

# 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 service<sup>2</sup>. 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.

<sup>2</sup> 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]<sup>3</sup>. 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

<sup>3</sup> 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.<sup>4</sup> 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.<sup>5</sup> 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,

<sup>4</sup> 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.

<sup>5</sup> 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

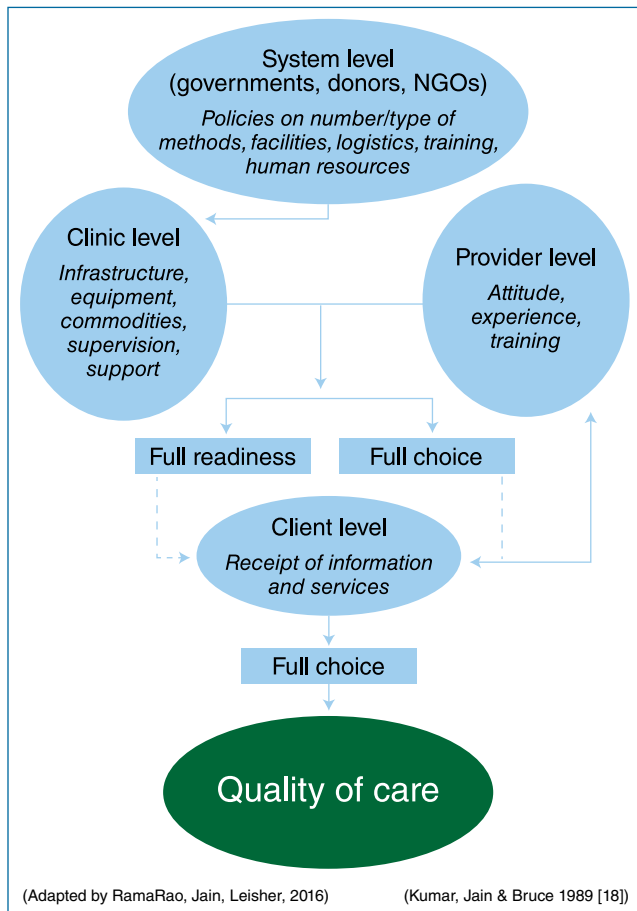
results. In the know-do gap, providers may have sufficient knowledge to treat or manage their clients with high-quality care, but do not act upon this knowledge. It has been hypothesized that providers can be encouraged to act upon their knowledge with better monitoring, peer support and performance-based 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.<sup>6</sup> 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.<sup>7</sup> 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

<sup>6</sup> 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.

<sup>7</sup> 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
<b>SDP LEVEL</b>			
<b>READINESS TO PROVIDE A METHOD (CALCULATED FOR EACH METHOD PER SDP)</b>			
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
<b>READINESS TO PROVIDE CHOICE (CALCULATED FOR EACH SDP)</b>			
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
<b>CLIENT LEVEL (CALCULATED FOR EACH CLIENT)</b>			
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.<sup>8</sup>

<sup>8</sup> 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 provided 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%

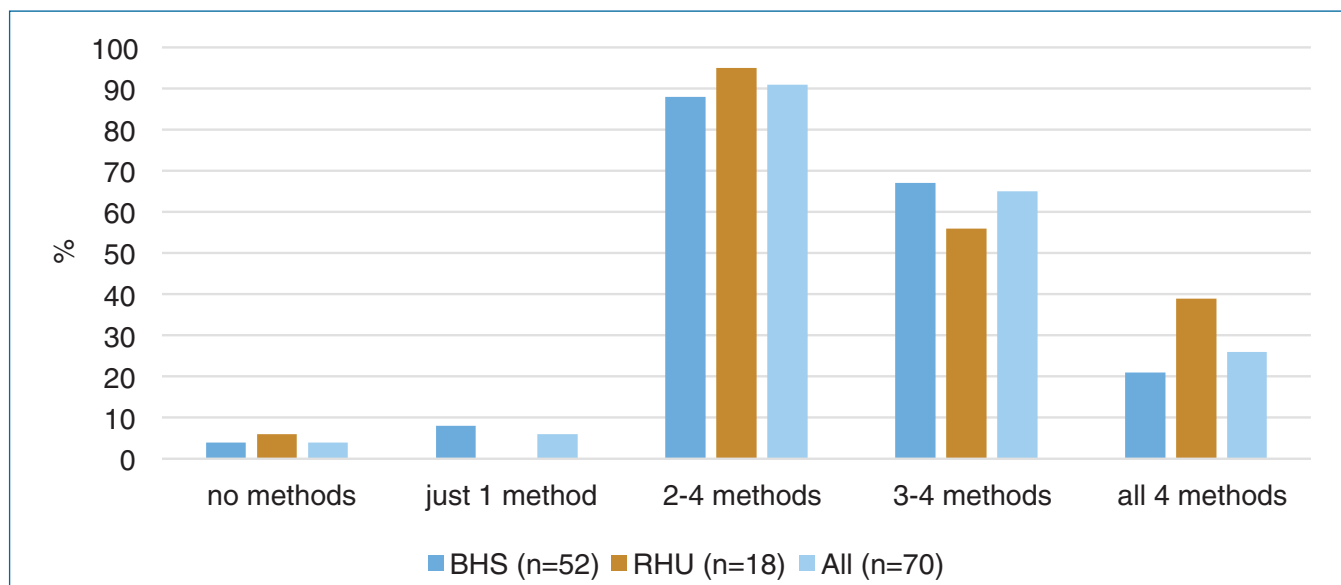
to provide IUDs. Just 26% of the 70 SDPs were ready to provide full choice (all of the readiness items for all methods).

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

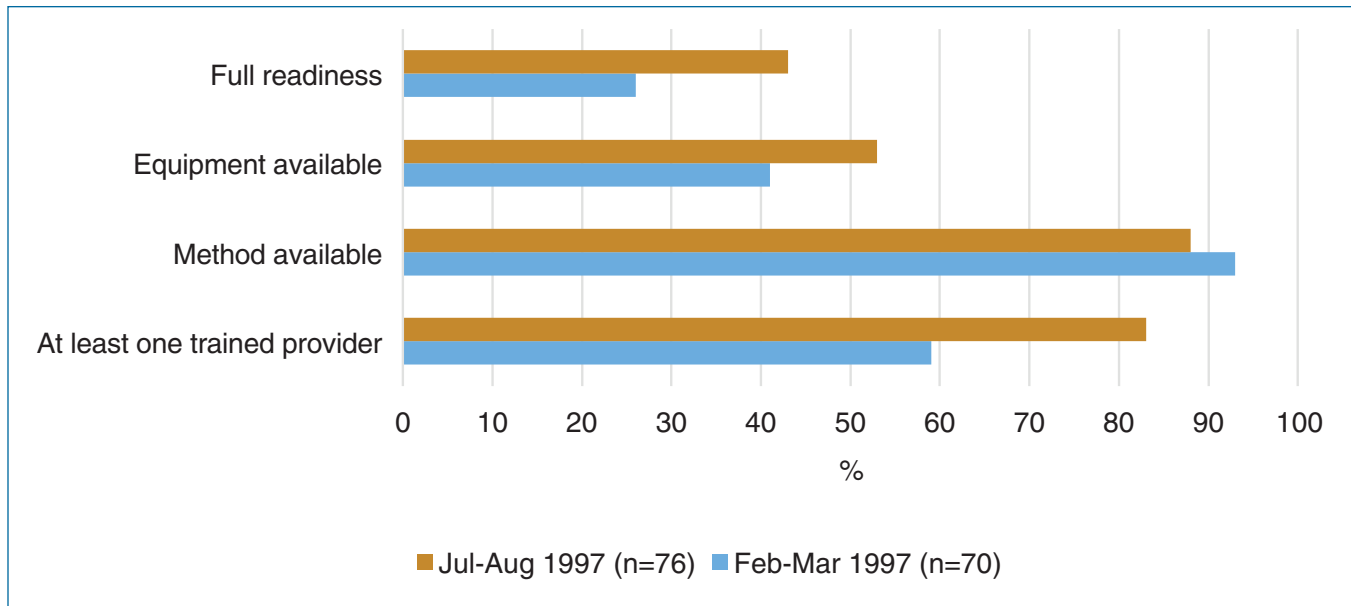
There was a substantial increase in the percentage of SDPs with at least one trained provider for a given method between the first and second SAs, from 59% to 83% (see Figure 3). During the same period, the percentage of SDPs

**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.

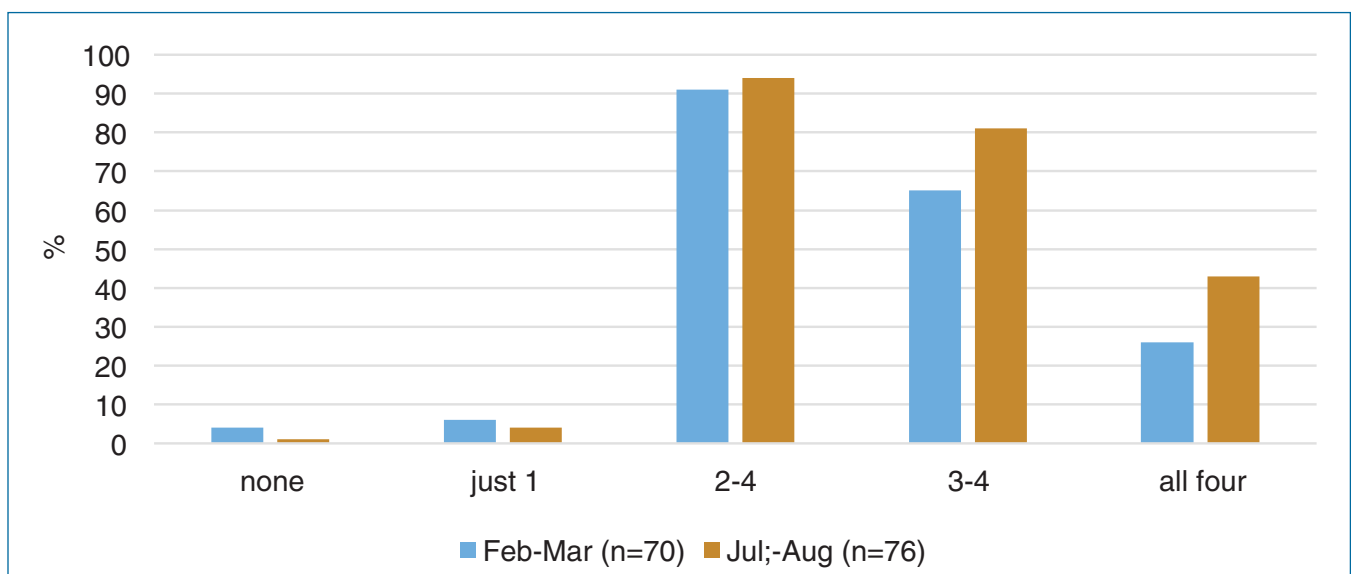
The average number of methods that facilities were ready to provide increased from 2.8 to 3.2

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

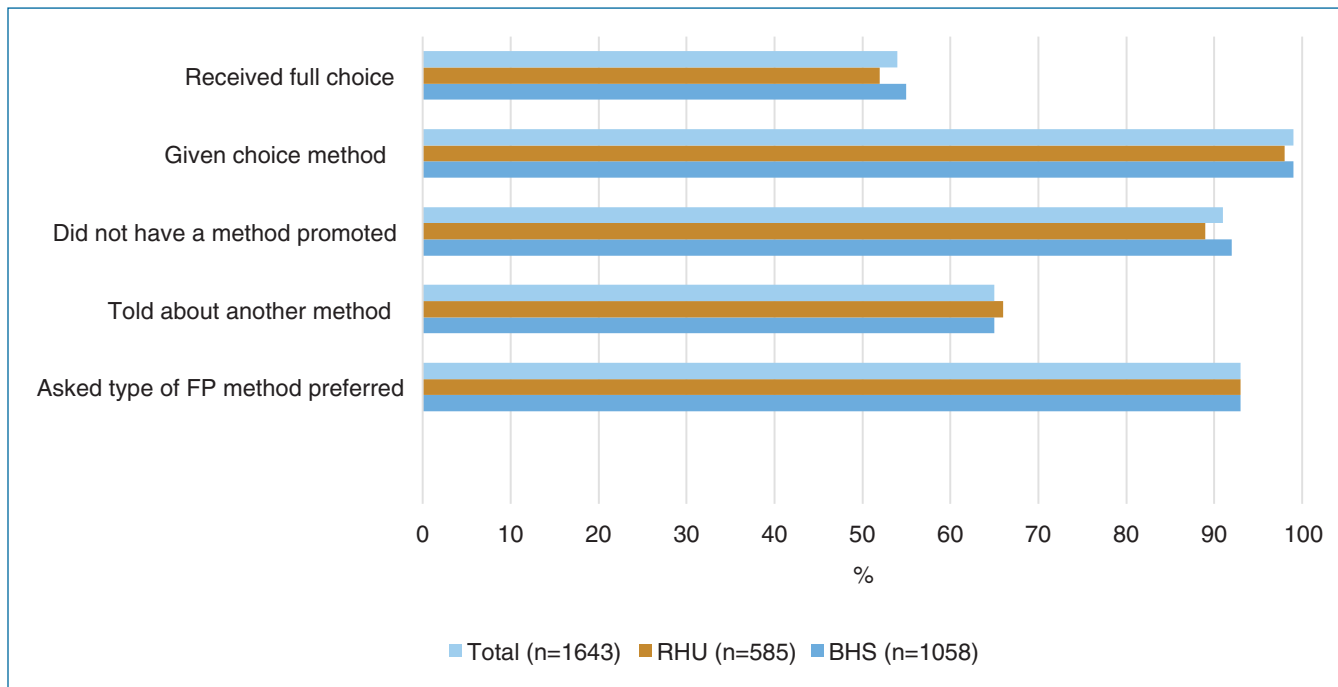
#### Choice received by clients

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)
<b>ALL FACILITIES</b>	<b>1042 (55)</b>	<b>585 (52)</b>	<b>1627 (54)</b>

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.

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