additional follow-up mentorship and coaching is done by AOGU. Trainings are done at facilities with a high client load, such as referral hospitals, to ensure adequate opportunities for practice. All trainings include testing and rating of trainees, with results then used by the QAS to target additional support to the QAO. Since the initial roll-out period, additional franchisees have joined the network. All newly recruited ProFam providers must receive similar initial trainings in all health areas. In order to offer a service, the ProFam facility is required to have at least two providers on staff who have completed the approved training course in a particular service. During trainings, health promotion events are organized to ensure that trainees have adequate clients for the practicum.

To facilitate its application, the QIP tool has been programmed into DHIS 2, an online data management system. QAOs use tablet computers to capture the assessment data and an immediate score is generated for each health area. The assessment enables teams to prioritize which services (LARCs, CCSPT, etc.) and standards need support. For LARCs, the standards cover areas such as counselling, assessment of medical eligibility, pre-insertion procedures, provider performance on insertion, etc.

Each of the 11 QAOs is responsible for visiting an average of 19 facilities per month. Quality is monitored by QAOs through regular support supervision with ProFam providers who are visited based on priorities identified through the QIP. Each facility is visited at least once each quarter. Facilities that continuously fail to meet key

quality indicators are dropped from the franchise network. In addition, internal and external quality audits are completed in alternate years. Internal audit teams include head office staff and AOGU members, while external teams are from Population Services International. Client experiences are captured by the research team through exit interviews completed twice a year.

Once facility staff have been trained in family planning, PACE provides IUD insertion kits and some equipment such as sterilizers, as necessary. Continuing ProFam facilities are required to buy new insertion kits. PACE also sells subsidized IUDs that are pre-packaged with gloves and cotton, and provides MOH-approved job aids. Providers receive additional support based on performance and rating in the basic training. After completing the basic training, providers become eligible for additional on-the-job training support and refresher trainings every two years. PACE has contracted AOGU to provide specific mentoring and coaching for maternal services. At the set-up of the franchise in 2008, PACE identified and recruited facilities with staff authorized to provide LARCs as well as other necessary physical and material resources such as room to conduct procedures, equipment, etc. In 2012, a similar assessment was conducted for sites for maternal health franchising. The recruitment at both times included the identification and engagement of a referral network to link franchisees to facilities with the capacity to handle adverse events.

Pakistan: The R-FPAP social franchise

Within R-FPAP's social franchising network, quality standards are assured in line with IPPF's Quality of Care framework, which recognizes the rights of the clients and needs of the providers (see Table 2).

Table 2: IPPF framework: Client rights and provider needs [13]

CLIENT RIGHTS	PROVIDER NEEDS
information	information
access	training
choice	infrastructure
safety	supplies
privacy	guidance
confidentiality	back-up
dignity	respect
comfort	encouragement
continuity	feedback
opinion	opportunity

Quality assessment and improvement for franchisees (both the 30 franchisees of the pilot phase and the 40 that have subsequently joined the network) include clinic renovations, equipment provision, and training. Minor renovations are carried out across all franchisees based on needs assessments. This includes the purchase of new furniture and equipment and interior and exterior painting. Incinerators have been installed in each clinic for waste management. For training during the pilot phase, one mid-level provider from each franchisee participated in a two-day training on FP and SRH service provision. The training workshops were carried out in multiple locations (Lahore, Faisalabad and Islamabad) in order to minimize disruption to services due to travel time, and where possible, were held during the evenings and on weekends. Training included both theoretical and practical components and was designed to ensure clinical competence in each of the eight categories included in IPPF's Integrated Package of Essential Services:

1. Counselling: sexuality counseling;
2. Contraception: short-term methods and long-acting reversible contraception;
3. Safe abortion care: pre- and post-abortion counselling; surgical abortion using Manual Vacuum Aspiration (MVA); medical abortion;
4. STIs/RTIs: symptom management of STIs;
5. HIV: pre- and post-test counselling for HIV;

6. Gynecology: breast screening through manual examination; cervical cancer screening through visual inspection by acetic acid (VIA);
7. Obstetrics: antenatal care; and
8. SGBV: screening and counselling for SGBV.

Infection prevention, inventory management, and data recording and reporting were also part of the training. Pre- and post-tests were carried out to assess comprehension. Post-tests in the pilot phase indicated a significant increase in knowledge among participants after training. For the 40 additional franchisees who joined in 2016, trainings are conducted as per needs assessments, with pilot phase franchisees attending refresher trainings.

R-FPAP uses a three-tiered performance monitoring system. At the district level there are program management offices (PMOs) staffed by program managers and program officers who conduct monitoring activities monthly. In each of the five regions, there is one Regional Director (RD) along with five Quality Assurance Doctors (QADs) and five Monitoring, Evaluation and Research Officers (MERs). The QADs visit each of the franchisees on a monthly basis. During each visit, the QAD provides on-the-job training, conducts four to five exit interviews to assess client satisfaction, and uses R-FPAP's QoC checklists to assess adherence to protocols and commodity availability (see Annexes 3.1-3.6). The QAD also supports the implementation of a semi-annual self-assessment in order for the franchisees to identify challenges relating to quality of care and to develop an action plan to resolve these challenges. As is the case for R-FPAP clinics, the QADs use a traffic light system for categorizing franchisees:

- *Green Zone*: clinics with high quality, high numbers of clients and high consumption of commodities;
- *Yellow Zone*: clinics with minor quality gaps and an average number of clients and commodity consumption;
- *Red Zone*: clinics with significant gaps in quality, low client volumes and low consumption of commodities.

QAD visits to clinics in the red zone, *i.e.*, who are not actively providing family planning services,

not purchasing contraceptives regularly or not ensuring QoC in their clinics, are more frequent, and community mobilization is more focused.

The role of the family planning representative (FPRs) in the project is to conduct community mobilization and demand creation by conducting regular home visits, holding sessions with community elders, and generating referrals for the franchisees. For franchisees who fall in the red zone, these activities are strengthened.

At the national level, monitoring is done biannually by the R-FPAP program management division at the head office, including a Programme Director and a social franchising coordinator (a medical doctor) who supervises the SF program in all provinces/regions. At the provincial/regional level, performance meetings are held on a quarterly basis by the Regional Director and program managers and attended by field teams, including family planning representatives and social mobilizers, to share the best practices of the franchisees and propose strategies to overcome challenges. The best-performing field workers are also formally acknowledged in front of their peers during these meetings.

The system has a paper-based data collection sheet, and after manual editing and verification, data is entered into Excel spreadsheets. Electronic data recording at the local level is not possible due to limited capacity and infrastructure challenges in rural settings.

Ongoing quality challenges

Quality challenges for the provision of healthcare in LMIC are numerous. Social franchises have arisen in part to address some of these challenges, yet they themselves face a wide range of quality challenges. These may be addressed fully or partly during the initial or pilot phases of a SF network; yet many challenges may persist or even reappear, perhaps related to problems with new franchisees, new target populations or areas, new types of services being provided, a changing legal and regulatory environment, or issues with quality assurance systems themselves. Most of the issues discussed below have been addressed to at least some extent by the case studies in question, yet also remain ongoing challenges, for

instance due to the nature of operating a fractional franchise that is also affected by the competitive private sector environment in which staff are mobile and resources are limited.

Challenges related to the franchisees

Staff, skills, and attitudes

Attrition of trained providers at ProFam in Uganda is at about 30% annually. This means clinics often have no provider trained in IUD insertion and implants, so they cannot offer adequate choice to clients. To reduce the challenge of staff turnover, PACE endeavors to recruit provider-owned facilities. This reduces the likelihood that facilities will lose trained providers. Provider-owned facilities are also easier to lobby to invest in quality improvements. Forty percent of ProFam facilities are currently provider owned.

Another challenge for the Uganda SF is that despite being trained on all franchised services, and having completed proficiency tests, franchisor field support staff do not regularly conduct procedures such as IUD insertions. Thus, their ability to provide guidance to ProFam is sometimes limited, and they have been observed to focus their support on procedures with which they have more experience. The expanded scope of franchised services in 2012 (to include maternity services) exacerbated this problem.

In Pakistan, many providers have not received competency-based trainings or refresher courses, nor have they had previous training on infection prevention techniques. Some private providers may be reluctant to expand their package of services to include specialized SRH services, as they have had no prior training or experience, or perhaps have not been sensitized on the importance of such services as well as their potential for leading to monetary gain. On the other hand, many private providers are more concerned about increasing the number of services and thereby generating more income and ensuring the profitability of their businesses than ensuring quality standards are met and clients' rights upheld.

Resources and infrastructure

In Uganda, meeting some quality standards has required that facilities make investments in infrastructure, equipment and supplies. For example, facilities may be required to improve client bathroom hygiene or purchase sterilization equipment. However, some facility owners do not understand the related return and therefore they do not make these investments. In Pakistan, too, sizeable resources are needed to maintain quality standards and to provide ongoing, supportive supervision. While the investment in renovations and equipment helps to raise the standards of the private clinics, many are starting from a very low standard.

Challenges related to the franchise network

Franchised services vs clinics

ProFam in Uganda franchises only some of the services that providers implement, but for many reasons, this is not an ideal environment for the provider behavior change that is needed for improved service quality and consistent application of quality standards. For example, providers sometimes apply practices from non-franchised services to franchised services, such as a non-franchise client records system rather than the thorough client tracking that is required for continuity of care.

Growing scale and scope of network

In Kenya, one of the key challenges has been how to cope with the increasing scale (from 93 to 309 facilities) and scope of the franchised health service areas (from one to eight) that make day-to-day quality assurance complex and resource-intensive. Provider support (mentorship and on-the-job training) is provided across the network in the form of biannual assessments and monthly follow-up visits; however, this has become very complex with the increase in the number of health areas covered. With a large number of facilities, the diversity in type and timing of support required has also become greater, further increasing complexity, with some providers requiring more support because their quality is not high enough, and others because they have larger client loads. Tunza network quality visits have been based on a pre-determined routine schedule that is not responsive to this complexity. Essentially, the return on investment in support activities is not optimized due to a lack of targeting and prioritization of support visits. This challenge

has, however, been greatly reduced by the introduction of the HNQIS in 2016.

Change management

The quality assurance system radically changes how QAOs work; for example, the schedule of their work is automated, determined by how the providers score rather than by the QA, which means that QAs also need to adjust and ensure that the support supervision visits are conducted using tablets and not paper; feedback is also standardized to the extent possible, and QAOs receive guidance from the system on how best to respond to specific quality areas. Hence, change management has been vital to ensure franchise staff buy-in.

Challenges related to the quality improvement work itself

Quality assessment tools

Current quality assessment tools utilized for Tunza network providers are detailed but one-dimensional, with a focus on the assessment of clinical service provision skills. Different teams have continually modified the tools. While this helps ensure the tools meet their individual assessment needs, it has also led to challenges in the depth of content, as well as making it difficult to make comparisons between facilities and ensure external validity.

Feedback and coaching

Prior to the introduction of the HNQIS in Kenya, the provision of feedback and coaching of providers following quality assessments was inconsistent and subjective, given that it was left to the QAO to determine what areas to focus on and how to structure the feedback. While this has improved, challenges remain; for instance, the QAOs still rely on clinical service delivery protocols for the provision of feedback, yet these principally focus on how to undertake procedures rather than why it is important to do them, yet the latter is vital for provider behavior change.

Use of data

Prior to the HNQIS' introduction, Kenyan QAOs were not fully utilizing routinely collected data on service quality. This was due in part to poor access to data, as most data was paper-based

with analysis being done late and centrally at the head office, affecting teams' ownership and understanding of the data, as well as leading to poor presentation of data (e.g., lack of decision-driven dashboards). QAOs did not have network performance trends data at their fingertips, yet this information is vital for understanding how the network responds to support from the QAOs. Monitoring data is also important for identifying common areas of weakness across the network that may require additional attention. With the HNQIS, this data is now available.

In Pakistan and Uganda, there were also data-related challenges. Many private providers in Pakistan do not recognize the importance of recording clinical data, nor are they aware of how data can be used for decision-making. This issue has been overcome among trained franchisees, though. In Uganda, facilities have had to improve their client documentation levels for family planning services in order to ensure continuity of care. However, improved documentation for family planning services has not been subsequently implemented for other services offered at the same facility.

Client satisfaction

Quality procedures such as instrument sterilization and counselling can result in longer service delivery times. When providers can fully focus on family planning activities, the time required for instrument sterilization and counselling can be decreased. In response, ProFam providers in Uganda, who provide other services in addition to family planning, have developed monthly family planning days. These days have been set up to enable the provider to focus exclusively on family planning service provision. During these days, clients may receive group education followed by individual counselling and service provision. These days are also used for newly trained providers to progress from proficiency to competency in regard to skills in service provision. PACE has also reduced community outreach in order to ensure that there is an adequate provider-to-patient ratio and appropriate continuity of care, giving clients a fixed site to return to in case of any complications or concerns.

Conclusions

One of the challenges to ensuring quality of services in healthcare generally and family planning specifically is that, as found in the Uganda case study, different stakeholders have different quality expectations:

- Clients mostly focus on receiving their method of choice with limited side effects and no adverse effects;
- Providers expect that quality interventions improve their competence to safely deliver more diverse services;
- Facility managers aim to reap returns from investments in quality by gaining additional clients through increased and diversified service offerings with improved quality. They do not want any risks associated with adverse events that may damage the reputation of the facility;
- The franchisor expects to have a network of facilities for which quality is a cornerstone.

Evidence from these case studies suggests that more developed SFs may experience more challenges related to the quality improvement work and to the franchise itself, while newer SFs may face more challenges related to the facilities themselves. Yet overall, the quality of services provided by social franchises is determined by a multitude of factors, relating among other things to the SF's stage of development, its market and aims, its founding and supporting organizations, and its national context. These case studies provide a number of recommendations for other organizations seeking to ensure quality in social franchises, including:

- *Ensure the design stage is participatory.* It is important to ensure that both medical experts and monitoring and evaluation staff are involved in the design of quality assurance systems;
- *Put the system online, but ensure offline functionality.* Technology can play a significant role in optimizing the use of data in making operations-related decisions, such as on resource allocation. The offline capabilities of a quality assurance system can ensure that it is applicable in areas with poor internet connectivity;

- *Take care in selecting franchisees.* The success of the franchise will ultimately depend on maintaining an effective relationship with franchisees. It is worth investing the time and resources up front in order to select providers who meet your criteria. This does not mean that there will not be challenges in bringing them up to the desired level of quality, but it is important to recognize what can be changed through capacity building and what cannot be changed. In particular, consider selecting facilities that are provider-owned since this reduces challenges with attrition and improves willingness to make financial investments in quality;
- *Take care in selecting providers.* In Pakistan, initially, the franchise aimed to work with lady doctors and Lady Health Visitors (LHVs). However, during the mapping exercise, it became clear that lady doctors were not interested in being part of the franchise. For them, the burden of reporting was not worth the support that R-FPAP could provide. They were also reluctant to provide services at subsidized prices. LHVs, on the other hand, were in a position to benefit a lot more from the partnership given their limited service offerings and need for support;
- *Work with locally recognized professional organizations.* For instance, in Uganda the SF worked with the AOGU to develop and implement quality and training protocols. AOGU has local knowledge to help ensure that protocols meet MOH standards;
- *Target support.* Clinic-specific quality assessments enable support supervision to be based on clinic-specific gaps. Supervision visits should be targeted to pre-identified quality priority areas;
- *Integrate tools:* The solution to an effective quality assurance system in Uganda was integrating existing and new quality assurance tools to create a functional system for all services offered;
- *Increase provider buy-in via training.* Overcoming negative perceptions among providers can present a significant challenge. R-FPAP in Pakistan found that the inclusion of value clarification in training can have a positive impact on the provision of rights-based

services. Further, quality improvements have been shown to increase client satisfaction. In order to get providers on board, it is important to show during training how satisfied clients can work as advocates and thereby increase the number of clients coming to the clinic;

- *Ensure ongoing support.* While a one-off investment in training and clinic readiness is necessary, it is not sufficient to ensure the provision of quality services to clients. This initial investment must be supplemented by continued resources (e.g., for maintenance and refresher training) to ensure that quality standards are met;
- *Be creative in ensuring record-keeping.* Many LHVs in Pakistan were not accustomed to keeping records, and initially many were resistant to doing so. With the help of the community mobilizers, though, they became comfortable with the process over time.

As observed in the Kenya case study, poor quality of care not only leads to poor patient outcomes but also compromises the safety of health care providers. Therefore, it is important that the quality of care provided in franchised clinics is consistent with current knowledge and practice. In Kenya, this intention resulted in the creation of the HNQIS tool to assess quality; triangulating data from this tool with outcome data and client exit surveys now provides a more accurate picture of quality within the franchise. Ultimately, investments in improving quality assurance will help both clients and service providers to be more confident in the quality of services offered, and franchised services will be more cost-effective, safe and efficient.

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5 Constructing indicators for measurement and improvement of the quality of family planning programs: An example using data on choice from the Philippines, 1997-1998

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Introduction

Quality is an important dimension of health service provision and can be defined from various perspectives, including the policy and program, service provider, and outcome perspectives. Diverse analysts have provided different definitions of quality depending on their perspectives. Despite these differences, there is general consensus that good quality healthcare means well-equipped clinics with trained health personnel providing a wide variety of appropriate services, and where clients are treated courteously and provided with good care.

This wide-ranging definition of quality covers so many different aspects and perspectives that a classification of the main concepts is needed for programmatic action. It is useful first to distinguish between “quality of services” and “quality of care.” Quality of services refers to the level of preparedness or readiness of health facilities to offer services of a specified level of quality, and includes such aspects as infrastructure, equipment and buildings, availability of staff, and logistics; in other words, those conditions of the health facilities which enable service delivery of good quality. Quality of care, on the other hand, refers to the way clients are treated by service providers. It includes the extent to which providers adhere to protocols and guidelines, and how they interact with clients and provide them with accurate information and appropriate services. These two concepts are often collapsed into a single rubric of quality, leading to a classification which is useful neither to researchers nor to program managers. The distinction between readiness and

care also reflects the perspectives of two different constituencies—service providers and clients—who might have entirely different expectations, priorities, and experiences of service². Once concepts are clearly defined, the next step in the process of assessing quality of healthcare is the creation and measurement of indicators.

The aim of this paper is to demonstrate the creation and use of indicators for quality of healthcare and discuss how this can help improve quality of care. We begin with a brief overview of the principal initiatives to define and measure quality in healthcare. Next, we describe how to build indicators for choice of contraceptive methods (one element of quality family planning) from both the readiness and care perspectives, using data collected through facility surveys conducted in the Philippines in 1997-98. We have selected the “choice” element of quality to illustrate the creation of indicators for quality, meaning the choice of contraceptives that is available to family planning clients, which affects clients’ ability to make decisions that are appropriate to their reproductive desires and life circumstances, and thus embodies principles of client rights and autonomy. Our intention is to provide practical guidance on the types of indicators that can be developed to measure the quality of programs and that program managers can monitor and track over time. Finally, we conclude with a discussion of methodological issues and challenges and how program managers might use the data generated to improve quality of care.

² By providers we mean not only individual service providers but also more broadly the program offering services.

Background

Judith Bruce's groundbreaking article on quality of family planning provided a theoretical framework for the study of quality, including its determinants and its effects [1]. The framework describes six fundamental elements of quality which reflect clients' experience of services: choice of methods, information given to users, technical competence, interpersonal relations, follow-up or continuity mechanisms, and appropriate constellation of services. The extent to which these six elements of quality are achieved depends on the family planning program's goals for standards of care and the necessary level of preparedness, as well as on the actual process of service provision, when intentions are translated into action. Users experience the outcomes of the service provision process in both the short and long term; in the short term, users should have greater knowledge about various contraceptive options, receive a contraceptive method, and be satisfied with services they receive; in the long term, users should continue to use contraception as desired and be better able to achieve their reproductive goals, as they are (ideally) equipped with both the knowledge and the means to act upon their reproductive intentions.

The International Planned Parenthood Federation (IPPF) added the roles and perspectives of providers to the Bruce framework in 1992/93. In this revised framework, the needs of providers are explicitly considered so that providers are able to address clients' rights to good quality services [2]. Specifically, providers need to be equipped with the skills, infrastructure, and technical support needed to fulfill their functions well and thus be in a position to offer good care to clients. Providers' rights include training, information, infrastructure, supplies, guidance, back-up, respect, encouragement, feedback, and self-expression, while clients' rights include information, access, choice, safety, privacy, confidentiality, dignity, comfort, continuity and opinion. The development of frameworks for the quality of family planning has helped not only in conceptualizing and defining quality but also in explicitly laying out the specific inputs and activities that are required to achieve it, thereby assisting in the translation of concepts of quality into service delivery actions.

The Situation Analysis (SA) approach was developed around the Bruce framework to respond to the needs of program managers to know the quality of their programs at the field level [3]. The SA is a field-level assessment of quality of services, *i.e.*, the readiness of family planning/reproductive health programs to deliver services of good quality and the quality of care received by clients. An attractive feature of the SA is that it provides managers with reliable information on the state of both quality of services and quality of care offered by their programs; it specifically provides information on those aspects over which they have administrative control and about which they can make programmatic changes in order to ensure good quality of care.

A standard SA collects data using four tools: an inventory of the facility to determine readiness; provider interviews to determine providers' training and experience; observations of interactions between providers and clients to evaluate provider performance in counseling and clinical procedures; and client exit interviews to understand clients' experiences at the facility. Trained teams of researchers collect these data from a sample of facilities within a specified area or region in order to produce an assessment of an entire program. Typically, data are collected at a facility on a single day, though longer durations of data collection are possible. Use of the SA has been documented numerous times, especially in Africa [4-7]³. The data collected have been used to describe how programs were functioning at the field level and to provide systematic information on program strengths and weaknesses. For example, SAs conducted in Nigeria, Tanzania, and Zimbabwe found that there were many problems which constrained service delivery, *e.g.*, in supplies of commodities, facilities and equipment, staffing and training, Information, education and communication (IEC) materials, and record keeping [4].

Since the development, testing and wide-scale use of the SA methodology, researchers have also devised other methodologies to assess quality of family planning [8, 9]. In 1999, a United States Agency for International Development

³ Since 1989, SAs have been conducted in over 27 countries.

(USAID)-funded project called the MEASURE Evaluation project developed the Quick Investigation of Quality (QIQ) methodology, which is a modified and pared down version of the SA. It collects data on 25 indicators of quality of care for the purpose of monitoring facility-based family planning programs in developing countries.⁴ As with the SA, data are collected through a facility audit, observations of client-provider interactions, and a client exit interview; the QIQ does not include interviews with providers. This methodology has been used in four countries: Turkey, Ecuador, Uganda, and Zimbabwe [10].

With general consensus among technical experts regarding the utility of collecting data on quality of care from health facilities, the term Health Facility Assessment (HFA) was coined. Since the creation of the SA and QIQ, other types of HFAs have also been designed to collect data on quality of care. Most notably, Service Provision Assessment (SPA) surveys began to be implemented in the late 1990s by ICF Macro, collecting information on a range of health services provided at health facilities. The services covered include family planning, child health, maternal and newborn health, HIV/AIDS, Sexually Transmitted Infections (STIs), malaria, tuberculosis (TB), non-communicable diseases, and basic surgery. Issues covered by the SPA include the availability of different health services in a country, facilities' readiness to provide services in terms of infrastructure, resources and support systems, providers' ability to meet standards of acceptable quality, and client and provider satisfaction. As of 2016, SPAs have been conducted in 22 countries, with new variations being developed such as continuous SPAs which are being implemented in Senegal (<http://blog.dhsprogram.com/>). Here, data is being collected from health facilities between 2012 and 2017. This five-year period is broken down into phases, with the sample and topics of data collection varying between the phases. The design of the continuous SPA is intended to provide a complete picture of the health care system, as all health facilities in the country will have been surveyed by the end of data collection.

Other health facility survey assessments (HFAs) include the World Health Organization's (WHO's) Service Availability and Readiness Assessment (SARA). SARA was designed in 2010 to assess and monitor service availability and readiness of the health sector and to generate data for managers of health systems [11]. The focus was on the availability of basic equipment and essential medicines and the capacity of health facilities to provide services for family planning, child health, basic and comprehensive emergency obstetric care, and care for HIV, TB, malaria and non-communicable diseases.⁵ Other initiatives and projects have examined sub-systems of health services such as logistics or human resources using HFA tools.

Conceptually, indicators for readiness of facilities ("quality of services") are different from those for quality of care. However, there is a tendency among both researchers and program managers to group them together, typically equating infrastructure—modern buildings with all the amenities and equipment—with quality of care. This can lead to puzzling results, as clients in well-equipped facilities may be treated poorly while clients in less well-endowed facilities may receive better care. This has been noted in an analysis of SPA data from Kenya where clients visiting "ready" facilities reported being less satisfied with services received, while those visiting "less ready" facilities reported being satisfied [12]. Whether this is an artefact of self-selection is unknown. For example, women visiting poorer facilities may have lower expectations of quality care than women visiting better-equipped facilities.

Common sense indicates that there is a link between readiness and the nature of care, since good care cannot be given or received when the enabling conditions do not exist. Yet in situations where quality of care is poor, providers are often taken to task for not providing services of adequate quality. The reality is that very often these providers work in facilities which are ill-equipped, lacking basic infrastructure such as running water and electricity; or commodities, drugs, and consumables may be out of stock,

⁴ 24 of the 25 indicators measure five of the six elements of the Bruce framework and hence there is a great degree of correspondence. The element of the Bruce framework which is not measured is the constellation of services offered. The QIQ additionally measures the existence of mechanisms at the facility which can facilitate programmatic changes based on client feedback.

⁵ SARA builds on the SPA and WHO's Service Availability Mapping (SAM), which was used between 2004 and 2009, after which it was replaced by SARA.

insufficient or irregularly supplied, providers may lack the training to provide the requisite services, or they may not be compensated on time. Such problems are more systemic or organizational in nature than related to the capacity of individual providers, meaning that even the most conscientious employees will be unable to perform their tasks and deliver quality care unless systemic flaws are fixed (see [13]). In spite of these systemic problems, some creative providers do provide good care by referring clients to other facilities if their facility is not ready to provide the desired or needed service.

However, there is also evidence that readiness by itself is no guarantee that good care will be provided [14, 15]. An analysis of data from the 1995 Kenyan SA only partially supported the hypothesis that well-equipped health facilities, with trained staff, IEC materials and contraceptives, provide better care than poorly-equipped facilities [15]. While the availability of some equipment and IEC materials was associated with their use in consultations with clients, the presence of a trained provider or availability of various contraceptives did not always translate into greater contraceptive choice for the client. An analysis of data from five other African countries yielded similar findings: clients who wished to space pregnancies were offered limited contraceptive options even though the contraceptives were available; IEC materials were not always used even if present; providers did not always wash hands or use gloves while conducting pelvic exams even when water and gloves were available [14]. This evidence suggests an underutilization of resources present in facilities, often resulting in poor quality care for the client. The evidence further suggests that there is much scope for improvement in quality of care without adding to infrastructure and resources, *e.g.*, if providers followed service norms and guidelines where possible, used available resources, treated facility users courteously, and provided adequate and accurate information. Such changes can be undertaken with little additional outlay, and in fact they may be cost-effective, as resources will no longer be under-utilized, and costs associated with unwanted pregnancies and births (including the sequelae of unsafe abortion) will be reduced.

A number of researchers have hypothesized that there is a “know-do” gap which could explain such

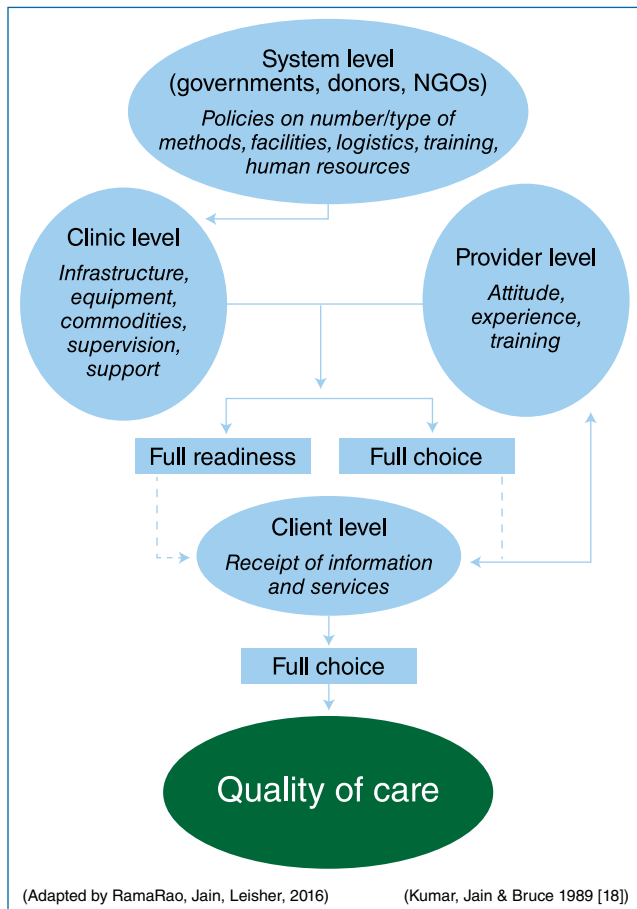
results. In the know-do gap, providers may have sufficient knowledge to treat or manage their clients with high-quality care, but do not act upon this knowledge. It has been hypothesized that providers can be encouraged to act upon their knowledge with better monitoring, peer support and performance-based incentives [16].

Methods

Conceptual framework

One approach to quality assessment is to assess at three levels: policy level, service delivery point (SDP), and client level [17, 18]. At each level, quality is measured from a different perspective (see Figure 1). At the policy level, the intention of the government to provide good quality services is measured; in other words, the degree of policy commitment to the concept of quality is ascertained. At the service delivery level, the readiness of facilities to provide a given standard of care, as well as the actual quality of services provided, are measured. Finally, at the client level, the quality of care received by clients during service delivery is assessed. Studying quality at these three levels is meaningful from both conceptual and programmatic points of view. Conceptually, this approach incorporates the differing perspectives of those supplying as well as using the services, such that a distinction is made between readiness to provide services and clients’ actual experiences. Thus, for instance, the care received by clients is determined in part by the SDP’s norms and guidelines, which in turn are guided by policies set by regional or national bodies. Thus, quality that clients receive cannot be independent of the policy climate or the readiness of the SDP at which they seek services.

The conceptual model used in this paper reflects the main themes described earlier. First, facilities have to be ready or able to provide services of good quality, and as a result of such readiness, providers should have all the resources required to be able to serve their clients. The final outcome in this causal chain is that facility users receive good quality care. There is sufficient information in the literature about the two ends of this causal chain—the readiness and the quality of care received—but relatively little is known about how and why readiness affects client-provider interactions.

Figure 1: A conceptual framework for quality of care

For example, it is clear that program inputs such as infrastructure, equipment and training constitute readiness, and that these support providers as they tend to clients; further, good client-provider interactions result in good quality care received by clients, be it via information or an appropriate service.⁶ However, while there is agreement about what constitutes a good client-provider interaction, not much is known about the specific ingredients and mechanisms which foster and sustain it [19, 20]. For example, little is known about the motivation of providers to engage in meaningful client-provider exchanges; some researchers have hypothesized that organizational factors such as the organization's missions and goals, structure, and reward systems are some of the important components in fostering a

good client-provider interaction [21]. Others have postulated that provider incentives and disincentives play a role [22].

Indicators

We created indicators for method choice at the SDP and client levels so that they could be used for the monitoring of programs and provide program managers with information for decision-making. The program in the Philippines was organized to provide services for four contraceptive methods—the pill, IUD, injectable, and condom.⁷ We defined choice at the SDP level as a facility's readiness to provide these four reversible methods.

At the SDP level, we created two indicators. An indicator for “readiness to provide a particular method” was created for each SDP in three steps. First, we created three binary variables to track whether the SDP had: 1) a trained provider to provide that method; 2) the commodities in stock on the day of the visit; and 3) all required equipment on the day of the visit, coding them as 1 if “yes” and 0 if “no.” Second, we added the scores for these binary variables. Third, we coded the “readiness to provide a particular method” as a binary variable, with a value of 1 if the sum of scores was 3 (meaning that provider, supplies and equipment were all available for the method in question) and 0 otherwise. An indicator for “readiness of an SDP to offer choice” was then created by adding the readiness scores for each method. Each facility could thus receive a score ranging from 0 to 4 depending on its readiness to provide the four contraceptives under study, with facilities scoring a 4 able to provide complete choice and those scoring 0 unable to provide any choice.

Choice at the client level was defined as including four items: 1) whether the client was asked if she had a preference for any specific contraceptive; 2) whether the client received the chosen method; 3) whether the client was told of a method in addition to the one chosen; and 4) whether any particular method was promoted by the provider. The choice of items which go into the creation of an indicator is fairly subjective, even though they are based

⁶ We use the term services to refer generally to a variety of activities—delivery of the contraceptive, management of side effects, and physical or medical exams.

⁷ Lactation Amenorrhea Method (LAM) and Natural Family Planning (NFP) are the other available methods, but they receive lesser emphasis in the public program; the SDPs in the study also provide referrals to bigger facilities where male and female sterilizations are performed. More methods could be included depending on the program context. For example, in recent times there has been a call for programs to offer five different categories of contraceptives to serve different needs: for short-term, long-term, permanent, or emergency contraception, and for protection against pregnancy and STIs/HIV.

on professional judgement, consensus of expert opinion, and field experience of service delivery conditions. For example, the Performance Monitoring and Accounting (PMA) 2020 of the Family Planning 2020 (FP2020) initiative measures choice by the following four items: whether the client received method of choice; whether the method was chosen alone or jointly with somebody else; whether the client was told of other methods; and whether she had been counseled about possible side-effects. However, these items are not combined to create an indicator of choice at the client level. In comparison, FP2020's core indicators include the Method Information Index, which is based on three items: whether a woman had been told about 1) another method, 2) side-effects of the chosen method, and 3) how to manage the side-effects. FP2020 is an initiative stemming from the 2012 London Summit on Family Planning that aims to reach 120 million new women and girls with modern contraception by 2020. PMA 2020 is the monitoring arm of FP2020 for routine data gathering, and focuses on a small subset of FP2020 countries.

We selected the four items to reflect the degree to which the client had sufficient information to choose among the available options and was able to choose without pressure. Each item was coded as a binary variable (1=yes, 0=all other responses), and values were added to create an indicator for choice received by a client with a range of 0 (no choice) to 4 (full choice) (see Table 1).

Data

We used data from three sources: two Situation Analyses and a survey of new family planning users. The first Situation Analysis was conducted in February-March 1997 and the second in July-August 1997. Both were conducted in the provinces of Davao del Norte and Compostela Valley in southern Mindanao, Philippines, and covered 80 facilities, including both Rural Health Units (RHU) and Barangay Health Stations (BHS). RHU are bigger and staffed by a doctor, a nurse and one or more midwives; they are typically located in the main town of a municipality. BHS, on the other hand, are smaller, staffed by a midwife, and located in the barangays (the smallest administrative unit) surrounding the main town.

Data analyzed for this study are from two of the four data collection instruments commonly used in Situation Analyses: an inventory of facility features (including data on availability of equipment and supplies for the provision of various contraceptives) and interviews with providers (including data on the training nurses and midwives have received for the provision of various contraceptives). In some of the bigger facilities, doctors were interviewed as well. However, the analysis focuses on midwives and nurses, as they are the main providers of family planning services. In the first SA, this data was available for 70 of the 80 included facilities, including interviews with 84 nurses and midwives. No information was collected from five facilities as they were closed on the day the data gathering team visited them, and one of the two tools was not complete for another five facilities, resulting in complete data for 70 facilities. In the second SA, for 76 facilities including interviews with 91 nurses and midwives, of the 80 facilities, two were closed on the day of the visit and a provider interview is not available for another two facilities, thus reducing the sample to 76.

The third data source includes interviews with 1,643 new family planning users who had visited the 76 facilities covered in the second SA between April and December 1997. This number constitutes all of the total new FP users at these facilities in this time period. We defined new family planning users as being new to the specific contraceptive, or to the specific facility, or who had never used contraception before. The reason for focusing on new clients was to capture the effects of a new training program for providers in which the focus was on new clients. These users were interviewed at home between September 1997 and January 1998, with a focus on various aspects of care they had received during their visits to the facility. Sixteen clients with inconsistent data were excluded from this analysis. Data from subsequent follow-up of clients have been used to document the effects of care received on clients' subsequent contraceptive use and fertility [23, 24].

The protocol for this research including all data collection activities was reviewed and deemed to be Institutional Review Board-exempt since sensitive data were not collected and all research participants were adults. Nevertheless, all efforts

Table 1: Construction of indicators to measure choice of FP methods at SDP and client levels

INDICATOR	DEFINITION	RANGE	INTERPRETATION
SDP LEVEL			
READINESS TO PROVIDE A METHOD (CALCULATED FOR EACH METHOD PER SDP)			
Presence of at least 1 trained provider	Provider has received practical training in providing the specific method	0-1	Yes = 1 No = 0
Availability of contraceptives	Method available on day of facility visit	0-1	Yes = 1 No = 0
Availability of equipment	All equipment necessary for the method available	0-1	Yes = 1 No = 0
Readiness to provide a method	Sum of scores for above 3 items	0-3	3 = Ready to provide a method 0-2 = Not fully ready
READINESS TO PROVIDE CHOICE (CALCULATED FOR EACH SDP)			
Readiness to provide the pill	"Readiness to provide method" score for the pill equals 3	0-1	Yes = 1 No = 0
Readiness to provide IUD	"Readiness to provide method" score for IUD equals 3	0-1	Yes = 1 No = 0
Readiness to provide injectable	"Readiness to provide method" score for injectable equals 3	0-1	Yes = 1 No = 0
Readiness to provide condom	"Readiness to provide method" score for condom equals 3	0-1	Yes = 1 No = 0
Readiness to provide choice	Sum of scores for above 4 items	0-4	4 = complete choice 1-3 = partial choice 0 = no choice
CLIENT LEVEL (CALCULATED FOR EACH CLIENT)			
Method preference	Asked about method of choice	0-1	Yes = 1 No = 0
Told about more than 1 method	Being told of at least 1 additional method	0-1	Yes = 1 No = 0
Receiving method of choice	Receiving chosen method	0-1	Yes = 1 No = 0
No promotion of a method	Was not steered toward any specific method	0-1	Yes = 1 No = 0
Receiving choice	Sum of scores for above 4 items	0-4	4 = complete choice 1-3 = partial choice 0 = no choice

were undertaken to ensure that all study participants underwent an informed consent process; only those who consented to be in the study were interviewed. Efforts were undertaken to ensure privacy of the interview and confidentiality of the data after they were collected.

Analysis

Our analytical approach was descriptive. We generated frequencies of the variables of interest

and built indicators from these variables to align with our conceptual and methodological approach. Where relevant, we conducted bivariate analyses to assess relationships between variables. We examined changes in the indicators between the two situation analyses. Each SA provides a cross-sectional snapshot of health facilities, and we made comparisons of two cross-sections.⁸

⁸ The Situation Analysis approach can also be used if there is a need for longitudinal tracking of the same SDPs and health care providers over time.

Table 2: Readiness of SDPs to provide various FP methods, n=70, February-March 1997

ITEMS OF READINESS	CONDOM, n (%)	PILL, n (%)	IUD, n (%)	INJECTABLE, n (%)	ALL METHODS, n (%)
1. AT LEAST ONE TRAINED PROVIDER	60 (86)	61 (87)	55 (79)	52 (74)	41 (59)
2. METHOD IN SUPPLY	69 (99)	69 (99)	69 (99)	67 (96)	65 (93)
3. EQUIPMENT AVAILABLE	N/A	N/A	33 (47)	57 (81)	29 (41)
ALL OF THE ABOVE 3 ITEMS	59 (84)	60 (86)	28 (40)	46 (66)	18 (26)
0-2 OF THE ABOVE 3 ITEMS	11 (16)	10 (14)	42 (60)	24 (34)	52 (74)

N/A: not applicable (no equipment is required to provide condom or pill)

Results

Readiness of SDPs to provide contraceptives and choice

Nearly all (93%) of the 70 SDPs included in the first SA had all four contraceptive methods in stock (see Table 2). Three-quarters had at least one trained provider who could deliver at least one of the four methods and about three-fifths had a provider who could deliver all four. Required equipment was lacking for 53% of SDPs to provide IUDs (e.g. tenaculum or speculum) and 19% of SDPs to provide injectables (e.g. sterile needles or syringes). Facilities were best prepared to provide the pill (86% of SDPs were fully “ready”) and condoms (84%); they were less prepared to provide the methods requiring equipment: 66% fully ready to provide injectables and 40%

to provide IUDs. Just 26% of the 70 SDPs were ready to provide full choice (all of the readiness items for all methods).

We also examined whether there were differences in readiness by size of health facility. The percent of RHUs ready to provide choice (ready to provide all four methods; 39%) was twice as high as that of BHSs (21%) (see Figure 2). Two-thirds of all facilities were ready to provide at least three methods, including two-thirds of BHS and 56% of RHUs.

Change in readiness to provide contraceptives and choice

There was a substantial increase in the percentage of SDPs with at least one trained provider for a given method between the first and second SAs, from 59% to 83% (see Figure 3). During the same period, the percentage of SDPs

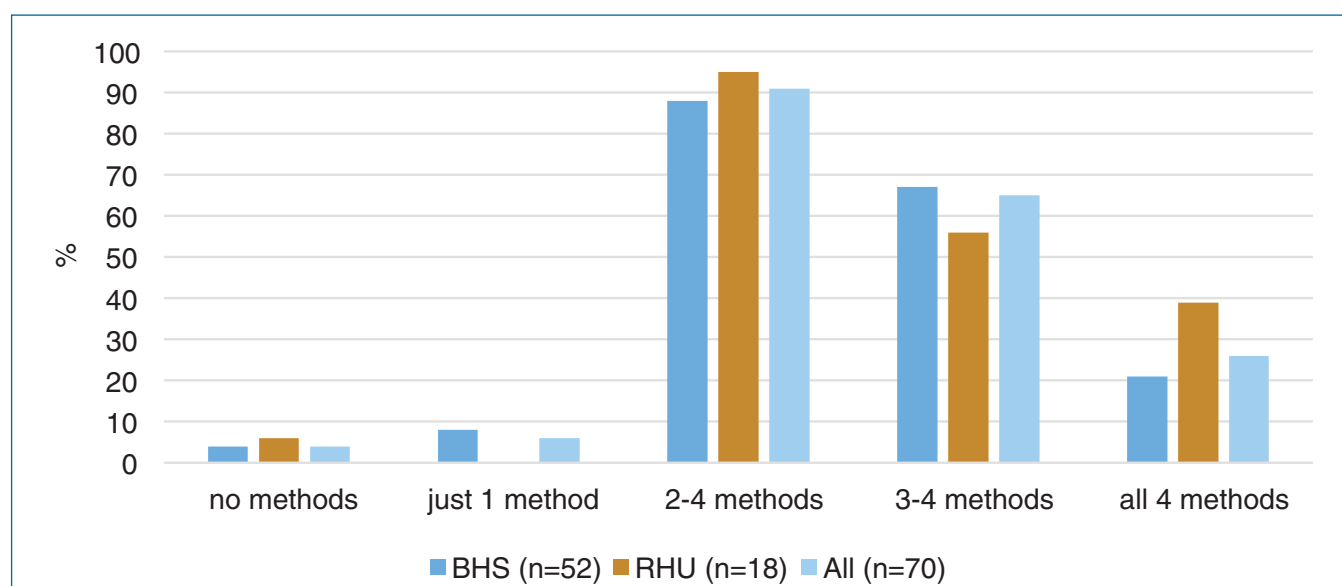
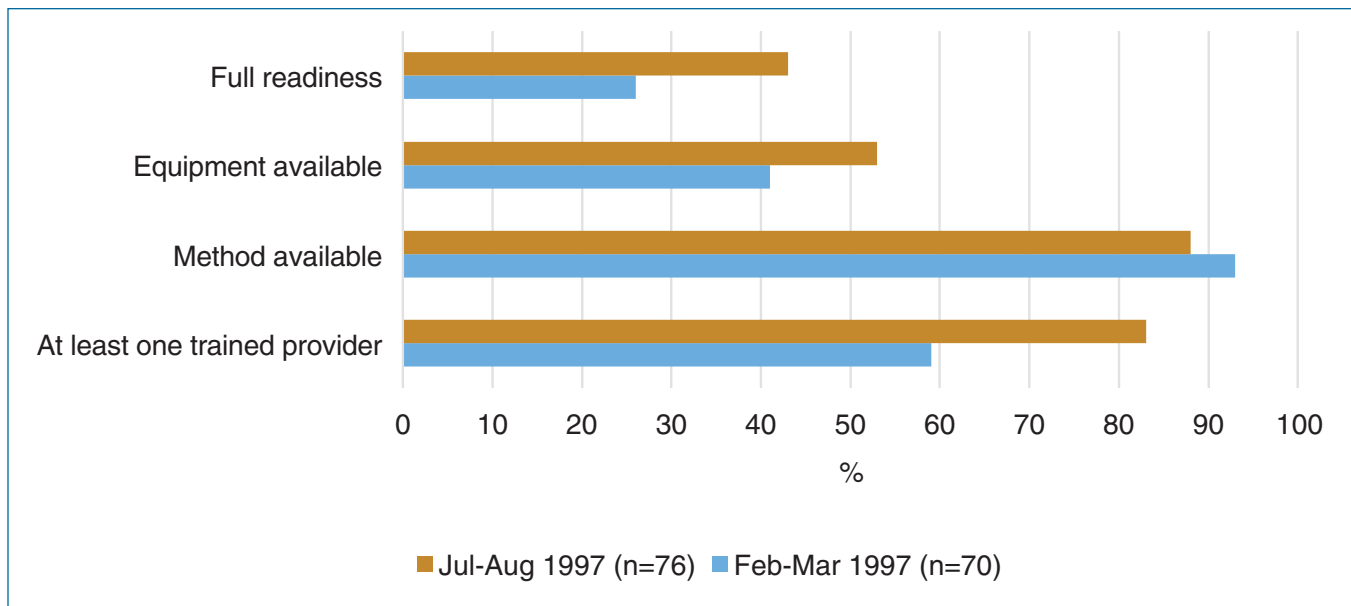
Figure 2: Percent of facilities offering different numbers of contraceptive methods

Figure 3: Percent of facilities with different elements of readiness to provide four contraceptive methods and full choice, Feb-Mar and Jul-Aug 1997



“ready” as defined by having necessary equipment also increased, from 41% to 53%, but the percent “ready” as defined by having the method itself available decreased slightly, from 93% to 88%. The percentage “ready” to provide all four methods in terms of all three elements of readiness nearly doubled, from 26% to 43% of SDPs.

The average number of methods that facilities were ready to provide increased from 2.8 to 3.2

(data not shown). The percent of facilities ready to provide at least three methods increased from 65% to 81% (see Figure 4).

Choice received by clients

Most clients were asked about the method they prefer (93%), and were given that method (99%); according to most clients (91%), providers did not promote use of another method to them (see Figure 5). Only two-thirds of clients were

Figure 4: Percent of facilities offering different numbers of contraceptive methods, Feb-Mar and July-Aug 1997

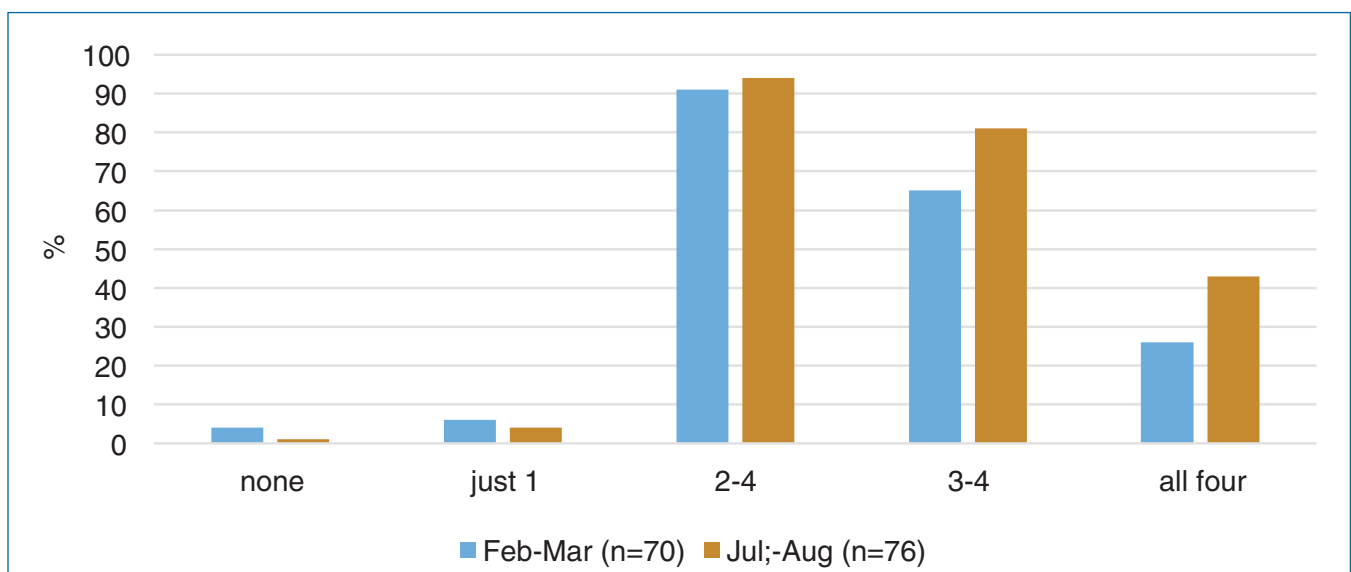
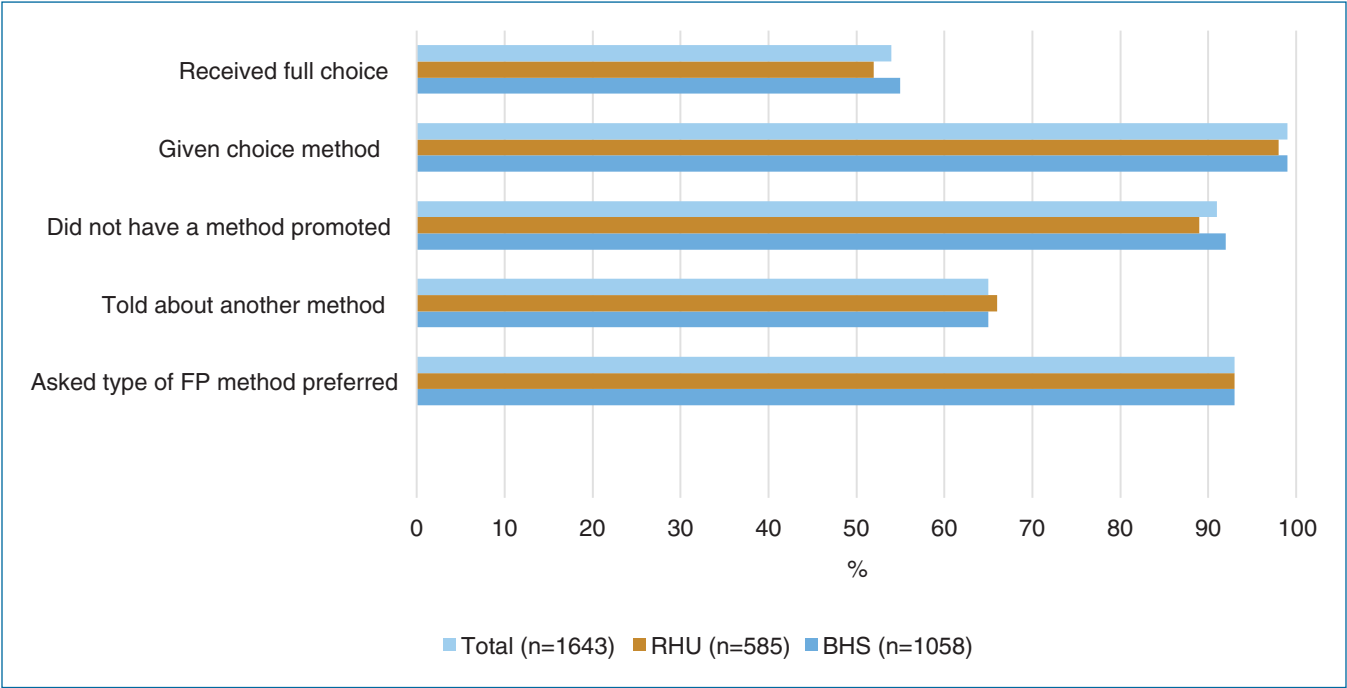


Figure 5: Client choice of method by type of facility at 76 clinics, July-August 1997



told about another method; just over half (54%) received full choice of methods as defined for this study. There were no major differences between the types of SDP.

Relationship between SDP readiness and client choice

Among all SDPs, 54% of clients received full choice, with little difference between the two types of SDPs (see Table 3). A higher percentage of clients received full choice in facilities ready to provide just one method (58%) than in facilities ready to provide all four methods (51%). Similarly, 58% of clients received full choice in BHSs offering just one method as compared to 48% in

BHSs offering all four. In contrast, 42% of RHU clients received full choice at RHUs offering just two methods, versus 55% at RHUs offering all four methods.

Discussion

Using data from Situational Analyses and client interviews, a set of indicators can be built to measure the “choice” element of family planning quality, and can be used not only to assess readiness for and receipt of choice, but also (depending on the availability of data from the same population at different points in time) change in choice

Table 3: Percent of clients receiving full choice by facility readiness and type of facility

FACILITY READINESS TO PROVIDE CONTRACEPTIVE METHODS	PERCENT OF CLIENTS RECEIVING FULL CHOICE AMONG THOSE VISITING A FACILITY: N (%)		
	BHS	RHU	ALL
1	99 (58)	n/a	99 (58)
2	109 (56)	81 (42)	190 (50)
3	474 (59)	225 (52)	699 (57)
4	360 (48)	279 (55)	639 (51)
ALL FACILITIES	1042 (55)	585 (52)	1627 (54)

Notes: n/a= not applicable because no RHU with a score of 1; n shows the number of clients visiting SDPs in a particular group.

over time, and whether there is evidence for a relationship between readiness and receipt of choice in a given population.

In this population, only one-quarter of SDPs were initially fully “ready” to provide all four contraceptive methods, only increasing to 43% at the second data collection period, despite the existence of a government policy requiring all methods to be available at these SDPs. Readiness did not appear to differ according to SDP type. Limited readiness at the first Situation Analysis was mainly for the IUD and injectable methods, related mainly to limited equipment and training. We found a similar pattern from the second Situation Analysis (data not shown). The increase in full readiness appeared to be related mainly to an increase in availability of at least one trained provider. During the data collection period, some providers underwent training in counseling which emphasized a two-way dialogue between providers and clients and establishing rapport with the client. It is possible that some providers may have misreported being trained in all aspects of service delivery when in fact they had only received the training in counseling. This would have led to an overestimate of the percentage of SDPs fully ready at the second data collection point. No changes were expected related to method supply or equipment. It is possible that the observed increase in equipment was due to orders having been placed for equipment prior to the SAs, with delivery occurring between the two SAs, or the increase may be an artefact of the data collection process, in that facilities were simply reporting the existence of equipment (they may have been in the facility but were part of the MCH unit).

Over half of clients reported receiving full choice of methods when questioned during the second data collection period; the main limitation was limited information provision about other methods. Clients may have known which SDP offers a particular method and only visited that SDP if they wanted that particular method. This may explain why 99 percent of clients received their method of choice.

There was no apparent difference in receipt of full choice according to SDP type, suggesting

that the size of the facility was not an important factor. However, higher degrees of readiness (from readiness to provide one method only, to readiness to provide all four methods) appeared to be associated with higher percentages of clients experiencing full choice only for RHU clients. Contrary to expectations, this relationship was reversed for BHS clients, and for all clients (of both BHS and RHU). Among all facilities that were fully ready, only 51% of clients experienced full choice.

The lack of evidence for a link between readiness of facilities to provide choice and the actual choice that clients report receiving is consistent with earlier research that while readiness is a necessary condition for the provision of good quality care, it alone is not enough to guarantee care [14, 15]. In addition to facility readiness, there are other factors as yet unidentified which probably influence the client-provider interaction such that clients do not receive choice even when facilities are judged to be fully ready to provide choice.

The nature of the client-provider interaction is still a “black box,” and not enough is known about what makes some providers perform differently or treat clients differently from others [20]. Some have postulated that differences in intervention or research design could be reasons for differences [25]. Others have posited that training *per se* may not result in better care unless there are mechanisms in place whereby providers are incentivized to heed client responses such as satisfaction with services or higher client volumes [22]. Other incentives the authors suggest include peer mentoring, supportive supervision and the possibility of sanctions for poor performance. However, one has to be careful in selecting performance-based indicators in implementing performance-based incentives because some indicators may lead to poor quality of care. For example, an indicator that measures the number of new family planning acceptors a provider serves or the number of particular types of contraceptive services provided has the potential to create incentives for providers to act against the interest or choice of the client. On the other hand, other indicators (e.g., client satisfaction) may solicit normative responses rather than reflecting actual quality of care. We posit that one

possible reason for the lack of association could be due to inter-interviewer differences and other such unmeasured elements of data collection.

Typically, research on the provision of choice is based upon the availability/stock out of a contraceptive. Our effort to define choice differs from previous efforts in three important respects. First, we assess choice at both SDP and client levels, allowing a distinction between the readiness and care components of quality. Second, we assess choice at the SDP level more broadly by facility readiness to provide (in this case, to provide the four reversible methods in the program being studied), rather than simply by the number of different methods available at a facility. Third, we calculate a “readiness to provide choice” score for individual SDPs instead of a group of SDPs, enabling program managers to use the data to improve readiness for their individual SDPs.

We envisage that the approach we have demonstrated here for measuring quality has implications for field level application. The approach that we have demonstrated can be used by program managers who are responsible for a single SDP or others responsible for a number of SDPs at the provincial or regional level. For example, data presented in Figure 3 indicate a substantial improvement in readiness of SDPs to provide all four methods, from 26% to 43%. However, the level is still much below the desired level of 100% of SDPs ready to offer all four methods. In other words, 57% (100%-43%) represents the gap between the policy intention to offer services and the actual readiness to do so. Figure 3 further indicates that this gap can be substantially filled by improving the situation regarding the availability of necessary equipment. With this knowledge, the program manager can improve the logistics and procurement systems so that all SDPs have the necessary equipment. Similarly, the checklist shown in Table 1 can help an SDP manager ascertain gaps in the availability of trained providers, commodities, and equipment necessary for getting ready to offer a particular method at the SDP. This information can then be used to take action required to fill the gap. Below, we lay out some key considerations for using this approach to measure and improve the quality of family planning.

First, the components of the choice indicators can be changed, leading to very different results. For example, if the client-level choice indicator had included just the single component “receiving the method of choice” as some analysts have done ([7, 10]), rather than the four components we included, our results would show 99% of clients received choice, rather than 54% (see Figure 5). Similarly, if the SDP-level choice indicator had included just the single component “availability of the method”, rather than the three we included, our results would show that 93% of SDPs were “ready”, rather than 26% (see Table 2). With such significant differences in results depending on the components of the choice indicators, it is clear that it is critical to select components such that they accurately reflect the underlying theoretical construct.

Second, there is a debate in the literature about how indicator scores should be presented to program managers and policy makers [7, 8]. Some analysts feel that composite scores cannot be statistically justified and should not be used to determine how or where to improve services; they advise the use of scale methodologies for creating indicators or presenting the individual scores of the items comprising the indicator. Others believe that a single composite score summarizing a lot of information (as illustrated in this paper) is preferable because it is succinct and easy to present. We believe that some composite indicators are conceptually more meaningful than non-composite ones, and more practical for researchers, program and facility managers, and practitioners who want to monitor progress over time and compare performance among units, while also being able to specify reasons for poor performance. For example, in the illustration presented in this paper, it was possible to see that the lack of trained providers and equipment were the main reasons for lower readiness of facilities, and insufficient provision of information about alternate methods was the main reason for incomplete choice at the client level. Given the complexity of choice, it is advisable to routinely ensure that choice indicators at least include more than one component. Each component can represent a different and unique dimension of choice that a client should receive, and hence the combination of components may better reflect the whole concept of choice. Including more than

one component within a choice indicator also may allow the indicator to be more useful for improving service delivery.

Third, it may be desirable to rank (and weight) the components of which a choice indicator is composed, for instance, if one item is deemed less important than another. However, for the most part, ranking is a difficult process. Since ranking is based on values, the perspective chosen, whether of the client or the service provider, is critical. For example, clients may value the component “being given the method they prefer” more than the component “not being pressured to accept certain methods,” while providers may place greater weight on the latter than the former.

Fourth, while indicators are useful guides for program managers as they modify their programs to improve the quality of care offered, our field experience shows that program managers are able to make the most use of indicators when they understand how they are measured and the standards for each indicator, and are thus better able to interpret the results. Dashboards and heat maps are some visual mechanisms that can be used to represent data for program managers for quick and intuitive comprehension. Ease of comprehension is expected to improve both tracking of data over time and timely decision-making for program correction.

Fifth, an important caveat for the use of this approach, and indeed any approach that involves the use of indicators, is that indicators only “indicate” existing situations, and cannot be used as tools for diagnosis. In other words, while they can identify problem areas, they cannot fully explain how these problems came about. Use of conceptual models and adopting a “theory of change” can help to identify where problems lie as well as potential solutions. For example, in the illustration used in this paper, the data indicated that clients do not receive full choice, and the conceptual model suggests whether this is due to some lapse on the part of the providers or is more system-related. In this scenario, a partial explanation is that both provider and facility level effects are at work; while facilities are not fully ready to facilitate the provision of a full choice of methods, providers may also have biases that result in their withholding specific methods from some individuals.

The data used in this study to illustrate the creation of indicators for choice at the SDP and client levels were collected in 1997-98. Given the purpose of this paper, which was illustrative rather than analytical in nature, we believe that the age of the data is not relevant, as any changes in quality of care since that time would not affect the data’s utility for illustrative purposes. Regarding the results presented, any data based on interviews may have been affected by memory and courtesy biases. However, these biases were likely minimized because clients were interviewed at home and not at facilities, and the duration between receiving services and giving interviews was relatively short—less than three months, while facility-level indicators were based on facility audits and not the responses of facility managers. Efforts were made to minimize errors in data collection; for instance, the data collection team checked the presence of each commodity and piece of equipment before recording the data, but one cannot rule out the possibility of some remaining reporting errors. Finally, we did not interview policy makers and therefore lack data for analysis at the policy level.

Conclusion

Quality of care has once again risen to the top of the health improvement agenda, as investments in health infrastructure have not resulted in commensurate improvements in health outcomes. In particular, in the field of family planning, it is being increasingly recognized that attention to quality is critical if significant strides are to be made in the achievement of the FP2020 goal of reaching an additional 120 million women by 2020. As a consequence, indicators for monitoring program performance are beginning to focus more on quality, whether this be the readiness aspect or the care aspect. At the same time, with the possibility of repeated measurements, whether through the SPA survey, the PMA2020 tracking system of FP2020, or the Service Delivery Indicators initiative, it is now more possible to track investments in health, and in particular, investments in specific areas that may enable program correction. In this paper we have used data collected in the late 1990s to illustrate the construction and use of one possible set of indicators for quality, focused on the choice of contraceptives available to a client. At the SDP level, two indicators

measured whether family planning facilities are capable of or ready to offer specific methods as well as a group of methods, and at the client level, one indicator measured whether women visiting these facilities did indeed receive full choice. Our hope is that the methodology demonstrated here will be replicated by other researchers with more recent data and utilized for improving quality of care received by clients, in order to help realize the FP2020 goal and ensure choice to millions of women worldwide.

Acknowledgments

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6 Social franchising for improving the clinical quality of family planning services and increasing client volumes at privately owned clinics: Evidence from the Suraj social franchise network, Pakistan, 2013-2014

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Introduction

The provision of family planning (FP) services has been cited as the most cost-effective strategy for reducing not only maternal mortality, but also infant and child mortality, as well as addressing issues such as poverty, hunger, and insufficient female education and women's empowerment [1-5]. Despite gains in contraceptive use in much of the developing world, from minimal levels in the 1970s to almost 60 percent contraceptive prevalence by 2012, there has been minimal progress in sub-Saharan Africa and South Asia, the regions with the highest burden of maternal deaths worldwide [6-8]. A 26 percent unmet need for family planning persists in this vulnerable region, with 97 percent of all unintended pregnancies occurring in women with an unmet need for contraception [8, 9]. Meeting this need through FP programs could reduce unintended pregnancies by 66 percent and prevent 70 percent of the 303,000 maternal deaths, 44 percent of the 2.9 million neonatal deaths, and a significant proportion of the 2.6 million third-trimester stillbirths that occur each year, as well as 73 percent of unsafe abortions [2, 10, 11].

Background

Interventions for improving the quality of FP services include training of service providers; improvement of infrastructure, staffing, and supplies; and effective supervision and monitoring of service delivery through observations of client-provider interactions, exit interviews with clients, and facility audits. These interventions have a demonstrably significant impact on uptake and continued use of FP services in low- and middle-income countries

(LMIC) [12-16], but there is no established set of measures which programs can use to accurately assess quality. The Bruce Framework (1990) provides a description of the various FP service quality characteristics, but rather than presenting a blueprint for monitoring [16], the framework has only allowed FP programmers to develop a series of proxy measures that are theoretically linked to the clinical quality of FP services and client perceptions of quality [13, 17, 18].

A relatively recent approach to increasing access to and quality of FP services is social franchising (SF) programs [8, 19-23]. Social franchising, like commercial franchising, entails the creation of a network of private sector service providers who offer a standardized set of FP services under a brand name [8, 17, 24]. These private providers are usually pre-existing facilities that add FP services as a franchised product and in return receive training, FP supplies, referrals, advertising, and branding that reflects high quality [8, 17, 22, 23].

Montagu (2002) presents a conceptual model for SF (see Figure 1) which highlights the different ways that quality of FP services is embedded within SF programs. In addition to professional training and certification in FP service delivery, SF providers are subject to mandated standards of service delivery which are monitored at regular intervals [17]. Findings from monitoring go into a feedback loop which is postulated to increase the overall technical quality of services. This in turn improves client perceptions regarding the quality of FP services and hence increases FP uptake, including both greater FP client volume and greater service revenue, thus ultimately creating

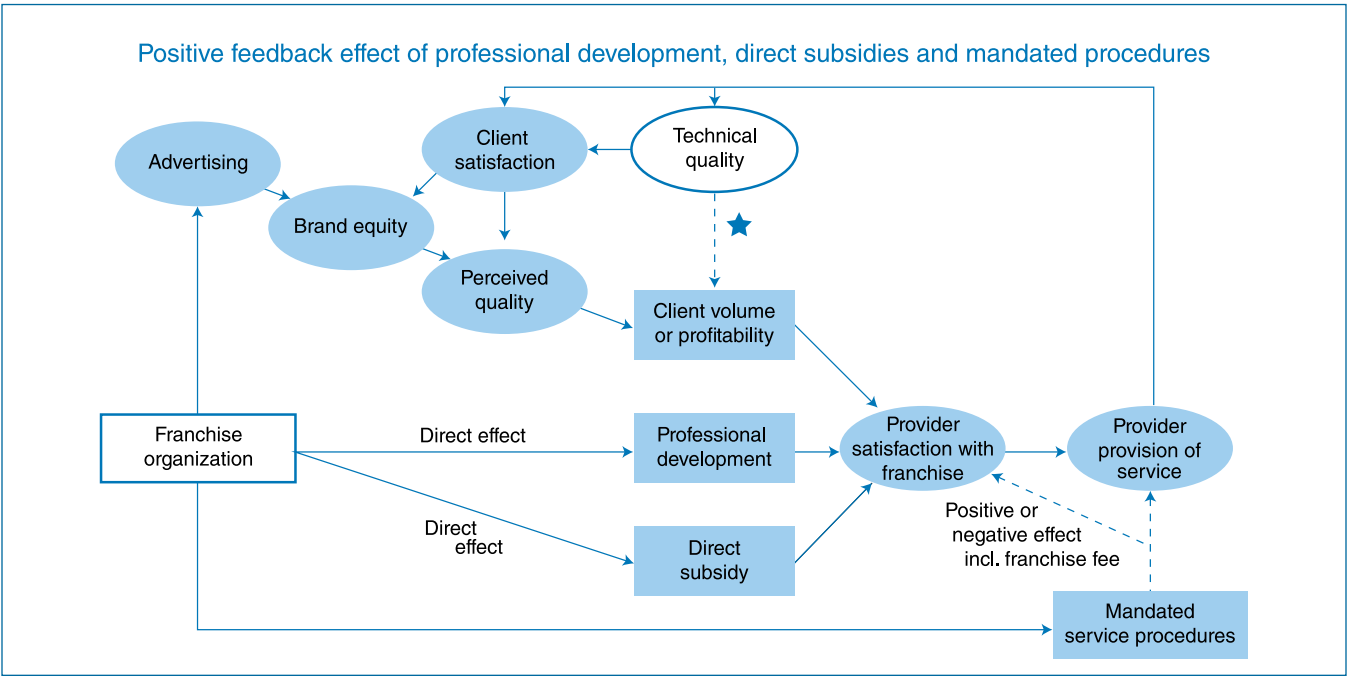
an incentive for the SF clinics to continue to improve their technical quality [17]. The perceived quality of FP services, FP client volume and clinic revenue from FP services may, therefore, be viewed as potentially critical outcome indicators for assessing the impact of improvements in the quality of FP services at franchise clinics. Although the quality of FP services at privately-owned SF clinics is integral to SF programs [17, 25], there is little consensus on what measures best reflect quality, and limited understanding of how quality of care and its various components (such as clinic administration, provider knowledge and skills, clinical supplies, etc.) influence the uptake of franchised FP services at SF FP clinics, and hence client volume [17, 20, 25].

Improving the quality of FP services is one way to increase uptake and use of FP services, with the ultimate goal of reducing the global mortality burden and helping people achieve their reproductive aims. To improve quality reliably and sustainably requires being able to measure it, and there is as yet insufficient knowledge about many components of quality assessment to do this. In this paper we seek to help address this challenge by using data from the Quality Assurance (QA) system of the Marie Stopes Society's (MSS') Suraj social franchise network for FP services

in Pakistan to measure the quality of franchise members and to investigate the relationship between technical FP quality and one of its critical indicators, client volume (as indicated by the dotted line in Figure 1).

Given the dearth of evidence for what proxy measures best reflect technical quality, we also assess how different quality of care variables used by MSS, such as knowledge, administration, and preparedness, are correlated with each other. A high correlation between measures could suggest that quality assessment may be performed just as accurately using fewer measures, with a gain in terms of reduced time and resources required.

Figure 1: Model of social franchising (Montagu 2002) (starred-dotted line indicates primary relationship explored in this study)



Methods

The Suraj Social Franchise Network Quality Assessment system

The Reproductive Health Franchise (RHF) project, one of MSS' flagship projects, began operation in June 2012 [26]. The current network of Suraj clinics under the RHF project consists of 250 FP service providers in rural areas of 29 districts in three provinces of Pakistan. The network operates under the brand Suraj, an Urdu word which means "sun." Each privately owned Suraj SF clinic serves a population of around 20,000 to 30,000 people including around 3,000 to 5,000 potential FP clients. Each provider is supported by a dedicated field worker who goes door to door in the catchment area and is the key vehicle for demand generation through behavior change communication, referrals and free service vouchers for long-term FP methods [26].

RHF operates a rigorous QA system based on a standard framework [25]. Existing service providers are mapped in a given district and recruited by the MSS operations team. All mapped and willing service providers undergo a standardized training for skill development and are evaluated by a third party. Service providers who obtain at least a 60 percent score on the evaluation are offered a Suraj franchise contract which establishes the terms of the partnership with MSS. This contract is a legally binding document which makes providers responsible for facilitating MSS QA teams' monitoring of clinical and non-clinical quality indicators (see Table 1). In addition to routine quality monitoring, MSS monitors client experience through an annual client exit survey. Findings from both these processes, tailored to individual providers, are used to provide feedback to service providers and are incorporated into refresher trainings in all districts where MSS operates.

The RHF QA system includes five monitoring visits per year for every provider in the network: four quarterly scans by QA teams based in the region and one annual scan by the central QA team. The first QA scan for a clinic (the baseline) is conducted six months after the clinic joins the network. All QA data are entered and maintained in a central MSS database. This is augmented by

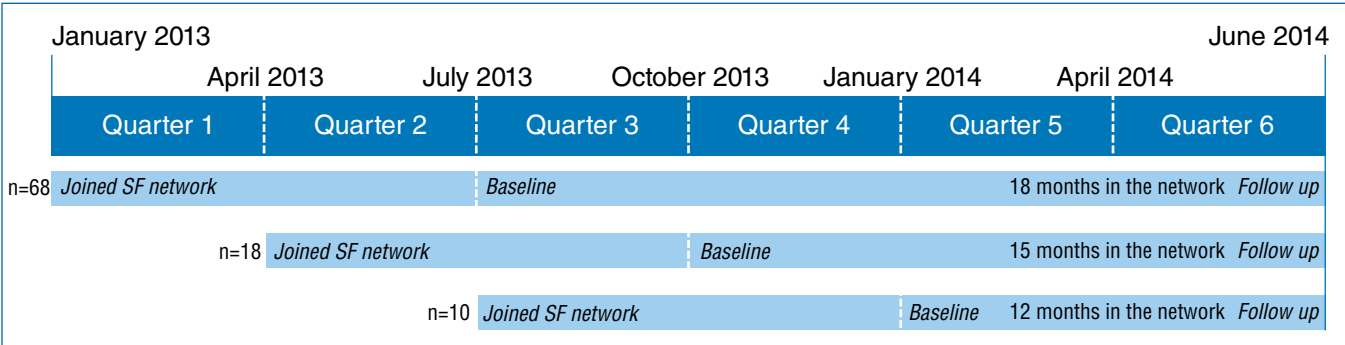
Table 1: Quality assurance scan categories and number of indicators in MSS' Suraj SF network

CATEGORY	# OF INDICATORS
CLINIC ADMINISTRATION	44
CLINICAL KNOWLEDGE	15
COUNSELLING	64
PROCEDURE COMPETENCY	115
INFECTION PREVENTION	38
EMERGENCY PREPAREDNESS	67
SUPPLY	24
TOTAL	367

an annual third-party Client Exit Survey to record client profiles, satisfaction and experience of FP services provided by Suraj SF clinics.

The quarterly and annual QA scans track a comprehensive set of 367 indicators covering seven categories including clinic administration, clinical knowledge, counselling, procedure competency, infection prevention, emergency preparedness and supply (see Table 1 and Annex 3.7). Each indicator receives a score ranging from 0 to 2. The average score for all indicators within each category is obtained, ranging from 0 to 2. The average scores for all categories are summed to yield a QA score ranging from 0 to 14. This number is then converted to a percentage and interpreted as follows: providers with scores above 85 percent are rated excellent, those with scores between 70 and 85 percent are rated good, scores between 45 percent and 70 percent are rated average and providers with scores below 45 percent are rated as weak or non-compliant. Overall QA scores below 70 percent are highlighted as a red flag issue for follow-up, a non-compliance issue, or a training need at the time of documentation. The extensive set of indicators, while comprehensive, makes quality assessment time-consuming and resource-intensive; hence it is desirable to ascertain whether a more parsimonious set of indicators may work just as well.

Figure 2: Data collection time-points for the sample



Data

Data were obtained from the RHF central database for 144 Suraj SF clinics which were functional in the SF network in the 18-month period from January 2013 to June 2014. Ninety-six SF clinics which had a baseline (first) QA score recorded during 2013 and a follow-up score reported between April and June 2014 were included in the sample (see Figure 2). SF clinics which had baseline QA scores reported prior to January 2013 (*i.e.*, during the first six months of the project), follow-up (last) scores reported after June 2014, or missing data were excluded from the sample ($n=48$). Data on clinic QA scores and quarterly client volume were obtained for all 96 clinics included in the sample.

Sixty-eight clinics joined the network in quarter 1, with baseline QA scores and corresponding client volumes in quarter 3 (six months after joining the network); their last reported (“follow-up”) QA scores and corresponding client volumes were recorded 18 months later. Eighteen providers joined the network in quarter 2, with baseline data obtained in quarter 4 and follow-up data 15 months later, and ten providers joined the network in quarter 3, with baseline data taken at quarter 5 and follow-up data 12 months later. Hence, all 96 providers’ follow-up scores were taken from quarter 6.

Statistical analysis

Univariate analysis was conducted on all variables, including average scores at first (baseline) and last recorded (follow-up) QA scans, average number of clients accessing FP services at baseline and follow-up, and the percent change in both variables between baseline and follow-up. Average scores were disaggregated by the duration of time that the clinic had been a part of the network at follow-up.

The t-test was performed to explore differences in baseline scores, quality component scores, and volumes by region both overall and by type of method (short-term (ST), including condoms, pills, two-month injection, three-month injection, and emergency contraception, and long-acting/permanent methods (LAPM), including intra-uterine contraceptive device or IUCD, implant, and tubal ligation), examining both raw scores and volumes, and the percent changes in raw scores and volumes between baseline and follow-up.

Spearman’s correlation coefficient was calculated for the percent change in overall volume and the percent change in overall and component quality scores, and by type of method. The analysis was repeated looking separately at clinics by region. Pearson’s correlation coefficients were calculated for every pair of quality score components and between each quality component and the overall score, at both baseline and follow-up. Correlation coefficients were interpreted as follows: .00-.19, “very weak” association; .20-.39, “weak”; .40-.59, “moderate”; .60-.79, “strong”; .80-1.0, “very strong” [27]. Correlations were considered to be statistically significant at 95% confidence.

Repeat clients who accessed services for a fresh cycle of a short-term method (pills, injection, etc.) were counted independently since each visit represents a paying client. Long-term method clients were all unique clients, however, since they are registered with unique ID numbers.

Analysis was conducted using STATA MP 13 (64 bit).

Results

Of clinics included in the sample (n=96), 75 were located in seven districts of Punjab province and 21 were located in four districts of Khyber Pakhtunkhwa (KP) province (see Figure 3).

Changes in quality scores after joining the SF network

The average overall QA score at baseline was 10.15. The mean baseline QA score was different between the regions ($p=0.04$), with a mean score of 9.97 for Punjab and 10.82 for KP, as were baseline scores for the QA categories of clinical knowledge (1.42 as compared to 1.59, Punjab and KP, respectively), technical competence (1.57 as compared to 1.79), supplies (1.42 as compared to 1.61), and infection prevention (1.25 as compared to 1.48).

The average overall QA score increased to 12.24 at follow-up (range 0 to 14), or by about 21%. The magnitude of change varied slightly by duration of time since joining the franchise (see Figure 4). A 21% increase from the baseline was observed for clinics which had been in the network for 18 months (n=68), similar to the 24% increase among clinics that had been in the network for 15 months (n=18) but higher than the 13% increase among clinics that had been in the network for just 12 months (n=10).

Figure 3: Locations of Suraj SF clinics included in the sample (n=96) (circles represent districts)



The average QA score also increased for each of the seven categories of which the QA score is composed, with the smallest percent increase in procedural competence (of 11%) (see Figure 5). While the largest increase between baseline and follow-up was in infection prevention (of 31%), the maximum score achieved, of 1.69, was still below that of all other categories except for emergency preparedness (data not shown).

Figure 4: Providers' average QA scores at baseline and follow-up, by length of membership in SF

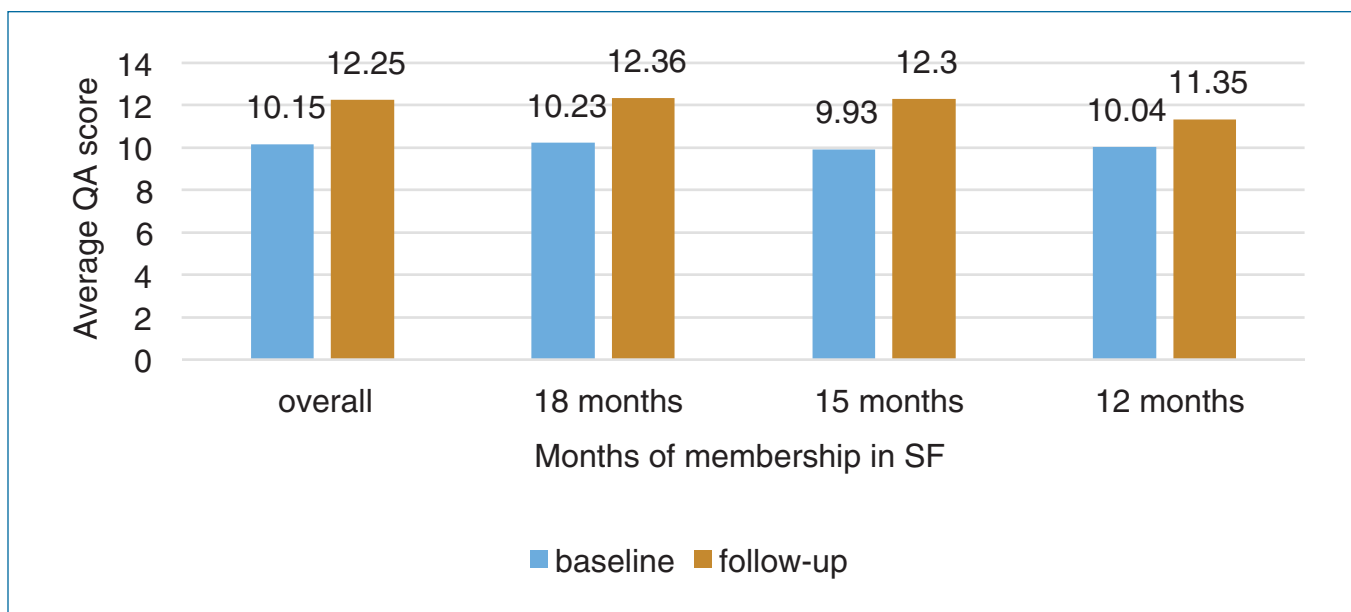
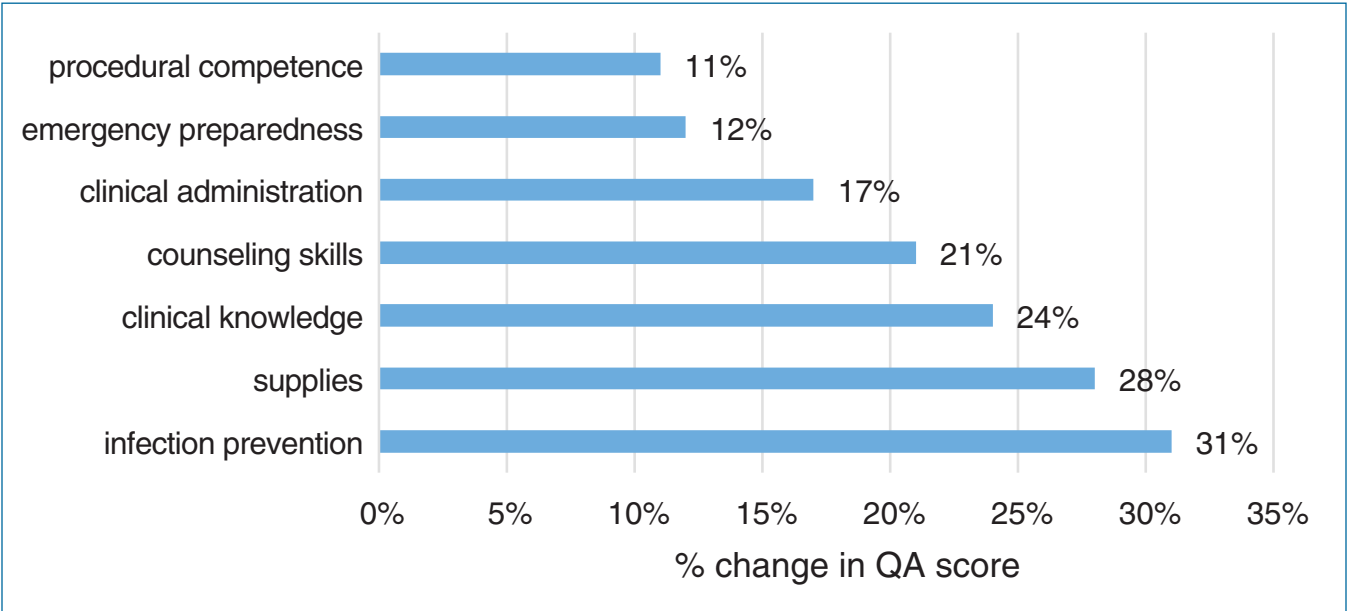


Figure 5: Change in QA scores from baseline to follow-up, n=96



The average change in QA score for KP was 32.5%, versus 8.1% for the Punjab region ($p=0.06$). There was a statistically significant difference between Punjab and KP clinics in the average change in QA scores for supplies (data not shown).

Changes in client volume after joining the SF network

The average baseline client volume was 145. There was evidence that the average baseline volumes of overall FP clients and LAPM clients per clinic was different between the two regions of operation ($p<0.001$), with an average baseline volume of 163 clients for the Punjab and 81 for KP (all FP clients) and 103 for Punjab and 30 for KP (LAPM clients). Differences in average baseline volume of ST clients between the regions was not significant at the 95% level.

Routine program reports from RHF indicate that FP client volumes increased from an average of 20 FP clients per clinic per month prior to joining the network to an average of 70-90 FP clients per clinic per month after joining the network, but this average is for the entire SF network of 250 SF clinics under RHF. For the sample, client volume increased by 114% from baseline to follow-up, from 145 to 310 clients per clinic; there was a 98% increase among short-term clients (to 118) and a 120% increase among LAPM clients (to 191) (see Figure 6).

The average percent change in overall FP client volume was 1.6% in the Punjab and 7.4% in the KP region (a statistically significant difference, $p<0.001$), and for LAPM clients the average change was 2.1% for facilities in the Punjab and 28.0% for facilities in the KP region ($p<0.001$).

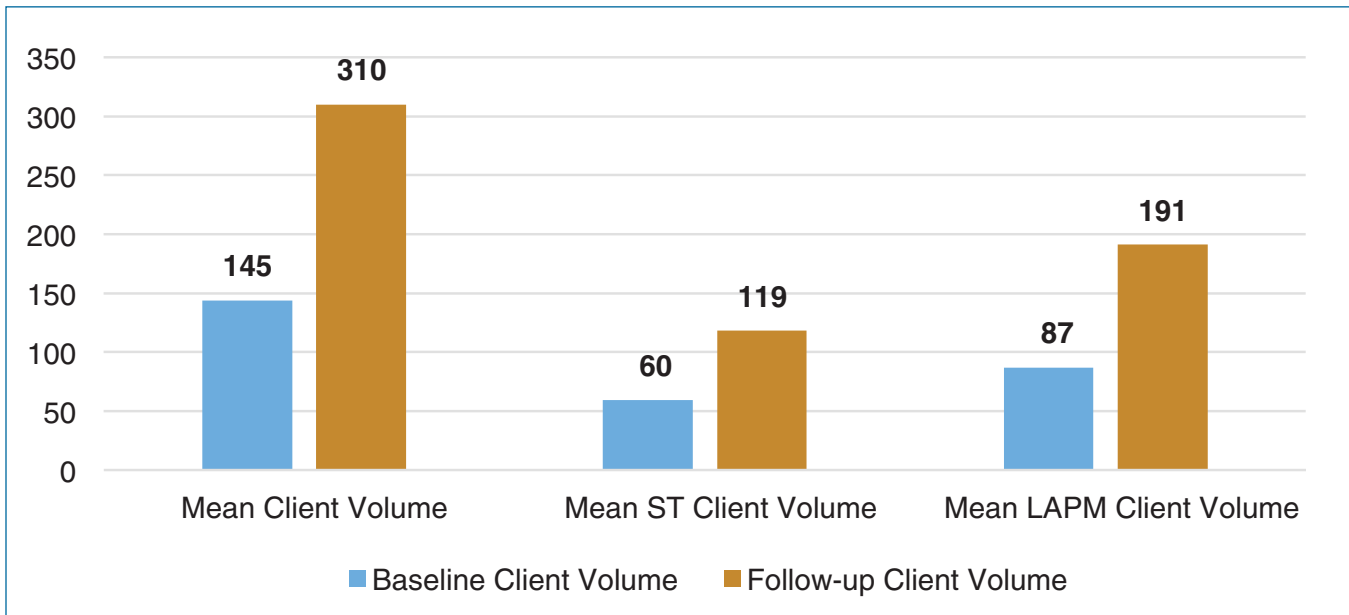
Differences in client volume and quality by region of operation

Eleven of the 21 clinics in the KP region (52%) had decreased QA scores between baseline and follow-up, compared to just one of the 75 clinics in the Punjab region (1%). None of the 21 KP region clinics had decreased client volumes, as compared to nine of the 75 Punjab clinics (12%) (data not shown).

The association between QA and client volume

Change in client volume showed a weak but statistically significantly negative correlation ($r = -0.21$, $p<0.05$) with change in infection prevention. Change in ST client volume had a weak but statistically significantly negative correlation with change in QA overall and with changes in infection prevention and clinical administration ($r = -0.23$, -0.22 , and -0.26 , respectively, $p<0.05$). Change in LAPM client volume was not correlated with change in QA by any measure.

The change in client volume at clinics in the Punjab region ($n=75$) had a statistically significant,

Figure 6: Average client volumes at baseline and follow-up by client type (n=96)

moderate correlation with the change in the quality score for FP supplies ($r = 0.42$, $p < 0.05$), and this relationship was stronger for LAPM clients only ($r = 0.51$, $p < 0.05$) (data not shown).

In clinics from KP, change in total volume had a moderate but statistically significantly negative correlation with change in scores for counseling ($r = -0.50$, $p < 0.05$). The change in LAPM client volume was moderately negatively correlated with changes in scores for counseling ($r = -0.5$, $p < 0.05$) and technical competence ($r = -0.49$, $p < 0.05$).

The association of QA measures with one another

The overall QA score showed a very strong association with scores for infection prevention at both baseline and follow-up ($r = 0.81$ and 0.83 , respectively) and clinical knowledge ($r = 0.84$ and 0.82 , respectively). The association with counseling was very strong at baseline ($r = 0.82$) and strong at follow-up ($r = 0.74$). Infection prevention had a strong correlation with clinical knowledge ($r = 0.74$ and 0.68 at baseline and follow-up, respectively) and counseling ($r = 0.63$ and 0.64 , respectively). Clinical knowledge had a strong association with counseling and infection prevention at baseline and follow-up. No other pairs of quality score components had a strong or very strong

association at both baseline and follow-up. All correlations were statistically significant at 99.9% confidence (data not shown).

Discussion

The quality of the 96 clinics in the Suraj SF that we included in our analysis improved over the time of their membership in the network as measured by the RHF QA mechanism, with an increase of over 20% in quality scores for clinics in the network for at least 15 months; client volume more than doubled in this period. Overall the RHF QA mechanism appears to be effective in assessing the structural and functional quality of SF clinics, as well as changes in that quality over time. Despite increases in both variables, there was no significant correlation between change in volume and change in QA score overall, and the only significant correlation of change in volume with any of the QA components was with infection prevention. This was a negative correlation, meaning the bigger the change in client volume, the smaller the change in quality of infection prevention. This finding was mirrored in subgroup analyses by region and client type. There was a very strong association between overall QA score and both infection prevention and clinical knowledge at both baseline and follow-up, suggesting that either of these QA components could serve as a

reasonable proxy for overall QA score in situations when it is impractical, undesirable, or impossible to measure all QA components.

The RHF QA mechanism provided information on the direction of quality change not only overall but also for each component. One of the core supply-side functions of SF for FP services is to ensure an uninterrupted supply of FP products and commodities at franchised clinics [28]. The RHF QA mechanism showed that included clinics scored highest on the quality domain of “FP supplies” at follow-up, with the second highest change in score (28%). A lack of continuous FP supplies has been identified as an important supply-side barrier for uptake of FP services in Pakistan [29], and these data lend some support to this notion. The quality domain of infection prevention received the second lowest scores at both baseline and follow-up compared to other QA categories, but the greatest magnitude of improvement (31%). The lowest change was seen in scores for procedural competence (11.7%), but this quality domain had the highest score at baseline with comparatively less room for improvement. This was closely followed by the score for emergency preparedness (12%), which had the lowest score at both baseline and follow-up. Emergency preparedness at SF clinics in RHF thus appeared to improve after joining the network, but our findings suggest that this technical aspect of clinical quality of FP services requires more intensive and continued focus to show a level of improvement similar to that of other quality domains. The duration of time in the SF network appears to be an important factor for improvement in quality. The change in quality was greater for clinics which had in the network for 15 months or more, as compared to 12 months, *e.g.*, the increase in score for emergency preparedness for clinics in the network for 12 months was 16% as compared to 48% for clinics in the network for 18 months.

The RHF QA mechanism also provided evidence that the overall quality of FP services in franchised clinics was most strongly related to the quality of infection prevention and service providers’ clinical knowledge, while the quality of infection prevention was itself most closely related to quality of clinical knowledge followed by the quality of counseling. These findings merit further research to assess whether measures of the quality of infection

prevention, clinical knowledge and counseling have the potential to serve as proxy indicators for overall quality and for other quality domains.

Along with QA scores, client volume increased dramatically after clinics had joined the SF network, by more than two-fold. The increase was more pronounced in the KP region, which is documented to have poorer access to FP services as compared to the Punjab. The magnitude of increase was similar for both ST method and LAPM clients. This is suggestive of a relationship between increased clinic quality and increased client volume, consistent with other research. However, we found almost no evidence for a statistically significant positive association between these two variables. Quality improvement in FP service delivery has been linked to uptake and continued use of FP services [12-16]. For instance, in a 2003 study conducted in the Philippines with 1,728 new FP users, RamaRao and colleagues (2003) reported a 67 percent predictive probability of contraceptive use for high quality FP services as compared to 55 percent for low-quality care [15]. Similarly, a 2003 study in Senegal evaluated the impact of quality improvement of FP services and found that women who visited improved clinics were 1.3 times more likely to be using a modern contraceptive method as compared to women who visited regular clinics [16].

Our findings may have been skewed by the large proportion of KP clinics for which quality scores decreased and the 12% of Punjab clinics for which client volume decreased. Further research could explore the features that distinguish these subgroups; for instance, nine of the Punjab clinics with a decrease in volume were in the same district (Multan), while KP is known to present a challenging operational environment. It would also be useful to identify the features of those clinics in both regions where volume and quality both increased. We found the only positive correlation between client volume and quality in the Punjab: a moderate positive correlation between client volume and FP supplies. This region had a lower baseline QA score than the KP region and also a much lower percentage improvement in QA score overall, while it had a higher baseline client volume and a lower percentage increase in volume than the KP region. A possible explanation for this lies

in the socio-demographic differences between the two regions: while the demand for FP is comparable in both regions (55% in the Punjab and 51% in KP), the Punjab is more densely populated, has a more favorable normative environment for FP, more service providers, and a higher percentage of demand for FP satisfied by modern methods (60%) as compared to KP (33%) [30]. It is therefore expected that clinics in the Punjab would have higher client volumes at baseline. Since demand for FP is finite, a higher volume at baseline leaves less room for improvement in profitability, so providers may not be as motivated to invest in quality and mandated procedures.

In line with the conceptual framework for SF presented by Montagu (2002) (Figure 1), the RHF QA mechanism incorporates a feedback loop through which QA monitors share QA results with providers, and options for improvement are discussed. Improvement in quality is therefore driven, at least in part, by QA assessment visits by the franchisor after joining the SF network. These visits potentially increase providers' sense of accountability to quality requirements, and the provision of feedback by quality assurance monitors on the level of compliance with mandated procedures increases providers' technical knowledge and competence.

Although there is mixed evidence on the actual impact of SF on improving health outcomes and addressing the unmet need for FP, SF of FP services is positively associated with increasing FP client volume at privately owned SF clinics [19, 22, 23, 28]. Montagu's (2002) conceptual framework for SF suggests that, in addition to improving access to health services, improvements in quality of services at privately owned SF clinics mobilizes latent demand for the franchised health service, leading to increased uptake of services and subsequent improvements in health outcomes [17].

A limitation of this study is that it only reports correlational data which cannot be used to draw conclusions regarding causal effects of increased quality on client volume. Further, the underlying data do not support a monotonic relationship between change in client volume and change in QA score, which helps explain some of the non-intuitive results (no correlation or only negative

correlation). Our analysis did not account for the presence of unmeasured confounders (e.g., regional socio-economic differences, levels of local literacy, the normative environment relative to fertility and FP in communities served by these clinics, concurrent marketing in the catchment communities by field workers, provision of free service vouchers). Furthermore, as presented in Figure 1, Montagu's (2002) model of social franchising suggests that the relationship between improved quality of FP services at SF clinics and FP client volume is mediated through client satisfaction and community-wide perceptions of the quality of FP services available [17]. A non-representative sample of clinics and the absence of validated, psychometric data on these mediating variables limited our ability to assess the relationship between objectively assessed technical quality of FP services and client volume. In order to establish an accurate empirical link between quality and client volume, these mediators would also need to be taken into account. A well-designed cohort study of Suraj SF clinics which includes these factors could help to strengthen the evidence for an association between increased quality and increased client volume by addressing these limitations of the present study.

Conclusion

Provider engagement and motivation to remain in an SF network and comply with franchisor requirements is driven, in part, by increasing client volume at the clinics (other drivers for provider engagement being subsidies and training and professional development opportunities offered by the franchisor) [17]. Further exploration is needed for empirical estimates of changes in FP client volume (and consequently, clinic revenue/profit) due to improvements in the quality of FP services. These estimates of increased future earning of the SF service provider could then potentially be used to enhance SF providers' motivation to improve the quality of FP services. The potential for profitability through increased client volume due to improvements in quality could thus be a key message embedded in all SF communication for motivating SF service providers to improve the quality of services being provided.

The notion that quality of care at privately owned SF clinics improves their financial viability as

businesses by increasing their overall FP client volume not only has implications for individual clinics, but also plays a critical role in strengthening the SF network for long-term sustainability. More rigorous research with appropriate and well-implemented study design is needed for developing and validating indicators for the

quality of FP services which are cost-effective, less resource- and time-intensive, and capable of serving as robust predictors of both FP client volumes and subsequent outcomes at SF clinics.

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7 Quality in social franchises: Challenges of improving interpersonal relations, with qualitative data from Asia and Africa, 2015

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Introduction

Quality in reproductive health services is a fundamental human right [2]. In addition to being a moral imperative, in many places *quality* reproductive health is also a legal requirement that needs increasing attention as countries scale up efforts to achieve Family Planning (FP) 2020 goals. Hardee's rights-based framework for family planning builds on the earlier work of Judith Bruce and the International Planned Parenthood Federation's (IPPF's) framework for healthcare clients' rights and providers' needs (see Box 1) [3, 4]. These frameworks were revolutionary for bringing the client's experience of care—the subjective and interpersonal aspects of care—into balance with the classical definitions for quality of care, which primarily addressed the technical clinical competence of healthcare providers.

Most social franchises have structured their programs' quality assurance and improvement systems according to these frameworks. Karen Schlein *et al.* found in their review of quality assurance in social franchises that social franchise programs have made quality an explicit goal that transcends all areas of operation [1]. They also note that such findings were the “first evidence to support the 2002 conceptual model of social franchising which proposed that the assurance of quality was one of the three core goals [the others are access and equity] of all social franchises, and a component of a ‘virtual spiral’ where higher quality would bring more clients, strengthening the brand and justifying greater emphasis on quality assurance” [1].

Despite the emergence of a more holistic definition of quality of care since the introduction of these frameworks, challenges persist in ensuring franchise providers deliver family planning

BOX 1

Quality includes both client rights and provider needs

Hardee *et al.* use a definition of quality based on Judith Bruce's “A Simple Quality Framework” and IPPF's “10 Rights: Clients' rights and providers' needs include:

1. Care that is scientifically and medically appropriate;
2. A broad choice of methods, continuously available;
3. Accurate, unbiased, and comprehensive information;
4. Technical competence of providers;
5. High quality client-provider interactions;
6. Follow-up and continuity mechanisms;
7. An appropriate constellation of services.

services that improve the client's experience of care. Attention is particularly needed as these programs work to increase the scale and scope of their services in line with FP2020. In this paper, we discuss one aspect of the client experience of care, interpersonal relations between providers and clients, and explore recent qualitative data on the quality of interpersonal relations and the ability of franchises to improve this quality.

Interpersonal relations

Interpersonal relations are defined as the “affective content of the provider – client transaction” and have a direct impact on the client's moods, feelings and attitude following an interaction with the healthcare provider [3]. Distinct from and going beyond the Bruce Framework's element of “information given to clients,” interpersonal

relations in family planning comprise all provider-client communications that are essential for the provision of good quality counseling, the delivery of services, and follow up. High quality interpersonal relations entail a “positive and productive exchange as perceived by the client”, including “understanding, respect, honesty, two way communications, question-asking and flexible guidance” [3]. Much of this is covered in client counseling alone, but interpersonal relations start from the moment the client walks into the clinic and continue well past the end of counseling.

Critical to interpersonal relations is *provider attitude*, defined as the degree of “courtesy, consideration, attentiveness and respect shown the client” [3]. This attitude can be demonstrated by concern for privacy, observance of modesty, bilateral interpersonal exchange without condescension, and some level of connection between the client and provider. *Provider behaviors* related to interpersonal relations during FP counseling include “greetings at the start of the session, whether the client is asked to sit down, the forms of speech with which the client is addressed, the ability of the client to participate in a two-way dialogue, and asking questions” [3]. A “caring attitude” or “client orientation” is often used to refer to this aspect of interpersonal relations. In current franchise quality assurance and improvement activities such as trainings and supportive supervision, there is limited ability to address provider attitudes and behaviors with respect to interpersonal relations [5].

Far from being a secondary consideration, effective interpersonal relations are fundamental to improving the quality and ultimately the outcomes of FP programs. High quality interpersonal relations can support greater continuation rates among current family planning users, build greater confidence among people who are tentative about the use of specific family planning services, engender greater client satisfaction, and ensure more timely follow-up. Interestingly, Bruce explains that good interpersonal relations can “compensate for the technical limits of contraception or logistical problems of accessing services” [3]. She explains that “empathetic information giving may be as

important as accuracy, in allaying negative feelings about method” [3]. Notably, there is a connection between interpersonal relations and one of its key components, provider attitude and effort, that is critical for health outcomes. For instance, it has been argued that “large improvements in the rate of accurate diagnosis and treatment can result from changing the level of effort that providers exert in their interactions with patients” [6], while high provider effort to engage with clients is at the heart of high-quality FP counseling.

Methodology

The arguments proposed in this paper are based on the authors’ years of working in social franchising and supported by qualitative data from two recent studies supported by the Hewlett Foundation.

The first study was aimed at understanding mechanisms used by social franchise programs to assess and improve patient counseling and medical practices related to the provision of intra-uterine contraceptive devices (IUCDs). An online survey created by the Global Health Group at the University of California San Francisco (UCSF) was sent to the 37 social franchise programs selected from the most recent Global Social Franchising Compendium [7] that met study criteria, including reporting that they 1) administered IUCDs and 2) conducted activities to assure the quality of clinical services provided by network providers. Appropriate ethics and institutional review board (IRB) approvals were obtained from UCSF’s Human Research Protection Program Committee on Human Research. Program managers and quality assurance leads from 25 social franchises in Africa and Asia responded,⁹ for a 68% response rate, providing self-reported data on quality improvement and assurance approaches for the year 2015. Most data were collected through checklist-based direct observation (11 programs out of 25 reported using checklists quarterly) and structured client exit interviews (five programs reported conducting interviews biannually). Information was also collected through unstructured direct communications with clients, as reported by inter-personal communicators and

⁹ 20 countries including Benin, Cambodia, Dominican Republic, El Salvador, Ethiopia, Ghana, Guatemala, Haiti, India, Kenya, Madagascar, Malawi, Mali, Myanmar, Nigeria, Pakistan, Tanzania, Viet Nam, Zambia, Zimbabwe.

help-line personnel. Some programs also reported conducting mystery client visits (11 programs out of 25 reported using this method annually).

The second study was aimed at understanding provider attitudes towards key aspects of interpersonal relations, including method-specific counseling and provider-patient communications following the insertion of IUCDs. A set of in-depth interviews was undertaken with Quality Assurance Leads and Operational Leads at programs worldwide that reported the greatest number of IUCD insertions in 2015 [7]. Interview guides were created by the Global Health Group at the University of California San Francisco and focused on qualitative aspects of quality assurance and improvement programs. Appropriate ethics and IRB approvals were obtained from UCSF's Human Research Protection Program Committee on Human Research. Representatives from a total of 15 programs from Africa and Asia (nearly 100% of those invited) were interviewed by four researchers including the authors, Behl and Viswanathan between August and September 2015.¹⁰ The results from this study helped to explain provider attitudes towards key aspects of interpersonal relations, including method-specific counseling and provider-patient communications following the insertion of IUCDs.

Persistent poor quality of interpersonal relations and programmatic responses

Through the online survey, respondents reported that their social franchises were using a wide variety of methods to assess quality (see Box 2), tailored to their contexts. Among these elements, we found several indicators that reflected interpersonal relations, but perhaps significantly, none that were specifically intended to measure provider effort. Despite the lack of sufficient indicators on interpersonal relations, interviews with the 15 franchise programs in 11 countries in 2015 revealed substantial qualitative information on the poor quality of several facets of interpersonal relations in the provision of family planning services.

Two-way conversations focused on the client's needs are necessary to facilitate informed choice, a key component of high-quality FP, but many

BOX 2

Common elements of quality assurance systems used by social franchise programs as understood by the authors and reported through the online survey, organized according to [1]

Recruitment:

1. Selective recruitment of licensed providers in registered clinics;
2. Strong and clear contractual obligations;

Training and set-up:

3. Competency-based training, including practicum and refresher training;
4. Job aides
5. Equipment and commodity supply;

Monitoring of clinical and non-clinical quality:

6. Supportive supervision at clinics (including peer-to-peer mentoring, coaching, working with public/government supervisors, and mobilization days);
7. Provider self-assessments;
8. Clinical audits by internal clinical team, including follow up action planning—annual;
9. Clinical audits by external clinical teams—annual or bi-annual on subset of clinics;
10. Ranking of providers based on quality and quantity of clients;
11. Regular reporting of services;
12. Phone surveys;

Monitoring of client experience:

13. Client exit interviews—annual;
14. Mystery client surveys—annual or bi-annual;

Feedback loop:

15. Annual prizes for quality achievement and improvement;
16. Franchisee exchanges;
17. Free call centers for clients' complaints;
18. De-franchising of non-compliant members.

¹⁰ Countries included Cambodia, Ethiopia, India, Kenya, Madagascar, Nigeria, Pakistan, Philippines, Tanzania, Uganda, and Viet Nam.

programs reported that their franchisees did not support two-way conversations. Effective two-way conversation requires that providers guarantee client confidentiality and support voluntary decision-making, but these are dependent on providers' having been trained in attentive listening and empathy. A program in Madagascar explained that many of their franchisees did not support conversations geared to finding out clients' needs or future plans, and a Pakistani program reported that some of their franchisees did not "assess a client's capacity to understand, retain or use information given during counseling." Another commonly reported issue was franchisees' failure to address clients' myths. For example, a program manager in Tanzania reported that franchisees rarely took "time to clear myths such as 'IUCD leads to infertility' or 'it travels upwards in the body'".

Many franchisees demonstrated "provider bias" in interpersonal relations, meaning that providers only discussed the methods they preferred to give clients, not the other methods with which they were less comfortable, thus making it impossible for women to have full choice. For example, a program manager in Ethiopia reported needing to constantly remind franchisees "To sell the client, not to tell the client". A program manager in Kenya referred to this predilection as "some providers [being] a bit dishonest". As part of this bias, some franchisees did not present comprehensive information, for instance avoiding any mention of side effects, failure rates, and potential complications, or information about how to follow up if a client experienced side effects or wanted to change methods.

The quality of interpersonal relations was also challenged by lack of time. Most interviewees reported that franchisees were "rushed" or "hurried". Ironically, while sufficient time is a necessary condition for high-quality interpersonal relations, evidence suggests that client satisfaction with services is higher when the time spent receiving services is reduced: franchisees reported that many clients don't want to spend time in counselling. As a Kenya program manager explained, "If you look at the standard operating procedures that we have developed for FP counseling, we have set the steps where they are supposed to greet the client, ask the client about themselves, and then

are supposed to tell the clients about the choices and then to help the client to choose, but then sometimes you find that [the] provider is in a hurry or they have a bias so they don't take time. This is a double edge[d] sword. If you look at the 2014 client exit survey that we did, most of the clients were happy with [the franchise] because they were spending less time at the facility."

Providers' effort, including their interest, motivation, attitude, social norms and even provider self-efficacy (their own perception of their ability to change), was cited by many programs as a major limiting factor for the quality of interpersonal relations. In numerous interviews, program managers noted that providers "know what to do, but just don't do it." A program manager in Madagascar suggested that interpersonal relations "bad habits" (e.g., not providing information about follow-up) are often explained by providers as just "forgetting" to perform the required steps, but instead are due to providers' lack of confidence or interest. As an Ethiopian franchise program manager explained, "The biggest problem is an 'attitudinal' problem, not a technical, clinical problem".

A fundamental challenge for both programs and providers is the lack of alignment around financial incentives. All the 15 interviewed program managers from the second study understood that family planning services income is often a small fraction of most franchisees' revenue; this is likely a factor in providers' lack of effort to invest in high-quality FP service provision, including high-quality interpersonal relations, which takes time. As one program manager in India put it, "Family planning is peanuts for their businesses". Long-acting and reversible methods take more resources (more counseling, more time for insertion, and more reporting) and keep client volume down (since clients don't have to come back for a long time). As a program manager in Nigeria explained, "Some of the providers were thinking about money, money, money and so didn't give the level of cooperation to the team... it appears for them that the level of the value proposition wasn't strong enough for them". Meanwhile, programs that have been able to improve pricing strategies to make family planning profitable, often through insurance and vouchers, have seen concurrent quality improvements in counseling and other quality measures.

Programs reported taking a number of approaches in response to poor quality interpersonal relations. A common approach was increasing supportive supervision through the use of skilled franchise program staff. Supportive supervision visits (SSV) is a facilitative approach that promotes mentorship, joint problem-solving and communication between the franchisor and franchisee providers.¹¹ Franchise staff are considered mentors and peer leaders with a commitment to joint problem identification and solution creation with franchisee providers. Respondents reported that they typically employ one supportive supervisor per 20-30 franchisee providers. As one program in India explained, *“Initially, rate of removal [of IUDs and/or implants] was high, but gradually, during supportive supervision visits, we took up this issue and now, removal rate has decreased. FP counseling helps with this a lot”*.

Another approach is task shifting, in which non-medical staff are trained to deliver services normally provided by medical staff, such as counseling and follow-up services to clients. As a program in India explained it, *“In spite of [our] reinforcing the value of counseling, some providers hardly get any time to counsel clients. So, from a sustainability perspective, we think it is crucial to build the capacity of paramedics [to provide counseling]”*. Task shifting can significantly improve the quality of client care; studies suggest it may be quite effective in empowering lower-level staff, improving efficiency in personnel allocation, and improving the quality of counseling [8]. A version of this approach is outsourcing of counseling to community groups—essentially task shifting counseling to the community. Some franchise programs hire or financially incentivize community outreach workers to deliver client or group education on family planning methods.

An extreme approach to addressing provider shortcomings is defranchising. Many franchise managers mentioned defranchising of providers that consistently scored poorly in performance reviews for various reasons including poor performance related to interpersonal relations, and reported removing a significant number of their providers (anywhere from 5-16% of their total network) in the last year. When there is a provider

with “bad attitudes,” it is easier to defranchise them then to try to correct the behavior, although this is a very expensive approach, given the thousands of dollars invested in each provider each year. From a program in Madagascar: *“Last year, we defranchised 20 members. We tried to coach the members, but when there was no improvement, we decided to ask them to leave”*; and from a program in Tanzania: *“This year we defranchised 15 providers for various reasons including low commitment and non-adherence to infection prevention, which is a critical QA factor”*.

Discussion

In the Bruce framework, interpersonal relations are critical to each of the other elements of quality: how choice of methods is offered; how effectively information is given to clients; how technical competence is executed; how continuity and follow-up are maintained; and how an appropriate constellation of services is supported. For each of these elements, interpersonal relations “strongly influence clients’ confidence in their own choices and ability, satisfaction with the services, and the probability of a return visit” [3]. Lack of confidence in choice, misinformed choice, and dissatisfaction with service can lead women to discontinue a method after a few months. Poor interpersonal relations is a contributor to discontinuation of family planning methods, which in turn leads to higher rates of unplanned pregnancy and abortions. Bruce understood the difficulty in addressing interpersonal relations, noting that *“Progress in this area will rely upon program managers’ willingness to orchestrate the interpersonal dimension of care as fervently as they do the technical dimension”* [3]. Qualitative data from the online survey indicate that programs were addressing the technical dimension of quality; however, in line with Schlein *et al.*, who found that the quality assurance and improvement systems of social franchises are focused on supporting technical competence (including recruitment, training, monitoring of clinical and non-clinical quality, monitoring of client experience, and provider feedback loops [1]), data from interviews demonstrated that programs struggled to effectively address the interpersonal dimensions of care.

¹¹ This is a definition provided by MEASURE Evaluation, Carolina Population Center, University of North Carolina at Chapel Hill.

The most common programmatic response to poor interpersonal relations was training. Yet training, while necessary for technical quality, may not be sufficient for interpersonal relations, for instance if it de-emphasizes effective counseling techniques and patient-provider communications. As one respondent observed, *“informed choice is a recurring problem, as not all the counseling steps are followed such as appropriate information on side effects and risks. The reason is that [some] trainers ... [do] not emphasize this area during training”*. Also, the positive impact of training on interpersonal relations may be reduced once a franchisee has been a member of a network for some years, or if lack of knowledge and skills is not the root of the quality challenge. Yet because providers tend to like trainings, franchise managers may still offer them in hopes of a *quid pro quo* for attitudinal adjustment.

Supportive supervision depends on facilitative problem-solving, which is a technique used to empower franchisees to develop and implement locally appropriate solutions. Supportive supervision can be very effective in improving interpersonal relations, but challenges may occur if supportive supervisors only offer mentorship in those areas of service delivery with which they are most comfortable. Other things which may reduce the positive impact of supportive supervision on interpersonal relations include the difficulty of recruiting supportive supervisors in certain areas such as rural or hard-to-reach areas; staff turnover; and local decision-making ability. Also, it is unclear whether this intervention is as effective in situations where the franchisee is not the owner or administrator of the clinic.

Supportive supervision visits are challenged by geography, the quality of the staff employed, and the breadth of services that supportive supervisors are supposed to provide. While most programs employ sufficient supportive supervisors to ensure that each provider can receive a full day of support each month, in reality there is significant variability due to factors such as supervisors' having catchment areas that are very large or include “less desirable” areas or large numbers of franchisees. Moreover, supportive supervision visits are generally expected to include many activities, including full facility audits, assessments of how providers provide counseling and selected

family planning services, and discussions with providers to help them reflect on their own practices and devise improvement plans. For various reasons, it may not be realistic to expect that all these activities are conducted at each supportive supervisory visit. Aside from supervisors' capacity and limited time, providers' willingness and ability to spend the required time is also an important limiting factor: as one respondent commented, *“Even during supportive supervision visits, when there should be time for feedback and developing an action plan, sometimes providers are not welcoming spending their time on this. Motivation helps, but may not address the full issue”*. Effective implementation of supportive supervision visits is also limited by the capacity of franchisee providers to improve their practices. As one respondent observed, *“SSV, which I think is the most effective quality improvement intervention, are only as good as the Medical Supervisor conducting [them]”*. And even with high-quality staff, SSV may not always have enduring positive results: as one respondent observed, *“The challenges come from the turnover rate of the staff. Those that are trained, move on”*.

Task shifting as a way of addressing shortcomings in interpersonal relations and other aspects of quality in family planning has challenges, in particular its sustainability, given staff turnover rates and competing work priorities. Accountability for counseling must ultimately reside with the franchisee provider, in order to help ensure sustained and integrated provision of counseling services by all service providers at a given clinic. Outsourcing also has its challenges. One difficulty is that it may cause franchised providers to believe they need not provide counseling on multiple methods, as clients have already been informed through the outreach efforts. As one respondent explained, *“Clients get the information already from the community mobilizer. They know about the IUCD before coming to the provider”*. This perspective was echoed across multiple interviews, suggesting that not only providers but also some program managers may view community education on family planning as an effective alternative to clinic-based counseling by a trained healthcare provider. Whether clients who have received community education on family planning actually possess full information on family planning methods as a result is unknown. Nonetheless,

community-based counseling does not always present the appropriate forum for raising personal questions or seeking clarifications; hence it is preferable for providers to ensure clients receive enough information during clinic visits to make fully informed choices, regardless of whether community educators have also played a role in education on method mix.

Defranchising is a normal component of franchising that is almost always done after concerted but unsuccessful efforts to support a franchisee to meet requirements. The decision to defranchise is often a difficult one. On the one hand, there is often reluctance to defranchise, as many programs have invested heavily in providers: rough estimates range from US \$500 to \$15,000 per franchisee per year. Yet franchises also face risks in having persistent poor quality linked to their brand and any affiliated international non-governmental organizations (NGOs). In the end, defranchising does not solve the problem of poor interpersonal relations, but transfers it away from the franchise, often back to the clients.

Some social franchise programs have begun to use targeted “Provider Behavior Change Communications,” an approach which engages providers in several reflective sessions that ask them to consider factors that positively and negatively affect their motivation and work flow needs. Providers are then encouraged to make plans to improve their attitude and clinical behaviors. In Cambodia, Uganda, Kenya and Tanzania, Population Services International has recruited nurses and midwives to engage providers in one-on-one communication and encourage them to adopt desired clinical behaviors. Providers are taken up an “adoption stairway,” a multi-level process to build awareness, build interest, try out different behaviors and create new habits around them, and inspire advocacy. The goal is to ensure that proposed solutions include individualized value propositions for the provider, and motivate the provider to become a change agent among his or her peers [9-13]. Further studies are required to validate this approach.

Conclusion

Despite the notable achievements of franchise programs’ quality assurance and improvement

systems across the globe, there remain challenges to ensuring clients receive high-quality family planning services through social franchises. Among the most important of these is the persistent low quality of interpersonal relations. As emphasized in the Bruce framework, interpersonal relations are woven through most, if not all, elements of a high-quality family planning service provision experience. Poor quality interpersonal relations, for instance lack of respect or time spent with clients, or insufficient information provided to facilitate full client choice, has a follow-on effect that can damage the quality of the entire family planning service delivery process. The programs reviewed in this paper, assumed to reflect the global experience, implemented a number of approaches to improve interpersonal relations both specifically and as part of their larger quality assurance strategies, yet all approaches were found to have weaknesses. The quality of interpersonal relations appears to be one component of quality assurance systems that has lagged behind other components (notably technical competence) as systems have been developed and have matured. Why has progress on interpersonal relations lagged, and what can be done about it?

While further research is needed to explore these questions in depth, some answers are clear. First, the tools used by SF programs to assess quality do not have many indicators for interpersonal relations; in particular, we found none at all for some important aspects of interpersonal relations, such as provider attitudes. What is not measured in quality assurance systems may then be left out of quality improvement plans simply because it has not been assessed. On the other hand, components of quality that are less recognized or valued by franchises (or their donors) may then be left out of quality assurance systems. Either way, the absence of interpersonal relations indicators from quality assurance systems reflects to some extent the understanding of, and value placed on, this component of quality.

Second, all approaches to improving interpersonal relations that we identified in the studies face challenges to effective implementation—for instance, staff turnover reduces the effectiveness of task shifting as a means to improving interpersonal relations. It is likely that work to further

strengthen quality improvement approaches in general will have a positive impact on interpersonal relations in particular.

Third, there is a lack of clarity on standards for interpersonal relations, as well as insufficient buy-in to standards which bear upon interpersonal relations, reducing the effectiveness of approaches for improving interpersonal relations or integrating relevant indicators into quality assurance systems. And finally, there may be additional root causes of low-quality interpersonal relations that require further study to unearth.

Despite the ongoing shortcomings of quality assurance systems in regard to interpersonal relations, it is also true that social franchise programs have embraced quality and have made it a goal and focus of their programs, with generally wide-ranging and robust quality assurance and improvement systems. Program managers feel that overall, quality results are starting to show, as many franchises are meeting and exceeding their quality targets. However, these same quality assurance and improvement systems use high volumes of medically qualified staff and corresponding amounts of funding. These expenses threaten any gains in cost-effectiveness as a result of higher quality. Moreover, programs are under increasing pressure to contribute to universal health coverage by increasing the scale of their networks, increasing the scope of services offered and identifying strategic purchasing opportunities that can strengthen cost-effectiveness.

Greater scale and scope may put the notable gains from current quality assurance and improvement systems at risk, and exacerbate existing weaknesses, as systems may collapse under their own complexity. Simultaneously, many of these originally donor-subsidized franchise networks are aiming to transform themselves into cost-recoverable businesses [14]. With these shifts, the already-present trade-offs among franchise programs' goals of quality, access, equity and cost-effectiveness are becoming more acute. There will be increasing pressure to resolve the tension, by reducing, finding economies of scale, and finding efficiencies—most likely within franchises' quality assurance and improvement systems, since they are largest cost drivers of these programs. Large programs like Greenstar

in Pakistan suffered as they cut their supportive supervision in order to operate cost effectively at scale; however, they saw both productivity and quality gains by re-introducing it [15].

Poor provider attitudes and behavior are an important component of persistent low quality interpersonal relations, because they reduce the quality of the interaction with the client, which in turn increases the likelihood of not taking a method and/or not continuing with a chosen method. Creating a metric to measure provider effort could help franchises to focus on this critical aspect of quality, and such a focus will likely help franchises find efficiencies in their quality assurance and improvement systems by encouraging them to drop ineffective activities such as extra training or superfluous visits. The Social Franchising Metrics Working Group (SFMWG) has already agreed on criteria for metrics: they should be relatively easy to execute, relatively low cost to the franchisor, enable the development of minimum standards, provide feedback that is actionable at all levels, be low cost to franchisees (in terms of use of their time), and be based on current evidence and approaches. Working within these parameters, a dedicated task force is needed to collaborate with the SFMWG, franchise program managers and franchised providers to develop a metric for interpersonal relations that could be readily adopted by the community of practice. Strengthening quality assurance systems in this way will help to ensure the sustained use of family planning methods that is critical for meeting global FP2020 goals.

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8

Examining progress and equity in information received by women using a modern method in 25 developing countries

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Introduction

The 2012 London Summit on Family Planning promised to enable 120 million additional women with unmet need for modern contraception in the world's 69 poorest countries to use a modern method by the year 2020 [1]; women are considered to have an unmet need for modern contraception if they are sexually active and want to space or limit their childbearing, but are not currently using a modern contraceptive method. A global partnership—Family Planning 2020 (FP2020)—was formed to help countries achieve their national goal and to measure progress toward achieving the global goal.

Of the 120 million women estimated to have unmet need in 2012 whom FP2020 aims to help, 75 million had never used a modern method (never-users) and 45 million had used a modern method but discontinued use (past users) [2]. The large number of past users reflects high discontinuation rates among women using reversible methods [3, 4]. For example, an estimated 44% of pill users and 40% of injectable users discontinue use within 12 months [4]. The achievement of the “120 by 20” goal, therefore, requires not only helping never-users to initiate contraceptive use, but also reducing high contraceptive discontinuation among current users.

One way contraceptive discontinuation can be reduced is by expanding method choice [2]. This includes adding methods not currently available in a country and new methods that have fewer side effects than existing methods [2]. Adding methods can reduce contraceptive discontinuation by giving current users more methods to switch to

instead of stopping contraceptive use altogether; increasing the number of methods available in a country or a health facility is also likely to attract new users, and thus to increase contraceptive prevalence [2, 5-7]. Expanding method choice also includes shifting the method mix toward long-acting and permanent methods, which have higher continuation rates.

Contraceptive discontinuation can also be reduced by improving overall quality of care and information exchanged between service providers and clients. Information exchange is one of the six elements of the quality of care framework in family planning articulated more than 25 years ago [8]. Other quality of care elements such as choice of methods, interpersonal relations, and follow-up and continuity mechanisms are usually operationalized at the client level through information exchange.

A focus on improving quality of care and information exchange is important, both because women have a right to high-quality services and accurate information, and because high-quality care and information exchange contribute to other desirable reproductive health outcomes. For example, longitudinal studies in diverse settings have shown that high-quality care and better information received by contraceptive clients at initial contact (actual or perceived) are associated positively with subsequent contraceptive use and negatively with discontinuation and unwanted childbearing [9-12].

Adequate information exchange between service providers and clients is necessary to help women select a method appropriate for their reproductive

health needs and use it effectively to meet their reproductive goals. To these ends, providers need to elicit adequate information from clients about their reproductive health needs and family circumstances. In return, clients need to receive enough information about various methods to make an informed choice, as well as enough information about their selected method to know how to use it, when to come back for resupply, what to expect in terms of side effects and how to manage side effects if they occur. Clients also need to be informed that they can switch to another appropriate method if they would like to. The number of topics discussed at the time women initiate use of a method has been shown to be associated with better continuity of contraceptive use, which in turn is likely to reduce unmet need for contraception and unwanted childbearing [12].

FP2020 has identified 17 core indicators to track progress made by family planning programs [13]. Among these is the Method Information Index (MII), which is calculated from current contraceptive users' responses to three questions on information given them by their provider about their chosen contraceptive method [13]. These questions do not capture all the important aspects of information exchange mentioned earlier, but they do make it possible to routinely measure and monitor some important elements of the information women receive [14].

The data needed to calculate the MII are being collected through annual cross-sectional surveys under the Performance Monitoring and Accountability 2020 (PMA2020) project. The measurement annex of the 2015 FP2020 report includes MII values based on data for all women from a PMA2020 survey or Demographic and Health Survey (DHS) from 24 countries [15]. In addition, the annex includes MII values by type of contraceptive method used. It is too early to assess from these data how the MII will change over time or how it might vary across countries and among women with different characteristics within a country; however, some of these issues can be further explored now by using similar DHS data collected for several years and for multiple countries.

FP2020 is interested in understanding the degree of inequity in many of its core indicators. Social and economic inequities in health and family planning indicators have been well documented. For example, the DHS country reports for almost all countries show that contraceptive prevalence increases with such socioeconomic characteristics as household wealth, women's education and urban residence [16]. More recently, Ortayli and Malcher documented that similar inequities exist in multiple countries in another indicator—percentage of demand satisfied [17]. These inequities most likely reflect relatively low contraceptive use due to deficiencies in services available to the poorest segments of the population. It is important to understand the level of inequity in the information women receive once they reach a service facility and seek to initiate use of a contraceptive method.

The purpose of this study is to address the following issues: how the MII varies among countries, how it changes between two surveys in the same country, how it varies by type of method and women's characteristics, and whether any specific subgroups are responsible for observed changes in the MII between two surveys in a country.

Data and methods

Data were drawn from the 25 countries for which the two most recent DHS surveys—about five years apart—included the three questions needed to calculate the MII: “Were you informed about other methods?” “Were you informed about side effects?” and “Were you told what to do if you experienced side effects?” [15].¹² Fourteen of the countries had surveys about five years apart, and the other 11 had surveys 6–8 years apart; 16 countries were located in Sub-Saharan Africa, and the remaining nine were located in other regions. The analytic sample was limited to married women who reported current use of a modern contraceptive method (*i.e.*, sterilization, the pill, the IUD, the injectable and the implant) and had initiated the method within the previous five years.

The MII for a method is estimated by the proportion of current users of that method who responded “yes” to all three questions, in reference to what

¹² Women who were sterilized were also asked whether they had been told that sterilization is permanent; however, this question was not asked in all surveys and was not included in the FP2020 definition of the MII, so it was not included in this analysis.

they had been told at the time they began use of their method. The overall MII for all methods is the average of method-specific values, weighted by the proportion of users relying on a particular method. Method-specific and overall MII values can range from 0 to 100; a lower MII reflects a country's higher level of deficiency in regard to adequate information exchange between providers and clients. The proportion of women who responded no to all three questions was also calculated; however, results for this No Information Index are not presented because of its high correlation with the MII ($r = -.89$).

To study the issue of equity in information received, MII values were compared by women's characteristics, including type of modern method used, source of contraceptive supply (public or private facility), place of residence (rural or urban), household wealth (quintiles by DHS asset-based allocation), education (none, primary, secondary or higher than secondary) and age (five-year age-groups). In addition, the time since women started using their current method was estimated by subtracting the month and year of contraceptive initiation from the month and year of the interview; the measure was coded 0–1, 1–2, 2–3, 3–4 and 4–5 years.

Descriptive data are presented for two times for each country: at the first survey (time 1) and the second survey (time 2). In addition, data are presented for all countries combined, and separately for Sub-Saharan Africa countries and those located in other regions. Country-specific MII values were summarized by estimating the weighted mean or median (50th percentile) value, and the range by using the lowest value and the highest value of the MII for three groups of countries (Sub-Saharan African, other and all). The statistical significance of each country-specific change was tested by using a simple *t* test for the significance of the difference between two proportions. The statistical significance of differences between two median values was not tested; in general, a difference of less than five percentage points is unlikely to be significant.

Results

MII across countries and over time

The weighted average MII for all countries at time 1 was 34%, which indicates that for the earlier survey, only about one-third of contraceptive users reported receiving adequate contraceptive information from their provider (Table 1); the overall MII at time 2 was about five percentage points higher (39%). By region, the average MII values at time 1 and time 2 were 44% and 48%, respectively, for countries in Sub-Saharan Africa, and 29% and 34% for countries in other regions.

Individual country MII values at time 1 ranged from 19% in Pakistan to 64% in Tanzania; at time 2, the index ranged from 13% in Pakistan to 65% in Burkina Faso and Malawi. Between survey periods, the index increased in 15 countries and declined in 10; however, the change in 14 countries was less than five percentage points. Among the remaining 11 countries with a significant change in the MII of at least five points, seven experienced an increase and four experienced a decrease; the greatest increases occurred in Cambodia (20 points), Rwanda (16 points), Benin (14 points) and Egypt (11 points), and the greatest decreases occurred in Tanzania (12 points), Honduras (eight points), and Ghana and Pakistan (six points each).¹³

The correlation coefficient between the MII and the modern contraceptive prevalence rate (MCPR) was not statistically significant at either time 1 or time 2, which suggests that a country's MII does not depend on the level of modern contraceptive use. For example, MCPR rose between the two surveys from 14% to 27% in Ethiopia and from 27% to 45% in Rwanda (not shown); however, the MII increased over time only in Rwanda (from 42% to 58%—Table 1). The change in the index in a country also was not significantly correlated with change in MCPR.

¹³ Annual changes in the MII were also calculated for all countries to remove the effect of different durations between surveys. The basic conclusion remained the same: the MII per year changed very little in 14 countries, increased in seven (ranging from 1.4 points in Burkina Faso to 4.0 points in Cambodia) and decreased in four (ranging from 1.0 points in Pakistan to 2.2 points in Tanzania).

Table 1: Method Information Index scores and absolute change in countries' index scores among countries with required Demographic and Health Survey data, by time point

REGION/COUNTRY	TIME 1			TIME 2			ABSOLUTE CHANGE
	Survey year	N	Index score	Survey year	N	Index score	
ALL COUNTRIES	2001–2008	37,140	33.9	2006–2013	50,789	39.4	5.5*
SUB-SAHARAN AFRICA	2001–2008	11,783	44.2	2006–2013	20,567	47.7	3.5*
BENIN	2001	178	30.7	2006	504	45.0	14.3*
BURKINA FASO	2003	511	55.2	2010	1,617	64.6	9.4*
CAMEROON	2004	205	39.7	2011	356	39.8	0.1
ETHIOPIA	2005	1,155	19.9	2011	1,941	17.1	–2.8
GHANA	2003	403	47.8	2008	281	41.9	–5.9
MALAWI	2004	1,710	62.7	2010	4,613	64.6	1.9
MALI	2006	617	30.7	2012–2013	784	33.1	2.4
MOZAMBIQUE	2003	217	58.5	2011	479	53.6	–4.9
NAMIBIA	2006–2007	597	42.0	2013	498	40.8	–1.2
NIGER	2006	476	27.1	2012	941	28.5	1.4
NIGERIA	2008	1,024	49.3	2013	1,527	50.2	0.9
RWANDA	2005	317	41.5	2010–2011	1,929	57.7	16.2*
SENEGAL	2005	607	39.5	2011	931	41.4	1.9
TANZANIA	2004	860	63.6	2009–2010	1,107	51.5	–12.1*
UGANDA	2006	554	44.7	2011	600	43.9	–0.8
ZIMBABWE	2005–2006	2,352	39.4	2010–2011	2,459	35.9	–3.5*
OTHER REGIONS	2003–2008	25,357	29.1	2008–2013	30,222	33.8	4.7*
BOLIVIA	2003	1,406	52.5	2008	1,185	51.4	–1.1
CAMBODIA	2005–2006	1,772	44.0	2010–2011	2,938	63.9	19.9*
COLOMBIA	2005	2,186	31.4	2009–2010	2,384	39.6	8.2*
EGYPT	2003	3,154	26.8	2008	5,505	38.1	11.3*
HONDURAS	2005	1,473	35.9	2011	1,609	28.2	–7.7*
INDONESIA	2007	11,590	20.8	2012	12,140	20.9	0.1
NEPAL	2006	1,423	34.4	2011	1,567	42.2	7.8*
PAKISTAN	2006–2007	907	19.4	2012–2013	1,266	13.2	–6.2*
PHILIPPINES	2008	1,446	50.1	2013	1,628	52.5	2.4

*p<.05.

MII by method type and women's characteristics

- *Method type.* Median MII values show that the contraceptive information received by women varies by method type (Table 2). In all countries combined, the highest median MII was for implant users (64%) and the lowest was for women relying on sterilization (30%); MII values for women using other methods were 50% for the IUD, 45% for the injectable and 37% for the

pill. This pattern of MII by method type seen for all countries combined was generally the same for Sub-Saharan Africa and for other regions combined; however, in Sub-Saharan Africa, the median index value for the IUD was similar to that for the injectable (49% and 48%), and in other regions, the value for the injectable was similar to that for the pill (38% and 39%).

Table 2: Lowest, median and highest values of Method Information Index at time 2, by women's characteristics, according to region

CHARACTERISTIC	ALL			SUB-SAHARAN AFRICA			OTHER		
	Lowest	Median	Highest	Lowest	Median	Highest	Lowest	Median	Highest
ALL WOMEN	13.2	41.9	64.6	17.1	42.9	64.6	13.2	39.6	63.9
CURRENT METHOD									
PILL	10.0	37.2	68.6	20.0	35.9	68.6	10.0	39.0	60.1
IUD	18.4	49.5	80.5	19.1	49.4	74.5	18.4	55.3	80.5
INJECTABLE	14.7	44.5	68.8	14.7	48.0	68.8	18.6	38.4	63.2
STERILIZATION	7.7	30.3	69.2	16.8	31.0	69.2	7.7	26.9	68.2
IMPLANT	21.0	64.0	81.6	29.1	62.9	77.4	21.0	68.1	81.6
HOUSEHOLD WEALTH									
POOREST	7.2	37.0	72.6	10.2	37.9	72.6	7.2	28.0	66.5
POORER	12.9	39.8	63.2	12.9	42.3	63.2	13.3	32.2	59.2
MIDDLE	11.6	43.5	68.8	11.6	46.0	68.8	12.6	38.7	61.0
RICHER	15.7	39.8	65.9	15.7	38.9	65.8	17.1	43.3	65.9
RICHEST	15.7	49.0	68.5	24.9	49.4	64.2	15.7	49.0	68.5
WOMAN'S EDUCATION									
NONE	8.6	38.4	64.6	10.8	42.2	64.6	8.6	29.1	60.6
PRIMARY	12.6	41.5	65.0	18.9	43.6	65.0	12.6	34.8	63.4
SECONDARY	23.2	43.5	67.1	32.8	45.6	65.7	23.2	40.3	67.1
>SECONDARY	27.4	54.1	86.8	42.9	57.9	86.8	27.4	50.1	80.8
PLACE OF RESIDENCE									
RURAL	12.6	41.1	65.1	13.6	41.6	65.1	12.6	35.6	63.3
URBAN	14.7	43.6	67.2	25.2	46.1	65.7	14.7	42.2	67.2
SOURCE OF METHOD SUPPLY									
PUBLIC	14.4	47.3	74.6	16.5	51.5	66.9	14.4	36.5	74.6
PRIVATE	12.1	36.4	67.9	22.8	34.3	67.9	12.1	40.7	55.9
WOMAN'S AGE									
15-19	3.1	41.6	100.0	3.5	32.6	100.0	3.1	42.7	60.9
20-24	16.1	42.3	64.9	16.1	42.8	64.9	18.7	42.3	62.9
25-29	17.2	41.4	68.1	17.2	42.4	68.1	19.0	40.2	66.3
30-34	10.5	44.2	68.6	20.2	45.8	68.6	10.5	40.2	64.3
35-39	13.3	41.9	61.6	17.5	42.6	61.6	13.3	36.5	61.6
40-45	7.0	44.1	63.6	21.3	45.1	60.6	7.0	36.5	63.6
45-49	8.9	44.9	81.3	8.9	47.4	81.3	14.1	38.4	65.1
NO. OF YEARS SINCE CONTRACEPTIVE INITIATION									
0-1	13.0	42.7	65.2	15.9	42.4	65.2	13.0	43.2	62.7
1-2	11.4	45.9	67.7	22.4	48.1	67.7	11.4	37.3	67.1
2-3	15.4	38.9	65.6	16.6	42.0	65.6	15.4	36.6	58.6
3-4	12.2	44.4	75.1	12.4	46.4	75.1	12.2	38.3	66.6
4-5	12.4	44.6	69.4	12.4	54.6	64.3	14.3	39.2	69.4

Country-level differences in the MII by method type were also seen (not shown). The index value was highest for the implant in 14 countries, for the IUD in nine countries, and for sterilization and the pill in one country each. In brief, implant or IUD users in 23 out of 25 countries received the most information about their method as indicated by the MII.

- *Household wealth.* In general, the median MII increased with household wealth. Among all countries combined, the median MII ranged from 37% for the poorest quintile to 49% for the richest; however, the index value for the second-richest quintile (40%) was lower than that for the middle quintile (44%). This pattern was seen in Sub-Saharan Africa; however, the median MII for other regions increased consistently with household wealth, from 28% for the poorest quintile to 49% for the richest.

Patterns in the MII by household wealth differed in individual countries (not shown). Wealth differentials were practically nonexistent in Cambodia, Burkina Faso and Malawi, where the MII for each country was at least 60% across wealth quintiles. In Cameroon, Colombia, Egypt, Niger and Nigeria, however, the gap between women in the poorest quintile and those in the richest was at least 20 percentage points.

- *Women's education.* Overall, the median MII increased with women's education, from 38% among women with no education to 54% among those with more than a secondary education. This basic pattern was seen for Sub-Saharan Africa, as well as for other regions combined; however, in Sub-Saharan Africa, MII values for women with no education, primary education and secondary education were similar (42%, 44% and 46%, respectively) and substantially lower than that for women with more than a secondary education (58%); whereas in countries in other regions, the MII increased consistently and substantially, from 29% among women in the lowest education group to 50% among those in the highest.

Country-level MII differentials by education differed across countries (not shown). For most countries,

the difference in MII value between women in the lowest education group and women in the highest group was about 20 percentage points. However, the education differential was more than 37 points in Cameroon, Colombia, Ethiopia and Tanzania, whereas there was practically no education differential in Malawi, Mozambique or Rwanda.

- *Place of residence.* The median MII value for all countries combined was 41% for women living in rural areas and 44% for those living in urban areas. This pattern was seen for countries in the Sub-Saharan African region (42% and 46%, respectively) and for those in other regions combined (36% and 42%). However, for some individual countries (Bolivia, Malawi, Mozambique and Namibia), the MII was higher for rural women than for urban women (not shown).
- *Source of method supply.* For all countries combined, the MII was greater for women who reported public-sector facilities rather than private-sector facilities as their source for contraceptives (47% vs. 36%). This pattern held for the Sub-Saharan African region (52% vs. 34%), but was reversed for countries in other regions (37% vs. 41%). When individual countries were examined, MII was higher among women using private-sector facilities than among those using public-sector facilities in nine out of 25 countries (not shown); however, some women may have mistakenly considered social franchises and social marketing outlets to be public facilities.
- *Women's age.* For the overall sample, the median MII did not differ substantially by women's age; values ranged from 41% to 45% across age-groups. In Sub-Saharan Africa, the median MII value was 33% for women in the youngest age-group (15–19) and 42–47% in all other age-groups; for other regions combined, values ranged from 37% to 43%.
- *Time since contraceptive initiation.* The median MII for the total sample and for regions other than Sub-Saharan Africa did not vary substantially by the amount of time since women started using their contraceptive method; values for each differed by 6–7 percentage points. In the Sub-Saharan African

region, however, the median value among women who started using their method less than a year prior to interview was about 12 percentage points lower than the value among those who had initiated their method 4–5 years prior (42% vs. 55%).

Changes in the overall index over time

To explore whether country-specific changes in the MII were associated with changes in method-specific index values and women's characteristics, three countries with the largest change in the index—Cambodia, Rwanda and Tanzania—were examined. According to DHS data (not shown), the MCPR increased between time 1 and time 2 by about eight percentage points (from 27% to 35%) in Cambodia, by 18 points (from 27% to 45%) in Rwanda and by seven points (from 20% to 27%) in Tanzania.

The type of method women were using appears to be associated with changes in the MII (Table 3). In Cambodia, the index value increased between times for all methods but the implant; however, the value for implant users was already quite high at time 1 (69%). The rise in index value was particularly high among IUD and sterilization users (39% and 45%, respectively). In Rwanda, the MII increased for all methods but sterilization; the rise was highest among IUD and implant users (27% and 49%). In Tanzania, however, the index value decreased for all methods but the IUD; the decrease was particularly high among pill and sterilization users (18% each). These changes

may reflect changes in program emphasis on a particular method in these countries. Further analysis of method mix among current users included in this analysis indicated that in Cambodia, pill and injectable use declined between surveys, but IUD and sterilization use increased (not shown). Injectable and implant use increased in Rwanda, but the use of other three methods declined; the shift from pill to implant use was quite substantial (about 14 percentage points). In Tanzania, IUD and implant use increased, but the use of pill and injectable declined.

For almost all subgroups defined by characteristics other than contraceptive use, the MII increased over time in Cambodia and Rwanda, but decreased in Tanzania. The rise in MII value in Cambodia was greater than average among women in the lowest and highest wealth quintiles, and among those who had a higher than secondary education, lived in urban areas and received services from public-sector facilities. In Rwanda, the rise in the index was higher than average among women in the middle and second-poorest wealth quintiles and those with no education, those who lived in rural areas and who received services from private-sector facilities. In Tanzania, the MII declined among women in the three lower educational categories, particular those with no schooling, and increased only among women with higher than secondary education.

Table 3: Absolute change in Method Information Index, by women's characteristics, according to country

CHARACTERISTIC	CAMBODIA			RWANDA			TANZANIA		
	2005–2006	2010–2011	Absolute change	2005	2010–2011	Absolute change	2004	2009–2010	Absolute change
ALL WOMEN	44.0	63.9	19.9	41.5	57.7	16.2	63.6	51.5	–12.1
CURRENT METHOD									
PILL	43.3	60.1	16.8	46.2	55.7	9.5	65.9	48.1	–17.8
IUD	41.1	80.5	39.4	36.6	63.2	26.6	73.8	74.5	0.7
INJECTABLE	47.6	63.2	15.6	42.6	58.2	15.6	62.5	51.8	–10.7
STERILIZATION	22.9	68.2	45.3	17.8	16.8	–1.0	58.9	40.9	–18.0
IMPLANT	68.7	68.1	–0.6	11.4	60.8	49.4	65.3	64.0	–1.3
HOUSEHOLD WEALTH									
POOREST	37.6	66.5	28.9	38.6	55.6	17.0	56.6	45.9	–10.7
POORER	45.7	59.2	13.5	33.1	56.0	22.9	63.9	52.0	–11.9
MIDDLE	48.1	61.0	12.9	35.5	61.4	25.9	63.3	49.4	–13.9
RICHER	46.2	65.9	19.7	44.7	56.0	11.3	56.8	49.0	–7.8
RICHEST	41.8	68.5	26.7	46.7	58.7	12.0	70.1	57.7	–12.4
WOMAN'S EDUCATION									
NONE	40.6	60.6	20.0	27.6	53.3	25.7	69.1	50.0	–19.1
PRIMARY	44.0	63.4	19.4	44.7	58.2	13.5	62.2	50.3	–11.9
SECONDARY	48.1	67.1	19.0	42.5	60.7	18.2	67.6	61.6	–6.0
>SECONDARY	22.4	80.8	58.4	58.7	59.4	0.7	70.5	86.8	16.3
PLACE OF RESIDENCE									
RURAL	44.9	63.3	18.4	39.5	57.5	18.0	60.1	48.4	–11.7
URBAN	38.4	67.2	28.8	47.3	59.5	12.2	69.1	58.5	–10.6
SOURCE OF METHOD SUPPLY									
PUBLIC	53.4	74.6	21.2	43.4	57.6	14.2	63.2	50.0	–13.2
PRIVATE	43.4	52.3	8.9	40.0	57.3	17.3	54.4	67.9	13.5
WOMAN'S AGE									
15–19	48.5	60.9	12.4	na	71.7	na	51.4	53.6	2.2
20–24	45.6	61.6	16.0	45.5	51.5	6.0	60.6	48.2	–12.4
25–29	40.1	66.3	26.2	43.9	57.3	13.4	70.0	53.7	–16.3
30–34	46.8	64.3	17.5	38.3	58.6	20.3	63.6	47.3	–16.3
35–39	45.6	61.6	16.0	46.9	58.7	11.8	61.8	52.6	–9.2
40–45	43.9	63.6	19.7	44.0	60.6	16.6	60.0	58.1	–1.9
45–49	26.1	65.1	39.0	12.6	55.2	42.6	58.2	49.9	–8.3
NO. OF YEARS SINCE CONTRACEPTIVE INITIATION									
0–1	41.3	62.7	21.4	41.5	53.8	12.3	62.0	50.6	–11.4
1–2	41.9	67.1	25.2	41.2	57.7	16.5	71.1	49.6	–21.5
2–3	49.5	58.6	9.1	43.3	61.2	17.9	58.9	48.7	–10.2
3–4	48.5	66.6	18.1	37.4	63.9	26.5	66.8	62.8	–4.0
4–5	51.3	69.4	18.1	48.0	62.4	14.4	47.3	62.8	15.5
NOTE: NA=NOT APPLICABLE.									

Discussion

The quality of care framework articulated more than 25 years ago has now become a standard part of the vocabulary in the family planning literature; however, little is known about the progress developing country family planning programs have made in improving the quality of services. This study—the first to examine issues of progress and equity in one indicator of information exchange, the MII—found that the value of the index varied considerably by region, by country and across survey times for individual countries.

At both time points, MII values for countries in Sub-Saharan Africa were higher than those for countries in other regions. Regional and country differences in index values could reflect changes over time in the way family planning programs have been organized. The 1994 International Conference on Population and Development (ICPD) marked a paradigm shift from a macro-level demographic perspective to individual-level improvements in reproductive health and quality, and also generated a shared commitment to reproductive health and quality of care. Most programs in Asia and Latin America were created prior to the ICPD, at a time when donors and programs were more focused on decreasing overall fertility and population growth rates. In contrast, many of the programs in Sub-Saharan Africa were organized after the ICPD, when donors and programs may have placed more emphasis on issues of quality in family planning programs.

In addition, program emphasis may also have reflected differences in women's desire to space or limit childbearing. Compared with programs in other regions, programs in Sub-Saharan Africa may have focused more on spacing births than on limiting births, which may have affected how services are delivered and the resulting method mix. Furthermore, the MII reflects the information women received at the beginning of their last episode of contraceptive use. In Sub-Saharan Africa, where contraceptive prevalence rates are increasing [16], these episodes may disproportionately represent first-time users, who may demand and receive more information than past users returning for services.

Changes in an individual country's MII over time reflect the effect of efforts made by that country's family planning program to improve information exchange between providers and clients. Although MII values in 15 of 25 countries increased between surveys, many of those countries experienced an improvement of less than five percentage points. And in the remaining 10 countries, the MII declined by as much as 12 points. These results clearly suggest that although the concept of quality is widely accepted, many countries have made limited progress in providing adequate information to women adopting a contraceptive method. Moreover, the findings show that there is substantial room for improvement in all developing countries.

MI values showed striking differences by contraceptive method. Implant users reported receiving the most information, followed by users of the IUD and injectable; women who relied on the pill or sterilization received the least. In 23 out of 25 countries, the MII was highest for either implant or IUD users, suggesting that these methods are being promoted by providers. Moreover, maximum changes in the MII observed in three countries (Cambodia, Rwanda, and Tanzania) appear to be related to changes in the method-specific information provided, which may reflect changes in the emphasis on a particular method in that country. If so, the introduction of a new method in a country might also be used to improve the content of information exchange for all methods; however, whether it is being done or can be done in practice is not known.

In most countries, the MII increased with education and household wealth. This finding may reflect better treatment by health facilities of women with higher social and economic status. Alternatively, it could suggest that, compared with other women, those of higher social and economic status may have greater method knowledge or that they may have a greater ability to recall the information they received.

Women need and deserve accurate and complete information about the method they select. It is quite challenging to determine the minimum level of information that women need from providers at

the time of contraceptive initiation; this has to be decided within the country context of a program or particular service.

Determining how to monitor the extent to which women can recall, in a population-based survey, the information that they received from providers is also challenging. DHS surveys and PMA2020 rapid surveys have made a good start by including three questions used in calculating the MII for users of a reversible contraceptive method, as well as four questions for users of sterilization. In future surveys, women using a reversible method could be asked an additional question about whether they were told about the possibility of switching. Information about the possibility of switching may facilitate continuity of contraceptive use. Moreover, this question is similar to the one about the permanency of sterilization those relying on sterilization are asked and would allow for the index to be based on four questions for all women.

For the MII based on three questions to be used widely, its validity needs to be established in terms of its relationship with other existing indicators, its value in predicting future contraceptive use and fertility, and the extent to which it can be used as a proxy for other key elements of information exchange. Findings from this study show that the MII and the MCPR are not correlated, which suggests that the two indicators reflect different aspects of family planning programs. Whereas the MCPR is the ratio of users and all married women of reproductive age, the MII is based on the information received by users only. A country focused on increasing its MCPR can do so with or without providing adequate information to users, as illustrated by comparing data from Ethiopia and Rwanda. Both of these Sub-Saharan African countries experienced a rise in contraceptive prevalence between the two surveys, but the MII increased over time only in Rwanda. This suggests that the program in Rwanda may have focused on increasing contraceptive use and providing information to clients, whereas the program in Ethiopia may have focused only on the former. The two objectives are complementary, however, because adequate information exchange may reduce contraceptive discontinuation, which in turn will likely increase contraceptive prevalence.

Another way to assess the validity of the MII is to assess the extent to which it is predictive of continuation rates. Such an analysis would require a longitudinal study in which individual contraceptive users are interviewed over time. This type of validity would require that a subsample of respondents from the DHS or PMA2020 be interviewed at a later date. Also, the data from a longitudinal study could be analyzed to study the effect on subsequent contraceptive behavior of clients' receiving the information asked about in the three MII questions.

In facility surveys, women have been asked multiple questions about their interactions with and information received from service providers; recall bias is not a concern with these data because respondents are asked the questions immediately after seeing their provider. For example, Costello *et al.* [18] collected data on 24 items describing the service-provision process and created five indicators of quality: all needs assessed, full method choice provided, full information received, treated well and connected well to services. However, it would be unrealistic to expect that surveys like the DHS or PMA2020 could include such questions and collect reliable information retrospectively. Further analysis of these types of data from facility surveys, such as the Service Provision Assessment surveys conducted by the DHS [19], could be helpful in deciding the extent to which the three or four questions currently included in the DHS and PMA2020 surveys could act as a proxy for other important questions about information exchanged between service providers and clients. Such an analysis would also help in ascertaining the minimum core questions that can be pretested and then included in DHS or PMA2020 surveys.

Limitations

In this study, the MII was estimated from retrospective individual-level DHS data. The routine availability of these data makes it possible to compare index values across countries and monitor changes over time; however, their use has some limitations, especially in regard to the accuracy and completeness of information exchanged between providers and clients. While facility surveys have used multiple questions to assess the content of information exchange [18], it is unrealistic to expect that population-based

surveys can collect reliable information retrospectively on multiple aspects of information exchange. The extent to which the three questions from which the MII is estimated might reflect the entire content of information exchange cannot be assessed from these data and requires further analysis. In addition, women's responses to the three questions may not accurately depict what they were actually told during their contraceptive visit. Instead, their responses may reflect what they may remember and what they may know from other sources. This tendency to recall and report information may increase with women's socioeconomic status, which may in part explain the observed increase in MII with women's education and household wealth. However, what information women perceive they were told or what they may have learned from other sources may be more important than what they were actually told in terms of their subsequent contraceptive behavior. Perhaps future fertility surveys can rephrase the three questions to enquire what women know and from whom (providers or other sources) they learned about each item included in the MII.

Courtesy and recall bias are also potential limitations. Courtesy bias arises when respondents give normative answers or answers they believe will please the interviewers. The values of the MII for most countries and for most subgroups of women within a country were well below the maximum possible score of 100, which suggests that these data did not suffer from substantial courtesy bias. The possibility of recall bias was examined by studying the relationship between MII values and the time elapsed since women started contraceptive use. Women who started use relatively recently should be able to recall the information they received better than those who started use some years ago; this type of relationship would also be expected if the content of information provided to women improved over the five years. However, MII values did not vary by time elapsed since starting contraceptive use, which suggests that the estimated index values are not affected by recall bias and do not reflect improvements in the content of information provided to women.

Another type of selectivity may be at work, however. Contraceptive users interviewed in a cross-sectional survey may not represent those who started contraceptive use a certain number of

years ago. Instead, they reflect women who started contraceptive use that many years ago and have continued use. Women in the original cohort who discontinued use are not included in an analysis of contraceptive users in a cross-sectional survey because they would be classified as nonusers. The degree of this selectivity would increase with time since contraceptive initiation, because of the increase in the cumulative discontinuation of a method with time since initiation. This would not be a problem if both groups—continuers and discontinuers—received the same information; however, empirical evidence suggests that the level of information received at contraceptive initiation is positively associated with subsequent continuation of a method [10-12]. Thus, those who receive less information are more likely to discontinue the method, which leaves behind those who received more information. Such selectivity would imply that using population-based survey data would overestimate the MII. We cannot check for this possibility because the DHS did not ask the three questions from discontinued users as well.

This selectivity could affect cross-country comparisons; the degree of selectivity depends on a country's method mix because different methods have different discontinuation rates. Cross-country comparisons may also be affected by a country's having different proportions of first-time users and past users. It is extremely important to document through further research the effect of this selectivity on MII values.

Finally, one indicator does not tell the whole story about the strengths and weaknesses of a country's family planning program. The MII simply indicates one facet of the program in terms of what may be going on in the area of information given to current users on a limited number of items.

Conclusions

FP2020 has taken an important step in the right direction by including the MII as a core indicator used to monitor an important aspect of information exchange. The results of this analysis show plenty of room to improve the content of information exchange, which could also result in quick wins in terms of better reproductive health outcomes among clients.

Monitoring changes in the MII is important, but it is not enough. The index is unlikely to rise rapidly in the absence of special efforts by family planning programs to improve the quality of care at service facilities, as well as in communities, among depot holders and at pharmacies offering resupply of methods. Concerted efforts are needed to improve the content of information exchange and quality of care. Experimental studies in Pakistan and the Philippines illustrate how this can be accomplished [18, 20]. These studies have demonstrated that it is feasible to develop and implement interventions to train service providers in interacting with their clients to improve quality of care, and that the nature of client-provider interactions can be improved through these training interventions. The Balanced Counselling Strategy has also been used to improve the content of information exchange between providers and clients [21].

There may be some tension between achieving a numerical goal—such as reaching a certain number of modern contraceptive users—and improving the quality of services [14]. A focus on achieving a numerical goal may adversely affect

the quality of care provided in some countries. One way to minimize the potential conflict between quantity and quality is to include activities and budget to improve the content of information exchange in the country plans being articulated under the auspices of FP2020. Both the numerical goal and quality of care can be incorporated by setting the overall goal as “120 by 20 through quality.”

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PART THREE:

KEY CONSIDERATIONS FOR MAKING PROGRESS IN QUALITY MEASUREMENT





9 Family planning quality assessment tools used in low- and middle-income countries: Review for application in clinic-based services

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Introduction

Approximately 40% of the 213 million pregnancies that occurred in 2012 were unintended. To meet the 2012 London Summit on Family Planning goal of decreasing the incidence of unwanted or unplanned pregnancies, as well as to strive to meet the FP2020 goal of increasing modern family planning contraceptive use, we must be able to offer quality family planning services [1]. By reaching more women with quality family planning services, we can also help to achieve Sustainable Development Goals (SDGs) 3 and 5, which aim for universal access to sexual and reproductive health services and rights by 2030 [2]. Family planning, according to population health researcher and policy analyst Judith Bruce, is a critical social investment with a lasting impact on countries' development. As the quality of family planning services is improved, women are more likely to use these services, resulting in a healthier population and a lasting positive effect on countries' demographic and economic profiles [3].

Facility-based family planning program managers must be able to measure and track service quality as part of clinical care management, including increasing efficiency and improving service quality. There are many methods to measure quality of care, but data collected at the health facility or program level are often "inconsistent, incomplete and incomparable" as a result of the variety of quality assessment tools currently employed [4]. The Social Franchising Metrics Working Group (SFMWG), the conveners of the 2015 Bellagio Center Meeting on Clinic-Based Family Planning Quality, is composed of over 30 representatives from implementing agencies, research and academic institutions, and donor organizations. The group aims to create standardized and simplified performance metrics that

are effective for a large number and diversity of health-focused social franchising programs [5]. At the Bellagio Meeting, the group developed a set of principles for an ideal tool to assess the quality of a low- or middle-income country (LMIC) family planning program, criteria that have application beyond social franchise service provision. Such a tool should:

1. Be designed or adaptable for use in a clinic-based family planning program;
2. Assess structural, process, and outcome quality components (according to the widely-used Donabedian framework for assessing the quality of health services [6, 7]), ensuring that results are credible, actionable, and relevant to program goals to improve health;
3. Require a limited amount of time and staffing beyond normal clinic operations to complete (so that data is easy to collect and analyze on a routine basis, and assessment costs are minimized);
4. Enable comparability of data both within a program over time and across programs, and be perceived by providers as adding value to their work;
5. Enable benchmarking to a national standard to provide context on programmatic efforts.

The objective of this review was to compile a comprehensive list of clinical quality assessment tools in the public domain with existing or potential application in facility-based family planning programs in LMIC, and to describe their key features in comparison to the above-mentioned principles. The overall aim was to assess whether there exists a tool that aligns with all these principles that could become widely used in LMIC settings. Such a tool would measure health outcomes and could help facilities, particularly

small- to mid-sized family planning clinics, identify where limited resources can best be used, improve the effectiveness of service delivery, and aid in learning between peer institutions [8].

Although the focus of this review was tools used in family planning clinics, tools from other health domains such as surgery, primary care, infectious disease, and maternal and child health were also reviewed, in order to investigate whether portions of those tools could be easily adapted to or applied in a family planning context. Although many countries have country-specific accreditation programs that include quality assessment elements [9], accreditation schemes were not included in this review, due to the high costs, necessity of using external assessors, and long timeframes required to achieve full accreditation, as well as the common requirement of fees for membership or assessment, all of which render the schemes unsuitable for facility-based quality assessment based on the defined criteria above.

Methods

Literature search

A literature review was undertaken to identify tools to measure healthcare quality that were designed for or adaptable to use in clinic-based family planning programs in LMIC. A tool was defined as:

- (i) a complete set of written documentation that supports consistent implementation and reporting;
- (ii) with one or more instruments (such as a checklist, observation guide, exit interview guide, etc.);
- (iii) which may be applied, or adapted to be applied, in multiple facility types.

The review was performed in PubMed, PopLine, and Google Scholar (see Box for search terms). Key organizational websites such as those of EngenderHealth, Family Planning 2020 (FP2020), the Population Council, USAID's MEASURE Evaluation Project, The Global Fund to Fight AIDS, Tuberculosis, and Malaria, the International Planned Parenthood Federation (IPPF), Marie Stopes International (MSI), Population Services International (PSI), and the World Health Organization (WHO) were also searched for both family planning and non-family planning quality assessment tools.

We excluded tools that focus on quality improvement without a quality assessment component capable of being applied independently from the improvement activities. Tools designed for use in a single research study, or for use in high-income country (HIC) contexts, or that focused on client satisfaction, job support, or non-clinical services were also excluded. Tool inclusion/exclusion decisions were reviewed with a senior researcher.

Search results were presented to a group of experts, including health care quality specialists, academics and researchers, LMIC program leaders, and government-level quality tool developers, at the 2015 Bellagio Center Meeting on Clinic-Based Family Planning Quality for feedback on initial decisions on inclusion and exclusion, and to identify any tools missed.

Data extraction and analysis

Data was extracted by one researcher from peer-reviewed journal articles and tool guidelines written by the organizations that developed the tools.

The tools were reviewed in depth by studying the peer-reviewed literature that discussed use of the tool, as well as the instructions about tool application and the associated instruments. Six overarching features, aligned with the Bellagio

Search terms

19 terms related to quality assessment tools designed for LMIC: quality assessment tool; quality assessment; assessment; assess*; quality measurement; measure; quality metric; metric; quality method; quality instrument; instrument; quality; LMIC; low and middle income country; developing country; low income country; LIC; middle income country; MIC

21 terms related to healthcare domains: family planning; family plan*; FP; maternal health; maternal neonatal health; maternal neonatal child health; MNCH; MCH; adolescent; reproductive health; RH; surgery; cancer; oncology; primary health care; primary care; PHC; infectious disease; communicable disease; noncommunicable disease; NCD

Table 1: Definitions of tool features used for data collection

FEATURE	DEFINITION
DATA IS EASY TO COLLECT AND ANALYZE	<ul style="list-style-type: none"> • Only existing staff required • Data collection requires 1 week or less (per year, if relevant)
TOOL IS INEXPENSIVE TO USE	<ul style="list-style-type: none"> • Assessment is free, or costs can be easily incorporated into standard daily operations without reallocation of funds or additional application for funding
RESULTS ARE CREDIBLE	<ul style="list-style-type: none"> • Data produced is valid • Data produced is reliable
PERCEIVED BY PROVIDERS AS “ADDING VALUE”	<ul style="list-style-type: none"> • Tool allows comparison of results across time and facilities • Datasets are publicly available
RESULTS CAN BE BENCHMARKED TO NATIONAL STANDARDS	<ul style="list-style-type: none"> • Output can be compared to nationally recognized and regularly collected data • Tool is designed for use at the facility level (rather than national level)
RESULTS ARE ACTIONABLE	<ul style="list-style-type: none"> • Tool measures structure, process, and outcomes • Output includes an easy-to-interpret score, grade, index, or report card that inform program services

Meeting principles, were examined (see Table 1). Quality components assessed by each tool (see Annexes 1.1 and 1.2) were incorporated into the “results are actionable” feature. Quality components were identified iteratively, by reviewing the available literature and supporting documentation for each tool and compiling a list of components included, and adding additional components to the list with each subsequent tool reviewed; the tools were then re-reviewed against this full list of quality components. Client records were included as both a structure quality component, if their presence and completeness was assessed, and a process quality component, if their content was assessed. Generally, structural quality assesses the context in which healthcare is delivered; it was defined to include physical infrastructure, equipment, revenue, health information management systems, and staffing. Process quality examines interactions between healthcare providers and clients throughout service delivery, and included client flow, patient experience, clinical practice, and clinical records. Outcome quality considers the effects of care delivery on the status of a patient or larger population [7].

Tools identified and data collected were compared to previously published tool summary articles, such as those by Nickerson, *et al.* 2014 and Hozumi *et al.* 2006 [4, 10, 11].

Results

Search results

We identified 35 tools for initial consideration. Fifteen were excluded for the following reasons: six tools with a focus on quality improvement; three that are designed for single country application; four that assess only the client’s perspective of quality and thus do not meet the program focus; one tool that is better categorized as a job aid because it provides guidance to help providers deliver quality services, but not to assess those services; and one tool that addresses only counseling and not clinical services. Thus, 20 tools were included in the analysis (see Table 2a).

Although all tools identified are publicly available, several are out of date or no longer maintained: SAM was employed from 2004 to 2009 and has been replaced by the SARA [11], FASQ is over ten years out of date [30], and ELMS is no longer maintained [31]. These tools were still included to determine whether they fit enough other criteria that they could be easily updated, or relevant sections could be extracted and included in combination with another tool.

Ten of the tools were designed to measure family planning and/or reproductive health quality. Tools were developed by a range of well-recognized NGOs, research institutions, global initiatives, or well-recognized funding bodies. The quality measurement aims vary from a limited feature, such as how clients move through a facility, to understanding local clinic-based service delivery,

Table 2a: Selected characteristics of 20 included tools for quality assessment of clinic-based family planning programs in LMIC: Provenance, purpose, instruments, and health domain

PURPOSE	INSTRUMENTS	HEALTH DOMAIN ASSESSED	COUNTRIES OF IMPLEMENTATION
Client Flow Analysis (CFA)[12] EngenderHealth (known at time of development as the Association for Voluntary Surgical Contraception)			
Understand how patients move through a facility.	Client flow tracking document	Not specified	None reported
Client-Oriented, Provider Efficient (COPE)[13] EngenderHealth (known at time of development as the Association for Voluntary Surgical Contraception)			
Self-assessment tool for program evaluation and improvement.	Checklist-aided self-assessment, record reviews, client interviews, CFA, action plan templates	Family planning	None reported
ACQUIRE's Evaluation of LAPM Services Suite (ELMS)[10] (adapted from FASQ) EngenderHealth			
Assess the availability of resources in facilities providing long-acting and permanent method contraceptive options.	Facility audit, provider interview, client-provider interaction observation checklist, client exit interview	Family planning	None reported
Facility Audit of Service Quality (FASQ)[10] MEASURE Evaluation			
Assess availability and quality of facility-based services for child and reproductive health.	Facility audit questionnaire	Reproductive health; child health	None reported
Facility-Based Assessment (FBA)[14] Africa Child Survival Initiative-Combating Childhood Communicable Diseases (ACSI-CCCD) project			
Evaluate whether children are appropriately diagnosed and treated at the health facility.	Standardized observation checklists, client interviews, health worker and supervisor interviews, provider performance observation, exit interviews, provider interviews, record review, equipment and supplies inventory	Primary health care	Malawi, Burundi, Nigeria, Togo, Guinea, Swaziland, Central African Republic, Democratic Republic of the Congo, Côte d'Ivoire
Health Facility Census (HFC)[10] Japan International Cooperation Agency			
Identify facilities that do not meet basic criteria to provide health services and understand the investments needed to make improvements. Designed for health system policy, planning, and management.	Health service modules, GPS, building assessment module, utilities module, medical equipment module, human resources data form	Not specified	Malawi, Zambia
Performance Assessment Tool for Quality Improvement in Hospitals (PATH)[15] World Health Organization			
Designed to help hospitals define quality improvement strategies with primary use in HIC.	Indicator set with descriptive sheets, feedback report	Not specified	Belgium, Canada, Denmark, France, Slovakia, South Africa
Performance, Monitoring and Accountability 2020 (PMA2020)[16] PMA2020			
Monitor nationally representative family planning indicators that support FP2020 goals.	Household questionnaire, female respondent questionnaire, service delivery point questionnaire	Family planning	Ethiopia, Kenya, Uganda, Democratic Republic of the Congo, Ghana, Nigeria, Burkina Faso, Niger

Table 2a: Selected characteristics of 20 included tools for quality assessment of clinic-based family planning programs in LMIC: Provenance, purpose, instruments, and health domain (continued)

PURPOSE	INSTRUMENTS	HEALTH DOMAIN ASSESSED	COUNTRIES OF IMPLEMENTATION
Population Council Health Facility Assessment [10] Population Council			
Understand the range of reproductive health services offered and resources available. Assess performance of health facilities, with emphasis on strategic health planning, monitoring and evaluation or to pilot service quality improvements.	Facility inventory, provider interview guide, client exit interview, client-provider interaction observation, focus group discussion (providers, clients, communities), CFA, service-specific questionnaires	Reproductive health	None reported
Primary Care Assessment Tools (PCAT)[17] Johns Hopkins Bloomberg School of Public Health			
Measure primary healthcare quality (structure and process).	Consumer-client surveys, facility surveys, provider surveys, health system survey (in development)	Primary health care	Brazil, China, Canada, South Korea, United States, Spain
Quality Assessment Guidebook for Adolescent Services [18] World Health Organization			
Help national and district health managers to assess services to understand if care is “adolescent-friendly” and where improvements in service provision can be made.	Adolescent client, provider, facility manager, support staff, and outreach worker interview guides, observation guide, equipment, medicines, and supplies list, clinical competencies checklists	Adolescent health	None reported
Quick Investigation of Quality (QIQ) [19, 20] MEASURE Evaluation with funding from USAID			
As a subset of the Service Provision Assessment, assess family planning clinic quality.	Facility audit, provider observation, client exit interviews	Family planning	Ecuador, Turkey, Uganda, Zimbabwe
Rapid Health Facility Assessment (R-HFA)[10] Child Survival Technical Support project in collaboration with partners			
Assess primary maternal, newborn, and child health services to identify service delivery bottlenecks and understand health worker performance.	Facility checklist, health worker survey, provider observation checklist, client exit interview (optional), community health worker survey and checklist	Maternal, neonatal, and child health	None reported
Rapid Service Quality Assessment (RSQA)[21] The Global Fund to Fight AIDS, Tuberculosis, and Malaria			
Assess and improve service quality at the country level in national disease prevention programs.	Central/policy level questionnaire, facility level questionnaire	HIV, tuberculosis, and malaria	None reported
Service Delivery Indicators (SDI) Health Survey Instrument[22] World Bank			
Measure education and health service delivery quality and performance from a client perspective.	Facility questionnaire, staff roster, clinical knowledge assessment, health facility finances, GPS	Not specified	Kenya, Senegal, Tanzania, Uganda, Mozambique, Nigeria, Togo
Service Availability Mapping (SAM)[11] World Health Organization			
Map and monitor availability of and access to health services.	District questionnaires, facility questionnaires, GPS	Not specified	None reported

Table 2a: Selected characteristics of 20 included tools for quality assessment of clinic-based family planning programs in LMIC: Provenance, purpose, instruments, and health domain (continued)

PURPOSE	INSTRUMENTS	HEALTH DOMAIN ASSESSED	COUNTRIES OF IMPLEMENTATION
Service Availability & Readiness Assessment (SARA)[23] (replaces SAM)			
World Health Organization			
Use rapid data collection and analysis to assess health facility service delivery.	Questionnaires for staffing, number of inpatient and observation beds, infrastructure, available services, medicines and commodities, interviewer observation, GPS	Family planning, child health, basic emergency obstetric care, comprehensive emergency obstetric care, HIV, TB, malaria, non-communicable diseases	Benin, Kenya, Mauritania, Uganda, Burkina Faso, Tanzania, Sierra Leone, Zambia
Service Provision Assessment (SPA)[24-26]			
World Health Organization			
National overview of health service delivery system.	Facility resources audit questionnaire, provider interview, client-provider observation checklists, client exit interview	Maternal, neonatal, and child health, Family Planning, HIV & AIDS, sexually transmitted infections, malaria, tuberculosis, non-communicable diseases	Bangladesh, Caribbean, Egypt, Ethiopia, Ghana, Guatemala, Guyana, Haiti, Kenya, Malawi, Namibia, Nepal, Rwanda, Senegal, Tanzania, Uganda, Zambia
Situation Analysis (SA)[27]			
Population Council			
Assess client-provider interaction.	Provider observation, client interviews	Family planning	None reported
Supply, Enabling Environment, and Demand (SEED)[28, 29]			
EngenderHealth			
Assess organizational capacity to provide family planning services. Emphasis on long-acting methods.	Self-assessments that include literature review, key informant interviews, review of final report findings with key stakeholders	Family planning	None reported

to use for district and national strategic planning, to monitoring national quality goals as part of a global mandate. To collect data, the tools use a variety of types and numbers of instruments but we frequently see structural checklists and client-provider observation guides. Only nine of the twenty tools reported the countries where they had been implemented; the majority of these were implemented in Africa.

Ease of data collection and analysis

Eighteen of the 20 included tools specified the qualifications of the individual or team who should carry out data collection and analysis. Of these, two-thirds required an external assessor; for the remainder, facility staff were sufficient. Fourteen of the 18 tools required a trained data collector (regardless of whether staff or not), and eight of these include a provider observation instrument, which must be completed by a physician (see Table 2b).

Among the 11 tools that reported the amount of time required to complete a quality assessment, the time commitment ranged from 1.5 hours/facility for the FASQ to six weeks/facility for SEED, with a median of two days (see Figure 1). PMA2020 also required six weeks, but for multiple facilities, as the tool is national in scope. Only 11 tools included a recommendation for re-evaluation frequency, with a range of from three to six months (CFA) to five years (R-HFA, SPA, and HFC) and a median of two years (see Figure 2). Only the CFA recommends a re-evaluation frequency of less than one year.

Just three tools possess the desired features for “ease of data collection and analysis” (see Table 1), allowing data collection by staff and requiring a time requirement of less than one week per facility: the CFA, COPE (with no recommended re-evaluation frequency), and FASQ (with a re-evaluation frequency of 1-2 years).

Table 2b: Selected characteristics of 20 included tools for quality assessment of clinic-based family planning programs in LMIC: Personnel and time requirements and comparability of data

TOOL	PERSONNEL REQUIREMENTS		COMPARABILITY OF DATA		
	Assessor	External?	Allowed?*	Output	Level
CLIENT FLOW ANALYSIS (CFA)	Staff	No	No	Written report; flow chart	Facility
CLIENT-ORIENTED, PROVIDER-EFFICIENT (COPE)	Staff	No	No	Written report	Facility
EVALUATION OF LAPM SERVICES SUITE (ELMS)	Trained	Yes	No	Written report	Facility
FACILITY AUDIT OF SERVICE QUALITY (FASQ)	Staff	No	Unknown	Unknown	Facility
FACILITY-BASED ASSESSMENT (FBA)	Trained	Yes	Yes	Written report	National
HEALTH FACILITY CENSUS (HFC)	Trained	Yes	Yes	Written report	National
PERFORMANCE ASSESSMENT TOOL FOR QUALITY IMPROVEMENT IN HOSPITALS (PATH)	Unknown	Unknown	Yes	Unknown	National
PERFORMANCE, MONITORING AND ACCOUNTABILITY 2020 (PMA2020)	Trained	Yes	Yes	Written report	National
POPULATION COUNCIL HEALTH FACILITY ASSESSMENT (PCFHA)	Trained	Yes	Yes	Written report	Facility
PRIMARY CARE ASSESSMENT TOOLS (PCAT)	Unknown	Unknown	Yes	Written report	Facility
QUALITY ASSESSMENT GUIDEBOOK FOR ADOLESCENT SERVICES	Trained	No	Yes	Score	Facility
QUICK INVESTIGATION OF QUALITY (QIQ)	Trained	Yes	Yes	Written report	Facility
RAPID HEALTH FACILITY ASSESSMENT (R-HFA)	Trained	Unknown	No	"Balanced scorecard"	Facility
RAPID SERVICE QUALITY ASSESSMENT (RSQA)	Trained	No	Yes	Written report	National
SDI HEALTH SURVEY INSTRUMENT	Trained	Yes	Yes	Written report	National
SERVICE AVAILABILITY & READINESS ASSESSMENT (SARA)	Trained	Yes	Yes	Written report	National
SERVICE AVAILABILITY MAPPING (SAM)	Trained	Yes	No	Written report; GIS	National
SERVICE PROVISION ASSESSMENT (SPA)	Trained	Yes	Yes	Written report	National
SITUATION ANALYSIS (SA)	Trained	Yes	Yes	Written report	National
SUPPLY, ENABLING ENVIRONMENT, AND DEMAND (SEED)	Staff	No	No	Written report	Facility

*Comparison of one facility to another facility.

Cost of implementation

A 2000 report on the QIQ reports costs per facility ranging from US \$258 in Turkey to \$1,070 in Ecuador (1998-1999 cost data) [20], while the costs of implementing SAM as per a 2008 report range from US \$63,000 to \$313,000 per assessment (including district questionnaires for all districts and facility questionnaires in 1-3 districts per assessment; costs are not specified based on country where the assessment was conducted) [10]. The FASQ is reported to be relatively inexpensive because it can be completed rapidly, but costs were not available. We were unable to find cost data for the 17 other tools.

Credibility of results

All tools included in this review are considered credible as a result of the reputation of the organization that created the tool. While all tools have face validity, research external to the organization on the validity or reliability of the included questions is not readily available. Data on the number of times a tool had been applied, repeat use of tools, or number of organizations using the tool, which could serve as rough proxies for reliability or validity, are published for tools such as SPA, SARA, and PMA2020, for which data is available on the years in which surveys were conducted, but this data is not available for all tools.

Figure 1: Maximum number of hours required to perform assessment per facility, 11 facility-based tools with available data

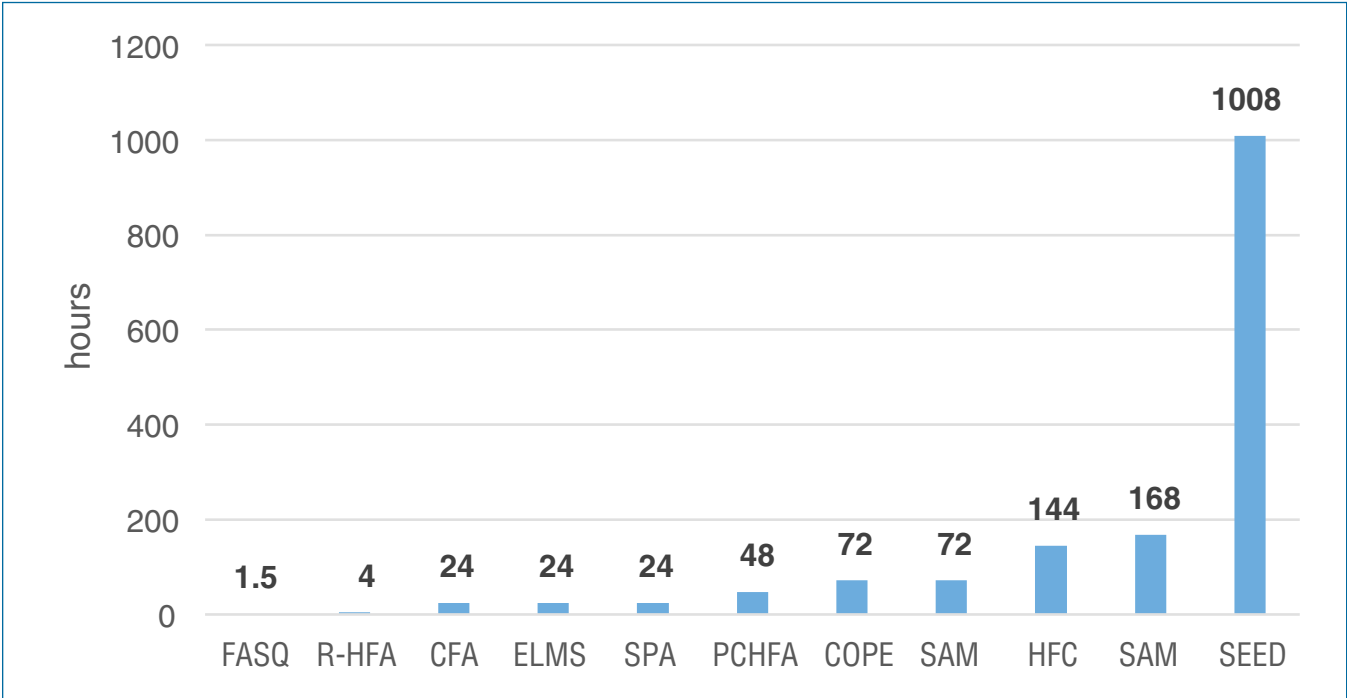
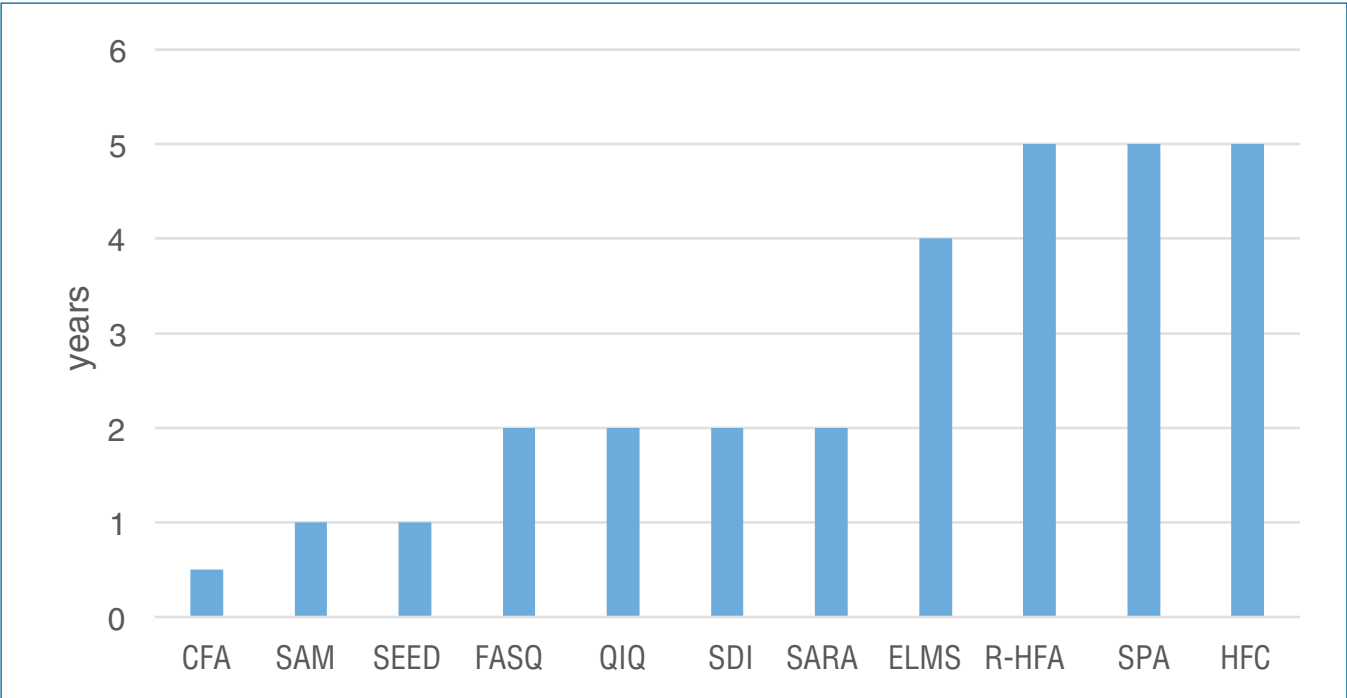


Figure 2: Maximum number of years recommended for re-assessment frequency, 11 facility-based tools with available data



Added value for providers

Of the 18 tools for which data output types were reported, 16 use a report that would require case-by-case review of the narrative, tables, and/or charts to compare one facility to another, or to review one facility's performance over time (see Table 2b). Tools such as COPE or ELMS are individually adapted by the organization implementing the tool and are thus so specific to the unique facility's operations that results cannot be compared between facilities. Of the remaining four tools, two do not permit comparison between or across organizations and two do not report data presentation methods.

Although the R-HFA produces a 21-point “balanced scorecard,” the data is not publicly available. Data for other tools is also not publicly available.

Benchmarking to national standards

Ten of the tools are designed for use at a national level, and ten are designed for use at an individual facility level. The ten tools designed for facility-level assessment do not allow benchmarking to national results.

Actionable results

Fourteen out of the 20 tools assess at least some components of both structure and process quality. None looked at outcome quality, although the QIQ's guide refers to choosing indicators that organizations “felt most directly affected client outcomes in terms of behavior” [19], and several tools use client satisfaction as a proxy for outcome quality. While there are no clear differences in the type of quality components assessed in national versus facility-level tools, facility-based tools measured more components (eight versus 5.8). The mean number of components assessed was five out of 16 structure components and one out of four process components (see Annexes 1.1 and 1.2).

Three of the tools reviewed are designed to create actionable results and identify key changes that can improve service delivery. The Quality Assessment Guidebook for Adolescent Services includes instructions on how to calculate a score for each health characteristic assessed [21], allowing a program manager to quickly see where to take action for quality improvement. The R-HFA provides a “balanced scorecard” for its 21 indicators, quickly highlighting focus areas [14].

COPE provides action templates to help program managers review assessment results and determine where to focus improvement efforts, and requires a more cumbersome review to demonstrate changes in the quality of service delivery based on previous assessments.

Discussion and conclusions

Overall, there was a lack of the data that would be needed in order to fully assess tools' utility for facility-based family planning quality assessment in LMIC. With the available data, we found no tool for quality assessment that is either used for or adaptable to facility-based family planning clinics in LMIC contexts which adheres to all the principles set out by the SFMWG. Most tools adhered to just a few of the principles. For instance, the CFA, while easy to use (with in-house staff able to perform assessment and just a day needed per facility), and with a recommended re-evaluation frequency of less than a year, did not allow benchmarking, nor add value to providers as defined in the Methods, and though it assesses both structure and process, it covers just one component from each of these domains, and does not assess health outcomes at all. Like the CFA, COPE and FASQ also met the criteria for “ease of use,” but not the benchmarking criteria (none of these tools is national). COPE assesses both structure (five components out of 16) and process (three out of four), but FASQ assesses structure only (three components); neither assesses outcomes. There was no data available for any of these tools on cost or credibility.

For a facility to be able to routinely collect quality data, a quality assessment tool must produce data that is easy to collect and analyze, yet only three tools met this requirement. Tools must also be inexpensive to implement relative to a facility's operating budget, yet there was virtually no data available to assess this requirement. One reason may be that costs are difficult to calculate. They vary based on a wide variety of factors including personnel and time required to complete the assessment, sampling methodology, facility size and location, amount of training necessary, whether an external assessor is needed, the varying rates for consultants, and the depth of analysis required. Expenses tend to be higher when a physician is required. Direct cost calculations are

also influenced by fluctuating exchange rates and in-country purchasing power, making it difficult to compare costs between countries and time periods. In addition to direct costs, organizations must also consider indirect costs, including the amount of time that staff must take away from their daily tasks to participate in assessments.

Lack of data for validity and reliability is another challenge for reviews of quality assessment tools. Any results collected through a quality assessment tool should be valid and reliable, yet data on these features was not available for any of the included tools. However, all included tools were developed on the basis of thorough research, often including consultation with experts for design, selection of indicators, and piloting, so a level of acceptable rigor can be assumed.

In addition to being able to rely on a tool's reliability and validity, providers need a tool that gives them a clear understanding of how the quality of their facility's services is changing and how it compares to that of other facilities. Otherwise, tools' results are of limited utility to providers. Yet nearly one-third of included tools did not produce results that could be compared within or across programs. The opportunity to compare results across programs is important for peer-to-peer learning and further improvement of service delivery.

Benchmarking to national standards is another way for organizations to identify areas where service delivery excels or faces challenges, by allowing program results to be compared to those of other organizations or against national results. Ultimately, organizations can use this information to adjust service delivery for improved results, including how to distribute limited personnel and financial resources [8]. Without a benchmark, program leadership can only make informed guesses at how to tackle quality challenges. Yet none of the included tools allow benchmarking; this may be due to tools' having been developed primarily for specific situations, without consideration of the broader context. One way to approach this challenge may be to adapt or incorporate elements of a national survey such as SARA or SPA for use at a facility. By using the same question framework, data collected at a facility could be benchmarked against nationally representative

results. The example of the adaptation of the national SPA to the QIQ, a simplified version of the SPA developed for facility-level assessment, is relevant, and should be studied to determine whether national benchmarking with SPA data is possible.

Notably, none of the included tools measured outcome quality. Outcome quality is difficult to capture because it often must be tracked over a long period. In addition, because health outcomes are affected by a variety of factors, a poor health outcome is not necessarily directly correlated with or caused by low quality of care received [32]. Yet outcome quality may arguably be the most important aspect of quality to measure if programs aim to improve long-term health. All included tools measured at least some components of structural quality, though only about two-thirds measured components of process quality as well. While structural components are necessary for quality care [33], and are often quite easy and inexpensive to measure, assessing only structural quality is insufficient as there is only a weak link between structure and other aspects of quality [34, 35]. Components of structural quality are best used to establish a basic level of quality, not to distinguish between high and low performers [33]. Because structural components are the easiest to assess, using a simple checklist, it is unsurprising that so many tools assess them. Incorporating process quality adds a level of difficulty, but process quality components can still be measured within the clinic. Research is needed to explore correlations between structural/process quality and outcome quality, as evidence of a strong correlation would suggest that facilities may measure structural/process quality as a proxy for outcome quality (such as rates of unplanned discontinuation of FP method, side effects, morbidity, or mortality).

This review had some limitations. Because it was not devised as a systematic review, and was limited to tools with supporting online documentation and to English-language publications, some tools, and some data on the use of included tools, may have been missed.

Given the limitations of the tools available to LMIC FP facilities to measure quality, and the demand from LMIC health service providers and donors to be able to routinely measure and deliver

quality services, we argue for the creation of a new tool, incorporating or adapting portions of existing tools as possible and appropriate. SPA, SARA, and PMA2020 are well-supported, widely applied, national tools that could provide a useful starting point. Similarities could be identified, and instruments adapted and simplified into a single tool with all the features described by the principles of the SFMWG. Beginning with these large, international initiatives would also help to provide a broad base of support from NGOs and governments and ensure promotion by donors to help facility managers understand and address challenges in assuring the quality of family planning services. Such a tool would be designed for use at the facility level because this is the level that, through the work of individual providers, drives national and international quality improvements [36]. Costs and staffing requirements, as well as considerations of how the data could be routinely incorporated into action for quality improvement, would be of high priority. The data collected would be nationally benchmarked and correlated to immediate health outcomes, such as discontinuation of family planning methods or side effects, features critically missing in the current landscape. The tool should produce an easy-to-interpret output, such as an index, that will allow a facility to see how its quality is changing over time, as well as how it compares to that of other facilities of similar type and to national results.

The lack of a globally adopted quality assessment tool that possesses basic key features such as low cost and comparability of data makes it difficult to identify better-performing facilities, learn from best practices, identify struggling facilities, and focus assistance and resources; ultimately, it has slowed global progress toward delivering quality healthcare. With the importance of quality in the current global family planning landscape, such a tool is especially critical. By learning from the challenges of and pitfalls faced by existing quality assessment tools, the Bellagio Family Planning Experts, representing implementers, researchers, quality experts and donors, are well placed to collaborate on the creation and adoption of a new, programmatically relevant, family planning quality assessment tool.

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10 Options for measuring the quality of family planning programs: The experience of social franchisor Population Services International

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Introduction

Private provision of health care is an important avenue for increasing access to health services. In low and middle income countries (LMIC), over 50% of health care is provided by private providers [1, 2]. Patients seek services in the private sector due to shorter wait times, fewer drug shortages, and friendlier treatment than in the public sector, as well as from a belief that technical quality is better in the private sector [3].

Yet, unlike public sector facilities, private facilities in LMIC are rarely submitted to oversight or supervision, and private providers have limited access to new skills and clinical information. In response, a number of interventions to improve the quality of care in the private sector have arisen [4]. One of these is social franchising, which leverages economies of scale to create networks of health-care facilities through which providers are trained and their quality assured, clinics are branded to increase client recognition, and routine support is provided.

Population Services International (PSI), an international health non-governmental organization (NGO) with operations in over 60 LMIC worldwide, is the world's largest clinical social franchisor. PSI conducts social marketing, product distribution and service delivery primarily through the private sector, but sometimes in conjunction with public sector distribution channels. PSI operates branded networks, or social franchises, which cover 17,744 clinics and pharmacies in 25 countries (see Table 1). PSI's franchise operations began with a focus on family planning with the Greenstar Network in Pakistan in 1995. Today, PSI has both single-service and multi-service social franchises, covering

family planning and reproductive health (FP/RH), HIV, maternal and child health (MH/CH), cervical cancer, malaria and tuberculosis (TB).

The United States Institute of Medicine has defined quality to be “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” [6]. By including the clause “increase the likelihood”, the definition acknowledges that improving quality, or having high quality, does not guarantee desired health outcomes. Yet, quality is a key component to achieving improved health outcomes in several guiding theoretical frameworks [7, 8].

Social franchises promise clients that the quality of their services is better than that of independent private providers. Research to assess whether this is true has shown primarily positive results, but has been of varied quality [9, 10]. In fact, for most franchisors, assessing the quality of their franchisees in comparison to that of other clinic types (private non-franchised and public) is neither a priority, nor feasible. It is made more difficult by the lack of a standard set of measures or indicators to assess quality. Franchisors focus on assessing quality within their networks, often using common tools across the organization. They do so for a variety of reasons, including:

- **Eligibility:** Franchisors assess potential franchisees' quality, including attributes of facility structure (running water, private rooms) and clinical training of providers, in order to determine whether they meet minimum criteria for franchise membership.

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Table 1: PSI social franchises and services provided, by country and year of establishment, 2015

COUNTRY	YEAR	# FACILITIES ENROLLED	FP/RH	MH	HIV	CH	MALARIA	OTHER
ASIA								
PAKISTAN	1995	6420	x	x		x	x	x
MYANMAR	2001	5346	x	x	x	x	x	x
CAMBODIA	2002	290	x			x	x	
INDIA	2008	1114	x					
NEPAL	2009	398	x					
LAO PDR	2010	150						x
VIETNAM	2012	259		x				x
SUB-TOTAL		13,977						
EAST AFRICA								
KENYA	2008	323	x	x	x	x	x	x
TANZANIA	2009	450	x	x		x	x	
UGANDA	2009	215	x	x		x	x	
MALAWI	2012	64	x					
SUB-TOTAL		1,052						
LATIN AMERICA								
NICARAGUA	2008	144	x					x
GUATEMALA	2010	245	x					
EL SALVADOR	2011	52	x					
DOMINICAN REPUBLIC	2013	48	x					
HAITI	2013	14	x					
SUB-TOTAL		503						
SOUTHERN AFRICA								
ZIMBABWE	1999	450	x		x			x
MADAGASCAR	2001	344	x		x	x	x	
ZAMBIA	2002	431	x		x			
SOUTH AFRICA	2004	92	x		x			
SUB-TOTAL		1,317						
WEST AFRICA								
DRC	2003	232	x			x		
BENIN	2004	59	x	x	x	x	x	x
CAMEROON	2004	190	x					
MALI	2005	74	x		x			
NIGERIA	2010	340	x	x		x	x	
SUB-TOTAL		895						
TOTAL		17,744						

Source: [5]; "Other" includes cervical cancer and TB

- *Business advantage:* Franchisors know that clients are concerned about the quality of services they receive. Hence, they promote quality improvement practices to potential franchisees as a way to attract additional clients, improve health outcomes, improve

franchisee reputation, and eventually, allow the franchise network to grow and serve more clients. Evidence to support these results as outcomes of quality assessment is, however, limited.

- *Moral obligation and risk mitigation:* Franchisors want to ensure that providers branded under their name are not engaging in practices that will harm a client, so they promote quality as part of providing medically ethical services, as well as to protect the name equity of the franchise.
- *Resource allocation:* Franchisors assess quality in order to decide how to allocate scarce resources for training, clinical updates, and in-person supervisory visits.
- *Disenfranchisement:* Franchisors may have minimum standards, including related to quality, pricing, branding and/or record keeping. If providers can be removed from the franchise for failure to meet minimum standards, then franchisors need to assess said standards periodically.
- *Reporting:* Most franchises are donor funded, and as such, need to report to donors that funds used to train or assure quality are actually resulting in a change in provider knowledge and practice.

Some methods of quality assessment are considered routine monitoring, while others are evaluative, encompassing a control group or assessment over time. PSI finds that no single approach to quality measurement can meet the requirements for eligibility, routine monitoring and evaluation. However, less variability in the types of indicators measured across organizations would benefit PSI and all social franchises. As a contribution to the debate on a single measure of family planning quality, this paper describes the different types of tools available for measuring quality of social franchises, outlines PSI's approach to quality measurement, and reviews lessons learned and recommendations for quality assessment.

Evolution of quality measurement approaches at PSI

When first starting social franchises in 1995, PSI recognized that in order to train providers and enroll facilities, something had to be learned about the provider and the clinic—an *assessment of “structural quality”* or readiness to provide services. This includes aspects of the clinic, such as stocks of key drugs and commodities, availability of basic medical equipment (examination table, source of light), presence of necessary utilities (running water, electricity), specialized devices as needed (speculum and uterine sound for intrauterine device (IUD) insertions, functioning microscope or rapid diagnostic test for malaria treatment), and characteristics of the provider—whether the provider has the requisite schooling and skills to provide appropriate clinical care, as demonstrated for instance by a certification or attendance at a training.

PSI also recognized that clinical services should be reviewed—an *assessment of “process quality”*, which includes clinical competence. Process quality assesses the care the patient receives, including examining whether providers employ clinical techniques safely and correctly, conduct the appropriate examinations (both of which comprise clinical quality), follow infection prevention procedures and interact with clients appropriately.

About a decade after franchise operations began, PSI started *assessments to understand and measure changes in provider knowledge and behavior*. Understanding knowledge and attitudes has often been used as a proxy for clinical quality, as having correct clinical knowledge is a prerequisite for performing the procedure correctly. In addition to correct knowledge, providers should exhibit a favorable attitude towards the services they are providing. For example, providers should provide services which are youth-friendly, rather than adding moral judgements on the use of contraception by young people. These assessments aided in donor reporting, and the data provided through the structural and process measurements also directed resource allocation for quality improvement. Assessments were often country specific and changed over time, making comparison, even within PSI, difficult. To refine

these assessments of process quality, PSI created standard tools to be used across franchises in the PSI network.

Concurrent to measuring facility and provider readiness, PSI realized the necessity of a *system to monitor and prevent adverse events, and to ensure informed choice* – a key tenet of family planning service provision. This was driven by the 2008 creation of a multi-year, multi-country project focused on increasing access to IUDs. Outcome quality is monitored through the reporting of complications and adverse events (see Box). As PSI's franchises spread from Asia to Africa, the need to assess quality in order to maintain franchise membership and mitigate risk grew.

Recently, PSI has expanded its franchises to provide services for appropriate malaria case management in both franchised and non-franchised private sector outlets. Non-franchised outlets are not branded, and do not receive the same level of support, training, and audits. However, they may sell PSI products, or participate in a PSI-run health intervention. Consequently, PSI's quality assessment mechanisms have had to evolve to encompass a variety of health areas and service provision contexts, from franchised

clinics to informal drug vendors, with *assessment not only for a single outlet on a variety of services, but also for a variety of outlet types on a single service*.

Theoretical frameworks for measuring healthcare quality

The theoretical framework of Avedis Donabedian states that structural and process components of quality affect each other as well as affecting health outcomes, where structural quality refers to the human and material resources needed to provide high quality care, while process quality refers to activities carried out by health professionals, and health professionals' abilities [7]. Instead of Donabedian's more general model, clinicians at PSI began from the perspective of the well-regarded Bruce framework for quality family planning (FP) service provision. This framework has six domains regarded as essential for a high quality FP service: technical competence, choice of contraceptive methods, information given to patients, interpersonal relationships, continuity of care, and appropriate constellation of services [8]. The Bruce framework formed the basis for both the direct observation tool, which assesses providers, and (initially) the client exit interview or patient-reported observation tool. Bruce's method choice and constellation of services provided domains fit within the Donabedian structural components of quality, while the other Bruce quality domains are more closely aligned with Donabedian's process components of quality.

The global nature of implementation organizations such as PSI means there are many choices for quality assessment. PSI currently uses eight tools to assess health services quality and outcomes. PSI's family planning programs have adopted five quality assurance standards and 21 indicators. These are used to measure quality across all PSI programs, thereby giving PSI a means to consistently evaluate compliance with its quality standards across its entire global network. The Bruce framework for quality was developed for family planning services, and is not applicable to other health services provided by PSI franchisees. Nevertheless, as most social franchise organizations provide FP services, the Bruce framework has influenced the domains PSI measures, as

PSI's adverse events monitoring system

The system extends from the rural private provider through the PSI country office to a global medical director and senior staff. International staff are "on call" day and night, and can provide medical advice and indicate how PSI country offices should respond. Adverse events are given full corporate attention, while reported complications are handled at the country level through support to the provider and arrangement of appropriate treatment for the client. Providers are trained to report any complications, in order to receive clinical support from the franchise, as well as assistance with any media, financial, legal or political response. Since 2010, PSI has required all countries with a social franchise network to have a quality assurance system, including clinical audits of providers and adverse events reporting.

Table 2: Domains of healthcare quality measurable by various research tools

	COMPETENCE	CHOICE	INFO	RELATIONSHIP	CONTINUITY	CONSTELLATION
DIRECT OBSERVATION	x	0	x	x	0	0
OBSERVED SIMULATED SERVICES	x		x			
MYSTERY CLIENT	0	x	x	x	x	
FACILITY SURVEY		x				0
CLIENT EXIT INTERVIEW	0	x	x	x		
PROVIDER SURVEYS	0	0	0			0
OUTCOME ASSESSMENTS	0					
RECORD REVIEW	0				0	

x=primary objective of method; 0=possible to assess through method

Competence=Technical competence; Choice=Method Choice; Info=Information provided to clients; Relationship=Interpersonal relationship; Continuity=Continuity of care; Constellation=Appropriate constellation of services.

has the Donabedian framework. Table 2 indicates which domains of quality are directly and indirectly measurable by each of various research tools.

Tools for measuring healthcare quality

A: Direct observation

PSI approaches direct observation at four levels—supportive supervision, verification, internal audit and external audit. Routine observation during supportive supervision visits is undertaken by a member of the franchisor quality assurance team (country office-based). All providers are visited and observed in a defined time-frame, such as every quarter or semester, with some providers visited more frequently if their “quality scores” merit additional support. Supervisors are occasionally accompanied by the franchise quality assurance manager to ensure that the supervisory visits are being conducted thoroughly and appropriately. Within each franchise network, an internal quality assurance audit is also undertaken yearly. In these audits, providers are visited and observed by someone other than their routine contact person, to provide a check to the observations of the normal supervisor. The audit also ensures that systems and processes are working, such as for referrals, complications, and adverse event management. Finally, the franchise network is audited biennially by a pair of auditors external to that network, and sometimes external to PSI. This audit selects facilities that are representative of the diversity of providers in the network with respect to such factors as location, client volume, and provider qualifications. External audits are

a required component of RH and HIV service delivery at PSI, last 10-14 days, and include about 10-12 facilities. Audits observe patient-provider interaction, supportive supervision and demand generation activities, and include a visit to a referral hospital. External audits also review documents on file, in clinics and in the PSI country office, such as records of supervisory visits including actions taken if gaps were identified, and copies of provider licenses.

Direct observation has been considered a very important way to measure the quality of service delivery, as it reveals whether the provider can show a client how to do something, as well as what the provider actually does in a clinical setting [11]. It is used to measure various aspects of process quality and requires a trained observer, often clinically trained. One difficulty of direct observation studies is that they incentivize providers to exhibit desired behaviors, a phenomenon known as the “Hawthorne effect.” Direct observation is highly valued as a quality assessment tool by PSI’s clinical staff, despite being expensive to conduct and biased due to the Hawthorne effect. Clinicians believe that if an error/deficiency in quality is uncovered during direct observations, then the true situation must be considerably worse, meriting intervention. Audits are used by PSI to assess the quality assurance system, while observation during supportive supervision can include real-time support for observed gaps, as well as clinical mentoring.

There are other limitations of direct observation. First, the trained observer may only be trained to support certain services; for example, a primary care provider may not be able to adequately observe an IUD insertion, and using an obstetrician or gynecologist to observe childhood illness treatment would be overly expensive. Thus, observation is often segmented by type of health service. Second, in facilities with low client flow, observation is more expensive, or somewhat stilted. For example, if auditing IUD service provision, often a client who wants an IUD is asked to attend on a day when the audit will occur, rather than waiting in the facility for the client to spontaneously appear. Methods that are naturally difficult to time, such as post-abortion care, are not regularly audited, and rarely observed. Similarly, non-routine or complicated cases, which would require a higher clinical understanding, occur infrequently, and rarely when a supervisor or auditor is present, thus making it more difficult to know if a provider is prepared for such cases. Finally, the physical layout of the examination room, and a desire to preserve client comfort and trust with her provider, sometimes makes it difficult for the observer to properly view all aspects of the procedure. Direct observation can be used in a formal research study, as long as observers are distinct from the clinical supervisors, do not provide any advice or guidance during observation, and can observe enough client-provider interactions to increase the likelihood that data is statistically representative. PSI rarely uses direct observation in this way, however, due to the cost and time implications.

B: Observed simulated services

Observed simulated service was developed to overcome a main issue with direct observation, which is that there may be no real client present when the observation is taking place, particularly for a low-volume service. The observer (who must be trained) can assess clinical quality immediately upon arrival at a facility, rather than waiting for the right type of client to present him- or herself. The simulated service can occur in one of two ways. One method, validated in a study in Myanmar, is to use an anatomical model or doll [12]. For child health services, the doll is accompanied by a trained actor playing the mother, as well as a clinical observer. A second method, used by PSI as a component of supportive supervision visits,

is a simulated case without a model. This takes the form of an interactive vignette, where the provider can ask questions, and the interviewer (who is also the simulated patient) responds after describing the case.

This tool has limitations as well. The Hawthorne effect is still present, and a clinically trained observer, especially for specialized clinical procedures, is required. Providers need to be primed for what can be a strange scenario. In particular, with independent private providers, both the simulation on an anatomical model and the interactive vignette can feel like exams.

For the model method, the unrealistic scenario of a disembodied uterus or child doll makes it difficult to assess all the same aspects of quality as could be assessed during direct observation of a live patient. There are also upfront capital costs of acquiring the models, which then need to be transported to all service outlets. If outlets are far from the main PSI office, this can be difficult and cumbersome. The costs of the simulated service with model may be greater than the cost of direct observation, given that the same expensive technical observer is required, in addition to the anatomical models. The interactive vignette method is limited to those services for which the actual clinical technique is less important, such as diagnosis and treatment of malaria. The validity of the interactive vignette in comparison with the model has not yet been assessed by PSI. The interactive vignettes have been used for supportive supervision visits for child health and malaria treatment services, while anatomical models are used during audits of reproductive health services (IUD and implant insertions) as a back-up option when no client is available.

C: Mystery client study

The mystery client study is an observational study in which data is gathered by a person who is believable to the provider as a real client, rather than known to the provider as an observer (“direct” observation). The mystery client is trained to observe client-provider interactions, and is often a lay person. Mystery client studies have been used to overcome the biases associated with direct observation, such as the Hawthorne effect, since it is theorized that mystery clients will observe the provider’s typical behavior, rather than behavior that may have been

affected by the provider's awareness of being observed. The mystery client study has been used often by PSI, both in franchised clinics and in pharmacies and drug shops where PSI may have trained staff in appropriate dispensing.

The mystery client can assess more nuanced aspects of the patient-provider interaction than the direct observer, including communication, friendliness, any attitudinal biases based upon the appearance or situation of a prospective client, and whether or not the provider offers the desired service or commodity. Mystery client studies are also used to assess deviant behavior. For example, in assessing correct case management of malaria, trained mystery clients are sent to outlets with apparent recent febrile illness to request treatment for malaria (where it has been previously determined that they are negative for malaria). The clients are trained on correct procedures for the rapid diagnostic test (RDT) for malaria, as well as counseling procedures, and complete a short questionnaire after the interaction. Providers who treat clients as though they have malaria would be considered deviant (since they should offer an RDT, which would return negative results), and may reveal behaviors different from those demonstrated during supervisory visits.

This assessment method has some drawbacks. First, the research and programmatic staff designing the study must be very clear on the desired outcome. This is easier for fever case management, where there is a correct procedure and correct drug, but more difficult for family planning services, where a client might be offered one of several "correct" products. Ethical review boards sometimes consider this type of study to be unethical, because they feel providers are being deceived or tricked. This is particularly an issue when trying to determine whether providers are offering a drug or service which is against national policy. For example, in Uganda, PSI has conducted studies to see if pharmacies are offering misoprostol to clients seeking to terminate a pregnancy, or with symptoms of an incomplete abortion. As induced abortion is illegal, but the provision of treatment to a woman in distress is acceptable, this type of study could be considered deceptive by some review boards.

Second, it is very important that the mystery client be well trained in the scenario to be acted, and be believable to the provider or shopkeeper. Consequently, the client must look, speak and act like someone from the area who would visit that facility. This can pose problems in rural areas, where providers or shopkeepers may easily identify individuals who are not local. Also, there must be very little variation among all mystery clients in a given study when acting out the scenario, in order to minimize the influence of other factors which could affect the result and hence any conclusions that might be drawn from the study. These issues have been difficult to address in practice.

Third, the mystery client study is used to measure process quality, but given that the mystery client is not a clinician, not all aspects of clinical quality can be measured by this type of study. Finally, the scenario must be created such that the mystery client is not receiving medically unnecessary or "irreversible" drugs and services, such as a vaccine or IUD insertion. Consequently, many franchised services, such as long-acting and permanent FP method provision, cannot be assessed via a mystery client study.

D: Facility surveys

Facility surveys usually assess structural quality, including the presence or absence of utilities, whether spaces are clean, price levels, stocks, and availability of tools and commodities required for service provision, as well as some aspects of process quality, such as the presence of a trained provider. Facility surveys can be combined with provider surveys, direct observation, observed simulated patient studies or client exit interviews to provide a more complete picture of quality.

Facility surveys often use checklists and simple questionnaires, and can be completed via self-report or by an interviewer without an advanced or clinical background. Detailed assessments of equipment and commodities may require more detailed questionnaires, but if no procedures are being observed, a clinically trained interviewer is not required. In facilities that have a relationship with PSI, or a promise of a future relationship, conducting a survey is generally not considered difficult by research staff. Response rates are high, and the survey can be unobtrusive to clinic operations. Stock and coverage surveys are a

method often used by PSI in its role as a social marketing organization, to ensure that products are being distributed and the private sector supply chain is working as envisioned. Data from such surveys has been an important advocacy tool for franchisors to use in working with policy makers to improve access to necessary products and services. Surveys where PSI has tried to include a comparison group have been more challenging, as non-affiliated facilities may refuse to participate, or governments may not easily agree to assessments in the public sector.

E: Client exit interview

The client exit interview has been used to assess perceived quality, some aspects of provider technical quality, and client satisfaction. It can also capture additional data such as clients' wealth and demographic profiles and care-seeking behavior. In family planning, exit interviews have been validated and used as a primary tool for assessing quality. In other services, such as those for curative care, exit interviews can be used to assess clinical outcomes, including procedures in the clinic or pharmacy, and treatments or prescriptions received, as well as counseling. Within a client-centered paradigm, exit interviews have also been used to assess client satisfaction or "acceptability" of services received.

Sample sizes for exit interviews are dependent upon the primary objective, but are often powered to assess quality for a particular clinical service type. In this case, facility data on client volume must be known, and the interview team must have the capacity to remain at the facility throughout the time period required to achieve the required sample. Most PSI surveys are designed with 80% power, and precision of the estimates can range from 5%-15%. Less precise estimates require smaller samples.

For a franchise, this type of study has a number of benefits: notably, it can be used to directly inform the marketing and branding strategy, to understand the client profile, and to provide information on perceived quality, choice of contraceptive methods, and whether or not clients feel adequately counseled.

Limitations of exit interviews include the fact that responses are dependent upon the recall of an

untrained client, who may not have observed all that occurred. Other drawbacks include the risk that clients may not have patience for long interviews, and the strong social desirability bias towards indicating satisfaction: clients may report positively out of courtesy, or fear that they will not receive friendly service in the future. The literature indicates that this bias can be addressed, for instance by asking clients if their expectations were met, irrespective of what these were, as well as by asking for their opinion on specific aspects of the encounter, rather than on their general satisfaction. PSI is experimenting with these types of questions in exit surveys.

In order to generate estimates with the desired precision for different health services, enough clients of each type must present at the clinic within a reasonable time period. Thus, PSI has found it difficult to use the exit interview to study the client perspective on long-acting and permanent family planning methods, or for seasonally endemic conditions such as malaria, as these generally have smaller numbers of presenting clients. In order to overcome limitations with regard to survey length, PSI has experimented with asking the survey in two parts—before and after the provider encounter. This can be operationally challenging and result in incomplete data if clients do not want to wait to be interviewed after receiving their services. PSI has also asked providers to request clients' consent to be followed up at their homes for interviews, in order to achieve a large enough sample size for rare events. This comes with its own set of problems, and introduces bias from the provider. Despite drawbacks, the exit interview remains an important method for understanding who visits a franchise, and for what service.

F: Provider surveys

Provider surveys assess providers' knowledge and behavior, which are considered to be a more distal indicator of quality. In addition to objectively quantifiable knowledge on appropriate care and practices, providers' attitudes and biases have been shown to play a role in the care they provide [13, 14]. Three techniques can be used to understand attitudes: vignettes, scales and binary, non-clinical questions. For example, to understand whether a provider is negatively biased towards providing family planning services to unmarried women, a vignette (small story) could

be designed that presents a scenario in which unmarried women are seeking family planning services, to which providers would be asked to respond; responses are then compared across providers. Alternatively, the possible bias could be assessed by constructing a scale to understand attitudes regarding premarital sex, in which a provider indicates his or her level of agreement or disagreement with several related statements. The responses would be combined into a single score. In the simplest fashion, providers could be asked whether they would provide a specific family planning service (such as an IUD) to women with varying clinical and demographic characteristics, including unmarried women. The assumption is that there is no clinical reason why an unmarried woman should not receive family planning, so any resistance to providing the service could be interpreted as a wrong answer. Occasionally, provider assessments are conducted using a qualitative approach. This may involve in-depth interviews with providers to understand causes of their attitudes, or their willingness to provide particular services.

Provider surveys can be used to assess single services or multiple areas of care, and to explore correlation with provider training, personal characteristics, or health facility characteristics. Such surveys can also fairly easily assess changes that may be attributed to particular interventions by including a control group, making them a good tool for evaluations and program planning for provider-oriented interventions. Provider assessments have been primarily used by PSI to design and evaluate trainings and behavior change interventions with network providers. As such, they focus on correct knowledge as well as on attitudes of providers related to the provision of desired services. These studies can be designed to be quasi-experimental, and can improve the evidence base regarding the effectiveness of the interventions on provider knowledge in the private sector in LMIC.

There are three primary limitations PSI has faced in using provider surveys to assess knowledge. The first is that knowledge is not the same as quality: it is correlated with quality, and is something that can be “intervened upon”; however, it is not clear whether providers with more and better knowledge always provide better quality

services. Second, there are several areas of uncertainty regarding the correct methodology for provider surveys, for instance, whether to sample one or more providers from a given facility or outlet, whether to take the most highly qualified provider or the one present at the time of the survey encounter, and, for longitudinal samples, how to draw inferences if a provider leaves the facility and intervention is facility-based. Research approaches such as an intent to treat analysis can be used in these cases. However, they are often not the best for programmatic decision-making, because the interpretation of results becomes more nuanced and less easily understood. Finally, despite having conducted numerous studies of provider knowledge and attitudes in family planning, PSI found that results were not easily comparable, particularly prior to the introduction of standard questionnaires. Subsequent to their introduction (after 2012), comparability across countries and time has improved.

G: Outcome assessments

As noted above, quality is highly correlated with positive health outcomes, but poor health outcomes can occur even with high quality care, due to patient characteristics and other externalities (which lie outside the scope of this paper). The converse—good health outcomes with low quality care—is also possible. Health outcomes, whether at the patient or population level, are a factor of much more than quality. Nevertheless, understanding the reasons behind a poor outcome may reveal problems with service quality that can be addressed, such that the likelihood of future negative outcomes is reduced. These types of assessments may be prospective, following clients over time to record their outcomes; they may be retrospective, through record review or case-control studies; and they may only be focused on the negative outcomes, such as through event audits.

Donabedian’s framework proposes that structural and process quality influence clinical and health outcomes. However, outcome assessments do not directly measure structural or process quality. They are difficult for two main reasons. First, adverse outcomes and complications are relatively rare events, requiring large sample sizes and long periods of time in order to achieve a sample large enough for meaningful data analysis. Second, both prospective and retrospective

outcome assessment designs rely upon accurate reports, which is especially an issue when working with private providers who are otherwise poorly regulated and may conceal poor outcomes out of fear.

PSI does not use outcome assessments as a research tool, but rather as a way to monitor and respond to rare but serious occurrences. Assessments are focused on a system of provider self-reporting of complications and adverse events arising from services supported by the franchise, whereby PSI, as the franchisor, provides support for care and treatment of the clients in question. The system is periodically tested through “drills” to ensure that it is working as intended. When combined with all client records, these reports could be used to calculate rates of adverse events and complications. However, as most public sector and non-franchised private sector facilities do not collect this data, the rates would be difficult to view in context. Furthermore, PSI suspects that complications may be misreported—the client with complications may seek treatment outside the network, or a provider may identify a complication for a service not provided by the franchise. In spite of the limitations of self-reporting, the adverse events and complications system is an important aspect of clinical quality assurance, not to mention a moral and ethical obligation, and provides useful data for PSI’s advocacy for the private provision of services in environments where the government is hostile to such provision.

H: Record review

Reviewing client records can be an assessment of process quality or clinical outcomes. Any inference drawn from record review is, however, predicated upon the records actually being present, complete and accurate. In fact, just having complete clinical records (as opposed to reviewing them) is often a quality criterion in and of itself, as this allows for better client follow-up, referrals, and diagnosis.

The review process is often laborious and time-consuming. It is improved when records are electronic. This is rare in low-income private sector settings, but franchisees are increasingly collecting client level data electronically. In 2015, six PSI franchise networks had this capability, and up to 22 PSI networks are projected to be able to by 2018. To date, PSI has not used record

review as a research tool, but could do so in the future, in order to understand the prevalence of health conditions, outcomes, and referrals, and their correlation to particular behaviors such as use of family planning.

Quality measurement tools used by PSI

PSI has used many of the above-mentioned quality assessment tools extensively. In some instances, they are designed as true research studies, to be representative of a specific population and generalizable to all members of that population. This is most often true for mystery client surveys, facility surveys, provider surveys and client exit interviews. In other instances, the purpose of the assessment is routine monitoring of quality, or to obtain a “snapshot.” In these cases, there is no formal study design and probability-based sampling procedure. However, the information gathered is still a quality assessment. Direct observation is an example of an assessment type which has been used in formal research studies, in routine monitoring through supportive supervision visits to providers, and in external quality audits, which are process assessments.

Different methods are appropriate for different aims of quality measurement, for instance assessment of knowledge, clinical practice, or client satisfaction, and for different theoretical domains of quality, such as the Donabedian domains of process, structure, and outcome [7]. Many other factors also influence the choice of method, including donor desires, fiscal and human resource considerations, the amount of time needed versus available for the assessment, whether the information gathered can serve multiple purposes, and whether information gathered will be used for external advocacy and dissemination or internal purposes. Choices of method are often made when funding proposals are written, since all quality assessment requires financial resources.

Possible methods for a given aim are weighed against what might be considered the gold standard of quality assessment, which is direct observation of providers with a follow-up assessment of health outcomes [15]. The level of scrutiny this approach

requires is, however, usually not realistic in any setting, whether low-income or high-income, due to the financial and human resources needed.

Lessons learned and recommendations for quality assessment

Quality assessments in health have been described as comprising structural measures and process measures, of which clinical assessments are a subset. In family planning specifically, a complementary framework described six domains to delve more deeply into the things that make up structure and process [8]. Many tools exist to measure components of quality, and eight were reviewed here. Each of these tools has advantages and disadvantages; for example, direct observation with clinically trained observers is best for understanding a provider's clinical quality, yet it is time- and resource-intensive. A mystery client study can capture how providers performs, and their attitudes, when they do not know they are being assessed; however, its utility for observation of clinical skills is limited.

There are many decisions made, implicitly or explicitly, in choosing which aspects of quality to measure and which method to use. PSI has struggled first with deciding whether to measure process quality broadly or clinical quality alone. Broad measures of process quality would include provider knowledge and attitudes, family planning counseling and follow-up, and even client perceptions of the entire interaction. It most often measures both, though measures which assess knowledge and attitudes of providers are designed as research studies, while assessments of clinical quality, such as direct observation during supervision visits, are part of the franchise supervision and management system. Ensuring clinical quality is the most important objective in the franchise's quality assurance system.

Use direct observation if possible

Most of the research methods available to assess quality do not directly or comprehensively measure clinical quality. Measures reliant upon patient or lay observation are limited in what they can report, as are those using simulations, and quantitative provider assessments of knowledge (such as contra-indications for use of a particular FP method), while correlated with clinical quality,

are not truly representative of clinical quality. For these reasons, PSI believes that direct observation is preferred to assess clinical quality.

Yet, PSI struggles with how to best undertake direct observation of provider skills. The system described above—four-tiered, using both real patient/provider interactions and hypothetical ones, assesses clinical quality for the purpose of immediate improvement, mentoring, and resource allocation of training, as well as to ensure that the quality assurance system is working. Observation visits, particularly external audits, are expensive and require a great deal of coordination between the auditors, program staff, and providers to be visited, and require assurance that clients will be present at the facility during the visit. Further, the resultant observation data is not generalizable to the network, and not representative of routine service provision, given the advance arrangements required.

Private providers in LMIC generally have not received the necessary years of mentorship and training required to master the specialized clinical skills that would enable them to assess others on those same skills. For this reason, and until providers have greater ownership, PSI believes that this external quality assurance system is required (rather than relying on a national system). However, since the external audits are not research studies, and thus sample sizes are generally not large enough to allow generalization of results to the entire network of providers, other studies, such as client exit interviews, mystery client surveys, etc., should be used to supplement the quality assessment.

Increase cost efficiency

In choosing quality assurance methods, cost is an important consideration. Studies need to be planned during the proposal stage (as franchises are donor-funded) and appropriately budgeted. Although organizations receiving large implementation grants may be able to fund the variety of data collection methods required for a holistic assessment of quality, smaller programs, or those in countries where donor funds are more restricted, need to choose judiciously.

The standard questionnaires and indicators introduced by PSI also increase cost-efficiency,

although that was not their primary objective. The tools can be used across different donor-funded programs, reducing the need for parallel monitoring and evaluation systems. Standard questionnaires exist at PSI for family planning provider and facility surveys as well as client-exit interviews. Most franchise networks are cross-subsidized with various sources of funds, and having a streamlined and standard set of indicators minimizes redundancies (and hence costs) in quality assessments. For example, if PSI has committed to one funder to implement activities to improve provider knowledge with regard to IUDs, the same set of questions is used to assess provider knowledge for reporting purposes for all other sources of funding as well. If needed, this same set of questions could also be used outside the franchised context, though with minor adjustments. When used with pharmacies or drug shops, for instance, surveys often need to be made shorter and less clinical. These questionnaires are standard within PSI, but not across other franchise organizations. Thus, comparability with results from other organizations is limited, and subjective based upon the decisions made by the researcher in presenting the results. Cost-efficiency would be further improved if funders requested the same output and outcome indicators across organizations, or if franchisors themselves agreed to a common set of indicators. In East Africa, PSI is exploring collaboration with external accreditation organizations such as SafeCare to outsource and standardize quality assurance. In areas with more mature health insurance markets (national or private), franchises could follow the example of Blue Star in the Philippines, whose clinics are accredited by PhilHealth. Still, most accreditations focus on structural and process quality, assuming that these are sufficient indicators of clinical quality and positive health outcomes.

Another way to improve cost efficiency is in the conduct of direct observation of the various health services provided by franchises. Many franchise networks focus on family planning services, or one service type alone. In contrast, 16 out of 25 PSI franchises provide services in two or more health areas, defined as family planning, HIV, child health, TB, maternal health, etc. PSI's quality assurance system started with FP services, and is focused on long-acting reversible contraceptives (LARCs). Yet, the system could be made

more cost-effective and efficient if all franchised services could be integrated within one visit or assessment. A franchisee may currently receive separate direct observation visits to assess family planning and HIV services, for instance. The challenges noted earlier (e.g., needing observers to be trained in the services they are observing) have precluded this from occurring, as has a historical structure which is "disease-specific." A more streamlined approach would use fewer human resources in the form of auditors and supervisors, as well as take less time away from providers' service to clients.

Integrate technology into quality assessment

As mobile networks and internet connectivity improve within the countries in which we work, franchisors such as PSI can exploit technology for quality assessment. PSI is already equipping some of its supervisors with tablet computers in order to collect clinic data, see past performance, use checklists to assist in direct observation, and have tools/videos/materials at hand to aid in mentorship. One could imagine a future in which providers log on to complete knowledge and attitude surveys, study case vignettes, or link with their supervisors for supervision visits via video-conference.

Adopt validated tools

Decisions to use a particular tool, such as vignettes, or to assume clinical quality is sufficient if knowledge is high, should be externally verified. In other words, have other studies been done which suggest that vignettes are a good way to assess family planning quality, or that clinical quality and provider knowledge are highly correlated? Franchisors should adopt methods of assessment and evaluation that have been tried and tested, to the extent possible. If new methods or questionnaires are required, franchisors should formally share results, in publications and presentations, in order for others to learn.

Ensure the data is used

Collecting quality information through a variety of tools and approaches is meaningless if the data is not used. Within PSI, experience has shown that research studies (provider and facility surveys, mystery client studies, etc.) are not often interpreted in conjunction with information from direct observation. An understanding and review of the

research is not a part of the external quality audit, despite the fact that data from research studies can provide context for the auditor. In order to maintain the anonymity of survey results, staff cannot link data from supervisory visits with results of surveys. Yet data from research and routine monitoring could be presented in aggregate at a subnational level, or stratified by provider type, so that correlations between the observed clinical quality and structural quality or other aspects of process quality can be seen. In order to be most interpretable and accessible to an array of program staff, data from research studies should be simple descriptive statistics, as opposed to multivariate analyses. Finally, these data should be presented to the franchisees themselves, to influence their service provision and engage them in co-owning the quality agenda and brand promise of the franchise network.

Conclusion

Organizations have many choices in assessing quality, and would benefit from some guidance on and standardization of their chosen methods. Standardization would allow for quality to be

reliably compared across organizations, across countries, and over time to see if real differences are apparent. Guidance on measurement methods can take into consideration the experiences of PSI and others who have used many approaches in low-income settings and can provide a “real world” perspective. A standard approach to measuring family planning quality should balance cost-efficiency and use of technology with the use of validated tools and direct observation when possible. The trade-offs implied here—the costliness of direct observation versus the limited ability to assess clinical quality through a mystery client or client exit interview—need to be carefully considered in the process of designing a standard approach to family planning quality measurement. Finally, enthusiasm for a standard approach from donors and decision-makers, fed by the use and usability of the data produced, will increase the likelihood of moving from an esoteric exercise of creating a standard approach to a useful tool for franchisors and providers.

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11

The quality of healthcare: Measurement *of* improvement or measurement *for* improvement?Pierre M. Barker ¹

Introduction

The quality of health care needs to be assured and continuously improved, and measurement is a critical part of ensuring the success of this process. The way in which quality of health care is regulated and improved has undergone significant changes over the past half century, and with this, there have also been major changes in how quality is measured, with the most rapid change in high-income economies. One feature of the evolution is that health systems are now turning to quality measurement methods that have been used in manufacturing and other service industries for many years. Following the model of quality described by Donabedian [1], measurement of quality revolves around the responses to three questions:

- Does a given healthcare facility have the inputs required for the provision of high-quality services?
- Is the facility reliably implementing processes that can ensure high quality?
- Is the facility producing the desired health outcomes?

While the answers to all three will help the public, practitioners, managers and leaders to understand the quality of health facilities and of the health system as a whole, the purpose of measurement is a key driver of what should be measured, how it should be measured and who should measure it.

Yet as the approach to assuring quality in health care has transitioned from reliance on inspection-driven quality control (QC) methods to more dynamic and locally-driven quality improvement (QI) approaches, a false dichotomy has emerged between these two approaches. This paper describes the various types of QC and QI, focusing on the interplay between them, their development

and use in low- and middle-income countries (LMIC), and their advantages and disadvantages. It is hoped that the discussion will prove useful to those interested in finding more efficient and effective ways to measure quality in various areas of healthcare, especially in LMIC.

The purpose of quality measurement: Differentiating between quality control and quality improvement

In the quest for measurement of quality, it is important to be clear about the focus, whether it be quality control (QC) or quality improvement (QI), because there are crucial differences in the way in which measurement should then be undertaken. The importance of differentiating between QC and QI was articulated by Joseph Juran, who had a major influence on modern quality management thinking. Juran described an interplay between three key domains of quality management: planning, control, and improvement [2]. Juran differentiates between *quality control*, described as “*staying on course, adherence to standard, prevention of change*”, assumes that the system as currently configured could actually deliver the expected result, and *quality improvement*, described as “*a change, a dynamic, decisive movement to new, higher levels of performance*”, assumes that significant redesign of the system is required in order to achieve a different (better) result or to restore the required level of function [3].

In QC, we are concerned with the measurement of quality in a system that is capable of performing to the existing design specifications, where measurement is done (continuously or intermittently) in order to verify that level of performance. In health systems, QC can be externally or internally measured. The QC process described by Juran uses *internal inspection*, meaning

continuous measurement by local health system participants, for example a manager or frontline worker, to track performance. If a facility's performance falls outside accepted limits, some action is taken, for instance root cause analysis and corrective action to increase adherence to standards. This type of action is best suited for minor corrections in performance. It cannot be used to fix major or persistent deviations from expected performance, unless QC is linked to a QI process. Although Juran reserved the term "quality control" for continuous real-time performance evaluation, for the purposes of this review we use QC to describe both internal monitoring and *external inspection* methods (e.g., audits and accreditation) that fall under the term "quality assurance". In more developed economies, where routine data collection and reporting systems are more reliable, internal monitoring is more common, while *external inspection* is more common in LMIC (see below).

In contrast, in QI, measurement is done *for* quality, with a purpose-built, time-limited strategy to measure activities and outputs resulting from a new design intended to reach higher levels of performance. QI measures can include routine process measures used for quality control as well as purpose-built measures that are tracked closely only during the improvement process (i.e., until the desired state of quality is reached). For example, the rate of infection may be measured as part of both quality control and quality improvement, but handwashing rates may be measured only during introduction of new efforts to reduce infection rates. QI can be challenging to implement well, even in high-income countries (HIC); for example, while HIC advances in electronic data capture at the point of care have had a generally positive effect on quality, they have also ironically led to an overwhelming amount of internally collected and reported data that may be hard to channel towards performance improvement [4, 5].

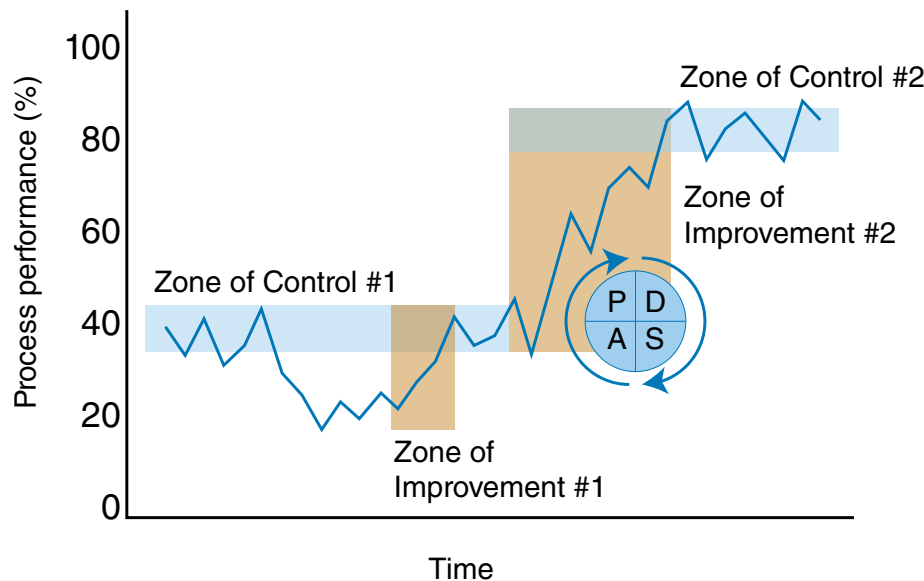
Balancing QC and QI

In both HIC and LMIC, there has been an imbalance between QC and QI methods in efforts to manage quality, with QC usually emphasized, although more recently, QI approaches have been gaining ground. In Juran's framework, there is a clear interplay between QC and QI, with QC

playing an important role in maintaining quality at predetermined levels, and QI being implemented as a strategy to restore quality if results are slipping, or to achieve a higher level of quality altogether. The figure below illustrates this process with a hypothetical example. In this example, the initial expectation for a clinical process is that it be performing at about 40% of the expected level of quality according to some quantitative scoring method. At the start of the period of observation, the process performs within acceptable control limits (i.e., within zone of control #1, between about 38% and 42% of the expected level of quality). However, after a while the process performance slips and a QI intervention (zone of improvement #1) restores performance to the desired level. The QI intervention could, for example, be root cause analysis of performance gaps followed by iterative rapid testing of new ideas. A key QI approach is the Plan-Do-Study-Act or PDSA cycle, a quick method of testing ideas for their potential to effect change that could, if successful, be translated into standard work processes to maintain new (higher) levels of performance [6].

If a new goal is set that requires the process to perform at a much higher level (say, 80%), a new design for system performance improvement is likely to be required. The process enters a new zone of improvement (improvement zone #2), where strategies or ideas for improvement are tested using multiple PDSA cycles. Once the new performance goal is achieved, quality control is again needed, and new standard work processes are institutionalized; these will help ensure that there is no slippage of performance (zone of control #2). The knowledge that is gathered from these experiences of improving and controlling quality can then be incorporated into future efforts to do the same, ensuring that the necessary specifications and interventions become part of designs for better system performance; this is known as *quality planning*.

Figure: The relationship between quality control and quality improvement (P=plan, D=do, S=study, A=act) (adapted from [7])



Measuring QC and QI in resource-constrained settings

In LMIC, a limited number of tools have been used by system administrators and managers for both measurement of and for quality of healthcare services. Quality assurance, or QA, is a commonly-used approach for quality control in these settings. It is a process of *external inspection* in which the performance of health care processes or outcomes is measured by people external to the site of care delivery, for instance system managers or external auditors, against pre-determined standards. If standards are not met, then as with other forms of QC, there is often an expectation that the facility will take action to improve quality. Types of external inspection include accreditation, routine or reactive audits, routine reporting to District Health Information Systems (DHIS), and secret patients; external audits in particular have become a mainstay of QA.

As in higher-income economies, there has been an imbalance between QC and QI methods in efforts to manage quality in LMIC, where the dominant mechanism has been through inspection (accreditation and audits), although more recently, QI approaches have been gaining ground.

In LMIC, the accreditation movement has grown, but has mostly been limited to larger institutions. It is predominantly undertaken in the private sector where it is used as a marketable differentiation of quality (although there is no evidence to support a link between accreditation and certification of hospitals and measurable changes in the quality of the care they provide [8]). A number of countries have instituted their own accreditation and licensing systems. Newer options for measuring institutional performance through a “grading” system mean that a much broader range of primary care clinics and hospitals is being evaluated against standard measures [9]. While these inspection systems provide external validation of agreed measures of “quality,” their disadvantages are that they are expensive, time-consuming for the facilities, and provide only a “snapshot” of performance at the time of inspection. Further, the measures associated with the accreditation process are largely focused on counting inputs. However, the measurement of quality of the processes of care has expanded over time through the use of “key performance indicators” [9]. Also, in line with the increasing understanding of the importance of the roles of both QC and QI, newer accreditation grading systems are increasingly being supplemented by QI methods

such as data feedback and redesign support for failing processes in facilities that aspire to achieve expected levels—or reach higher levels.

Other external inspection approaches, such as external review of facility data by external data teams (external audit), are quite common among the non-governmental organizations and funders that support health care delivery in LMIC. Audits are used for planning and evaluation, but increasingly efforts are under way to follow external audits with QI approaches such as feedback and support for improvement when gaps in performance are detected. A recent systematic review of healthcare facilities in African countries indicated a small increase in process compliance after audit and feedback; effectiveness was greatest when initial process performance was poor and the audit was conducted internally rather than externally [10].

In-facility observation has been used to audit whether specific tasks or activities are being undertaken; trained observers may verify whether items indicated as “completed” on activities checklists have actually been done [11]. The advantage of this approach is that it enables measurement of the quality of healthcare processes and the qualitative performance of care providers. The disadvantages are that it is liable to the temporarily performance-enhancing influence of observation (the “Hawthorne effect”), expensive, and difficult to scale up. Another approach, the standardized patient (based on the “secret shopper” model from the retail industry), has been used in India and China and found to be an accurate way to measure the quality of care provided by practitioners for a standardized clinical problem in a primary care setting, eliminating the bias and influence of the external observer [12]. This method is useful for program evaluation and implementation research, but its application across complex programs and its scalability are likely to be limited by expense. The approach also carries a risk that health workers who are being monitored will feel “policed” by the process [13].

The over-reliance on external inspection systems for QC is related to the weaknesses of internal monitoring systems (facility-based data collection and reporting systems) in LMIC. Excessive reliance on external inspection was discouraged in manufacturing by the “father” of quality control,

W Edwards Deming, who stated that the need for “inspection on a mass basis” could be eliminated by building quality into the product (or process) in the first place [14]. Nonetheless, external inspection became the dominant mechanism in early efforts to ensure quality in health care, and has persisted until recently as a primary means of “assuring” quality in LMIC. While useful to varying degrees as an external validation of internal measures of quality, all external inspection methods have limited utility for improving quality, as they cannot be used for continuous quality control by facilities themselves. External inspections systems are also less likely than internal systems to ensure accountability of the inspected health facility staff for their own results. Yet internal quality control systems also face challenges, particularly that they are vulnerable to data inaccuracies, incompleteness and tampering, as facilities may be expected to achieve quality targets without sufficient support, or staff may be subjected to negative consequences for reporting adverse outcomes or performance.

In the past, quality improvement was expected to be achieved through a variety of means within the same basic system design (e.g., re-training, incentives, disincentives), but more recently there has been an emphasis on redesigning systems for better performance after gaps have been identified. As in higher-income settings, quality management systems that include both QI and QC are increasingly being introduced into LMIC health systems. In these settings, facility teams are provided with frequent or continuous performance data on their processes of care and outcomes. A successful example of this approach is the Prevention of Mother-to-Child Transmission Program in South Africa in which individual facilities receive feedback on the process and outcome data that they submit monthly to routine data reporting systems [15]. Routine data collection and reporting systems are notoriously inaccurate and need to be made reliable before they can be used to drive the improvement process [16]. While there are many examples of projects that routinely use systems that measure *for* improvement, and the use of continuous measurement of and for quality is increasing rapidly, these systems have to date rarely been institutionalized into health systems in LMIC. Hybrid systems that use audit

Table 1: Data for quality control and improvement: Activities, report types and sources

	DATA COLLECTION ACTIVITY	REPORT TYPES	SOURCE
DATA FOR QUALITY CONTROL	<i>Routine monitoring:</i> Continuous monitoring of key input, process and outcome data (internally collected)	Data dashboard, run charts, histograms	Register reports for DHIS, internal collection and reporting tools, chart reviews, surveys, checklists
	<i>Intermittent inspection:</i> Monitoring of a host of system inputs and processes (externally collected)	Audits, accreditation, data sampling	Checklists, surveyor reports, purpose-built reports, provider observation, secret patient methods
DATA FOR QUALITY IMPROVEMENT	Purposive data collection to drive breakthrough improvement	Run charts, statistical control charts, quality cross improvement stories	<i>Ad hoc</i> tools to support PDSA, checklists, data extraction from charts, registers, checklists

and feedback together with rapid cycle breakthrough improvement approaches to addressing gaps have introduced QI to many settings [17].

A limitation of QI measurement is that very often the process measures required for QI are not available for collection and reporting through the routine measurement systems of clinics and districts. Often measurement of this type is undertaken by external agencies, limiting the sustainability and scalability of the QI process in the absence of these agencies. An exception to this reality is the South African government program mentioned above, a large-scale quality improvement initiative which tracks the progress of screening and treating mothers infected with HIV using routinely collected data [15].

The table above provides examples of the types of data collection activities, report types, and sources of data for QC (depending on whether data is being collected and reported intermittently or continuously) and QI. While the sources of data for QI can be the same as for QC, data for QI are often *ad hoc* and collected for the specific purpose of improvement.

Conclusion

In summary, in LMIC settings, inputs, activities and outcomes are still largely measured through external, intermittent inspection, and until recently, efforts to improve quality have been limited by an over-reliance on this approach and a mistaken view that quality goals can be reached through external inspection alone. While external inspection may be useful for evaluation and planning, it is

of limited value on its own for breakthrough quality improvement, and in low-income economies, these resource-intensive approaches are unlikely to be deployed on a large scale. The performance of processes is best measured through internal, continuous monitoring—yet this approach is difficult, especially in LMIC settings where routine data measurement systems are weak, and where honest reporting may be disincentivized if poor performance is linked to punitive governance approaches.

The increasing popularity of QI approaches may help in the improvement of system performance, but QI is also highly vulnerable to weak data systems. In an ideal world, the performance of healthcare systems will be measured by a combination of internal and external measurement approaches for quality control and primarily internally collected measures for quality improvement, supporting a balanced interplay between the two. The gap between the current reality—many challenges to effective implementation of both QC/QA and QI approaches, especially in LMIC—and this ideal world may be fairly wide, but it can be bridged, if health system planners adopt a balanced approach, developing the capacity and the tools to accurately implement and report on these complementary methods for measuring quality of care.

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12 Benchmarking to assess quality of family planning services: Construction and use of indices for family planning readiness in Kenya with data from 2010 and 2014

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Background

Ensuring high quality family planning (FP) services is critical to the sustained uptake of a broad mix of contraceptive methods and to helping men and women realize their desired fertility outcomes [2, 3]. Measurement of quality in family planning has traditionally focused on clinical care and the process of service delivery. Key concepts that must be incorporated within the quality assessment of family planning are captured in the Bruce framework, including choice of contraceptive methods, information given to users, provider competence, client and provider relations, re-contact and follow-up mechanisms, and appropriate constellation of services [2, 4]. The state of facility infrastructure and utilities, client health status, and demographic outcomes as indications of family program quality are less commonly used than are indicators relating to process such as service accessibility [5], medical policy and practice barriers [6], and service readiness [7]. More recently, rights-based frameworks for family planning programming have incorporated the availability, accessibility, acceptability, and quality (AAAQ) framework and human rights to broaden the understanding of quality in family planning programs [8].

A key challenge in quality improvement lies in setting appropriate standards that are reasonable to achieve, distinguish high- from low-performing providers, and help low performers to undertake quality improvement over time [9, 10].

Benchmarking in health services is defined as a regular collaborative process of measuring key attributes of and clinical processes for health-care to identify best practice, compare practices within an organization (“internal benchmarking”), use comparative data between organizations to judge performance (“external benchmarking”), or examine trends over time [11].

For FP program managers, measurement of quality serves two purposes: differentiating high and low performing facilities for internal quality assurance, and benchmarking facilities against a broad, often national, context of FP service delivery and quality. In many national health systems and other large health networks (e.g., social franchises), it has been difficult to create and implement a single quality metric that can serve both purposes. This is also true of FP franchises, in which quality measurement has typically involved a complex, non-standard series of tools and procedures, including clinical quality audits, client exit interviews, provider competence assessments, patient safety monitoring, and spot checks on adherence to franchise protocols [12]. The quality metrics derived from these sources may be comparable across the franchise’s programs and even over time. However, they are generally unique to the franchise and hence it is not possible to benchmark them to national or regional standards [13].

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In low- and middle-income countries (LMIC), benchmarking data on healthcare quality are scarce, but the USAID-funded National Service Provision Assessment (SPA) that has been used to describe the performance of healthcare facilities by type and location is a promising dataset with standard components that has been used in 16 countries since 1997. In Kenya, the 2004 SPA data were analyzed to compare differences in family planning quality between public and private facilities [14]. Another recent paper used the Kenya 2010 SPA to analyze variations in the quality of antenatal care in Kenya [15]. In this paper, we demonstrate one approach to FP quality measurement that can address FP program managers' need for a single quality metric that can both differentiate high and low performers and benchmark facilities against a broader (e.g., national) standard, using readily available SPA data to develop a summary FP index for facilities. As far as we know, this is the first time that an index for FP service readiness has been created from SPA data by scoring the quality of nationally representative facilities and comparing them to quality scores in a local cluster of facilities of programmatic interest (in our example, public facilities in Bungoma County, Kenya).

Methods

Data sources

Kenya SPA

The 2010 Kenya SPA survey included a nationally representative sample of 690 formal health facilities with data on various service areas such as FP, maternal and child health, and infectious diseases. Specifically, the survey provided data on facilities' capacity and readiness to provide quality care, providers' training and characteristics, health worker performance, and clients' satisfaction and perception of service quality. A primary goal of the SPA survey was to illustrate the strengths and weaknesses of service delivery according to funding ownership status (government, non-government organizations (NGOs), private providers, and faith-based organizations) and province (the highest-level administrative unit in 2010). The survey also provided data according to facility type (hospital, health center, maternity, clinic, and dispensary).

Facility audit is one of four tools used in the SPA to collect facility-level data on structural quality or service readiness indicators. For FP, data is collected on whether or not a facility provides services and commodities on site (*i.e.*, service availability) by individual contraceptive method. Data is also collected on the observed availability of clinical guidelines, visual aids or booklets for counseling, and of equipment and commodities on the day of assessment. Standardized methods are used to ensure data quality and comparability across countries. Detailed information on SPA survey methods is available elsewhere [16, 17].

Bungoma County Facility Audit

A 2014 audit of 43 public facilities in Bungoma county, located at the western end of Kenya, was part of a baseline survey conducted by the Population Council in four sub-counties prior to a maternal health systems strengthening intervention by Save the Children. The baseline survey objectives were to measure the facilities' readiness to provide reproductive and maternal health services and to identify gaps that could be addressed by the health systems strengthening intervention, using 35 service availability and readiness indicators. For the survey, sections of the facility audit tool from the Kenya 2010 SPA were adapted, enabling us to benchmark the capacity of Bungoma county public facilities against national data from the Kenya 2010 SPA.

Samples

Of the total of 690 sampled facilities in the Kenya 2010 SPA, 612 facilities offered FP services. Of these, 573 facilities had complete data on all 35 variables of interest, and were thus included in our analysis. Data from all 43 facilities in the Bungoma county 2014 survey were analyzed. Some of these may have also been included in the Kenya 2010 SPA sample. They were not removed from the analysis in order to maintain national representativeness of the SPA data.

Index composition

For the creation of the index, we selected 35 questions on FP service readiness that were asked both in the 2010 Kenya SPA survey and in the Bungoma County survey (see Table 1) [16]. The choice of FP service readiness (rather than, for instance, observation of client-provider interaction) was driven simply by data availability,

since the aim of this paper is to demonstrate proof of concept rather than to develop an index for a particular aspect of FP program quality *per se*. Questions were selected to cover as many aspects of FP service readiness as possible. A parsimonious selection of questions would dictate selecting the smallest possible number of questions while not negatively affecting index performance. We judged it inadvisable to use fewer than 35 questions, though, since the widely used household asset wealth indices also use roughly this number of questions [18].

The questions, all relating to structural quality or service readiness, were each coded in the same direction (1 = positive, available; 0 = negative, unavailable). Categories of categorical variables with more than two categories were collapsed into binary variables to ensure comparability between the two datasets. For example, for availability of method-specific services, original response categories included “provide,” “prescribe/counsel,” and “don’t provide” in the Kenya SPA and “available” or “not available” in the Bungoma county survey (see Annexes 2.3 and 3.8). In order to create binary variables, only “provide” in Kenya SPA and “available” in the Bungoma county survey were coded to “1.” Responses for “don’t know” and missing were recoded to “0” for all variables.

Ten of the 35 variables examined availability of services to provide long-acting and short-term FP methods (including male and female condoms, injectables, oral contraceptive pills, emergency contraception, and IUCDs); one represented availability of private space for FP examinations; 11 represented availability of surgical equipment for implants and IUCD insertions (including sterile latex gloves, sterile syringes, speculums, and uterine sound machines); eight represented observed stocks of long-acting and short term methods; and five represented availability of counseling materials including posters, policy guidelines, and demonstration models.

Analysis

We constructed a family planning readiness index to benchmark Bungoma County public facilities against a nationally representative set of facilities (see Box 1). First, we conducted a principal components analysis (PCA) on the 35 included questions in the 2010 Kenya SPA [19, 20]. The

Steps for the creation of a quality measurement index

1. Identify the questions that reflect your area of interest. These questions need to be the same in both the national survey and the local survey
2. Conduct the surveys/collect the data
3. Analyze national data to generate weights
4. Analyze local survey data by applying standardized (national) weights
5. Interpret the results

For a similar step-by-step process, see [1].

PCA produced factor weights for each of the 35 variables. A normally distributed, continuous index score from the components was then calculated. This score quantifies each facility’s FP readiness. In our analysis, facilities from the Kenya SPA were then grouped into quintiles based on their FP readiness PCA index score ranking (herein-after referred to as “readiness quintiles”). Similar procedures have been widely used to generate household asset wealth indices in populations lacking readily available income data [18, 21].

A second FP readiness index was constructed using the Bungoma survey data. In order to compare the local (Bungoma) and national (Kenya SPA) FP readiness scores, each of the 35 variables from Bungoma was first standardized against the national data distribution, using the corresponding mean and standard deviation from the Kenya 2010 SPA. Each of the factor weights from the PCA analysis of the Kenya SPA was multiplied by the corresponding variable from the Bungoma survey, which was first standardized by applying the mean and standard deviation. The resulting FP readiness PCA index score for each of the Bungoma facilities was then compared to the national distribution. Bungoma facilities were assigned to the corresponding national readiness quintile based on their index score [1]. The percentages of facilities in each FP readiness quintile were compared (from the Kenya SPA sample, the subset of all public facilities in the Kenya SPA sample, and the Bungoma County audit sample). The subset of all public facilities in

Table 1: Family planning readiness of 573 healthcare facilities in Kenya, 2010, mapping Kenya SPA FP Readiness Index scores onto national FP readiness quintiles, by facility type and ownership, n (row %)

READINESS QUINTILE						
FACILITY TYPE	Lowest (Q1)	Second lowest (Q2)	Middle (Q3)	Second highest (Q4)	Highest (Q5)	Total n (col %)
HOSPITAL	25 (11)	24 (11)	46 (20)	55 (24)	79 (35)	228 (40)
HEALTH CENTER	17 (19)	15 (16)	20 (22)	25 (27)	14 (15)	91 (16)
CLINIC	31 (40)	12 (16)	16 (21)	12 (16)	6 (8)	77 (13)
DISPENSARY	36 (27)	59 (44)	21 (16)	12 (9)	5 (4)	133 (23)
MATERNITY CLINIC	6 (14)	4 (9)	12 (27)	12 (27)	10 (23)	44 (8)
TOTAL	115 (20)	114 (20)	115 (20)	115 (20)	115 (20)	573
FACILITY OWNERSHIP STATUS*						
GOVERNMENT	33 (10)	86 (26)	67 (20)	67 (20)	77 (23)	330 (58)
NGO / PRIVATE	5 (31)	5 (31)	2 (13)	1 (6)	3 (19)	16 (3)
PRIVATE	41 (25)	19 (12)	32 (19)	43 (26)	30 (18)	165 (29)
MISSION	36 (58)	4 (6)	14 (23)	4 (6)	4 (6)	62 (11)
TOTAL	115 (20)	114 (20)	114 (20)	115 (20)	114 (20)	573

* Refers to type of facility owner

the Kenya SPA sample was chosen to illustrate the potential uses of the FP readiness index since it is a reasonable comparator to the county facilities, which were all public.

To assess the reliability of the two indices, the Cronbach's alpha test was carried out on each.

In order to assess the sensitivity of the PCA approach, an alternative method to calculate the FP readiness index was conducted by simply summing the values of the 35 variables (also called the equal weights or additive method), with a maximum score of 35 for each facility. The scores from the additive index for the national SPA facilities were grouped into quintiles and the quintile cut points then applied to the additive scores

for the Bungoma public facilities. The quintiles for the Bungoma facilities produced by the PCA and additive methods were then compared.

All statistical analyses were conducted using Stata for Mac software (versions 11 and 14). As the data are derived from health facility audits, no human subjects were involved in the primary data collection.

Results

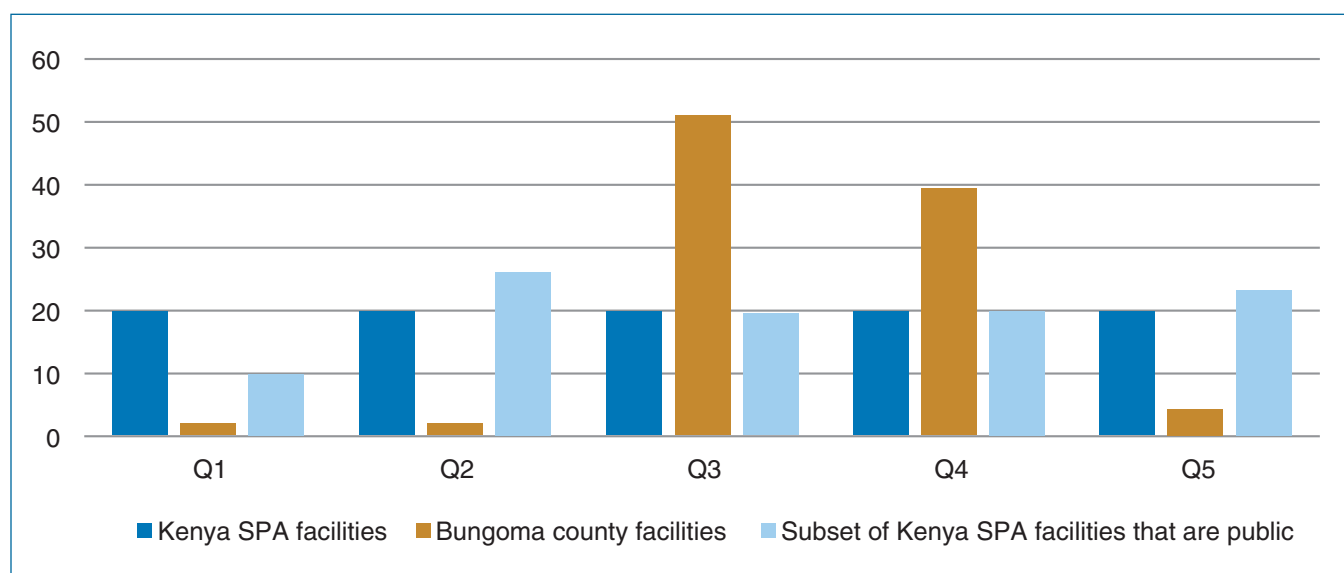
Kenya SPA FP Readiness PCA Index

The range of the Kenya SPA FP Readiness Index scores was -6.86 to 5.36, with a mean of 0.78 (data not shown). When broken down by ownership type, government facilities had higher FP readiness than other types of facilities (NGO,

Table 2: Family planning readiness of 43 healthcare facilities in Bungoma County, Kenya, 2014, benchmarked against national FP readiness quintiles, by facility type, n (col %)

READINESS QUINTILE	HOSPITAL	HEALTH CENTER	DISPENSARY	TOTAL
LOWEST (Q1)	0	0	2 (3)	1 (2)
SECOND LOWEST (Q2)	0	0	0	1 (2)
MIDDLE (Q3)	0	5 (45)	17 (57)	22 (51)
SECOND HIGHEST (Q4)	1 (50)	5 (45)	11 (37)	17 (40)
HIGHEST (Q5)	1 (50)	1 (9)	0	2 (5)
TOTAL	2 (100)	11 (100)	30 (100)	43 (100)

Figure 1: Comparison of percentages of facilities in each FP Readiness Quintile (43 Bungoma county facilities, 573 Kenya SPA facilities, and all 330 public facilities from the group of 573 Kenya SPA facilities)



private and mission), with just 12% of government facilities in the lowest FP readiness quintile, while mission facilities had the lowest FP readiness, with 58% in the lowest FP readiness quintile (see Table 1). When broken down by service type, clinics and dispensaries had the lowest FP readiness, with 41% and 30%, respectively, in the lowest FP readiness quintile, as compared to hospitals (11%) and maternity clinics (14%).

Bungoma County Survey FP Readiness PCA Index

The range of Bungoma County Survey FP Readiness Index scores was 0 to 5.30, with a mean of 3.08 (standard deviation, SD=1.08) (data not shown). Half of the 43 Bungoma facilities (51%) had “medium” FP readiness and another 40% were in the second highest FP readiness quintile (see Table 2). Results were similar to those at the national level, though less pronounced: both hospitals scored were in the two highest FP readiness quintiles, while dispensaries were mostly in the middle and second highest quintiles.

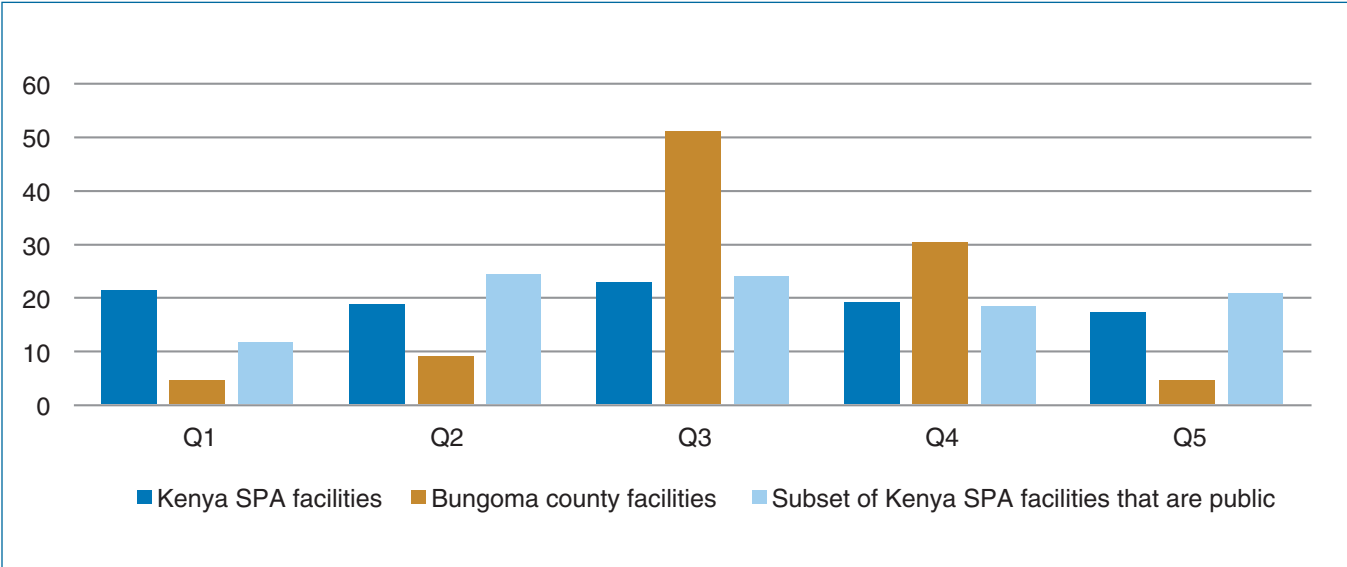
Benchmarking of Bungoma County facilities against national FP readiness

The national facility FP readiness scores are grouped evenly by quintile (blue bars, Figure 1). The 43 public Bungoma facilities (orange bars, Figure 1) are found most frequently in the third (middle) quintile, followed by the fourth (upper) quintile. Very few Bungoma facilities fall into the bottom 40% of facilities in terms of FP readiness. To ensure that the benchmark is meaningful, we added a third group, the subset of Kenya facilities that are public (grey bars, Figure 1), and we see a similar pattern of few public facilities in the first (lowest) quintile. However, the subset of national public facilities is more evenly distributed across the third, fourth and fifth quintiles.

Index Reliability

The Cronbach’s test on the Kenya SPA FP Readiness Index yielded an alpha of 0.94 with all 35 variables in the SPA dataset. (Removal of the item with the lowest individual alpha did not change the overall alpha.) Similarly, the Cronbach’s test on the Bungoma County FP Readiness Index yielded an overall alpha of 0.88. See Annexes 2.3 and 3.8 for item-specific alphas.

Figure 2: Comparison of percentages of facilities in each FP Readiness Quintile using the FP Readiness Additive Index (43 Bungoma county included facilities, 573 Kenya SPA included facilities, and all 330 public facilities from the group of 573 Kenya SPA)



Index Sensitivity: The FP Readiness Additive Index

The range of the FP Readiness Additive Index scores was 0 to 35, with a mean of 19.8 (SD=9.4). There was a clustering of Bungoma facilities in the middle and second highest FP readiness quintiles (Q3 and Q4) according to both the PCA and additive scoring methods (Figures 1 and 2).

In the Kenya SPA dataset, the correlation between each facility's score according to the Kenya SPA FP Readiness PCA Index and the FP Readiness Additive Index was very high ($r=0.995$, $p<0.001$). However, there were differences in the quintiles that each SPA facility was mapped to for 95% of facilities.

Discussion

Using readily available data from the 2010 Kenya SPA and a local-level survey that had 35 key FP readiness questions in common with the SPA, we constructed a single metric of FP readiness and used it to measure the FP readiness of 43 facilities in Bungoma County, Kenya, both in comparison to one another and benchmarked against national FP readiness.

Both the PCA index and additive index approaches quantify facility-level FP readiness, thus providing a mechanism to score and identify problematic

facilities. In the Bungoma dataset, FP readiness is weakest in the outpatient dispensaries, which often serve as the nearest referral point for community-based healthcare workers and rural populations seeking contraception. A perennial challenge in FP programming is delivering FP services closer to populations in need, and the limited FP readiness found at dispensaries in this analysis is consistent with that challenge. Limited staff capacity to offer long-term methods restricts method choice and is reflected in lower FP readiness scores at lower level dispensaries and clinics and health centers. The relatively low FP readiness of mission facilities was expected, as many mission facilities do not provide contraception.

Principal components analysis (PCA) presents advantages over the additive scoring method. While program managers may be drawn to the ease of using an additive scale for field-based calculations, this approach can lead to non-normal scoring distributions with clustering around whole numbers, which produces the unequal groupings in Figure 2 and undermines program managers' ability to differentiate facilities along a normal distribution. Further, in the literature on wealth indices, researchers note that the additive scale (also known as equal weights or simple sum) approach has been called arbitrary and simplistic

as it assumes that each element in the index has the same level of importance for measuring the variable of interest [21].

Limitations to this methodology for benchmarking facilities for FP readiness include the fact that no allowance is made for “must-have” quality indicators. Some quality experts recognize the conceptual importance of rights-based counseling; others insist specific aspects of service such as infection control measures are key quality indicators. This methodology can be used to create a large number of indices; as an example, the household assets wealth index has adopted the same approach to benchmark program beneficiaries’ wealth against national distributions of wealth scores. Our FP readiness index creates a rank to identify high and low scoring facilities. For program managers in need of a rational priority setting approach, this method can be useful for measuring facility readiness and, with prior calculation of the national distribution of scores, a FP readiness assessment tool could be practically implemented by monitoring and evaluation staff. However, as currently structured, the index (and the overall approach for index development) does not permit identification of which facilities are meeting “must-have” readiness standards. Even if facilities belong to the highest readiness quintile, it is possible that they do not meet minimum essential readiness standards. For example, among the SPA facilities in the highest FP readiness quintile, nearly 6% lacked a private room with both visual and auditory privacy, which is considered to be a key aspect of FP quality [9].

Another possible limitation is that the methodology depends upon the existence of both nationally representative data and data from the area or group of facilities to be assessed. These data ought to be close enough together in time to permit reasonable comparison and have sufficient overlap of survey questions to adequately quantify the quality characteristics to be measured. However, SPA data is easily available in 16 countries and there are other potential sources of relevant data in other countries from standardized health facility assessment (HFA) methodologies (e.g., Service Availability and Readiness Assessment, SARA, Health Facility Census, HFC, and Quick Investigation of Quality, QIQ) [22]. Finally, construction of a relevant index and analysis of

the subsequent data requires a level of skill that may not be present in all settings where such an index is desired.

Conclusion

The methodology presented in this paper could be extended to support the development of a single FP quality metric that can both differentiate high and low performers and benchmark facilities against a national standard. To do this, the next step would be to identify appropriate process quality indicators in national health facility assessments (HFA), in addition to structural quality indicators such as those relating to FP readiness which were included in the example presented here. Program managers could then incorporate the same questions into their assessments of FP quality in targeted facilities, just as is now done to assess equity of clients in specific programs using Demographic and Health Survey (DHS) wealth quintiles [1, 23].

However, HFAs have principally been used to estimate the status of service quality among large groups of facilities (e.g., a national health system), rather than to collect denominator data against which to benchmark individual facility performance. Although the SPA captures data on the service provision process by including observations of consultations and exit interviews, most other large scale, national-level HFA platforms, such as Performance Monitoring and Accountability (PMA) and Service Availability and Readiness Assessment (SARA), collect only facility-level, readiness data [22, 24]. HFAs could achieve greater interest and use in the global health research and policy analysis communities if standard indicators for FP processes could be captured in HFA datasets [24, 25]. New applications of currently available process data such as benchmarking described in this paper, accompanied by an advocacy strategy, would increase the demand for a standard set of FP readiness and process questions in national HFA surveys. This strategy would increase the value of the SPA and other HFA surveys, in particular those conducted annually, such as PMA, and give program managers, franchise operators, and district health teams an ability to meaningfully benchmark the performance of FP service delivery at their facilities against national scores.

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CONCLUSION

Dominic Montagu^{1,2} & Kim Longfield³

Family planning utilization is increasing around the world, aided by new contraceptive methods, decreasing prices, greater accessibility to commodities and services, and renewed attention by governments, donors, and healthcare providers. This is the good news.

The bad news is that utilization rates are not increasing rapidly enough. The number of family planning users is only two-thirds of what is required to be on track for achieving ambitious targets for new users under FP2020, and it is estimated that 60% of new method adopters will discontinue use within two years—many continuing to be in need of contraception [1, 2].

The lessons are clear. First, family planning quality remains a real and challenging issue in nearly all settings. Second, poor quality in its many dimensions is both a prime inhibitor of uptake of family planning, and a contributor to unacceptably high discontinuation rates among those women who do adopt new methods.

Fortunately, a new understanding of the importance of quality has come at a time when resources available for assuring and improving quality are growing. This book summarizes what has been done, and what is known, about the measurement of family planning quality.

As practiced around the world today, family planning quality measurement is not easy, consistent, or accurate, and it is certainly not cheap. Meantime, most quality assurance initiatives are bespoke—created and learned anew in each location by each practitioner. While quality measurement has been a priority at various times throughout the past 40 years, none of the measures at the global, regional, or national levels have been standardized or put into common use in delivery programs. One result is that quality does not improve, new

family planning adopters continue to discontinue, and ambitious targets for increasing use are not met. This should not be the case.

Many approaches have been used to try to make up for the lack of common measurement approaches to assessing quality, but they are highly unsatisfactory to the implementers who use them: expensive, vague, difficult to use, and nearly impossible to interpret. The team of program managers, researchers, policy makers, and implementers at Bellagio determined that the key attributes for an effective measure of quality are standardization and simplicity. Effective measures must also be credible, actionable, easy and inexpensive to use, facilitate comparison against national standards, and be valued by providers.

This book summarizes what is known about measuring family planning quality, presents what is done in “real world” practice, and highlights how current practices can become more useful. More importantly, the new understanding of how quality affects FP outcomes summarized in this book gives us insights into how best to build on current measurement practices to advance towards standardized and simple measures that are predictive of client satisfaction, knowledge, continuation, and adoption—simple measures which can then be applied to assure and improve these same important outcomes.

The experts who have contributed to this book, and the organizations they represent, are committed to continued collaboration to translate theoretical measures into reality. Working together, we have taken the initial steps to assess current common practices against established outcomes for counseling quality and continuation of use. Following on this assessment, we will work to develop and pilot measures which will embody the qualities of simplicity and standardization most important

to assuring regular use and enabling real-time decision-making and quality improvement in settings across the world. Once such measures have been developed, they will be explored and tested in a set of social franchise networks. Social franchises' centralized management structures and focus on quality make them an ideal "laboratory" in which to test and improve practices such that they can serve the needs of family planning providers around the world.

This is an ambitious undertaking, but its importance is underscored by the effects of the counterfactual: what will happen to current and potential family planning consumers if poor quality continues to go unacknowledged, unmeasured, and unaddressed. By learning from past experience, building on present best practices, and working together with a shared vision of future possibilities, we can improve family planning quality, and thereby increase adoption, client experiences, and continuation of use. The importance of success in this endeavor is reflected in what it will achieve: healthier women and families.

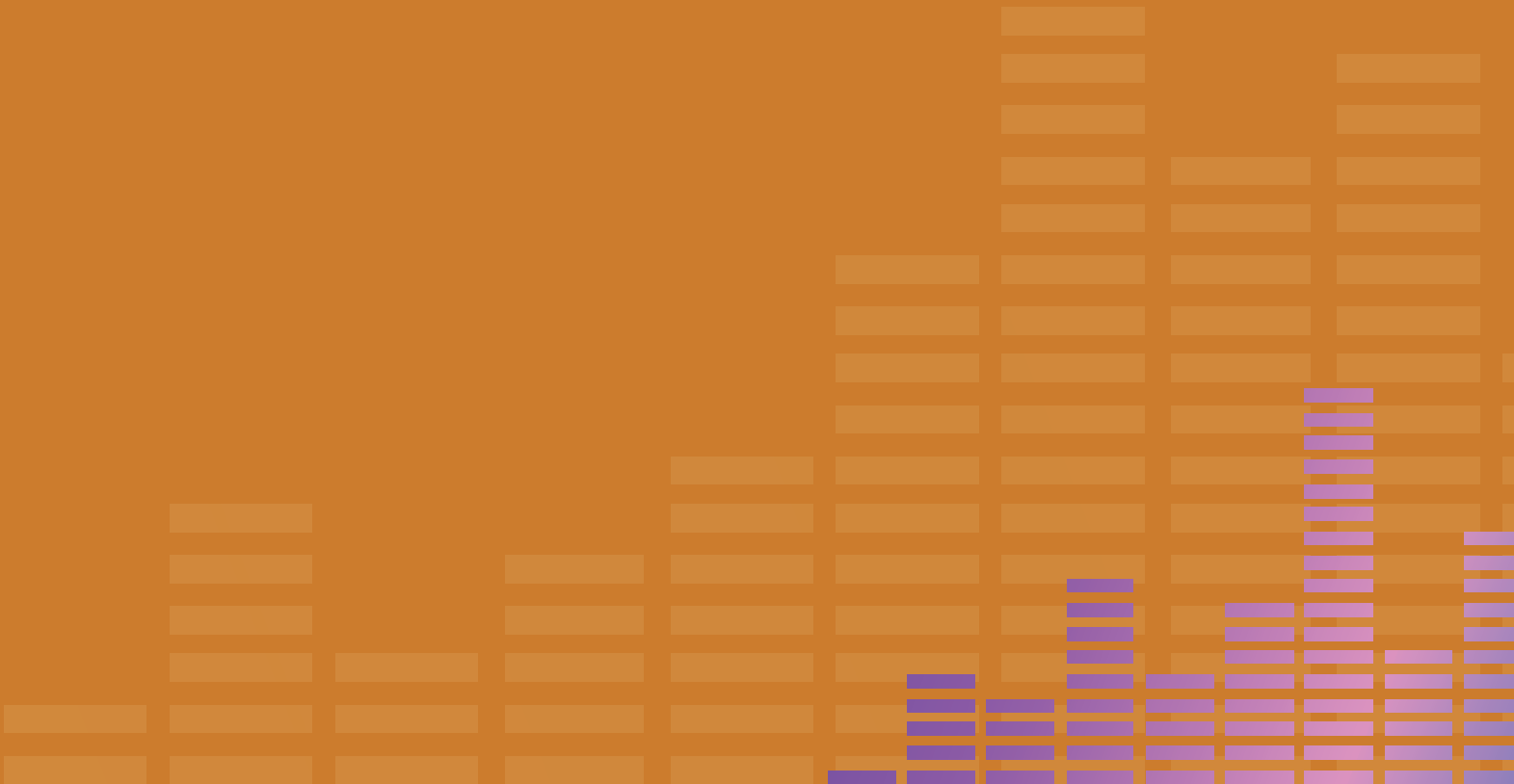
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ANNEXES



ANNEX 1:

Structure and process components of quality in selected tools for quality assessment of family planning

ANNEX 1.1:

Structure components of tools for assessment of family planning quality

See Sprockett, “Family Planning Quality Assessment Tools Used in Low- and Middle-Income Countries: Review for Application in Clinic-based Services”

TOOL NAME	Equipment & supplies	Physical facilities	Medicines	Staffing	Supervision	Service availability	Referral capacity	Provider technical knowledge & competence	Provider training (qualification & ongoing)	Infection control	Guidelines & protocols	Supply logistics	Revenue	Health Management Information System	Facility management	Clinical records
Client Flow Analysis (CFA)				X												
Client-Oriented, Provider-Efficient (COPE)	X	X		X	X			X								
Evaluation of LAPM Services Suite (ELMS)	X	X	X	X			X	X	X	X						
Facility Audit of Service Quality (FASQ)	X	X				X										
Facility-Based Assessment (FBA)	X		X													
Health Facility Census (HFC)		X														
Performance Assessment Tool for Quality Improvement in Hospitals (PATH)			X	X												
Performance, Monitoring and Accountability 2020 (PMA2020)		X	X	X		X	X			X						
Population Council Health Facility Assessment	X	X	X			X			X					X		
Primary Care Assessment Tools (PCAT)						X	X									
Quality Assessment Guidebook for Adolescent Services (WHO)	X	X	X			X		X			X	X				
Quick Investigation of Quality (QIQ)	X	X			X	X					X			X		X
Rapid Health Facility Assessment (R-HFA)	X	X	X	X	X				X							
Rapid Service Quality Assessment (RSQA)			X		X		X				X					
SDI Health Survey Instrument	X	X	X	X		X							X		X	
Service Availability & Readiness Assessment (SARA)	X	X	X	X		X					X					
Service Availability Mapping (SAM)	X	X		X		X										
Service Provision Assessment (SPA)	X	X	X	X	X	X			X		X		X	X	X	
Situation Analysis (SA)	X			X		X			X			X				
Supply, Enabling Environment, and Demand (SEED)	X		X	X	X		X	X	X		X		X		X	

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ANNEX 1.2:

Process components of tools for assessment of family planning quality

See Sprockett, “Family Planning Quality Assessment Tools Used in Low- and Middle-Income Countries: Review for Application in Clinic-based Services”

	Client Flow	Patient Experience	Clinical Practice	Clinical Records
Client Flow Analysis (CFA)	x			
Client-Oriented, Provider-Efficient (COPE)	x	x		x
Evaluation of LAPM Services Suite (ELMS)		x	x	
Facility Audit of Service Quality (FASQ)				
Facility-Based Assessment (FBA)		x	x	x
Health Facility Census (HFC)				
Performance Assessment Tool for Quality Improvement in Hospitals (PATH)		x		
Performance, Monitoring and Accountability 2020 (PMA2020)				
Population Council Health Facility Assessment	x	x		
Primary Care Assessment Tools (PCAT)		x		
Quality Assessment Guidebook for Adolescent Services (WHO)		x	x	
Quick Investigation of Quality (QIQ)		x	x	
Rapid Health Facility Assessment (R-HFA)		x	x	x
Rapid Service Quality Assessment (RSQA)				
SDI Health Survey Instrument			x	
Service Availability & Readiness Assessment (SARA)				
Service Availability Mapping (SAM)				
Service Provision Assessment (SPA)		x	x	
Situation Analysis (SA)		x	x	x
Supply, Enabling Environment, and Demand (SEED)		x	x	x

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ANNEX 2:Examples of established tools

ANNEX 2.1:**Quick Investigation of Quality (QIQ) indicators**

See Cuéllar et al., “The evolution of strategies and measurement methods to assess the quality of family planning services”

Indicator #	Indicator	Client Exit Interview	Observation	Facility Audit
	PROVIDER			
I-1	Demonstrates good counseling skills (composite)	✓	✓	
I-2	Assures client of confidentiality		✓	
I-3	Asks client about reproductive intentions (more children? When?)	✓	✓	
I-4	Discusses with client which method she would prefer	✓	✓	
I-5	Mentions HIV/AIDS (initiates or responds)	✓	✓	
I-6	Discusses dual method use	✓	✓	
I-7	Treats client with respect/courtesy	✓	✓	
I-8	Tailors key information to the particular needs of a specific client	✓		
I-9	Gives accurate information on the method accepted (how to use, side effects, complications)	✓	✓	
I-10	Gives instructions on when to return	✓	✓	
I-11	Follows infection control procedures outlined in guidelines		✓	
I-12	Recognizes/identifies contraindication consistent with guidelines		✓	
I-13	Performs clinical procedures according to guidelines		✓	
	STAFF (other than provider)			
I-14	Treats clients with dignity and respect	✓		
	CLIENT			
I-15	Participates actively in discussion and selection of method (is “empowered”)	✓	✓	
I-16	Receives her method of choice	✓	✓	
I-17	Client believes the provider will keep her information confidential	✓		
	FACILITY			
I-18	Has all (approved) methods available; no stock outs			✓
I-19	Has basic items needed for delivery of methods available through SDP (sterilizing equipment, gloves, blood pressure cuff, specula, adequate lighting, water)			✓
I-20	Offers privacy for pelvic exam/IUD insertion (no one can see)	✓	✓	✓
I-21	Has mechanisms to make programmatic changes based on client feedback			✓
I-22	Has received a supervisory visit in past ___ months			✓
I-23	Adequate storage of contraceptives and medicines (away from water, heat, direct sunlight) is on premises			✓
I-24	Has state-of-the-art clinical guidelines			✓
I-25	Waiting time is acceptable	✓		✓

ANNEX 2.2:

EVALUATION Project's quality indicators

See Cuéllar et al., "The evolution of strategies and measurement methods to assess the quality of family planning services"

Service providers are trained in interpersonal relations	Interpersonal Relations
Provider establishes rapport for assessing personal situation (family circumstances, nature of sexual relationships)	Interpersonal relations
Client reports feeling welcomed by staff; at ease asking questions; treated with respect/politeness by providers	Interpersonal relations
Number of methods approved for use at service delivery point (SDP)	Choice of method
Number/range of methods available at SDP	Choice of method
Provider offers all appropriate methods	Choice of method
Provider places no unnecessary restrictions on method choice	Choice of method
Client receives his/her method of choice	Choice of method
Provider refers client to an existing, accessible site for methods unavailable at SDP	Choice of method
Provider demonstrates good counseling skills (providing/eliciting info, answering questions)	Information given to client
Provider has checklist available on information to cover during counseling session	Information given to client
Provider gives accurate and unbiased overview of all methods	Information given to client
Provider gives accurate, relevant information on method accepted (how to use, advantages/disadvantages, side effects, primary and secondary precautions, complications that require referral, resupply, other important info)	Information given to client
Provider asks client to repeat key info on method choice (how to use, side effects, what to do if they occur, etc.)	Information given to client
Client correctly explains method choice (how to use, possible side effects, what to do if side effects occur, when/where to return)	Information given to client
Informational materials are available (printed, model, sample, etc.) on specific methods	Information given to client
Privacy is acceptable for counseling and exam	Information given to client
Consent form is available and signed by client	Information given to client
Written guidelines on FP practice are available at SDP	Technical competence
Job descriptions exist for each position	Technical competence
Formal mechanisms exist to review/screen potential service providers	Technical competence
Education/training criteria exist for service tasks	Technical competence
New staff are trained regarding institution's guidelines	Technical competence
Clinical providers have received training relevant to the job	Technical competence
All staff receive periodic refresher/in-service training	Technical competence
Basic items are present for delivering methods available at SDP (sterilizing equipment, gloves, blood pressure, specula, adequate lighting, water)	Technical competence

ANNEX 2.2:

EVALUATION Project's quality indicators (continued)

Provider can accurately explain contraception (how to use, advantages and disadvantages, side effects, primary and secondary precautions, complications that require referral, resupply)	Technical competence
Provider demonstrates skill at clinical procedures according to guidelines	Technical competence
Provider demonstrates ability to recognize/identify contraindications (consistent with guidelines)	Technical competence
Provider avoids tests, examinations, and waiting periods that are not medically justified	Technical competence
Provider follows infection control procedures outlined in guidelines	Technical competence
All levels of service providers receive routine supervision (regular, useful)	Technical competence
SDP is capable of handling HIV, other STDs, and reproductive tract infections, including identification, diagnosis, referral, prevention counseling, treatment and counseling	Technical competence
Client receives an appropriate method (medically appropriate and appropriate for sexual lifestyle)	Technical competence
Provider encourages client to return as needed	Mechanisms to ensure continuity
Follow-up/return schedule is appropriate/reasonable	Mechanisms to ensure continuity
Client can obtain resupplies easily (supply of all methods offered at SDP is adequate; systems for resupply is reliable/prevents stock outs)	Mechanisms to ensure continuity
Clients past-due for follow-up are identified	Mechanisms to ensure continuity
Clients past-due for follow-up are contacted	Mechanisms to ensure continuity
Reasons for non-return are identified	Mechanisms to ensure continuity
Client and non-users perceive that: privacy/confidentiality for counseling is acceptable privacy/confidentiality for exam is acceptable waiting time is acceptable time with provider is acceptable hours/days are convenient staff is acceptable in terms of gender, ethnic group, age	Appropriateness and acceptability of services
Clients and non-users perceive facility to be adequate in terms of: waiting room exam room cleanliness/hygiene water toilet facilities	Appropriateness and acceptability of services
Number of new acceptors/users	Outcomes
Complication rate for specific methods	Outcomes
Correct, consistent use of temporary methods (continuation rate of any method)	Outcomes
Number of new clients recommended by other users	Outcomes
Number of users that recommend service to someone else	Outcomes
Percent of clients that achieve reproductive intentions	Outcomes

ANNEX 2.3:**Questions from Kenya 2010 SPA Facility Audit questionnaire**

See Bellows et al., “Benchmarking to assess quality of family planning services: Construction and use of indices for family planning readiness in Kenya with data from 2010 and 2014”

Questions	Cronbach's alpha/coding
Service availability (10 items)	0.8173
*304. Which of the following contraceptive methods do you provide, prescribe, or counsel about in this facility? [SPA Facility Audit tool, Sections 3a and 3b]	<i>Dichotomized from SPA responses to code “prescribed” or “counseled” as “0” and “provided” as “1”.</i>
01) combined oral pill [v303a]	No = 0 / Yes =1
02) progestin-only pill [v303b]	No = 0 / Yes =1
10) emergency pill [v303l]	No = 0 / Yes =1
03-04) 1 month/2-3 month injectable [v303de]	No = 0 / Yes =1 [yes if “yes” in either 03 or 04]
08) IUCD [v303k]	No = 0 / Yes =1
09) implant [v303g]	No = 0 / Yes =1
06) male condom [v303i]	No = 0 / Yes =1
07) female condom [v303i]	No = 0 / Yes =1
14) female sterilization [v303r]	No = 0 / Yes =1
13) male sterilization [v303q]	No = 0 / Yes =1
Privacy for FP examinations (1 item)	n/a
310. Ask to see where counseling for family planning is provided and indicate the setting: private room with visual/auditory privacy; non-private room with auditory/visual privacy; visual privacy only; auditory privacy only; no privacy [v330]	<i>Dichotomized from SPA responses to code “no privacy” as “0” and all other responses as “1”.</i>
Implant and IUCD supplies (11 items)	0.9664
324. Observe the availability of common supplies for IUCD or implants services:	<i>Dichotomized from SPA responses to code “observed” as “1” and all other responses as “0”.</i>
01) sterile gloves [v334a]	
02) antiseptic solution [v334b]	
03) sponge-holding forceps [v334c]	
04) gauze pad/cotton [v334d]	
326. Observe the availability of materials for the insertion of IUCD:	
01) vaginal speculum—small [v335a]	
02) vaginal speculum—medium [v335b]	
03) vaginal speculum—large [v335c]	
04) tenacula [v335e]	
05) uterine sound [v335f]	
328. Note the availability of the following items:	
01) local anesthetic (such as lignocaine) [v336a]	
02) sterile syringe and needle [v336b]	
Stocks and commodities (8 items)	0.8406

ANNEX 2.3:

Questions from Kenya 2010 SPA Facility Audit questionnaire (continued)

Questions	Cronbach's alpha/coding
352. Go to the main area where contraceptives are stored and collect information on validation of the listed contraceptives.	<i>Dichotomized from SPA responses to code "yes, not today" or "no" as "0" and "yes [in stock]" as "1".</i>
01) combined oral pill [lv303a]	No = 0 / Yes =1
02) progestin-only pill [lv303b]	No = 0 / Yes =1
11) emergency contraceptives [lv303i]	No = 0 / Yes =1
03-05) Injectables (monthly and 3 monthly) [lv303d or lv303e or lv303t]	No = 0 / Yes =1 [yes if "yes" in lv303d, lv303e, or lv303t]
07) female condom [lv303j]	No = 0 / Yes =1
06) male condoms [lv303i]	No = 0 / Yes =1
08) IUCD [lv303k]	No = 0 / Yes =1
09) Implants [lv303g]	No = 0 / Yes =1
IEC materials / job aids (5 items)	0.6685
311. Are any of the following visual aids for teaching available in the waiting area/counseling room or examination room?	<i>Dichotomized from SPA responses to code "observed" as "1" and all other responses as "0".</i>
01) Samples of various family planning methods [v325a]	
10) Model for demonstrating how to use male condom [v325d]	
12) Posters for general promotion of family planning [v325e]	
313. Are any of the following guidelines or protocols for delivery of services available in the counseling room or the examination room?	
01) guidelines: cs guidelines or protocols on FP [v327a]	
312. Are any of the following types of information booklets or pamphlets for clients to take home available in the waiting area/counseling or the examination room?	
01) Printed material about family planning [v326a]	

*NB: In the 2010 SPA facility audit tool sections 3a and 3b, the question numbers differ from the corresponding variable names in the public dataset. Specifically, Section 3a, questions 304 are labeled v303 in the data file, questions 310 are labeled v330 in the data file, questions 324 are labeled v334 in the data file, questions 326 are labeled v335 in the data file, questions 238 are labeled v336 in the data file, questions 352 are labeled lv303 in the data file, questions 311 are labeled v325 in the data file, questions 313 are labeled v327 in the data file, and questions 312 are labeled v326 in the data file

ANNEX 3:

Examples of tools used in the field

ANNEX 3.1:

Observation checklist for IUD insertion

See Buyungo et al., “Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015”

IUD INSERTION - CHECKLIST FOR SERVICE DELIVERY POINTS (SDPs)

Name of SDP:

Date of Observation:

QOC STANDARDS CRITERIA	OBSERVED ITEMS	COMMENTS & RECOMMENDATIONS
<p>Guidelines are followed concerning:</p> <p>1. Pre-IUD insertion counseling and History</p>	<p>Observe/Find out if Provider:</p> <ul style="list-style-type: none"> • Greets client respectfully • Ask about her reproductive goals and protection against STIs • Determine that the contraceptive choice is the IUD • Assesses woman's knowledge about the IUD • Assesses client medical history which include an active, recent, or recurrent pelvic infection • Explains IUD insertion/removal procedures • Is responsive to client's needs and concerns (Possible side effects, duration of use, when to return for a follow up and why) 	
<p>2. IUD Pre- insertion steps and tasks</p>	<p>Observe if provider:</p> <ul style="list-style-type: none"> • Arranges instruments and supplies on high-level disinfected or sterile tray • Washes hands thoroughly and dries Before the procedure • Puts HLD or sterilized gloves to perform bi-manual examination • Determine the position of the uterus during bimanual examination • Performs speculum examination: visualizes vagina and cervix prior to insertion, collects vaginal and cervical specimens, if indicated • Remove gloves and places gloves in 0.5% chlorine solution for 10 minutes for decontamination • Remove speculum and places aside instruments tray 	

ANNEX 3.1:

Observation checklist for IUD insertion (continued)

QOC STANDARDS CRITERIA	OBSERVED ITEMS	COMMENTS & RECOMMENDATIONS
3. IUD Insertion steps and tasks	<p>Observe if the provider:</p> <ul style="list-style-type: none"> • Puts new examination gloves • Loads Copper T 380 in sterile package (Using non touch technique) • Inserts vaginal speculum to see cervix • Applies antiseptic solution two times to cervix, specially the Os, and vagina. • Gently grasps cervix with tenacious to align the uterus • Sounds uterus to determine uterine depth • Inserts the Copper T 380 IUD using the withdrawal technique 	
QOC STANDARDS CRITERIA	OBSERVED ITEMS	COMMENTS & RECOMMENDATIONS
4. Post-IUD insertion steps and tasks	<ul style="list-style-type: none"> • Cuts IUD strings to 3-4 cm in length • Gently removes tenacious and speculum, gloves and places in 0.5%chlorine solution for 10 minutes for decontamination <p>Observe if the provider:</p> <ul style="list-style-type: none"> • Washes hands thoroughly and dries • Completes clients records • Teaches client how and when to check for strings • Provides follow-up instructions and answers any questions • Assures client that she can have the IUD removed any time • Observes client at least 15 minutes before sending her home. • Before removing gloves places all instruments on 0.5% chlorine solution for 10 minutes for decontamination. 	

ANNEX 3.2:**Observation checklist for family planning surgical methods**

See Buyungo et al., “Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015”

Strengthening the Quality of the Reproductive Health Care Programme

QOC OBSERVATION CHECKLIST FOR FP SURGICAL PROCEDURES

- IUD INSERTION AND REMOVAL
- NORPLANT INSERTION AND REMOVAL
- TUBAL LIGATION AND VASECTOMY

This checklist is used by supervisors who undertake medical monitoring. It can also be used for the SDP internal assessment, if required. In the assessment column, tick “Yes” if the task/skill is adequate; “NI” if the task/skill needs improvement; “NO” if the task/skill is not adequate; “N/A” if the task is not observed or applicable. Provide additional comments in the “Comments” column if the answer is “NO” or “Needs improvement”.

Adequate = Yes (Y)
 Need improvement (NI)
 Not adequate = (NO)
 Not applicable/Not observed = (N/A)

Name of Service Delivery Point: _____

Date of Observation: ____/____/____

OBSERVED CRITERIA (Col 1)	TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
1. SDP has suitable facilities, supplies and equipment to perform surgical procedures	Observe if :					
	1.1 Suitable space is available for IUD and Norplant insertion and removal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.2 Observe if the area where surgical procedures are performed has:					
	- Its facilities separated from other parts of the clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- A washing room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- A dressing room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- An operating room with air conditioner installed, floor and walls tiled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- A recovery room with enough beds for patients at all times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.3 Limited traffic flow in the procedure room and surgical area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.4 Observe if standard equipment and emergency drugs are available including:					
	- Surgical instruments package: IUD and Norplant insertion and removal kits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Tubal ligation kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Vasectomy kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Anaesthesia equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Nursing equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Abdominal incision kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Rescue medicine and supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.2:

Observation checklist for family planning surgical methods (continued)

OBSERVED CRITERIA (Col 1)	TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	Observe if: 1.5 General guidelines for the infection prevention measures in the operating theatre and the procedure rooms are followed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Service providers are competent and confident to provide surgical procedures	Observe if qualified and competent staff are available in the following:					
	2.1 Surgical procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.2 Sterilization and disinfection techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.3 Managing complications or emergency situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Staff follow guidelines for the provision of clinical and surgical procedures	Before procedures, observe if:					
	3.1 Pre-insertion/ operative counseling and client health assessment (history and physical examination) are well documented for each procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.2 Informed consent form signed for TL and vasectomy procedures and attached to the client record	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	During procedures, observe if:					
	3.3 Aseptic techniques strictly are observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.4 Procedures are performed steadily, carefully, gently and accurately to minimize the pain of the client	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.5 Intra-op medications (time, name of drug, volume of drugs, route of drug) are recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.6 Intra-op vital signs are recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.7 Procedure notes are recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.8 Complications if occurred are recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.9 Procedure to resolve complications are recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.10 Complications are reported to appropriate supervisor/ personnel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.11 Medication is given and discharge status recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	After procedures, observe if :					
	3.12 Post-operative care is given to clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.13 Follow-up visits are provided to clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.3:**Observation checklist for family planning counselling**

See Buyungo et al., “Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015”

Strengthening the Quality of the Reproductive Health Care Programme

COUNSELING & INTERPERSONAL COMMUNICATION CHECKLIST

This checklist is used by supervisors to monitor how effectively staff counsel and interact with clients. It can also be used for the SDP internal assessment, if required. In the assessment column, tick “Yes” if the task/ skill is adequate; “NI” if the task/ skill needs improvement; “NO” if the task/ skill is not adequate; “N/A” if the task is not observed or applicable. Provide additional comments in the “Comments” column if the answer is “No” or “Needs improvement”.

Adequate = Yes (Y)
Need improvement = (NI)
Not adequate = (NO)
Not applicable/Not observed = (N/A)

1. Name of Service Delivery Point: _____

2. Date of Observation: ____/____/____

OBSERVED CRITERIA (Col 1)	TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
1. SDP has a private area/room for reception, physical examination or counselling of clients	Observe if visual and auditory privacy are maintained in the:					
	1.1 Reception area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.2 Counseling rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.3 Consultation rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
OBSERVED CRITERIA (Col 1)	TASKS/OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
2. SDP ensures that all clients are received and treated in a friendly and respectful manner	Observe if friendly and respectful reception is provided to all clients, including:					
	2.1 Use of language the client understands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.2 Greeting the client respectfully	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.3 Assuring confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.4 Directing clients where to go next	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.5 Explaining to clients what to expect during the visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Service providers use appropriate teaching aids during clients counselling/ education	Observe if one of the following materials is used during client counselling/education sessions: poster, family planning methods, anatomical models, brochures, leaflets, flipcharts, clients cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.3:

Observation checklist for family planning counselling (continued)

OBSERVED CRITERIA (Col 1)	TASKS/OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
4. Service providers encourage clients to actively discuss any problems or concerns about their RH and FP services	Observe if:					
	4.1 Service providers ask clients about their history and problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4.2 Service providers invite clients to ask questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Service providers give appropriate counselling to clients	Observe if :					
	5.1 Service providers explain the range of services offered in the clinic using the appropriate visual aids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.2 For every FP method prescribed, guidelines are followed concerning:					
	- Indications or precautions noted from a client's history and physical examination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Clients' free choice of the method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Instructions provided to the client on the method use, when and where to get supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
OBSERVED CRITERIA (Col 1)	TASKS/OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
	Observe if	YES	NI	NO	N/A	
	5.3 Providers encourage clients to ask questions and respond to clients' questions accordingly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.4 Providers discuss the client's needs, concerns and fears in a thorough and sympathetic manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.5 Providers provide information about all FP methods, describing benefits and risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.6 Providers help the client make decisions regarding methods, treatments, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.7 Providers record the method prescribed in the client's records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.8 Providers tell the client to return if s/he has any concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.9 Providers provide information on other RH services as required; e.g. STIs prevention (dual protection) and breast cancer screening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.4:**Observation checklist for storage of supplies**

See Buyungo et al., “Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015”

Strengthening the Quality of the Reproductive Health Care Programme

QOC OBSERVATION CHECKLIST FOR THE STORAGE OF CONTRACEPTIVES AND SUPPLIES

This checklist is used by supervisors and managers to ensure that proper storage guidelines are being followed. It can also be used for assessing the SDP and MA HQ storage during the internal or external assessment, if required. In the assessment column, tick “Yes” if the task/ item to be observed is adequate; “NO” if the task/ item is not adequate; “N/A” if the task is not observed or not applicable. Provide additional comments in the “Comments” column if the answer is “No” or “Needs improvement”.

Adequate = Yes
Need Improvement = NI
Not adequate = NO
Not applicable/Not observed = (N/A)

Name of Service Delivery Point: _____

Date of observation: ____/____/____

OBSERVED CRITERIA (Col 1)	TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
1. SDP has suitable storage facilities/space for supplies and commodities	Observe if suitable storage space for supplies, contraceptives and drugs are available with:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.1 Wide-wise space for storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.2 No signs of roof leakage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.3 Store room not subject to water penetration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.4 No direct sunlight on supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.5 Adequate lighting and ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.6 Fire extinguisher available and in good working condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.7 Store room disinfected and sprayed periodically against insects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.8 Store room cleaned regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Supplies and commodities are properly stored and well organised	Observe if the storing system is well organised both at the SDP and HQ with:					
	2.1 Supplies stored adequately and labelled for easy access with identification labels/ marks visible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.2 Supplies and commodities stored and distributed on the basis of "first expiry first out" (FEFO) system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.3 Damaged and expired supplies separated and disposed of without delay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.4:

Observation checklist for storage of supplies (continued)

OBSERVED CRITERIA (Col 1)	TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	2.4 Vaccines and other lab reagents stored in refrigerator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.5 Old files, information materials, office supplies, etc. stored separately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.6 Insecticides and other chemicals not stored together with contraceptives and medical supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.7 Tools in place for commodity and supplies purchase, stocks, management and distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.8 Regular supplies and equipment inventory and stock cards updated at all levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.9 Staff involved in logistics and supplies management trained and available at all time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.10 Store key available at all time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.5:**Observation checklist for infection prevention**

See Buyungo et al., “Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015”

Strengthening the Quality of the Reproductive Health Care Programme

INFECTION PREVENTION (IP) OBSERVATION CHECKLIST**INFECTION PREVENTION TASKS/ SKILLS AT SDPs**

This checklist is used by supervisors to monitor how effectively infection prevention measures are carried out by staff. It can also be used for the SDP internal assessment, if required. In the assessment column, tick “Yes” if the task/ skill is adequate; “NI” if the task/ skill needs improvement; “No” if the task/ skill is not adequate; “N/A” if the task is not observed or applicable. Provide additional comments in the “Comments” column if the answer is “No” or “Needs improvement”.

Adequate = Yes (Y)
Need improvement = (NI)
Not adequate = (NO)
Not applicable/Not observed = (N/A)

1. Name of Service Delivery Point: _____

2. Date of Observation: ____/____/____

ITEMS TO OBSERVE (Col 1)	TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
1. Does the SDP provide RH activities requiring infection prevention practices?	Services provided include the following - IUD insertion /removal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Norplant insertion/removal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Injectables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Female sterilisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- STIs/HIV/AIDS services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. SDP has suitable space /room/facilities for infection prevention services	Observe if suitable space and facilities available with: - Separate room for processing instruments/equipment - Continuously available running/ clean water - Functioning sink in procedure room - Separate room/area for examining clients - Operating room dedicated for surgical contraception procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.5:

Observation checklist for infection prevention (continued)

ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	- Scrub facility with immediate access to the operating room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Hot air oven, autoclave, or boiler available and in good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- IUD insertion/ removal kit available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Norplant insertion/removal kit available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Covered containers for storing equipment available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	-					
3. SDP has and adheres to QOC guidelines and standards required for the provision of adequate infection prevention measures	Observe if:					
	3.1 Written and updated standards/ guidelines/ protocols are available and used for infection control measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.2 Job aids for infection prevention are developed and displayed in the processing/ sterilization room including:					
	- Preparation of 0.5% chlorine solution from bleach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	- Procedure for decontaminating of equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Procedure for cleaning equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Procedure for sterilization using an autoclave or a dry heat oven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Use of antiseptic solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Proper waste disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	- Procedure for cleaning activity areas including clinical procedure areas, surgical areas and work area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.3 Trained and qualified staff available at all times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 SDP provides adequate infection prevention/ control in the area of hand washing and gloving	Observe if:					
	4.1 Soap and clean water available in/ near the consulting or operating room (s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4.2 Antiseptic solution, such as Ethyl alcohol 70%, is available if no water is available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.5:

Observation checklist for infection prevention (continued)

ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	4.3 Staff wash hands or use antiseptic solution (if no water is available) before and after each clinical procedure, after handling waste or touching body fluids/mucus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4.4 Staff wear sterile surgical gloves when performing surgical procedures (e.g. Norplant insertion/ removal; tubal ligation (LT), vasectomy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4.5 Staff wear high-level disinfected gloves (reusable or disposal) when performing medical procedures such as pelvic exam, inserting or removing IUDs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4.6 Staff wear utility gloves when cleaning or handling dirty instruments/ equipment and contaminated surfaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4.7 Staff put HLD or sterilised gloves without contaminating them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. SDP provides adequate infection prevention/ control in the area of decontamination	Observe if:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.1 0.5% chlorine solution available and prepared daily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.2 Buckets are available for chlorine solution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	5.3 Chlorine solution is mixed correctly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.4 All instruments are submerged in chlorine solution for 10 minutes immediately following a procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.5 Reusable gloves are decontaminated in 0.5% chlorine for 10 minutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.6 Disposable gloves are rinsed in 0.5% chlorine solution and inverted before disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	5.7 Examination table is wiped down with chlorine or linen table changed between clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. SDP provides adequate infection prevention/ control in the area of cleaning instruments	Observe if:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	6.1 Cleaning materials and supplies are available (scrub brush, detergent/soap, water, protective rubber gloves)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	6.2 Instruments and reusable items (syringes, needles) are properly cleaned in soapy water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	6.3 Instruments are thoroughly rinsed with clean water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.5:**Observation checklist for infection prevention (continued)**

ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	6.4 Cleaned instruments are dried by air or towel before further processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. SDP provides adequate infection prevention/ control in the area of high-level disinfection by boiling	Observe if: 7.1 Materials and supplies (boiling pan/pot, container for storing instruments, water) are available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	7.2 Instruments/ items are decontaminated and cleaned before boiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	7.3 Items/instruments are submerged in water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	7.4 Boiled instruments/ items are dried in a clean area of the room away from dust, flying insects or contaminated surfaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	7.5 HLD container is used for storing instruments/ items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. SDP provides adequate infection prevention/ control in the area of high-level chemical disinfection	Observe if: 8.1 Chemical supplies are available and fresh solutions are used (following manufacturer's directions for the dilution)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	8.2 Instruments/ items are decontaminated and cleaned before HLD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	8.3 Items are immersed completely in a covered container for an appropriate time (following manufacturer's directions for the timing and shelf life of disinfectants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	8.4 HLD items are rinsed with boiled or sterilized water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	8.5 HLD items are stored in sterilized or HLD Container	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. SDP provides adequate infection prevention/ control in the area of sterilization by autoclave or dry heat	Observe if: 9.1 Essential sterilization equipment is available and in good working condition (autoclave, dry heat oven, or boiler)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	9.2 Reliable power source (electricity line, generator, solar panel, kerosene, natural gas) is available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	9.3 Instruments/ items are decontaminated, cleaned and dried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	9.4 If autoclave is used, instruments are disassembled, wrapped and arranged loosely in the autoclave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.5:

Observation checklist for infection prevention (continued)

ITEMS TO OBSERVE (Col 1)	INFECTION PREVENTION TASKS/ OPERATIONS (Col 2)	ASSESSMENT (Col 3)				COMMENTS (Col 4)
		YES	NI	NO	N/A	
	9.5 Standard time/ temperature for sterilization is used (following manufacturer's directions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	9.6 Instruments kits to keep sterilised tools and equipment are available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. SDP provides adequate infection prevention/ control in the area of handling specimens or waste disposal	Observe if:					
	10.1 Clinic facilities and courtyard are clean	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	10.2 Cleaning materials are available (toilet paper, broom, floor cloth, antiseptic, soap)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	10.3 Staff wear gloves when obtaining or handling laboratory specimens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	10.4 Spills of blood or other bodily products cleaned up with 0.5% chlorine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	10.5 Sharp objects and needles are safely disposed in a puncture proof container filled with 0.5% chlorine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	10.6 Refuse and medical waste are properly handled (destroyed by burning or burying)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ANNEX 3.6:

Client exit interview

See Buyungo et al., "Overcoming challenges in quality assurance for social franchises for healthcare: Experiences from case studies in Kenya, Uganda and Pakistan, 2008-2015"

Quality of Care/M&E **CLIENT EXIT INTERVIEW FORM** **CODE: EXIT INT-01-2012**
TO BE FILLED BY QUALITY ASSURANCE DOCTOR (QAD)

INSTRUCTIONS: 1) Tick mark (✓) in a box as per reply by the respondent. 2) Do not read responses. 3) Write descriptive responses in English or Urdu. 4) In case if multiple responses are allowed, mark all responses.

Name of Region: _____ Name of PMO: _____
 District: _____ Name of SDP: _____ Date of interview (d/m/y): _____
 Type of SDP: FHH ☐ Model Clinic ☐ FHC ☐ Any other (write please): _____
 Area: Urban ☐ Semi Urban ☐ Rural ☐

INFORMED CONSENT

Rahnuma, FAPP always looks for ways to improve its services. For us, it is valuable to know the feedback of the clients that visit our facilities. Can I ask you a few questions? It will not take more than 10 minutes. You do not need to tell us your name. Your responses will be confidential and will only be used for research purposes. You can decide not to answer any question or terminate the interview if you so desire. At this time, do you want to ask me anything else about the survey?

Name of QAD: _____ Signature (QAD): _____

BASIC INFORMATION ABOUT THE RESPONDENT

Q1. Sex of respondent i. Male ☐ ii. Female ☐
 Q2. What is your approximate age in years?
 Q3. What is your academic qualification?
 Q4. Are you currently married? i. Yes ☐ ii. No ☐ (go to Q7)
 Q5. If yes, how long you have been married? (Years)
 Q6. How many children you have? Boys Girls

GENERAL INFORMATION

Q7. Is this your first visit to the clinic? i. Yes ☐ ii. No ☐ (go to Q9)
 Q8. Who referred you? i. No one (walk in client) ☐ ii. Satisfied client ☐ iii. Any other ☐
 Q9. What type of service did you come for today? (Multiple responses are allowed)
 i. Family planning services ☐ ii. Sexual or reproductive health services ☐
 iii. Other (please write):
 Q10. Did you receive the services you came for? i. Yes ☐ ii. No ☐
 Q11. Were you informed by staff about different kind of services provided in this facility?
 i. Yes ☐ ii. No ☐ (go to Q13)

ANNEX 3.6:

Client exit interview (continued)

Quality of Care/M&E

CLIENT EXIT INTERVIEW FORM

CODE: EXIT INT-01-2012

Q12. If yes, what are the services provided here? (Write all services mentioned by the respondent)

i. ii. iii.
 iv. v. vi.

Q13. Are you satisfied with the services?

i. Yes, fully satisfied/ Good ☐ (go to Q15) ii. Just satisfied/ Fair ☐ iii. Not at all/ Poor ☐

Q14. If not at all satisfied, what is the reason? (Write the reason mentioned by the client)

Q15. Do you think that the cost of service was acceptable? i. Yes ☐ ii. No ☐Q16. Have you been given any subsidiary/ concession in the fee? i. Yes ☐ ii. No ☐Q17. How much you paid today for your services? (Rs.) Q18. Are the clinic hours convenient for you? i. Yes ☐ ii. No ☐Q19. Which time is most convenient for you? i. Morning ☐ ii. Afternoon ☐ iii. Evening ☐Q20. Was it easy to get to the clinic/ site? i. Yes ☐ ii. No ☐

Q21. Was the time spent in consultation was sufficient to discuss your needs?

i. Too long ☐ ii. Just right ☐ iii. Too short ☐

Q22. How long you waited in the clinic for your turn for consultation? (Minutes) Q23. Do you think that the waiting area is comfortable? i. Yes ☐ ii. No ☐

Q24. Do you think that clinic is neat and clean?

i. Yes, completely ☐ ii. Yes, to some extent ☐ iii. Not at all ☐

Q25. Did you have sufficient privacy during your consultation time? i. Yes ☐ ii. No ☐

Q26. Did the clinic staff treat you in a friendly and respectful manner?

i. Yes, all of them ☐ ii. Yes, some of them ☐ iii. None ☐

Q27. What suggestions do you have which could help us offer you a better services in future?

IF CLIENT DID NOT RECEIVED FAMILY PLANNING SERVICES THEN THIS CLIENT IS NOT ELIGIBLE FOR ASKING REST OF THE QUESTIONS. PLEASE SAY THANK YOU TO THE CLIENT AND 'END THE INTERVIEW'

ANNEX 3.6:

Client exit interview (continued)

Quality of Care/M&E

CLIENT EXIT INTERVIEW FORM

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C. QUESTIONS FOR FAMILY PLANNING CLIENTS ONLY

Q28. Which family planning service you have taken today? (Multiple responses are allowed)

- i. Counseling ☐ ii. Treatment ☐ iii. Referral ☐ iv. Follow-up visit ☐

Q29. Was the use of method/ service explained to you?

- i. Yes ☐ ii. No ☐

Q30. Do you feel that staff had given you opportunity to ask questions and clarify doubts/ concerns?

- i. Yes ☐ ii. No ☐ iii. Had no concerns ☐

Q31. Have you been explained the common side effects and warning signs on the use of contraceptive?

- i. Yes, very clearly/ in detail ☐ ii. Yes, not clearly / briefly ☐ iii. No ☐

Q32. Which family planning method you have taken today? (Multiple responses are allowed)

- i. None ☐ ii. Condom ☐ iii. Oral pills ☐ iv. Injectables ☐
v. IUCD ☐ vi. Sterilization ☐ vii. Any other ☐

(Please do not miss filling section D- page 4 for clients taken Oral pills, Injectables or IUCD)

Q33. Has service provider informed you that in case of severe pain you must see the doctor for change of family planning method?

- i. Yes ☐ ii. No ☐

Q34. Has service provider informed you that in case of severe bleeding always return for checkup/ counseling?

- i. Yes ☐ ii. No ☐

ANNEX 3.6:

Client exit interview (continued)

Quality of Care/M&E

CLIENT EXIT INTERVIEW FORM

CODE: EXIT INT-01-2012

D. QUESTIONS ONLY FOR FP CLIENTS WHO HAVE TAKEN ORAL CONTRACEPTIVE PILLS, INJECTABLES OR IUCD

Please ✓ against options mentioned by respondent. Please remain focus only on the column for a method taken by the client. Please be clear that you have to find out that either service provider had taken these details or s/he asked these questions from the client before suggesting him/her the FP method.

A. ORAL CONTRACEPTIVE PILLS CLIENT	B. INJECTABLES CLIENT	C. IUCD CLIENT
Q 35. Did service provider asked following questions from you for confirming the suitability of FP method?		
i. Are you currently pregnant? <input type="checkbox"/>	i. Are you currently pregnant? <input type="checkbox"/>	i. Are you currently pregnant? <input type="checkbox"/>
ii. Do you have a child born in last 6 weeks? <input type="checkbox"/>	ii. Do you have a child born in last 6 weeks? <input type="checkbox"/>	ii. Do you have a history of Vaginal discharge? <input type="checkbox"/>
iii. Are you a lactating mother of a child up to 6 months old? <input type="checkbox"/>	iii. Are you breastfeeding to less than 4 weeks old child? <input type="checkbox"/>	
iv. Do you have a history of • high B.P: <input type="checkbox"/> • heart disease/angina: <input type="checkbox"/> • liver diseases(cirrhosis): <input type="checkbox"/> • major surgeries requiring immobilization: <input type="checkbox"/>	iv. Do you have a history of • high B.P: <input type="checkbox"/> • heart disease/angina: <input type="checkbox"/> • liver diseases (cirrhosis): <input type="checkbox"/> • breast cancer: <input type="checkbox"/>	
Q 36. What are the side effects you were told by service provider that you may experience by the use of given FP method? (Unprompted- do not read option, ✓ only those mentioned by the respondent)		
i. Spotting <input type="checkbox"/>	i. Change in bleeding pattern (lighter, fewer days, irregular, heavy, Spotting) <input type="checkbox"/>	i. Heavy vaginal bleeding (Change in bleeding patterns) <input type="checkbox"/>
ii. Amenorrhea <input type="checkbox"/>	ii. Amenorrhea <input type="checkbox"/>	ii. Amenorrhea <input type="checkbox"/>
iii. Nausea/ vomiting <input type="checkbox"/>	iii. Nausea, dizziness, vomiting <input type="checkbox"/>	iii. IUD expelled <input type="checkbox"/>
vi. Significant weight gain/loss <input type="checkbox"/>	iv. Unwanted weight gain <input type="checkbox"/>	iv. Cramping <input type="checkbox"/>
v. Diarrhea <input type="checkbox"/>	v. Diarrhea <input type="checkbox"/>	v. Missing strings <input type="checkbox"/>
vi. High BP <input type="checkbox"/>	vi. High BP <input type="checkbox"/>	
vii. Depression <input type="checkbox"/>	vii. Depression <input type="checkbox"/>	
viii. Headaches <input type="checkbox"/>	viii. Headaches <input type="checkbox"/>	
ix. Breast tenderness <input type="checkbox"/>	ix. Breast tenderness <input type="checkbox"/>	
x. Loss of libido <input type="checkbox"/>	x. Loss of libido <input type="checkbox"/>	
xi. Chloasma (mask of pregnancy) <input type="checkbox"/>	xi. Chloasma (mask of pregnancy). <input type="checkbox"/>	
xii. Acne <input type="checkbox"/>	xii. Acne <input type="checkbox"/>	
	xiii. Amenorrhea after prolonged used extending up to 10 months <input type="checkbox"/>	
	xiv. Severe lower abdominal pain <input type="checkbox"/>	
I am very much thankful to you for your time and cooperation		

ANNEX 3.7:**Quality assurance Indicators for individual QA categories in the Suraj SF Network**

See Gul et al., “Social franchising for improving the clinical quality of family planning services and increasing client volumes at privately owned clinics: Evidence from the Suraj social franchise network, Pakistan, 2013-2014”

CATEGORY 1: Clinic Administration Indicators**Centre Building and Facilities:**

1. SURAJ logo/ board is available and toll free # clearly visible at the entrance and in good repair.
2. The building is in good repair.
3. Exterior and interior of the building are clean with no litter, dust or bad odors or other refuse detracting from the external décor of the center; maintenance is of an excellent standard: there is no need for repainting; no need to repair brickwork or windows.
4. Toilets are clean and in good repair.
5. There are hand washing facilities.
6. Reception, waiting area and recovery area with beds have healthy looking plants (live or artificial).
7. Walls are decorated with laminated or framed non-clinical posters or pictures.
8. There is privacy for making payments in reception.
9. There are appropriate furniture and fixtures (chair, table, stool, examination table with plastic sheet) that promotes good client / provider interaction.
10. Satisfactory cleanliness of procedure room, clinic.
11. The procedure room has sufficient natural or electrical light with a back-up arrangement in case of power failures.
12. Where light is insufficient for procedure a head lamp or other torch is used.
13. Invasive medical equipment is kept out of client view.
14. Drinks (water is sufficient) are available.
15. There are no safety hazards present (e.g. trailing leads, cords across walkways, or free electrical wires etc.).
16. Framed accreditation certificate is displayed.
17. Suraj Pricelist is available.
18. Procedure rooms are visibly clean (i.e. have no stains of blood, vomit, sputum, dust, soil, trash and spider webs on the floors, walls, windows, etc.).
19. Clinic does not have smell of disinfectants.
20. The floor is water washable (observe).
21. District Project Officer has visited the center within the last 3 months (Verbal report).
22. Client / Provider Interaction: Clients are respectfully and warmly welcomed on arrival.
23. TRAINING RECORD: Staff are trained in family planning and counseling methods, IUCD, Femplant MSL (see certificates) or available record.

Training:

24. Team members/PP in this clinic have been trained in MSS- IP standards and guidelines and have access to the IP manual.
25. Providers trained on insertion of IUCD by recognized trainer. (check certificate)
26. Providers trained on insertion/ removal of implants of FEMPLANT by recognized trainer. (check certificate)

Instruments and Equipment:

27. B.P apparatus in working condition.
28. Stethoscope available.
29. Thermometer in plastic container.
30. Weighing scale in working condition.

31. Quality/condition of instruments. (check)
32. IUCD sets: Availability of complete sets: Cusco's medium, Stopes Forceps, Sponge holding forceps, IUCD Scissors Curved 8", Drums /trays.
33. Femplant Insertion & Removal Set: antiseptic solution, gallipot, blade, scalpel, saniplast, gloves, pressure bandage, drapes, Femplant).
34. Instruments sets stored properly in a covered container.
35. Instruments properly wrapped, linen available.

Operation Theater:

36. Operation table, OT lights in working condition, torch with batteries, buckets with labels (bleach & soap), bleach soaked towels, utility gloves
37. Cover sheets, standard size apron, mackintosh
38. Instrument drum with label (gloves, gauze and cotton)
39. Yellow sharp/sharp container with lid
40. Check suction machine; present and functioning
41. Check oxygen cylinder (key, flow meter & more than 1/2 full)
42. Revolving stool & foot step (single)
43. Drip stand (at accessible Area)
44. Instruments trolley 18x18, Instruments (mayo) trolley 18x24

CATEGORY 2: Clinical Knowledge Indicators**Infection prevention:**

1. Team members are aware of Infection Prevention protocols.
2. Provider has knowledge of importance of hand washing, how and when to wash.
3. All team members/PP are familiar with the protocols for: Sharp Handling, disposal of sharps, needle prick injury.
4. Provider has knowledge of needles are never recapped.
5. Provider has knowledge of importance of decontamination and Instruments processing.
6. Boiling technique (ask the method of boiling from relevant staff).
7. Instruments wrapping & storage.
8. Provider is vaccinated and has knowledge of importance of Hep B vaccination.
9. Complete information of final waste disposal and gloves available for waste.
10. Provider has knowledge of PEP.

Injections:

11. The vial / ampoule rolled between two hands, Depo shake to mix the content well before injecting.
12. The site of injection was not massaged and the client was also instructed not to massage or give hot compression.

Complications:

13. If occurring, how diagnosed; minor complications managed promptly; major complications referred to an appropriate hospital, and field supervisor informed.
14. Suraj provider has knowledge of importance of QA and audits and action plans.
15. Suraj provider has knowledge of importance of client satisfaction.

ANNEX 3.7:

Quality assurance Indicators for individual QA categories in the Suraj SF Network (continued)

CATEGORY 3: Counselling Indicators

1. MEC, guidelines, client cards, and consent forms available.
2. Provider aware of eligibility criteria.
3. A sample of each method is available for client consultation.
4. Written and pictorial information FP leaflets, Flipchart/ book available (must be in language clients can understand, or pictorial for illiterate clients).
5. Availability of aids and wall charts during counselling models, or FP method wall charts must be up in the counselling room where clients can see them.
6. Service information presented clearly and simple language used for counselling.
7. Explain FP methods/service details with side effects and warning signs.
8. Clients given time to ask questions and received information explanations that they understand.
9. There is a follow up mechanism in place for long term and permanent methods of FP. Follow up date (if required) given and written on card.
10. Privacy ensured throughout counselling.
11. Clients shown how to do breast self-examination.
12. Help client to make decision to meet his/her specific need.
13. Referral system in place for services not provided in site.

Counselling for Combined Oral Pills:

14. Asked about Last Menstrual Period (LMP) and breast feeding, excludes pregnancy.
15. History excludes Smoking and age over 35.
16. Major medical problems (Diabetes, Migraine, Heart Disease, Hypertension greater than 160/100, DVT & Liver Disease).
17. Gynecological problems (e.g.: Abnormal bleeding) and Breast cancer – breast lump or discharge.
18. Drug history (Rifampicin, Antiepileptic, Anticonvulsants & Antidepressants).
19. Tell the client when to start Pill & what to do if Pills are missed.
20. Check BP, Pulse (especially at first visit).
21. Client given adequate supplies (3 cycles).
22. Confirm expiry date.

Counselling for Injectables:

23. Asked about Last Menstrual Period (LMP) and breast feeding (up to 6 weeks), Pregnancy excluded.
24. Information about the dosage, duration, type of injections (2months, 3 months), route and date of next injection, importance of taking the Injectables timely.
25. Information on advantages, disadvantages, side effects & warning symptoms.
26. Comprehensive medical history taken: Major medical problems (Diabetes, Migraine, Heart Disease, Hypertension, DVT & Liver Disease).
27. Gynecological problems (e.g.: Abnormal bleeding) and Breast cancer – breast lump or discharge.
28. Drug history (Rifampicin, Antiepileptic, Anticonvulsants & Antidepressants).
29. Blood pressure not more than 160/100.
30. Weight monitored.
31. Observe the method of injection given and massaging after injection.

32. Client given return date.
33. Intrauterine contraceptive device (IUCD) Counselling: Exclude pregnancy, LMP.
34. History of STI's/RTI's Pelvic inflammatory disease.
35. Client informed of possible initial increased bleeding and discomfort with menses.
36. Explain in detail side effects/warning symptoms.
37. Complete history of abnormal, post-coital bleeding taken.
38. Assured the client that she can have the IUCD removed at any time if she wanted.
39. Teach the client how to feel the thread.
40. Condom & Emergency Contraception: Condom demonstration done correctly including; expiry date check, storage, opening, fitting, removal, and disposal.
41. Emergency contraception: Offered and available.
42. Provider knows how to use (check expiry, how to open, use and disposal) and rupture/ Leak.
43. Provider educates client on what to do in case of rupture and leakage.
44. IUCD and EC pills as emergency contraception offered and available.
45. Indication and Instruction about ECP & time duration of effectiveness.
46. How many times clients can use in a month?
47. Provide EC Pills pack to all condom users/ clients.
48. What to do if there is vomiting within two hours of taking ECP, Client given instructions (with food).
49. Possible side effects and their management.
50. Tell about the contraceptive options after ECP.
51. Pills: Eligibility/timing (120 hours post unprotected sexual intercourse).
52. IUCD: timing (7 days post-unprotected sexual intercourse).
53. PAC-FP Counselling: Detail history (medical, surgical, drug, allergy).
54. FP counselling /screening.
55. Clients understand the possible risk of continuing pregnancy.
56. STI/ RTI counselling/ screening: Knowledge of STI.
57. Per speculum examination (if required).
58. Compliance to STI's / RTI's treatment.
59. Regimen for STI's prescribed, partner treatment given, condom promotion.
60. Counselling for MSL: Ensure the client understands the chosen method
61. Permanency / failure explained
62. Choice of other methods (temporary) offered as an alternative
63. Detailed H/O of abnormal bleeding and Last delivery, LMP, current medical problem, STIs, PID. Detailed H/O previous surgeries, drug history. MSL procedure including possible risk & failure explained. Contraindication excluded
64. Client voluntarily signed consent form

CATEGORY 4: Procedure Competence Indicators:

IUCD:

1. To observe the IUCD insertion & removal set boiled/sterilized with proper storage in container (Drum/tray) and container can be wrapped in cloth.
2. Light source (torch / spot light / emergency light) is available and functioning

ANNEX 3.7:Quality assurance Indicators for individual QA categories in the Suraj SF Network
(continued)

3. IUCD Client (COPPER-T & MULTILoad): To screen the client by taking history and examination, rule out pregnancy, STI's / RTI's)
 4. Service provider briefed the client about the procedure (check the consent form if applicable FPRH / RHF)
 5. Empty bladder (instructions given by SP & observed by supervisor)
 6. Pre-Insertion Preparation: Service provider prepare the instruments with ML and kept covered until the procedure begin. Ensure the light arrangement (spot light /torch)
 7. Service provider has washed her hands with soap and Put on latex/ plastic gloves.
 8. Client positioned in Dorsal Lithotomy and covered with covering sheet.
 9. Clean external area; the vulva has been cleaned properly with diluted antiseptic solution with the help of a sponge holding forceps and cotton ball.
 10. Pelvic examination Bi-manual - Speculum -PV -speculum
 11. P/V: To check the size of uterus. Cervical motion tenderness, mobility and to exclude the Adnexal mass, cervicitis, PID.
 12. Step 1: To screen for STI before any procedure (IUCD etc.). During the speculum examination cervix is swabbed with dry cotton ball held in sponge holding forceps, then inspect the cervix and cotton ball for bleeding spot / any discharge which will indicate the presence of cervicitis.
 13. Step 2: To apply pressure with dry cotton ball for 30 seconds on cervix and look for bleeding, discharge and to exclude the cervicitis.
 14. Hold the upper lip of cervix with stipes forceps and pull forward & downward very gently then the 4mm cannula/ plastic dilator inserted slowly to determine the size & position of the uterus.
 15. To open the 1/3rd sterile pack of ML with non-touch technique and adjust the guard of ML according to size of uterus
 16. The provider slowly and gently inserts the ML and during insertion blue guard of IUCD was kept in horizontal position and withdraw the plastic tube 3-4th cm then cut the thread. (Non-touch technique was followed throughout the procedure)
 17. Clean the cervix with dry cotton to observe the bleeding then Gently remove the stipes forceps and speculum and thanked the client
 18. Provider teaches thread identification and post procedure instruction given
 19. Vocal local technique maintained throughout procedure
 20. Privacy maintained throughout the procedure; no-one comes in or out.
 21. Technique of Copper - T insertion: (To follow the instruction from # 1-14) To open the 1/3rd sterile pack of Cu-T with non-touch technique and adjust the limbs of Cu-T in inserter tube (fix on hard surface) then adjust the guard of Cu-T according to size of uterus.
 22. The provider slowly and gently inserts the Cu-T by slightly pull and with draw inserter. During insertion blue guard of IUCD was kept in horizontal position and keep plunger in vertical position. Remove the plunger & inserter tube 3-4cm then cut the thread. (Non-touch technique was followed throughout the procedure). (To follow the instructions from # 17-20)
 23. Follow-up date was recorded and reminded her when to come for her next follow-up.
 24. IP- instruments decontaminated in 0.5 % Chlorine solution immediately after the procedure for 10 minutes then proceed for cleaning and instruments processing.
 25. Wipe the examination table with chlorine soaked cloth/ towel and prepare it for next client.
- Injection giving technique:**
26. Check the expiry date of injection Depo shaken to mix the content well before injecting and Norigest/ vial rolled between two hands.
 27. Safe opening of vials (availability of ampoule cutters will be ideal) and filling of injection.
 28. Identify the correct site of injection and clean with spirit.
 29. After inserting the needle, the piston of the syringe was drawn to confirm that it did not puncture any blood vessel before injecting.
 30. The site of injection was not massaged and the client was also instructed not to massage or give hot compression.
 31. Do not recap the needle, Put the syringe and vial in a sharps container.
 32. Post procedure instructions given -If the site of injection got infected or she failed to come even after 14 days of the next dose, then instruct to use condom.
 33. Date of next injection recorded and advised to come on time.
- Implant- Insertion:**
34. Availability -service provider; Screened the client for Jaundice (within 6 months) / anemia, DVT, Breast lump, Drug interactions (Rifampicin; Griseofulvin; anticonvulsants) Post-partum up to 6 weeks, Breakthrough bleeding, bleeding after coitus.
 35. Explain the procedure to the client and check consent form.
 36. Ensure the client has washed the arm (less frequently use) with soap and water.
 37. IMPLANT- Instruments & Equipment: Metal tray, Sterile pack (kidney tray, scalpel with blade size 11, galipot, forceps), Sterilize gloves and cotton/ gauze, Disposable syringe, Injection Lignocaine, Sterile trochar and plunger, implant Sterile tape/saniplast available (Prepare the tray with non-touch technique).
 38. Scrub for 3-5minutes and dry in air / with sterile towel in the tray.
 39. Place clean sheet under the arm and bent the elbow, supported well.
 40. Puts on sterile gloves.
 41. Insertion site identified (6-8 cms above the elbow on the medial aspect of the upper arm in the groove between the biceps and triceps muscles).
 42. Place sterile surgical drape over arm.
 43. Anaesthetized arm with 2-4ml lignocaine 1%. At the site of insertion.
 44. Use of sterile gloves for insertion (clean gloves may be used for non-touch technique).
 45. Insertion site cleaned with antiseptic. Skin stretched during insertion of trocar and cannulae.
 46. Insertion; Check the anesthetic effect with the blunt end of the scalpel before making skin incision.
 47. Give 2mm superficial incision to cut the skin.
 48. While inserting the trocar through the incision stretch out the skin, so that trocar is visible directly beneath the skin and can be felt by finger tent the trochar).

ANNEX 3.7:

Quality assurance Indicators for individual QA categories in the Suraj SF Network (continued)

49. Take the plunger out of trocar, load one implant in the trocar, then put back the plunger in-side the trocar and push lightly until you feel the resistance.
 50. Fix the plunger with one hand and withdraw trocar barrel till it touches the handle of the plunger.
 51. While inserting 2 rod implant rotate the trocar at 15 degrees according to the marking and hold the inserted capsule with one finger so that next insertion does not push the first capsule. Push the trocar loaded with the plunger till mark no.1 then with draw.
 52. Never touch the barrel of the trocar while inserting the capsule, never take out the trocar out of the incision.
 53. Post-Insertion Tasks: Brought edges of incision together and closed it with butterfly bandage, band aid or surgical tape.
 54. Applied pressure dressing to insertion area and wrapped gauze bandage snugly around the arm to ensure homeostasis and minimize bruising.
 55. Instructed client regarding wound care (e.g., if pus, blood or capsules come out of insertion site, client should return to clinic).
 56. Maintain vocal local throughout the procedure.
- Implant- Removal:**
57. Pre-removal Tasks checked to be sure that the client's arm is clean.
 58. Helped the client onto table, positioned arm properly and placed clean, dry cloth under her arm.
 59. Scrub hands.
 60. Put on sterile gloves.
 61. Place sterile surgical drape over arm.
 62. Mark distal end, Apply alcohol swab on the arm.
 63. Locate implant by palpating.
 64. Anaesthetized arm with 2-4ml lignocaine 1%. At the site of incision just below the distal end of the implant, applying anesthetic under the implant to avoid swelling which can occur if injecting over the implant- making implant more difficult to locate.
 65. Prepare removal site by swabbing with antiseptic solution, beginning at incision site and moving outward in a circular motion for 8-13 cm. Wiped off excess solution.
 66. Make an incision 2mm long in longitudinal direction of arm at the distal end of the plant.
 67. Gently push implant towards incision until tip is visible.
 68. Grasp implant with mosquito forceps and remove.
 69. If implants have fibrotic tissue, make incision into tissue sheath and remove implants with forceps.
 70. If tip of incision is not visible, gently insert forceps into incision and grasp implant, dissects tissue around implant with second forceps and gently remove implant.
 71. Do the same removal procedure with the second implant, if using a 2 rod implant.
 72. Close incision with butterfly closure.
 73. Apply sterile gauze with pressure bandage to prevent bruising.
 74. Post-Removal: Observe client before discharge for few minutes in case of fainting or bleeding.
 75. Placed all instruments in chlorine solution for decontamination for 10 minutes.
 76. Record keeping done accordingly.
- Marie Stopes Ligation:**
77. Equipment & instruments available like OT table, light, back up light, Standard sets, linen and supplies
 78. **PREPARATION OF MSL CLIENT;** Service provider (who specify)
 79. Client understands this is a permanent, irreversible method of contraception (ask Client)
 80. Removal of jewelry & make up of client, area not shaved
 81. Change clothes
 82. Sedation (IM injection 30min: before MSL)
 83. Establishing eligibility through client screening and assessment; Recorded history of contraception /obstetric, previous surgery, bleeding disorders, BP, STIs, PID
 84. Pregnancy excluded, LMP, contraindications ruled out
 85. Pelvic examination by service provider
 86. Service provider's responsibilities; Provider greets the client prior to starting the procedure (observe)
 87. Room, equipment and supplies checked and keep out of client's view
 88. Client notes and consent form checked
 89. Client given opportunity to ask any final questions
 90. Provider ask client if the bladder is empty prior to starting the procedure (observe)
 91. Clinical areas restricted to only those involve in activity
 92. **PREPARATION OF SERVICE PROVIDER & ASSISTANT:** Correct surgical attire, Mask, Cap, Shirt/Trouser, Mackintosh, Foot wear worn
 93. Team member wash their hands for 3-5 minutes during surgical scrub (3 times with liquid soap + once with Savlon/Surgillum)
 94. Team member hold hands above the level of the elbow after surgical scrub
 95. Team member use a sterile towel after surgical scrub
 96. Aseptic technique used sterile gloves used, sterile drape with peritoneal hole used, skin swabbed, sterile field maintained)
 97. Standard steps of MSL procedure; Pubic area not routinely shaved
 98. MSL procedures record keeping done accordingly
 99. Procedure clients counselled on all the steps of the procedure and their role in procedure e.g. tummy tuck (observe consultation)
 100. Vocal Local is performed throughout the procedure, with a dedicated person providing the vocal local (observe)
 101. Provider asks client if the bladder is empty prior to starting the procedure
 102. Provider greets the client prior to starting the procedure (observe)
 103. Provider and assistant wear sterile gloves
 104. The muscle should not be cut while opening the abdomen (observe)
 105. The fold of the peritoneum is checked to ensure it contains no gut or bladder by both feeling the fold with fingers, and check translucency (observe)
 106. The peritoneum is opened with a blade and not scissors (observe)
 107. After opening the peritoneum, no sharps or crushing instruments should be used
 108. A safe method for retrieving the fallopian tube is observed
 109. Tubes are always occluded in a routine way – first on the side of the assistant (observe)
 110. Each tube is correctly identified by visualizing the fimbrial ends prior to ligation

ANNEX 3.7:**Quality assurance Indicators for individual QA categories in the Suraj SF Network
(continued)**

111. Provider checks there is no bleeding from the tubal stump before returning it to the cavity (observe)
112. Sterile field is maintained throughout the procedure
113. Client is observed/monitored while in recovery
114. Post-procedure counselling provided including education on wound care and danger signs
115. Client understands when and where she must return to, or contact, if she has symptoms that may indicate a complication

CATEGORY 5: Infection Prevention Indicators:

1. Hand-washing, Gloves, Sharps, Waste: Team members wash their hands BEFORE examining or providing a service for every client. (Observe 3-4 procedures).
2. Alcohol hand rub is available and used. (100 ml spirit+2 ml glycerin)
3. Examination gloves, sterile gloves / latex gloves and utility gloves are available and adequate at this clinic.
4. There are puncture resistant container of Sharps are placed in procedure room.
5. Sharps are placed in a sharps container immediately following use.
6. There are lidded waste containers with leak proof plastic bags for medical waste and securely stored till final disposal.
7. Clinical waste and general waste are put into separate containers clearly marked and easily distinguishable.
8. Ask & observe: that Staff wear gloves when handling medical waste.
9. The clinic has a system for properly dispose of medical and hazardous wastes and sharps. If this is not possible, waste is buried in sealed containers in accordance with local guidelines.
10. Instrument and Equipment Processing: There is an instrument cleaning area with a sink/source with running water.
11. There are labelled plastic containers with lids for 0.5% chlorine solution for decontamination in the procedure areas.
12. The 0.5% chlorine solution is prepared according to recommendations. (63 parts water + 1part Chlorine)
13. A timer available and used at all instrument processing areas.
14. Standard measurement (1000 ml) jar is available for preparation of solutions.
15. Team members ensure that all used instruments are completely submerged in chlorine solution for 10 minutes (container should be covered).
16. Instruments are thoroughly rinsed with clean water after removing all blood and other foreign matter (use plastic pot /tub for cleaning with proper protocols).
17. Detergent is used – not liquid soap.
18. Instruments and other items are allowed to air dry or dried with a clean towel (plastic rack or basket should be available).
19. Sterilization, Steam Sterilization (autoclave): Written instructions are available on site on the use of the autoclave (Optional if autoclave available with social franchise clinic). Provider has knowledge of Unwrapped items are sterilized for 20 minutes, Wrapped items are sterilized for 30 minutes, Instruments are opened or disassembled, a monitoring test is performed on every pack (e.g. indicator check) (optional where applicable).
20. High Level Disinfection (HLD): Boiling, Instruments are boiled for 20 minutes using a timer and starting from the time a rolling boil begins (Instruments are opened or disassembled).
21. Appropriate size of boiling container with lid is available.
22. Team members do not add instruments after timing has begun.
23. Instruments are removed after 20 minutes, using sterile forceps.
24. High level disinfected instruments are stored dry in sterile containers for a maximum of 24 hours.
25. Handling and Storage: Instruments are dated and used within 7 days of sterilization (Autoclave), and 24hours for boiling instruments and mention expiry date on them.
26. Unwrapped items used in 24 hours of opening storage container. Items are placed either on tray or shelf or in a metal, lidded container.
27. Cloth items have been laundered, dried and have no holes on them and packs are free of tears, dampness and excessive dust.
28. Chemical sterilization (HLD): The formula for Meddis solution is 50 ml of Meddis added to 950 ml of boiled cooled water
29. Mention the name of dispensing person with date of preparation, expiry (21 days) & signature.
30. Submerge Cannulae in chemical solution Meddis for half an hour (30 minutes) observe that the tip of cannula is dipped first.
31. After 30 minutes cannulae are removed with sterile Cheatel forceps.
32. Cannulae rinse with boiled/sterile cold water, each rinsed separately by holding lower part with sterile Cheatel forceps
33. Daily processing of cannulae
34. Store sterile cannulae in autoclaved cloth in a clean and covered sterilized metal tray
35. Store sterile cannulae in clean lidded sterilized metal tray.
36. Equipment Cleaning Routine: Procedure table/cover wiped with a chlorine or disinfectant solution between clients (ask and observe).
37. All surfaces coming into contact with blood or other body fluids are disinfected and cleaned (including light handles).
38. Procedure room damp dusted daily and inside of cupboards cleaned daily.

CATEGORY 6: Emergency Preparedness Indicators

1. Emergency preparedness training (including Basic life support (BLS)/cardiopulmonary resuscitation (CPR) received).
2. Relationship pre-established with referral facility.
3. Arrangements pre- arranged for transportation to referral facility.
4. All team members are familiar with protocols for transfer
5. All team members have knowledge that how involved appropriately during an emergency (they know the TORs of emergency)
6. There must be an agreed protocol for the management of suspected ectopic pregnancy
7. There must be timely and thorough follow up of any referral made Referrals to ensure client is receiving the appropriate care

Emergency supplies:

ANNEX 3.7:Quality assurance Indicators for individual QA categories in the Suraj SF Network
(continued)

8. Oxygen cylinder (size D) more than half full (for centers providing mini-lap); Oxygen cylinder easily accessible and mobile. Oxygen cylinder with an easily visible gauge with O2 cylinder
9. Emergency medications check & signed fortnightly and equipment checked and signed monthly; maintain record.
10. Non rebreathing oxygen mask with reservoir bag and tubing (all disposable after one use): clean
11. All drugs must be kept in their original packaging as dispensed or purchased OR kept safely and free from breakdown in clearly marked separate boxes/packages/containers with contents, dosage and expiry dates clearly visible.
12. Suction for airway – electric or manual (where high risk procedures only are performed) check functioning of suction machine
13. Pocket Mask with Oxygen port (with Oxygen Tubing attached); single use x (1)
14. Light source- spot light/torch with battery/charge light x (1)
15. AMBU bag/valve mask x (1)
16. Oral Airway size 2 x (1)
17. Oral Airway size 3x (1)
18. Oral Airway size 4 x (1)
19. IV Cannula, 16 x (2)
20. IV Cannula, 18 x (2)
21. IV Cannula, 20 x (20)
22. IV Cannula, 22 x (2)
23. Butterfly needle 22 & 24 G x (2 each)
24. IV sets x (2)
25. Cannula fixing dressing (micropore) x (2)
26. Foley's catheter (no. 16) with urine bag x (1)
27. Chromic Catgut (0, 2/0, 3/0) x (1 each)
28. Silk (2/0, 3/0) optional x (1)
29. Suture needle x (2)
30. Adhesive Tape x (1)
31. Sterile Gloves Small size (no 6) x (2)
32. Sterile Gloves Large size (no 7) x (2)
33. Latex Gloves x (1 box)
34. Spirit bottle +cotton balls (5) x (1)
35. Spongostan x (2)
36. D/syringes 2cc x (5)
37. D/syringes 5cc x (5)
38. D/syringes 10cc x (5)
39. Tourniquet x (1)
40. Sterile Gauze Pack x (1)
41. Large Scissors x (1)
42. Crepe Bandage x (1)

Emergency Medicines:

43. Inj: Atropine 1mg/ ml (6)
44. Inj: Adrenaline 1mg/ml, 1:1000 x (2)
45. Inj: Chlorpheniramine (Avil) x (2)
46. Inj: Hydrocortisone 100mg x (2)
47. Inj: Diazepam/Valium 10mg/2ml x (2)
48. Diazepam 5mg, x 2 suppository (Where available)
49. Inj: Oxytocin 5 IU/1ml) x (10)
50. Inj: D/W 5ml x (5)
51. Salbutamol inhaler 2.5 mg (1)

52. Inj: Methergin 0.2 mg/ml x (2)
53. Inj: Naloxone x (2)
54. Inj: Voren 75 mg x (2)
55. Inj: Clafron 1G x (1)
56. Inj: Flagyl 100 ml x (1)
57. Inj: Decadron 4 mg/ml x (2)
58. Tab: ST mom (misoprostol) x (5)
59. Cap: Doxycycline (vibramycin) 100 mg x (10)
60. Tab: Angised/GTN x (10)
61. Tab Aspirin x (5)
62. Glucose powder x (1)
63. 25% Glucose x (2)

Fluids

64. 0.9% Saline 500 ml x (2)
65. D/S 5% 500 ml x (2)
66. Plasma expander (Haemaccel/Gelofusin) x (1)
67. Ringer's Lactate/Hartman's solution 1 Liter x (2)

CATEGORY 7: Supply Indicators

Following supplies' availability in sufficient quantity: (view supplies for oral contraceptive pills, condoms, Injectables, implants and IUDs).

1. Check receiving documents.
2. Plain Condoms.
3. Emergency contraceptive pills.
4. Injections (Norigest + Depo).
5. Multiload.
6. The expiry date of injection was checked by provider
7. Copper- T.
8. Femplant.
9. Client cards.
10. Follow-up cards.
11. Client referral forms/cards.
12. Consent forms.
13. Bleach/Savlon solution/Meddis solution
14. IEC material.
15. Ordering stock: there is a designated person for ordering stock, with a system to forecast to avoid stock outs and over stocking.
16. All drugs are protected from moisture, heat and infestation and correctly stored on shelves in lockable cupboards.
17. Records are kept of commodities, with tracking of First Expire First Out and fast moving drugs within recommended temperature.
18. All drugs are within their recommended shelf life / have not expired.
19. There is a process in place for the management and disposal of damaged or expired drugs. FEFO. (ask SFS and check record)
20. There is an up-to-date drug register inventory (check for recent entry with SFS).
21. There is a functioning refrigerator which is being used to store drugs that require refrigeration (optional).
22. Controlled drugs are stored in a separate lockable cupboard (Injection Valium & Sosegon).
23. All emergency drugs/stock are available and within expiry date.
24. Supplies and equipment are available.

ANNEX 3.8:**Questions from Bungoma 2014 facility assessment survey questionnaire**

See Bellows et al., “Benchmarking to assess quality of family planning services: Construction and use of indices for family planning readiness in Kenya with data from 2010 and 2014”

Questions	Cronbach's alpha
Service availability (10 items)	0.6738
V302: Which of these FP methods are usually available to clients at the MCH/FP section?	
a) combined pill [q302a1]	
b) progestin-only pill [q302a2]	
c) emergency contraceptives [q302a3]	
d) Injectables [q302a4]	
e) IUCD [q302a5]	
f) hormonal implants [q302a6]	
h) condom male [q302a8]	
i) condom female [q302a9]	
j) female sterilization [q302a10]	
k) male sterilization [q302a11]	
Privacy for FP examinations (1 item)	n/a
V901. Infrastructure available in MCH-FP:	
c) private space for FP examination[q901a3]	
Implant and IUCD supplies (11 items)	0.7660
v403. General supplies for tests/lab	
i) iodine [q403a9]	
v405: For the MCH-FP units, are the following items in the room:	
g) Sterile latex gloves [q405b7]	
gg) sponge holding forceps [q405b33]	
cc) gauze [q405b29]	
u) speculum small [q405b21]	
v) speculum medium [q405b22]	
w) speculum large [q405b23]	
x) tenacula [q405b24]	
y) uterine sound [q405b25]	
v404. Drugs/immunization	
v) lignocaine [q404a22]	
v403. General supplies for tests/lab	
a) disposable syringes [q403a1]	

ANNEX 3.8:

Questions from Bungoma 2014 facility assessment survey questionnaire (continued)

Stocks and commodities (8 items)	0.7796
v401. Ask to see if the stocks of the following commodities are currently available at the MCH/FP section:	
a) combined pill [q401a1]	
b) progestin-only pill [q401a2]	
c) emergency contraceptives [q401a3]	
d) Injectables (monthly and 3 monthly) [q401a4]	
e) female condom [q401a5]	
f) male condoms [q401a6]	
g) IUCD [q401a7]	
h) Implants [q401a8]	
IEC materials / job aids (5 items)	0.7334
V601. Are any of the following visual aids for teaching available in the counseling rooms?	
a) samples of various FP methods [q601b1]	
f) model for demonstrating how to use condoms [q601b6]	
g) posters about FP [q601b7]	
v701. Are any of the following protocols for delivery of services available in the consultation/counseling rooms?	
a) FP policy guidelines for service providers [q701a1]	
v602. Are any of the following types of information booklets or pamphlets available in the counseling or consultation rooms for clients to take home?	
a) printed materials on FP [q602b1]	

Question numbers are drawn from the Bungoma survey's original questionnaire.

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1. Sullivan T, Bertrand J (eds.) (2000). **Monitoring Quality of Care in Family Planning by the Quick Investigation of Quality (QIQ): Country Reports:** Carolina Population Center, University of North Carolina at Chapel Hill.
2. Bertrand JT, Magnani RJ, N R (1994). **Handbook of Indicators for Family Planning Program Evaluation:** The EVALUATION Project.

