Provider Networks and Quality of Care for Reproductive Health Services in Nepal

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In order to determine current practices and client expectations for reproductive health services we conducted a study of the activities of three health networks in Nepal between February and June 2003. A total of 1,282 providers, 1,374 client exit-interviews, 1069 household interviews, and 511 mystery client surveys were conducted. All provider surveyed were also located using Geographic Positioning System (GPS) instruments. Quality of care varies by both the training level of provider and the status of providers, with networked providers giving more appropriate care and consultation in a number of critical factors. Prices are aligned with provider level of training, but are not linked to quality of care within provider levels. Clients are not price sensitive, and report provider selection primarily upon perceived or expected quality of care.

Background

Nepal is a landlocked country of approximately 23 million people sharing borders with India and China. The country is divided along an east to west axis into three distinct geographical regions. In the north the Himalayas cover a third of the country that borders with China. To the south of the Himalayas there is a long stretch of lower mountains known as the Hilly Region. Further south the hills flatten into the Terai that is a fertile sub-tropical plain that encompasses the border with India. Administratively, Nepal has five development regions (Far-Western, Mid-Western, Western, Central and Eastern). Within the development regions there are 75 administrative districts.

In the UNDP Human Development Report 2001, Nepal features amongst the economically poorest countries in the world. Nepal's social indicators remain well below the average for the South Asia region: more than 40% of the Nepali population lives below the national poverty line; nearly half of all children below 5 years of age are underweight; and nearly 60% of all adults are unable to read or write. Additionally, women have traditionally had a lower status than men, and gender inequality is deeply rooted. Nepal is one of the few countries worldwide in which men live longer than women. More boys than girls receive any form of education, women generally work longer hours than men and men have better access to services, including health services.

This study looked at the quality of care provided by three networks of providers supported by USAID, comparing their members to matched nearby non-members with similar technical skill.

The Sangini network consists primarily of pharmacists, trained in the provision of a branded injectable contraceptive (depo-provera, branded in Nepal as 'sangini'). They operate in 44 districts, with a total of 1256 outlets as of June 2002. After training re-supply of sangini-brand injectables is provided monthly by a local social marketing organization. No other regular support for Sangini providers has been organized, and quality assurance has been minimal since the project inception.

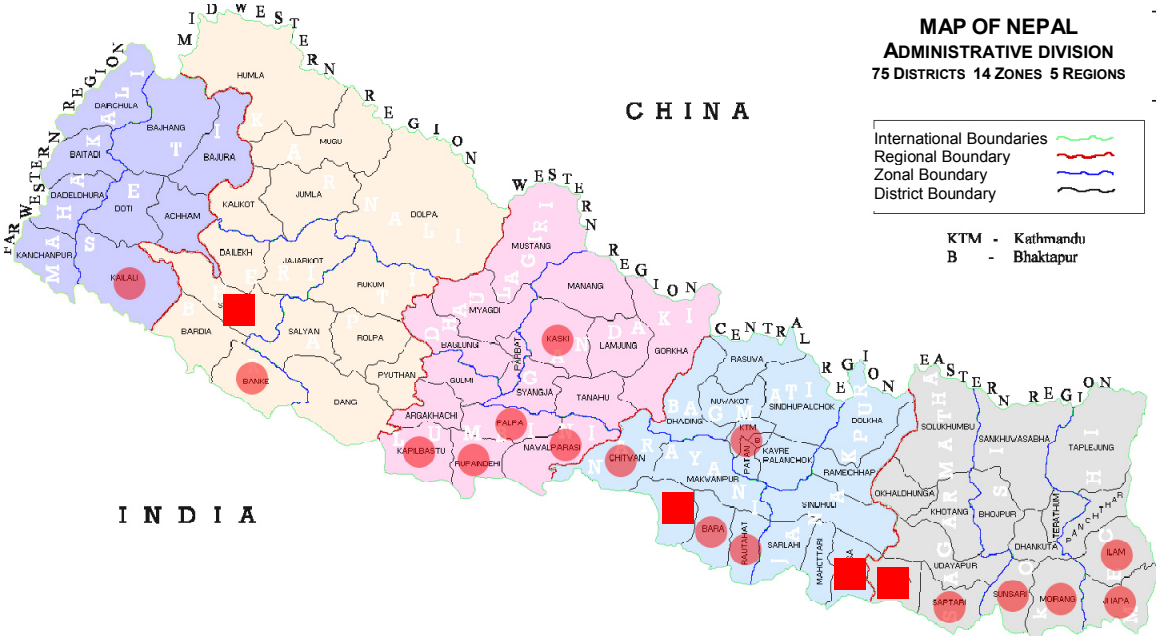
The SEWA ('service' in Nepalese) network was established in the 1992 by the Nepal Fertility Care Center (NFCC) with USAID assistance. SEWA consists of nurses and paramedics in Rupandehi district, trained in a range of family planning and ante-natal care services, including provision of injectables and insertion of IUDs.[1] Support visits were organized on a monthly basis by the NFCC, but no specific franchise-model contractual relationship was established between providers and the NFCC. As of 2003 there were 64 SEWA providers active, all in Rupandehi.

PSSN (*Pariwar Sewa Swasthya Network)* was established by NFCC in the 1990s as a network of high-level medical practitioners, all doctors, most obstetrician/gynecologists involved in family planning services. Most PSSN providers were initially in the Kathmandu valley, with limited numbers recruited in Pokhara, Biratnagar and Birgunj. As of June 2002 PSSN had 167 members located in 15 districts across the country. The

[1] A few SEWA providers were not trained in IUD insertion because of low-level of medical training at entry

network primarily has provided a forum for technical exchange, and as with SEWA no formal franchise relationship was established.

Currently, the networks are distributed across 22 districts as shown in the map below.



Methodology

We conducted a census of all members in each of the SEWA and PSSN networks. For the Sangini network, the survey used a simple random sample methodology, with probability proportional to size in each district. A representative sample was randomly selected from the Sangini list[2].

For each network provider in the study, a list was made of other equivalent provider operating within a 1km radius in urban areas, and 2km in rural areas[3]. Two non-network providers were randomly selected from this pool of matched providers.

Three exit interviews were conducted with married female clients, 15-44, of each sampled network provider, and one exit interview with each non-network provider. No screening regarding family planning was done, for three reasons. First, to establish roughly what proportion of clients were coming for FP/RH services, second, due to concern that not enough FP/RH clients would visit all providers in a day to meet the quota needed to provide illustration of the provider clientele, and most importantly because of past research indicating that clients do not distinguish between FP/RH services and other services available when selecting a provider, and therefore all client experiences and provider-perceptions were important as inputs to the franchise design.

Mystery clients were used with network providers in order to assess the quality of services provided, in order both to analyze lacunae in the current programs, and to assess the practices of members so as to set guidelines for practice and baseline criteria for quality of care as a condition of membership.

The last component of the survey is the household survey. All households located within 2 kilometers of a sampled network provider are eligible for interview. However the interviews should be conducted only with women 15-49 years of age. The household selection is also random. A total of 1374 household interviews were conducted. The number of household interviews per district corresponds to three times the number of network providers' interviews in the district.

In summary, the survey design included the following steps:

A. identification of the sampled network provider
B. demarcation of the study catchment area (1 km in all directions from the provider in urban areas, 2 km in rural areas)
C. identification and count of "*control*" providers
D. random selection of "*controls*"
E. random selection of households
F. random selection of female within the household

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[2] Based on an expected frequency of 30% percent of clients requiring family planning services, and a precision level of 5%.

[3] Equivalence criteria was based on general level of professional qualifications: MDs and other specialist providers were matched to PSSN members, Mid-level providers were matched with SEWA providers, and pharmacists were matched with Sangini members.

G. proceed with interviews

Not all of the data collected is used for this analysis.

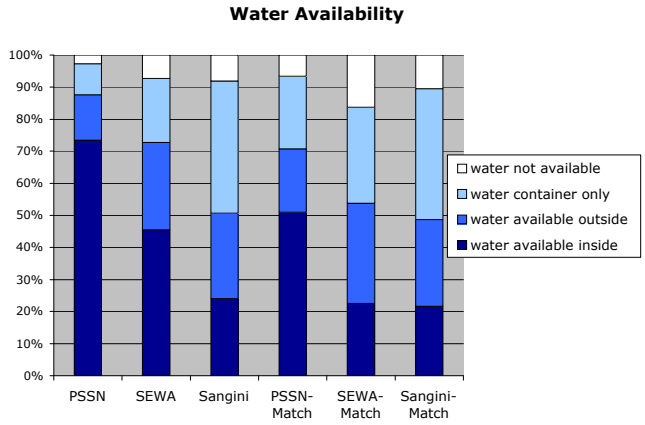
Quality was evaluated in terms of facility quality and patient care. The former measured through site visits by trained surveyors, the latter measured through mystery client surveys.

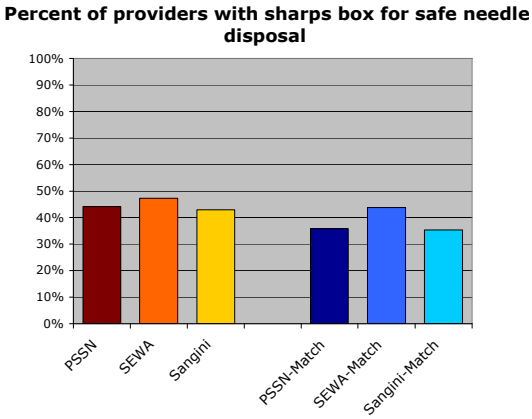
Facility quality

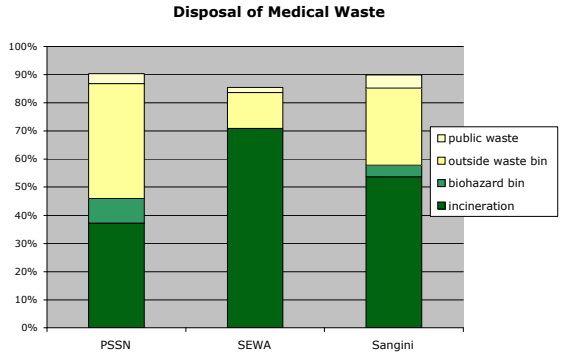
The quality of facilities is a multifaceted question, explored in this survey in general terms only with a focus on those service-related attributes which can be easily measured and rated as a proxy for more general assessments of facility quality.

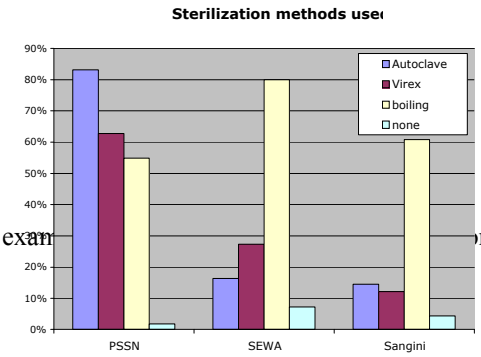
At the most general level, nearly all providers (>90% in each group) report having separate waiting and examination rooms.[4] 60% of PSSN members have laboratories, and 35% have separate store rooms, but both of those are rare among SEWA and Sangini members. X-ray or ultra-sound equipment is almost never found. (figure 5.1h). Non-member providers have similar facilities to members.

SEWA and Sangini member providers are more likely than their matched non-member providers to be open six or seven days a week. However they are less likely to be open all day. The reasons for this are unclear. PSSN providers, by contrast, are open slightly fewer days, and significantly fewer hours than either the other networks, or the PSSN-matched providers in their neighborhood. Only 10% of PSSN









Figures 5.1.k,l,m,n : Facility quality

[4] This was not a clearly defined category, however and an exam m in a private dwelling.

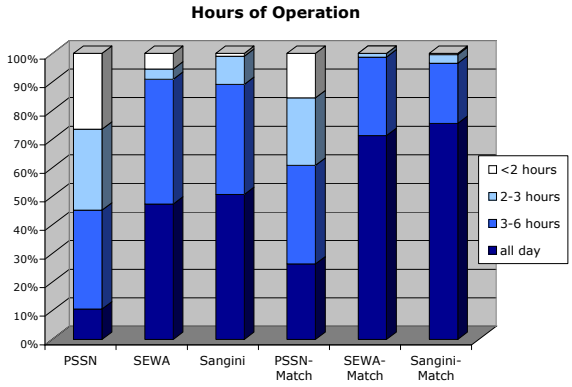


Figure 5.1i: Hours of Operation

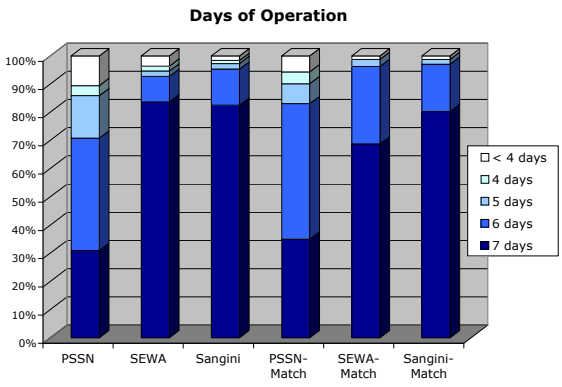


Figure 5.1j: Days of Operation

providers are open all day, and 25% report being open less than 2hours per day – a potentially serious concern for assuring access (figures 5.1i and 5.1j)

Other facility-level measures of quality for both members and non-members were studied, and showed significant differences. As shown in figures 5.1k-n, providers in general have some kind of running water, but higher-level providers were more likely to have running water inside or outside of their clinic, and 50% of Sangini providers either have no access to water or use water from a container – that may or may not have a spigot for hand-washing.

Toilet facilities are not critical to clinical care provision, but are an important criteria for client-perceptions of quality and therefore of interest for this survey. Between 70% and 85% of all providers had clean toilets, either private to the clinic or shared with other facilities. Clean was defined as without smell, and without evidence of standing urine or human waste.

Of greater significance, less than one half of all providers have a 'sharps box' for the safe disposal of used needles. This does not vary by provider type or by urban/rural breakdown.

Linked to this are general problems with disposal of medical waste. In the survey this was defined as material that may have infected fluids, such as cotton swabs or cloth used during examinations and not washed for re-use. While the bulk of SEWA providers are equipped to incinerate these materials and report doing so, most other providers are not and dispose of medical wastes in public waste bins.

Sterilization of instruments is done primarily by boiling for SEWA and Sangini providers, and by Autoclave for PSSN members. Multiple responses to the question of how instruments are sterilized were accepted, recognizing that providers have different ways to sterilize different equipment and/or have back-up systems for sterilization. Four of the 55 SEWA providers do not have any means of sterilizing instruments, and yet two of these four offer post-abortion care.

1.1.1 Service quality

The study looked at both structural and process service quality – the former measured through facility level attributes linked to quality of care, the latter via mystery client exit interviews.

Structural quality measures are summarized in table 5.1c. Privacy for family planning consultations and examinations was generally good for all provider types.[5]

	PSSN	SEWA	Sangini	PSSN-match	SEWA-match	Sangini-match
VACY						
both visual and aural privacy	80%	53%	55%	52%	47%	41%
visual privacy only	13%	47%	32%	9%	42%	24%
sound privacy only	0%	0%	2%	0%	0%	2%
no privacy/no FP exam area	7%	0%	10%	0%	0%	2%
CE LIST						
price list visible	28%	31%	6%	13%	1%	7%
CORD KEEPING						
Client Records	19%	2%	3%			
Client Log (daily record)	49%	11%	7%			
Record Drug Sales	5%	11%	9%			
Computer Record	3%	0%	1%			
Sangini Record Book	37%	93%	86%			
Lab Record	0%	0%	1%			
RH Record	6%	91%	4%			
None	18%	0%	10%			

Table 5.1c: service quality measures

Availability of price lists for services and products is a prime measure of client-friendly services. While the majority of providers do not have price lists printed and available for clients, the fact that more than 25% of PSSN and SEWA providers do is significant in terms of differentiating network members from non-network members.

Record keeping is generally poor for clinical services, and much better for specific interventions of the existing networks. Sangini record books are reportedly used by most SEWA and Sangini members. More sophisticated record keeping (eg: client-based records for tracking the health of individuals) is not the norm for private providers.

1.2 Treatment of clients (Mystery Client Data)

To assess the quality of treatment, mystery clients were used to a reduced number of PSSN (186) and SEWA (149) members and the associated non-member providers who agreed to participate (107 and 69 respectively). Mystery clients were young women trained to pose as genuine family planning seekers. Two scenarios were developed based on schematics , and the evaluation of the treatment given to the mystery clients gives us some insights regarding provider skills and knowledge.

[5] Privacy was evaluated only in terms of facilities. No questions were asked regarding clients estimation of provider protection of information.

For the mystery client scenario 1 (MC1), a breastfeeding mother of a three-month old infant is seeking a birth control method; mystery client scenario 2 (MC2), a woman with

Fig. 5.2.a1: Average waiting time to see the provider and duration of consultation MC1

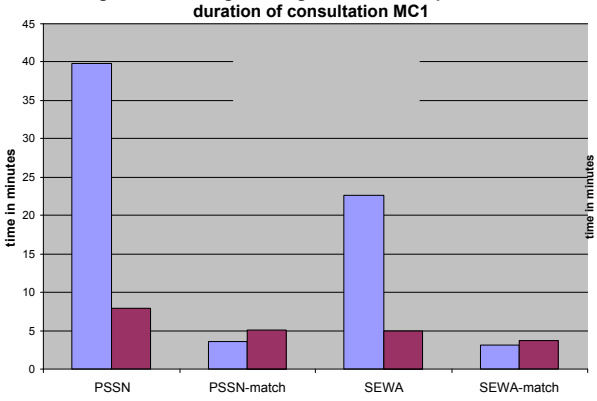
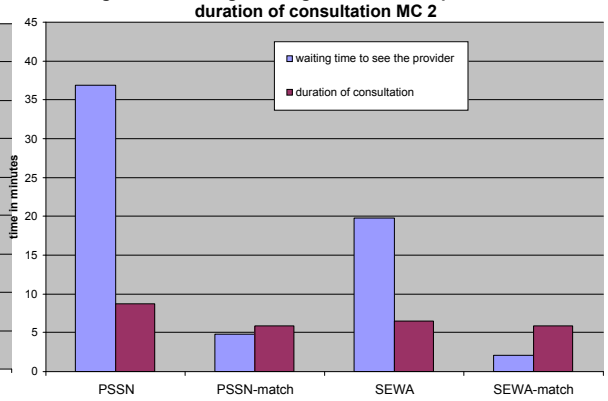


Fig. 5.2.a2: Average waiting time to see the provider and duration of consultation MC 2



three children wants to stop childbearing.

1.2.1 Characteristics of the consultation

PSSN and SEWA providers have much higher waiting times than their matched providers, and the average wait for a PSSN provider, at 37 minutes, is nearly twice the average for SEWA members (Figures 5.2a1 and 5.2a2). The duration of consultation was higher for the PSSN providers (averaging 8 minutes) than others, but was not

Fig. 5.2.b1: Privacy during consultation MC1

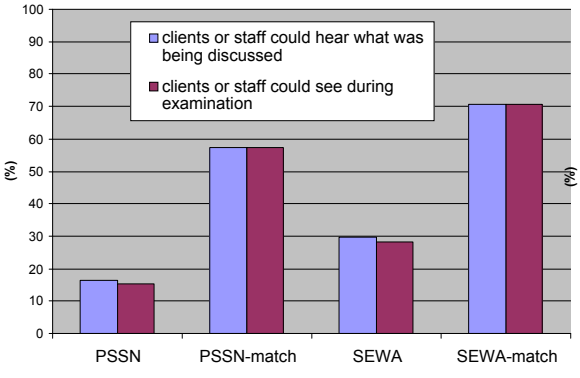
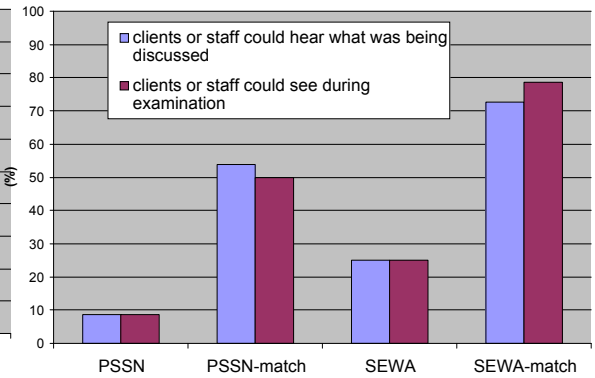


Fig. 5.2.b2: Privacy during consultation MC2



significantly different than the times found in the general survey (see section 6.2 below). The services required by MC1 and MC2 were provided or offered by the providers in almost all cases. Only 12% of the MC1 SEWA clients and 6% of MC2 were referred.

Network members' clients seem to enjoy more privacy during consultation than clients of their matched providers do. Most of the PSSN-match and SEWA-match clients could be heard or seen by other clients or staff during consultation, as shown in figures 5.2b1 and 5.2b2.

1.2.2 Provider knowledge and skills

Tables 5.2A1 and 5.2A2 present the results from the history taken during the mystery clients' visits. The information presented in the tables are those considered the minimum necessary for an adequate assessment of the clients' reproductive and general health status requiring family planning services. PSSN and SEWA providers were somewhat more thorough than their matched counterparts in taking clients' history, however all providers assessed poorly, often skipping important issues related to STIs, HIV risk, general health problems, and clients and respective partners' sexual life.

Sexually transmitted diseases are increasingly common in Nepal. The lack of attention paid to this by providers is an important finding that highlights a need for intervention.

Counseling during the visits can also be considered inadequate (figures 5.2c1 and 5.2c2). In the case of MC1 (breastfeeding woman seeking birth control method), the decreased likelihood of pregnancy while breastfeeding was only discussed by PSSN and SEWA providers in 10% of the cases, and less than that among their matched providers.

Table 5.2.A1: History taken during Mystery client scenario 1

(percentages represent those who asked the question)

Information asked during consultation	PSSN	PSSN-match	SEWA	SEWA-match
Socio demographic concerns				
Work status	31.5	5.6	29.7	2.9
Frequent traveller	2.2	0.0	6.3	0.0
Current age	91.3	13.0	54.7	5.9
Currently married or in union	73.9	66.7	62.5	38.2
Fertility / Reproductive health intentions				
Number of living children	95.9	79.6	87.5	67.7
Age of living children	100.0	98.2	85.9	91.2
Desire for more children	67.4	50.0	50.0	29.4
Timing of next child	63.0	64.8	39.1	26.5
Previous use of birth spacing	28.3	22.2	14.1	26.5
Where method was obtained*	1.1	0.0	12.5	5.9
Reproductive health concerns				
Current pregnancy status	85.9	87.0	26.6	70.6
Had a period since delivery	96.7	92.6	73.4	82.4
Currently breastefeeding	90.2	88.9	73.4	67.7
History of pregnancy complications	29.4	1.9	9.4	0.0
HIV/AIDS risk	2.2	0.0	0.0	0.0
History/signs/symptoms of STIs	17.4	3.7	6.3	0.0
General Health concerns				
Have heart problems	39.1	9.3	29.7	14.7
Blood pressure	41.3	18.5	28.1	17.7
Smoking habits	4.4	1.9	6.3	2.9
Sexual behavior concerns				
Client's number of sexual partners	1.1	0.0	0.0	0.0
Client's partner number of sexual partners	1.1	0.0	0.0	0.0
Partner's attitudes about family planning	12.0	0.0	6.3	0.0
Number of mystery clients in the sample	**93**	**54**	**73**	**35**

*of those who asked about previous use of birth spacing

Table 5.2.A2: History taken during Mystery client scenario 2

(percentages represent those who asked the question)

Information asked during consultation	PSSN	PSSN-match	SEWA	SEWA-match
Socio demographic concerns				
Current age	92.4	73.1	79.2	57.6
Currently married or in union	81.5	67.3	68.1	60.6
Fertility / Reproductive health intentions				
Number of living children	97.8	96.2	95.8	84.9
Age of living children	94.6	88.5	84.7	81.8
Desire for more children	60.9	51.9	51.4	48.5
Timing of next child	10.9	28.9	8.3	27.3
Previous use of birth spacing	70.7	65.4	43.1	63.6
Where method was obtained*	1.1	7.7	1.4	6.0
Reproductive health concerns				
Current pregnancy status	89.1	73.1	59.7	66.7
When had last period	93.5	73.1	63.9	66.7
History of pregnancy complications	28.3	1.9	18.1	3.0
HIV/AIDS risk	0.0	4.2	0.0	26.1
History/signs/symptoms of STIs	11.5	11.5	9.7	0.0
General Health concerns				
Have heart problems	22.8	3.9	19.4	3.0
Have liver problems	17.4	1.9	8.3	0.0
Blood pressure	34.8	3.9	20.8	6.1
Smoking habits	3.3	0.0	0.0	0.0
Allergies to latex	1.1	0.0	1.4	0.0
Any chronic health problems	29.4	17.3	18.1	3.0
Sexual behavior concerns				
Client's number of sexual partners	0.0	0.0	0.0	0.0
Client's partner number of sexual partners	0.0	4.2	0.0	0.0
Partner's attitudes about family planning	40.2	50.0	29.2	54.6
Number of mystery clients in the sample	**93**	**53**	**76**	**34**

*of those who asked about previous use of birth spacing

Fig. 5.2.c1: Counseling during the visit MC1

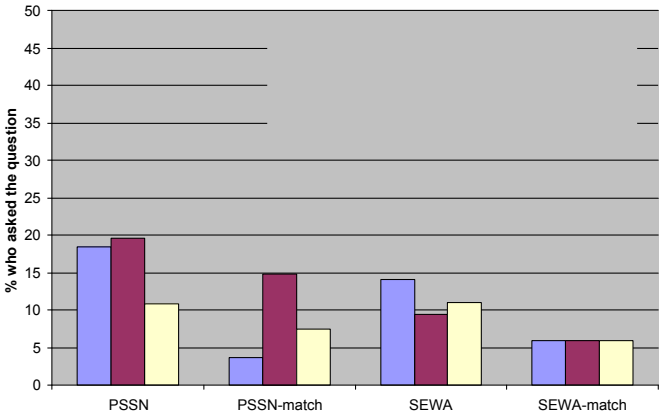
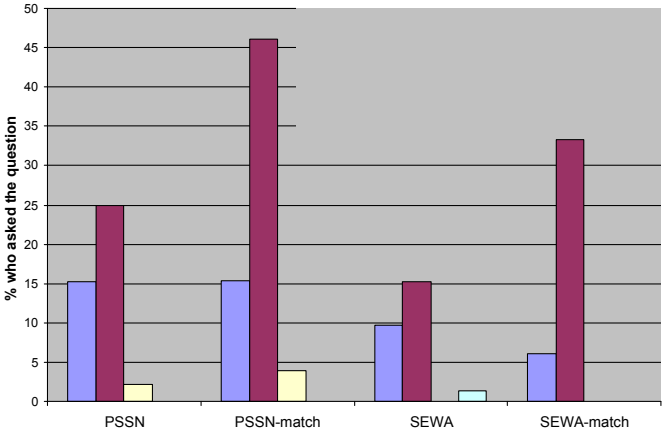


Fig. 5.2.c2: Counseling during the visit MC 2



The discussion of contraceptive methods with the provider followed more or less the clients' initial choice of method, and to a certain extent the providers' ability to provide the methods. For MC1 the methods discussed were mostly pills and injectables: the clients' preference. PSSN providers, because of their ability to provide these methods, also discussed IUD and Norplant in more than 60% of the cases.

PSSN and SEWA providers discussed the use of condoms in less than 35% of the MC1 cases. This is a notable lapse because condoms are a quite appropriate method for this scenario (woman probably during her postpartum infecundability for another 3 months if she continues breastfeeding). Low profitability of condoms is likely linked to this behavior.

The discussion of contraceptive methods in the case of MC2 was, appropriately, more balanced towards permanent or long term reversible methods of contraception.

Fig. 5.2.d: Selected explanations given by the provider about the preferred birth spacing methods MC1

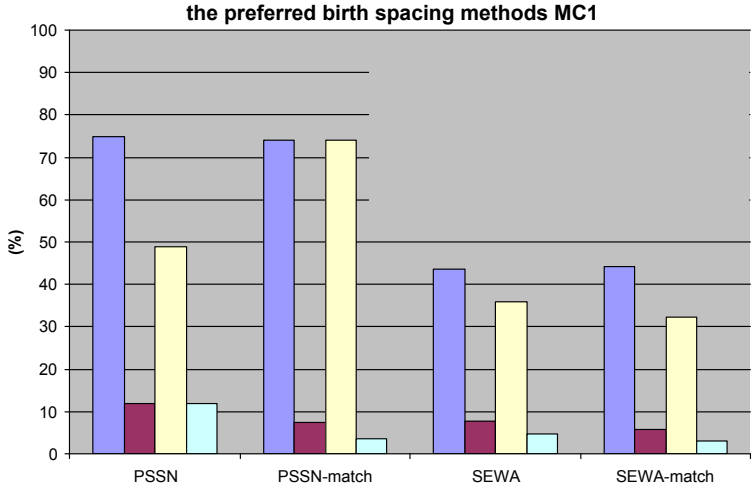


Figure 5.2d shows a clear cut between lower and higher level providers, regardless of network membership, with respect to explanations about the pill and breastfeeding, and the effectiveness of injectables. Higher level providers give better information to their clients than mid-level providers. Because this is true for both member and non-member providers, it suggests that it is related to general medical training and knowledge – and that mid-level providers lack knowledge either about OCs and breastfeeding, or about appropriate counseling on the subject. A conclusion may be that provider medical

Fig. 5.2.e1: Physical examination provided - MC1

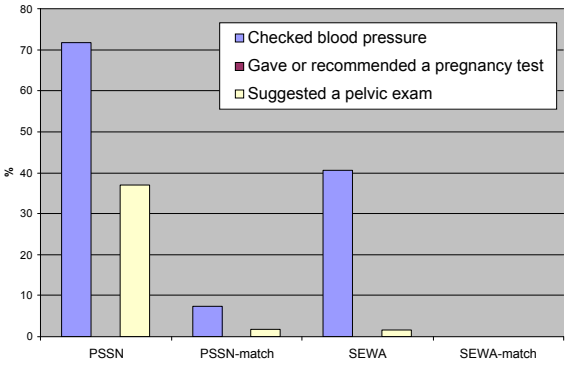
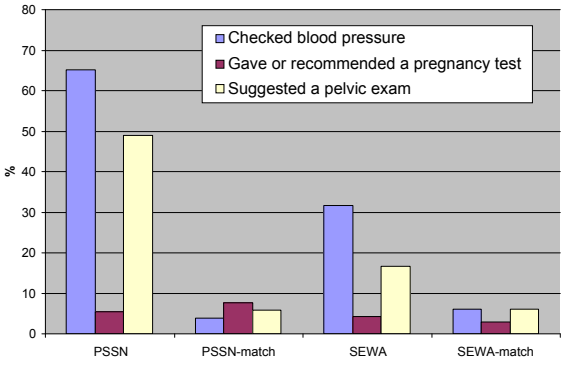


Fig. 5.2.e2: Physical examination provided - MC 2



training has been insufficiently augmented by network training, and that these areas of family planning counseling need to be addressed going forward.

The physical examinations provided to mystery clients are shown in figures 5.2e1 and 5.2e2. In a number of cases PSSN providers were reportedly very persuasive in suggesting pelvic exams – indicating to the mystery clients that they were wasting the providers' time if they didn't want an exam. Pelvic exams were not medically indicated for the scenarios of the mystery clients and the surveyors reported that the motivation for this behavior was the fees that could be charged for an exam, but not for a simply oral consultation.

Fig. 5.2.f1: Outcome of the visit - MC1

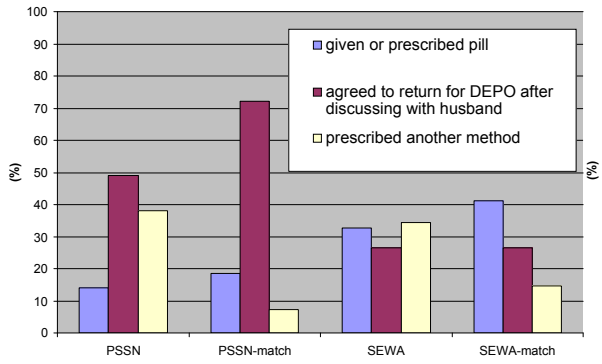
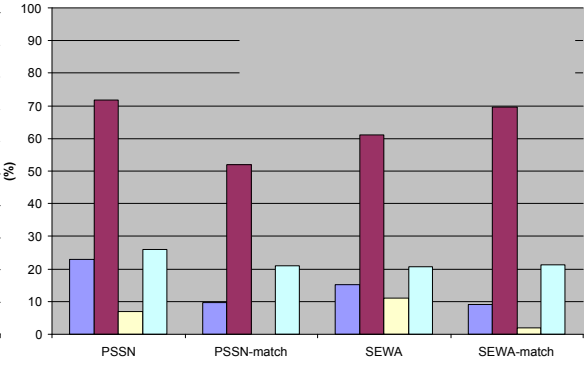


Fig. 5.2.f2: Outcome of the visit - MC2



Figures 5.2f1 and 5.f2 present the results of the outcome of the mystery client visits. Significant differences were found between PSSN and PSSN-matched providers although the reason for this difference is not clear. The high number of all provider types prepared to provider or refer for tubal ligation (figure 5.2f2) is unexpected and perhaps worth

investigative further. If SEWA member are themselves providing tubal ligation it would be important to verify that they have received training and are qualified to do so.

Table 5.2.B1: Information given by the provider according to decision on birth spacing method
(percentages represent those who asked/explained the question)

Given information	PSSN	PSSN-match	SEWA	SEWA-match
If the provider gave the pill				
The pill must be taken every day	69.2	80.0	75.0	75.0
Side effects include nausea	30.8	70.0	45.0	37.5
Side effects include spotting	23.1	60.0	50.0	37.5
What to do if problems occur	38.5	40.0	30.0	25.0
Read the pill insert with client	38.5	50.0	40.0	50.0
The pill does not protect against STIs/HIV	0.0	0.0	0.0	0.0
Number of clients receiving the pill	**13**	**10**	**20**	**16**
If the client agreed to ask husband about having a DEPO injection				
The injection provides protection for 3 months	100.0	97.6	100.0	100.0
Side effects include mentrual changes	95.8	92.7	73.7	100.0
What to do if problems occur	50.0	34.1	36.8	55.6
Read the injection insert with client	6.3	4.9	15.8	11.1
The injection does not protect against STIs/HIV	0.0	0.0	0.0	0.0
Number of clients receiving DEPO injection	**48**	**41**	**19**	**9**

Table 5.2.B2: Information given by the provider according to decision on birth spacing method MC 2
(number of providers who asked/explained the question)

Given information	PSSN	PSSN-match	SEWA	SEWA-match
If the provider gave/ prescribed condoms				
Explained how to use condoms	2	0	3	1
Explained that condoms are used once	3	0	4	1
Using condoms can cause irritation if allergic to latex	0	0	1	0
Provided counseling regarding negatiating condom us	3	0	7	1
Explained that condoms protect against STIs and HIV	1	0	2	0
What to do if problems occur	0	0	1	1
Number of clients receiving condoms	**7**	**0**	**11**	**2**
If the provider gave the pill				
The pill must be taken every day	18	5	10	2
Side effects include nausea	6	3	2	1
Side effects include spotting	5	0	2	1
Should go back if with a severe headache	3	1	0	1
Should start the pill during next period	1	13	3	5
What to do if forget to take 2 pills in a row	0	1	5	4
What to do if problems occur	2	1	2	4
Read the pill insert with client	4	1	0	0
The pill does not protect against STIs/HIV	0	0	0	0
Number of clients receiving the pill	**20**	**5**	**11**	**2**
If the client agreed to have tubal ligation performed folowwing discussion with husband				
You can never become pregnant again	52	24	33	18
You may experience pain at the surgical site	41	21	16	11
Offered to assist with arrangemnets to have a TL	63	6	23	7
What to do if problems occur	13	9	2	5
TL does not protect against STIs/HIV	0	0	0	0
Number of clients recommended for Tubal Ligation	**84**	**42**	**56**	**28**

At the end of the consultations, in almost all cases, insufficient information was given to the clients regarding their options, the risks of side effects, and the limitations of the different method choices (Tables 5.2B1 and 5.2B2). There remain many areas of quality improvement needing to be addressed in the future.