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Sexual & Reproductive Health Commodities: Measuring Prices, Availability & Affordability

Data Collection Report – Uganda 2017

hai Health Action International

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1. Introduction

Good sexual and reproductive health (SRH) is a state of complete physical, mental and social well-being in all matters relating to reproduction for both men and women, including adolescents. Maintaining good SRH means people need access to accurate information and to safe, effective, affordable and acceptable contraception methods of their choice. They must be informed and empowered to protect themselves from sexually transmitted infections and, when necessary, receive timely and affordable treatment. And when they decide to have children, women must have access to services that ensure they have a fit pregnancy, safe delivery and healthy baby. Every individual has the right to make their own choices about their SRH and family planning.

National policies on medicine pricing and procurement strategies are needed to ensure medicines are affordable and available. While policies are also greatly needed to improve health infrastructure, health education and financing are further required to ensure the rational use of medicines. Even in the face of weak infrastructure and gross inequality that underpins poverty prevalence, improvements in access can be achieved. However, without reliable information on medicine prices and availability, governments are working in an evidence vacuum. This restricts their ability to construct meaningful policy and properly evaluate the impact of any policy interventions. Reliable information is also a useful means of comparison between countries with similar health budgets for knowledge transfer and learning. Thus, in order to develop evidence-based policies, robust data is required. The Health Action International (HAI)–World Health Organization (WHO) methodology to assess the price, availability, and affordability components of medicines provides valuable data. To date, the methodology has not specifically targeted commodities for SRH. HAI has now adapted the methodology to focus on a specific set of sexual and reproductive health commodities (SRHC)[1,2].

The objective of the survey is to generate reliable information on the price, availability and affordability of selected important commodities in the SRH supply chain, with the ultimate goal of improving access to affordable medicines for all. The methodology uses a cross-sectional design with quantitative methods and a semi-structured questionnaire adapted from the standardised HAI–WHO methodology, *Measuring Medicine Prices, Availability, Affordability and Price Components (2nd Edition)*. It allows data on the availability and out-of-pocket patient prices of SRHC in the public, private and mission/other sectors to be collected. It also assesses health provider perspectives on access to SRHC beyond the medicines supply chain. The method facilitates rapid and reliable data collection and enables price and availability indicators to be compared within and between individual countries.

The following report presents the results of the survey carried out by HAI and in-country partners (HEPS Uganda) during August and September 2017 in Uganda.

The report provides data relating to the following questions:

- What price do people pay for SRH medicines?

[1] Please refer to the *SRHC Sexual and Reproductive Health Commodities: Measuring Prices, Availability and Affordability Methodology* and data entry manual (1st editions) for a full description of the methodology used for data collection.
[2] For a full list of the commodities surveyed, refer to the list in Appendix A.

- Do the prices and availability of the same medicines vary across the public, private and mission sectors?
- How affordable are medicines for ordinary people?
- What do health providers see as the main barriers to accessing medicines?

The following report should be used to highlight potential areas for intervention to improve access to SRHC and monitor changes to access over time in the country of study.

2. Data Collection

This report presents data from the initial rollout of the HAI research methodology, *SRHC: Measuring Prices, Availability and Affordability*, in Uganda. The methodology used for the data collection follows the first version of HAI's SRHC data collection manual, produced in 2017. Please refer to this manual for all details on the methodology followed for data collection. Data collectors were trained in Uganda in July 2016. Refresher training was provided just prior to data collection in July 2017.

Data collectors visited 'health centre III' and above facilities belonging to public, private and mission sectors in both urban and rural areas. The selection of regions to survey was random to provide a representative picture for the country. The regions selected for data collection were: Central, Eastern, Western (comprising South-Western, Mid-Western) and Northern (including West Nile). A total of 124 facilities were surveyed across public, private and mission sectors. The distribution of these facilities is outlined below.

	Urban	Rural	Total (N)
Public	20	22	**42**
Private	22	20	**42**
Mission	20	20	**40**
Totals	**62**	**62**	**124**

Table 1: Distribution of facilities surveyed.

3. Results

The following sections contain data analysed from Section A of the methodology, *SRHC: Measuring Prices, Availability and Affordability,* which measures the availability of commodities at facilities. Please refer to Appendix B for a full breakdown of the availability data across sectors.

3.1 Overall Availability of SRHC

Availability of SRHC in Uganda was 39%. Availability across the sectors was comparable: 41% availability in the public sector, 37% in the private sector, and 39% in the mission sector. Although urban availability was higher than rural availability by 11% (public sector), 6% (private sector), and 5% (mission sector), the differences were not marked. Table 2 shows the mean availability of SHRC across sectors and locations.

Only 36% of the 53 commodities researched were, on average, available at more than half of the facilities, while 40% of all commodities were available at only a quarter of the facilities. Figure 1 illustrates the overall mean availability of each SRHC.

	Percentage Availability		
	Overall	**Urban**	**Rural**
Public	41	47	36
Private	37	40	34
Mission	39	41	36
Totals	**39**	**43**	**36**

Table 2: Mean availability of SRHC by sector and location.

3.2 Availability of Selected SRHC by Sector

A closer examination of the availability of selected SRHC across the public, private and mission sectors, and urban and rural locations is provided below. Figure 2 gives an overview of the availability of the commodities across the sectors, while Figures 3, 4 and 5 provide an illustration of the availability of SRHC in urban and rural areas across the different sectors. Please refer to Appendix B for a full breakdown of the availability data across sectors.

Contraceptives

Ethinylestradiol + levonorgestrel, commonly known as the birth control pill, was available in 60% of public facilities. In the private sector, differences between urban and rural area availability were apparent: the tablets were available in 59% of urban area facilities and only 30% of rural facilities. The mission sector's availability was low in both areas (40% urban vs 30% rural). Availability of levonorgestrel tablets, used as emergency contraceptive after birth control failure or unprotected intercourse, was low. For instance, in the public sector, the 750 mcg formulation was available in 45% of facilities, and in the private sector they were available in 19% of facilities.

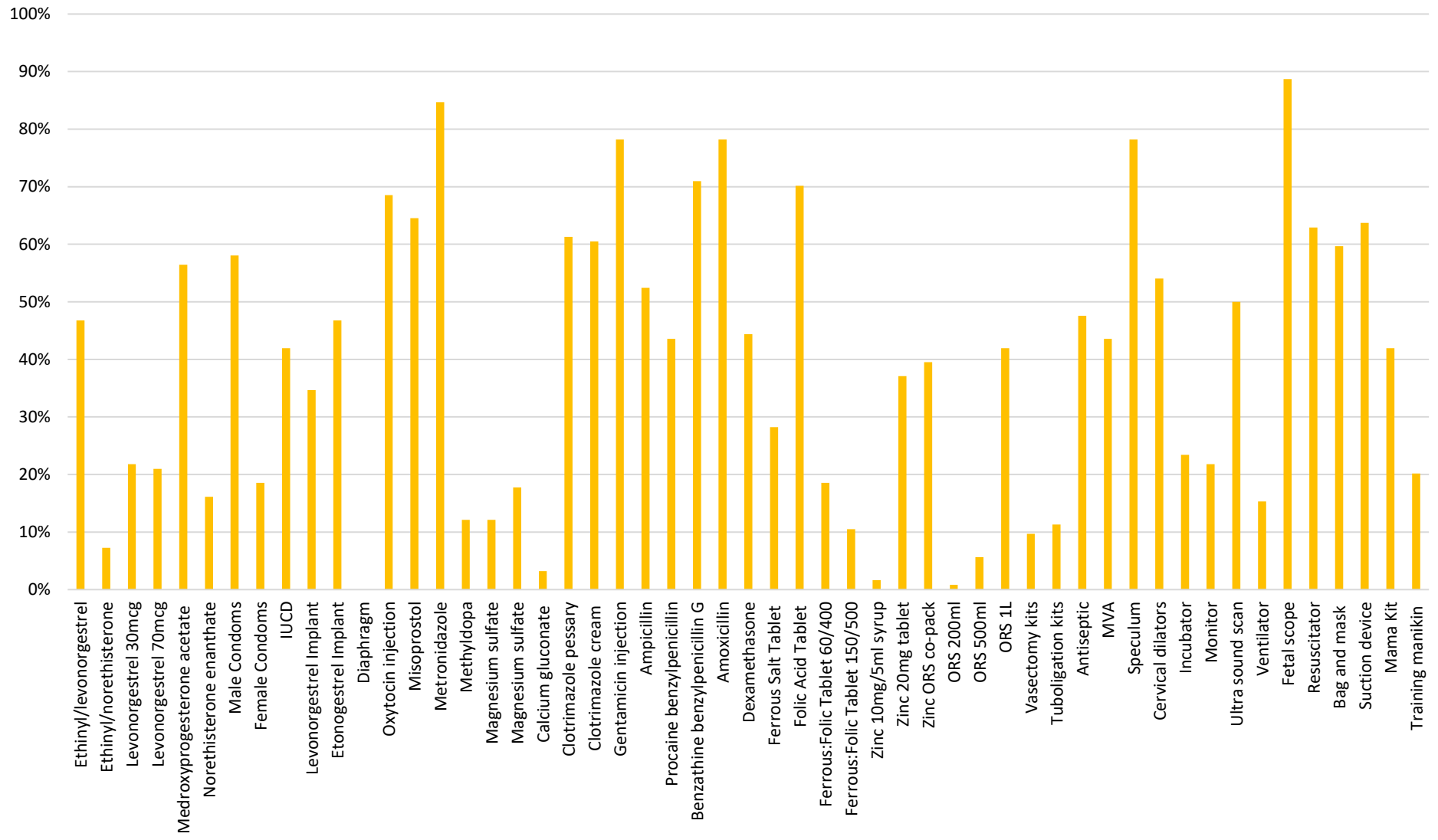


Figure 1: Mean percentage availability of SRHC.

Medroxyprogesterone acetate, an injectable birth control, had a relatively high availability (86% of facilities) in the public sector compared with other contraceptive commodities. Male condoms were the most commonly available contraceptive in the public sector (90%), but were available in less than 50% of private and mission sector facilities. Female condoms were available in 21% of public, 12% of private, and 23% of mission sector facilities.

Pregnancy & Childbirth

Availability of pregnancy supplements was inconsistent. For instance, zinc oral rehydration salt (ORS) co-packs had a high availability in the public sector (79%), while availability in the private and mission sectors was low (17% and 23%, respectively). Conversely, ORS sachets of 1L were available in 2% of public sector facilities, but had relatively a much higher availability in the private sector (67%) and mission sector (58%). Calcium gluconate was available in none of the public facilities, 2% of private facilities, and 8% of mission facilities.

Oxytocin, used to induce labour and for the prevention and treatment of post-partum haemorrhage, was commonly available in the public sector (90%), but less commonly available in the private and mission sectors. In the private sector, oxytocin was available in 50% of urban facilities and 55% of rural facilities, while in the mission sector it was available in 75% of urban facilities and 50% of rural facilities. Misoprostol, also used to induce labour, had similar availability patterns; it was commonly available in the public sector (88%), but less common in the private and mission sectors (50% and 55%, respectively). Magnesium sulphate, used in the treatment of pre-term labour and pre-eclampsia, had low availability across all sectors for both formulations researched; maximum availability in facilities across all sectors was no greater than 30%. Availability of dexamethasone, used in the management of pre-term labour for improving foetal lung maturity, was also relatively low in the public (36%), private (55%) and mission (43%) sectors. Gentamicin, used to treat pneumonia and maternal and neonatal sepsis, had the best overall availability of antenatal and post-natal commodities (74% availability in the public sector, 81% availability in the private sector, and 80% in the mission sector).

Sexually Transmitted Infections

Benzathine benzylpenicillin, used in the treatment of syphilis, was commonly available in all sectors, except in urban mission facilities (55%) and rural public facilities (64%), where availability was lower than in other facilities. Availability of clotrimazole pessary and cream, used to treat yeast infections, was around 50% across the sectors, with highest availability of clotrimazole cream in the mission sector (78%). In the private and mission sectors, metronidazole, used for vaginal infections, was available at more than 90% of facilities. In the public sector, metronidazole availability was lower (71%).

Medical Devices & Procedures

Vasectomy and tubal ligation kits were not commonly found at facilities. For instance, vasectomy kits could not be found in any mission facilities in rural areas, and the highest availability was in urban mission facilities (20%). Similar availability was found for tubal ligation kits. Speculums were available in 74% to 83% of facilities. The range of availability of ultrasound scans across sectors and areas was wide: Only 23% of rural public sector facilities had an ultrasound scan available, while one was available in 80% of urban private sector facilities. Interestingly, in rural private sector facilities, availability was also low (30%). Availability of an incubator was also different per sector and area. In the public sector, it was available in 40% of urban and 9% of rural facilities, and in the mission sector, availability was 50% for urban facilities and 15% for rural facilities. Conversely, in

the private sector, availability in urban facilities was lower (9%) than in rural facilities (20%). Antiseptic, important in preventing infections as a consequence of surgical procedures, was available in 57% of public, 38% of private, and 48% of mission facilities. A suction device, also important during surgery, was available in 85% of urban and 50% of rural public facilities, 59% of urban and 50% rural private facilities, and in 75% urban and 65% rural mission facilities.

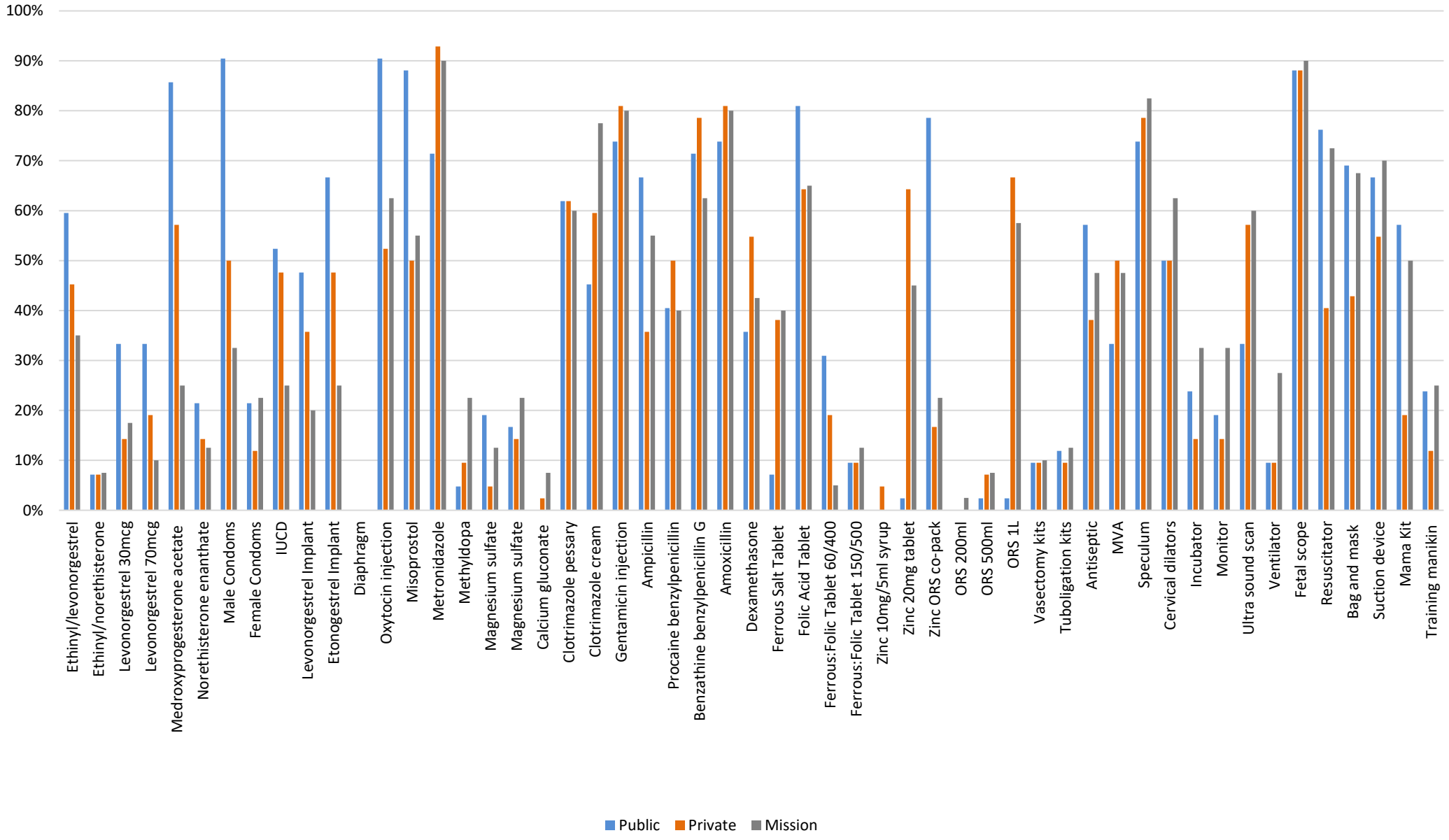


Figure 2: Mean percentage availability of SRHC across public, private and mission facilities.

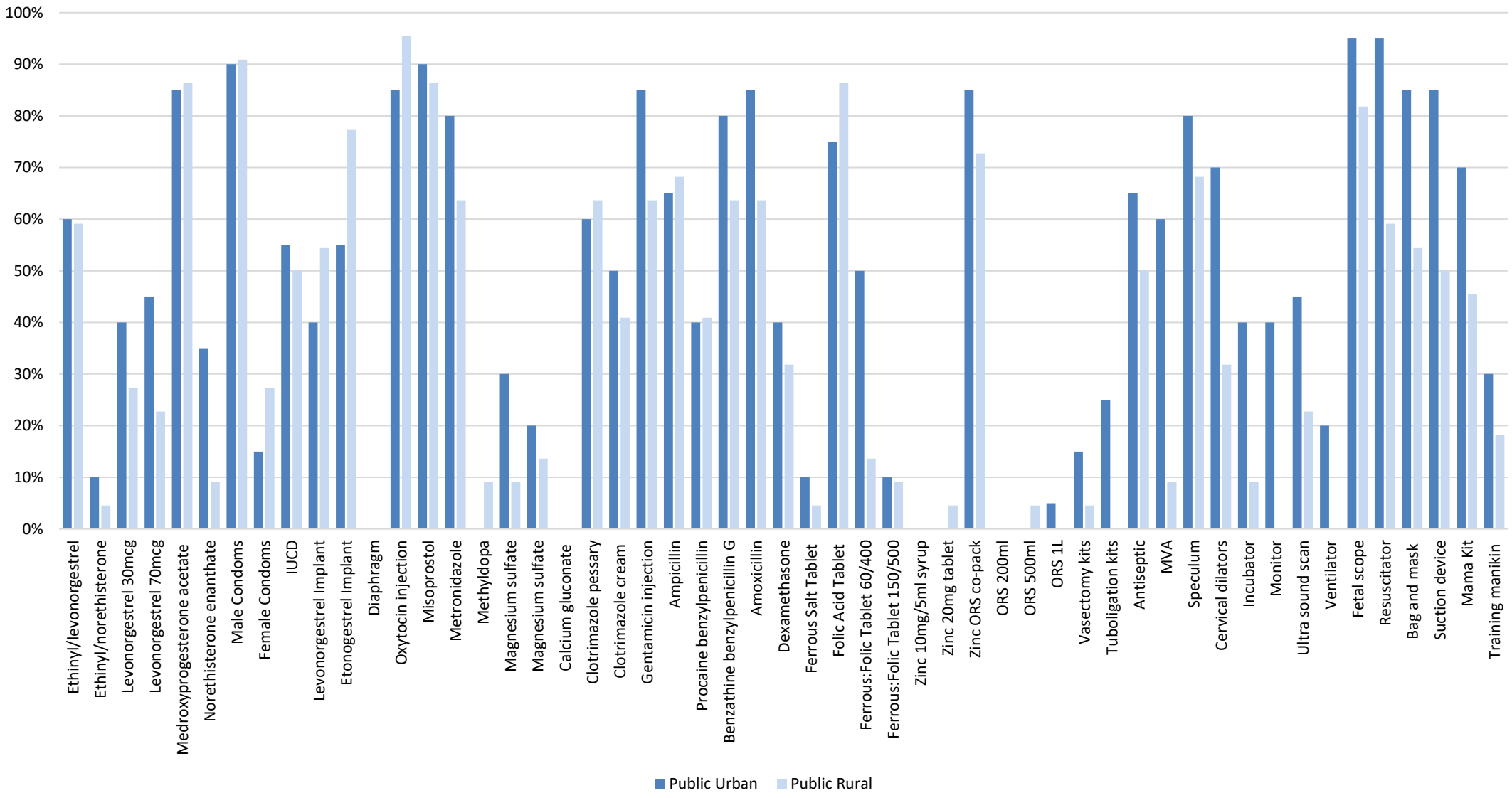


Figure 3: Mean percentage availability of SRHC in public sector facilities in urban and rural locations.

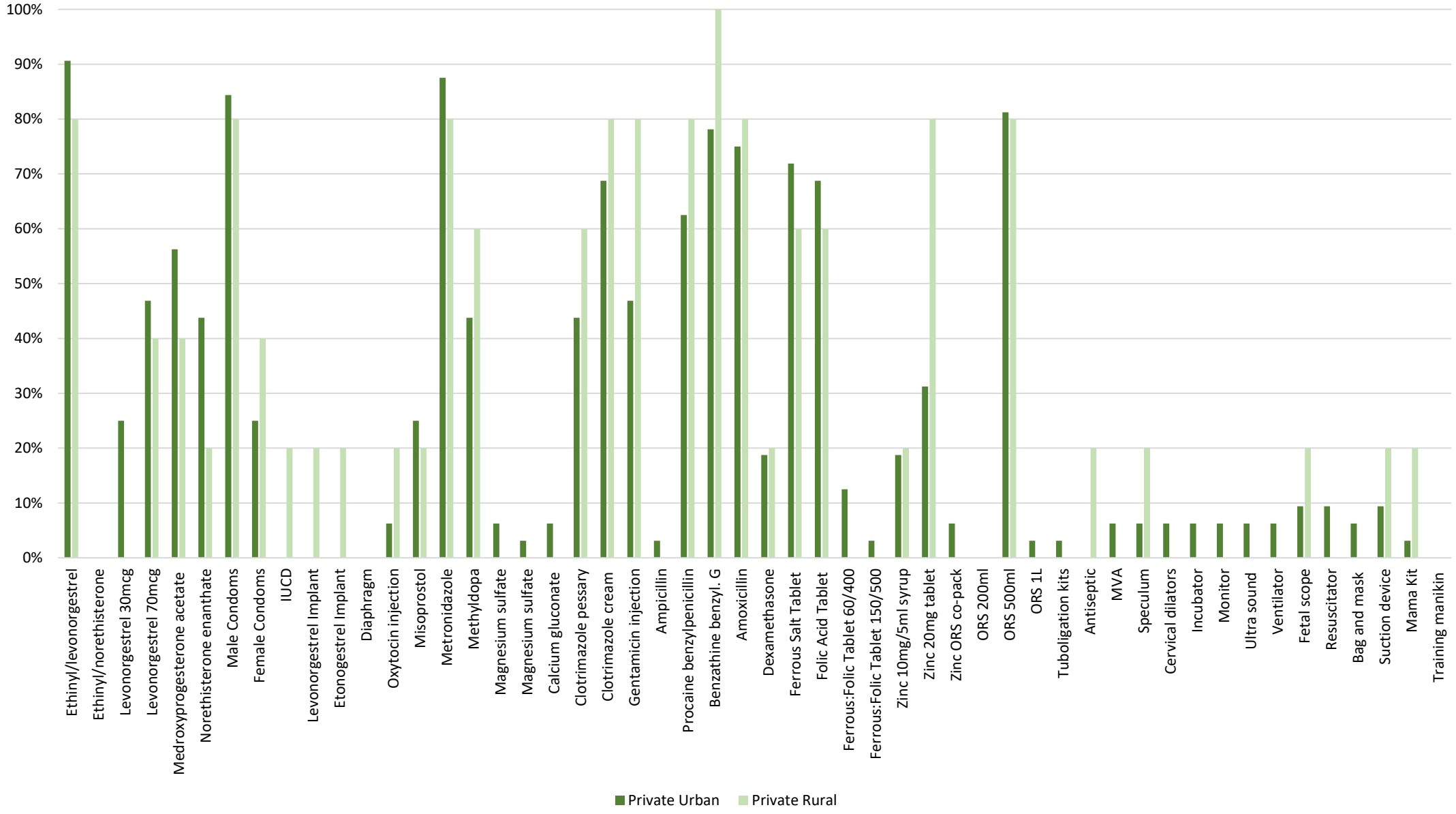


Figure 4: Mean percentage availability of SRHC in private sector facilities in urban and rural locations.

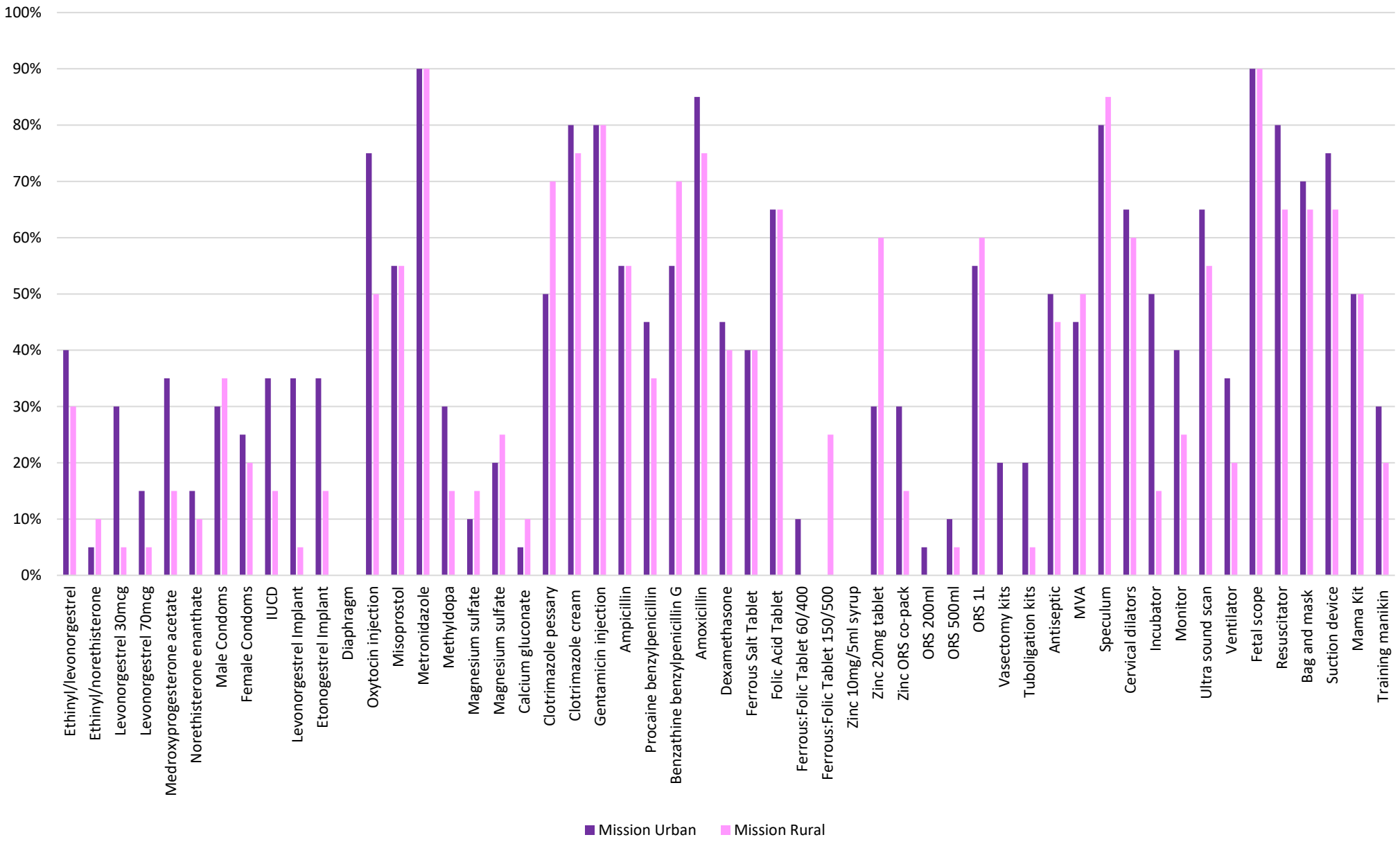


Figure 5: Mean percentage availability of SRHC in mission sector facilities in urban and rural locations.

3.3 Stock-out Days

Stock-out information was only recorded by data collectors when stock information could be seen via a stock card or stock-taking database. As a result, in cases where stock information was not recorded, or anecdotal evidence was presented, the stock-out days could not be recorded. Stock cards were not available in 34 facilities (10 mission, 2 public, 22 private). Please refer to Appendix C for a full breakdown of the stock-out data across sectors.

Stock-outs occurred in 12% of public sector facilities, 4% of private sector facilities, and 6% of mission sector facilities (see Table 3). All sectors were relatively similar in the average number of days SRHC were stocked-out per month: in the public sector the average number of days was 19, in the private sector 17 days, and in the mission sector 20 days.

	Percentage of facilities reporting stock outs	Average number of stock out days/month
Public	12	19
Private	4	17
Mission	6	20

Table 3: Percentage of facilities reporting stock-outs in the six months prior to survey and the average number of stock-outs recorded per facility.

Stock-outs for specific SRHC in the public sector ranged from 2% to 36%, of which metronidazole (36%), amoxicillin (33%), clotrimazole cream and pessary (29% and 26%, respectively), benzathine benzylpenicillin (26%), and zinc ORS co-pack (24%) were stocked out at the most facilities. Moreover, 11 other SRHC were stocked out at more than 10% of facilities. Private sector stock-outs ranged from 0% to 12% of facilities, with calcium gluconate (12%), and methyldopa (10%) experiencing stock-outs at most facilities. Five SRHC were not stocked-out at any facility. In the mission sector, stock-outs ranged from 0% to 13%, of which 13% of facilities were out of magnesium sulphate (500 mg in 10 ml), amoxicillin and ferrous salt - folic acid tablets (150/500), and eight other SHRC were stocked out at 10% of facilities. Figure 6 shows the percentage of facilities experiencing stock-outs for each SRHC.

In the public sector, 10 of the 37 SRHC for which stock-out data was collected were unavailable the entire month, and another six commodities were stocked-out for more than 20 days per month. In the private sector, 16 commodities were unavailable the entire month, while two were unavailable for more than 20 days. The mission sector had the most commodities unavailable for the entire month (19), and another four were unavailable for 20 days or more per month. Figure 7 is an overview of the number of stock-out days per sector and commodity.

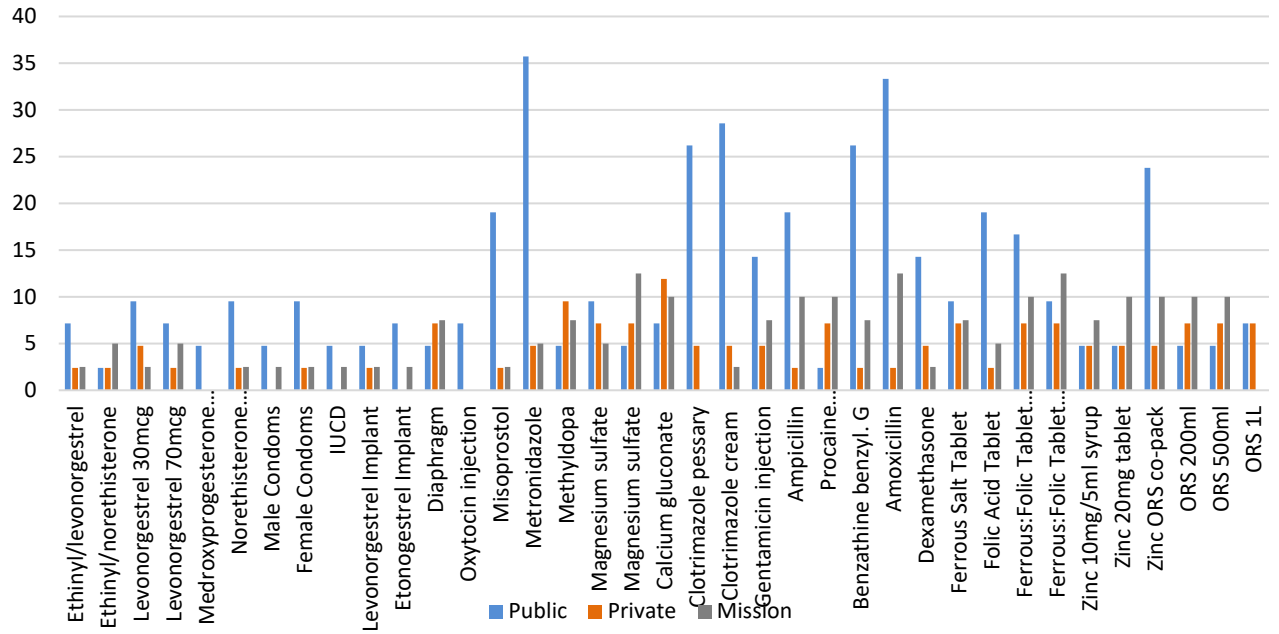


Figure 6: Percentage of facilities reporting stock-outs for SRHC in the six months prior to survey.

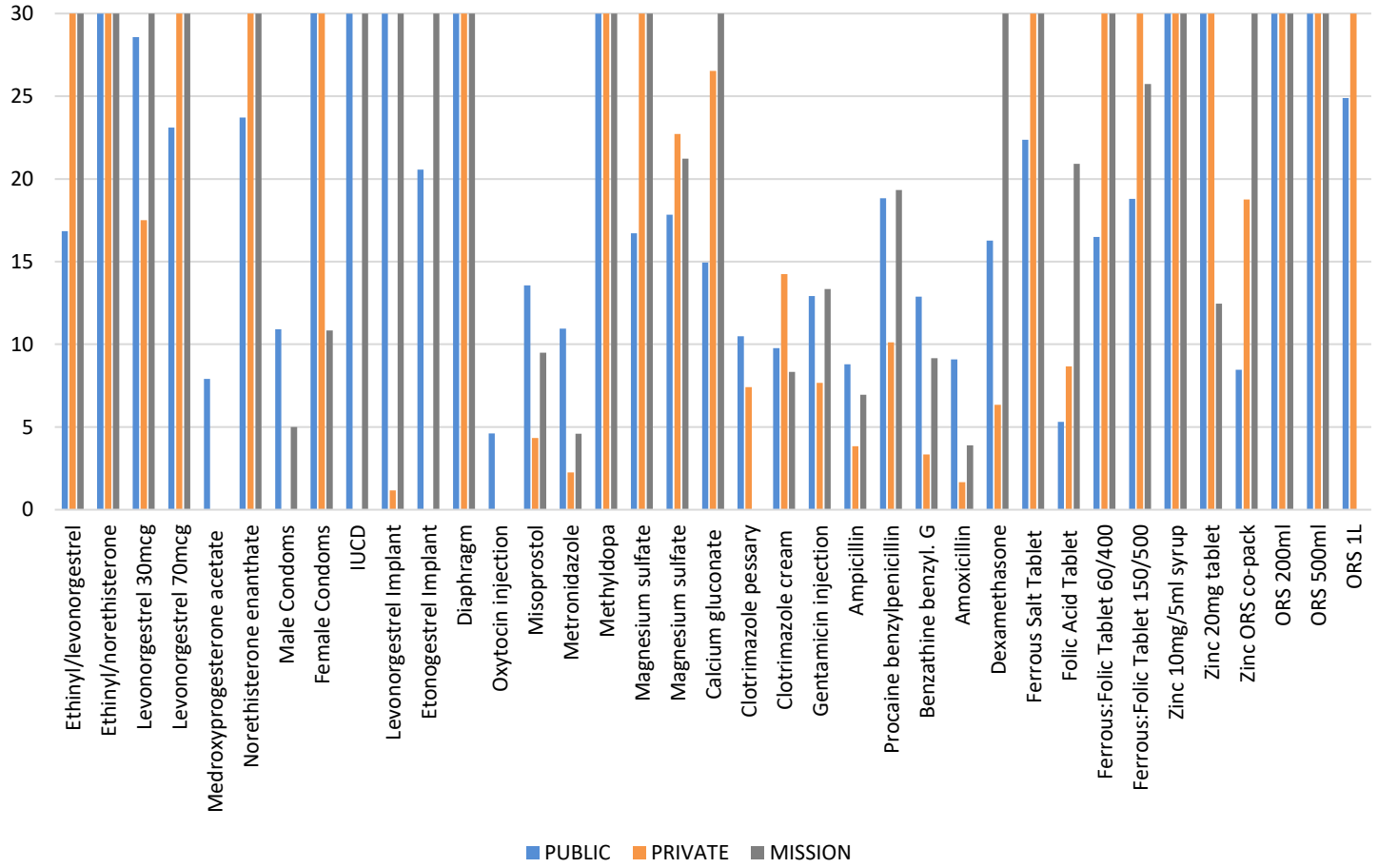


Figure 7: Average number of reported stock-out days per month for SRHC in public, private and mission sectors.

3.4 SRHC Prices in Public, Private & Mission Sectors

The following sections contain data analysed from Section B of the methodology, *SRHC: Measuring Prices, Availability and Affordability*. This section measures the pricing of commodities at facilities. Affordability of SRHC is based on the salary of the lowest-paid government worker in Uganda in 2017, the year of data collection. In Uganda, this is 6,255 Ugandan Shillings (UGX) per day. SRHC not included in the analysis below are those which are not typically sold in facilities, such as equipment and devices (e.g., incubators and monitors). Prices displayed are for individual units of a commodity; a unit is the single most effective amount of a commodity that can be used (e.g., one tablet, a strip of 28 contraceptive tablets, 1ml or 1 vial). Please refer to Appendix D for a full breakdown of the price and affordability data across sectors.

In the public sector, all SRHC were free to the patient, while in the private and mission sectors, patients had to pay for SRHC. The mean prices of SRHC in the private sector ranged from 0 UGX (female condoms) to 12,550 UGX (intrauterine contraceptive devices). In the mission sector, prices ranged from 0 UGX (ORS 200 ml) to 6,563 UGX (levonorgestrel implant). Table 4 provides an overview of the SRHC commodity prices.

3.5 SRHC Affordability in Public, Private & Mission Sectors

In the public sector, affordability of SRHC was optimal because the commodities were free to the patient. Using the wages of a lowest-paid government worker in Uganda in 2017, affordability of SRHC in the private sector ranged from optimal (0 days of wages) to 2.01 days of wages. A total of five commodities cost a lowest-paid government worker more than 1 day of wages. In the mission sector, affordability ranged from optimal (0 days of wages) to 1.05 days of wages. One commodity cost more than 1 day of wages for a lowest-paid government worker. Appendix D and Figure 8 provide an overview of the affordability of SRHC by sector.

Commodity	Prices in Ugandan Shillings (UGX)								
	Public Sector			Private Sector			Mission Sector		
	Mean Unit Price	Min Unit Price	Max Unit Price	Mean Unit Price	Min Unit Price	Max Unit Price	Mean Unit Price	Min Unit Price	Max Unit Price
Ethinyl/levonorgestrel	0	0	0	1132	0	5000	607	0	3000
Ethinyl/norethisterone	0	0	0	500	500	500	1000	0	2000
Levonorgestrel 30mcg	0	0	0	1502	0	7000	524	0	2000
Levonorgestrel 70mcg	0	0	0	7313	3500	15000	2125	0	5000
Medroxyprogesterone acetate	0	0	0	2033	0	4000	1400	0	2000
Norethisterone enanthate	0	0	0	833	0	2000	600	0	2000
Male condoms	0	0	0	357	0	2000	13	0	166
Female condoms	0	0	0	0	0	0	111	0	1000
Intrauterine contraceptive devices	0	0	0	12550	0	60000	6000	0	20000
Levonorgestrel implant	0	0	0	6067	0	15000	6563	0	15000
Etonogestrel implant	0	0	0	10300	0	50000	5500	0	15000
Diaphragm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N\A
Oxytocin injection	0	0	0	3555	200	6000	1455	0	5000
Misoprostol	0	0	0	2100	0	8000	1389	0	5000
Metronidazole	0	0	0	123	50	500	120	0	500
Methyldopa	0	0	0	400	300	500	304	100	500
Magnesium sulfate	0	0	0	5400	800	10000	912	200	2000
Magnesium sulfate	0	0	0	6750	1000	15000	3009	0	10000
Calcium gluconate	N/A	N/A	N/A	7500	7500	7500	1267	600	2600
Clotrimazole pessary	0	0	0	991	300	4000	754	0	5000
Clotrimazole cream	0	0	0	3023	125	10000	2230	0	6000
Gentamicin injection	0	0	0	1856	15	4000	1897	0	15000
Ampicillin	0	0	0	2833	200	5000	1361	300	2000
Procaine benzylpenicillin	0	0	0	2667	0	5000	2600	1000	5000
Benzathine benzylpenicillin G	0	0	0	3426	50	12000	2378	160	5000
Amoxicillin	0	0	0	182	50	1000	308	50	5000
Dexamethasone	0	0	0	2665	300	7000	1983	104	5000
Ferrous salt tablet	0	0	0	103	50	300	190	0	2000
Folic acid tablet	0	0	0	73	0	150	81	0	300
Ferrous:Folic tablet 60/400	0	0	0	456	0	3000	100	100	100
Ferrous:Folic tablet 150/500	0	0	0	308	0	500	94	0	200
Zinc 10mg/5ml syrup	N/A	N/A	N/A	2042	83	4000	N/A	N/A	N/A
Zinc 20mg tablet	0	0	0	181	0	500	211	100	500
Zinc:Oral rehydration salts co-pack	0	0	0	457	0	2000	778	0	2500
Oral rehydration salts 200ml	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Oral rehydration salts 500ml	0	0	0	611	333	1000	158	0	300
Oral rehydration salts 1L	0	0	0	536	0	2000	483	0	2000

Note: N/A denotes SRHC was unavailable and, therefore, no price or affordability information can be calculated.

Table 4: SRHC mean, minimum and maximum unit prices in public private and mission sector facilities.

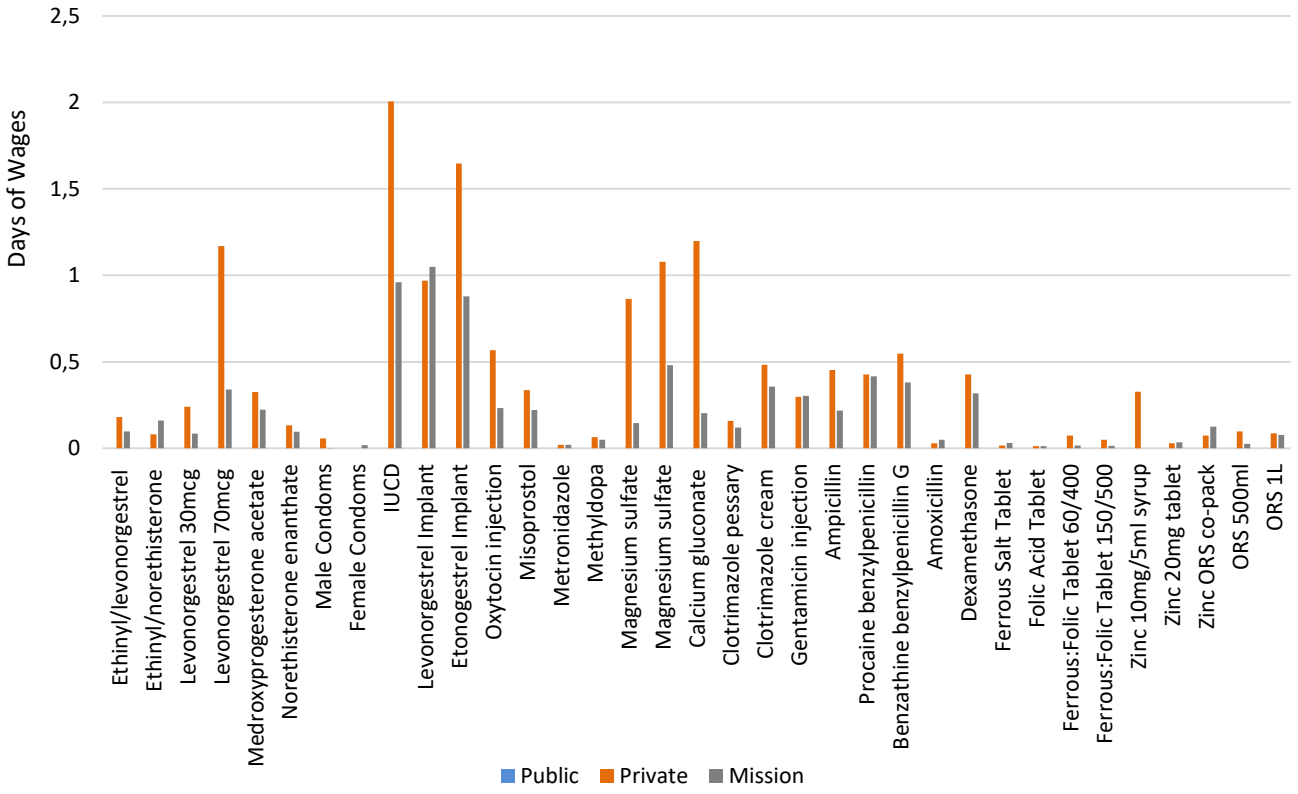


Figure 8: Affordability of SRHC in public, private and mission sectors.

3.6 Stakeholder interviews

The following sections contain data analysed from Section B of the methodology, *SRHC: Measuring Prices, Availability and Affordability*. This section investigates access to SRHC, in general, and at particular facilities from the perspective of the interviewed health provider. The respondents remained the same as those providing assistance in Part A of the survey. The response rate for the survey was 97.5%; three people declined to answer the qualitative component of the survey. Please refer to Appendix E for a full breakdown of the data across the sectors.

Key Challenges to SRHC Access

Respondents were asked what they thought were the key challenges to SRHC access. They were provided with six options and given the opportunity to add further suggestions. Respondents could choose as many options as they thought applicable. The options were:

a. There is no demand for medicines/commodities.
b. Requested medicines and commodities are not supplied.
c. Logistical issues for supply of medicines/commodities.
d. Training of staff.
e. Cost of medicines to patients.
f. Frequent stock outs.
g. Other (specify):

Costs to patients (49%) and training of staff (46%) were the most commonly mentioned key challenges to SRHC access. These challenges were followed by frequent stock-outs (33%), logistical issues for supply (29%), no demand for commodities (25%), and the fact that requested commodities are not supplied (25%). See Figure 9 for further detail.

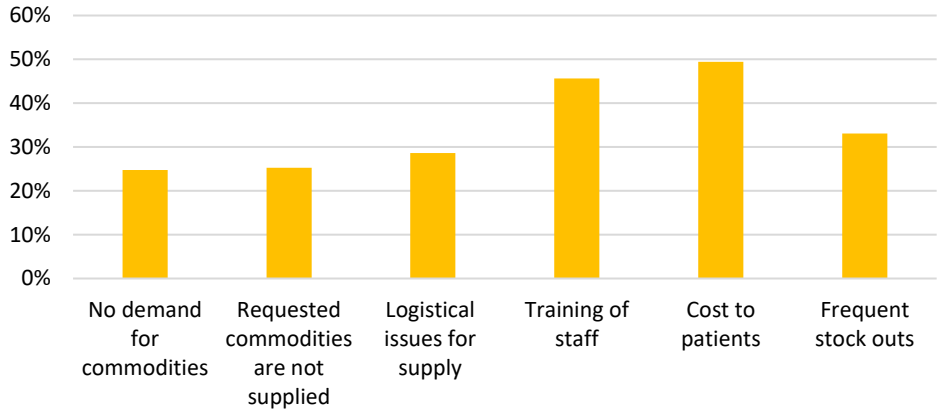


Figure 9: Key challenges to SRHC access.

When the key challenges were ordered according to the sectors, differences emerged. In the public sector, the biggest challenge to SRHC access, mentioned by 70% of respondents, was frequent stock-outs. The second most mentioned challenge was training of staff (56%), closely followed by requested commodities not being supplied (51%). In both the private and mission sectors, costs to patients were the main challenge (71% and 68%, respectively). Other challenges in the private sector mentioned by 29% of respondents were no demand for commodities, logistical issues for supply, and the training of staff. In the mission sector, training of staff was also seen as a main challenge (53%). Figure 10 is an overview of the challenges by sector.

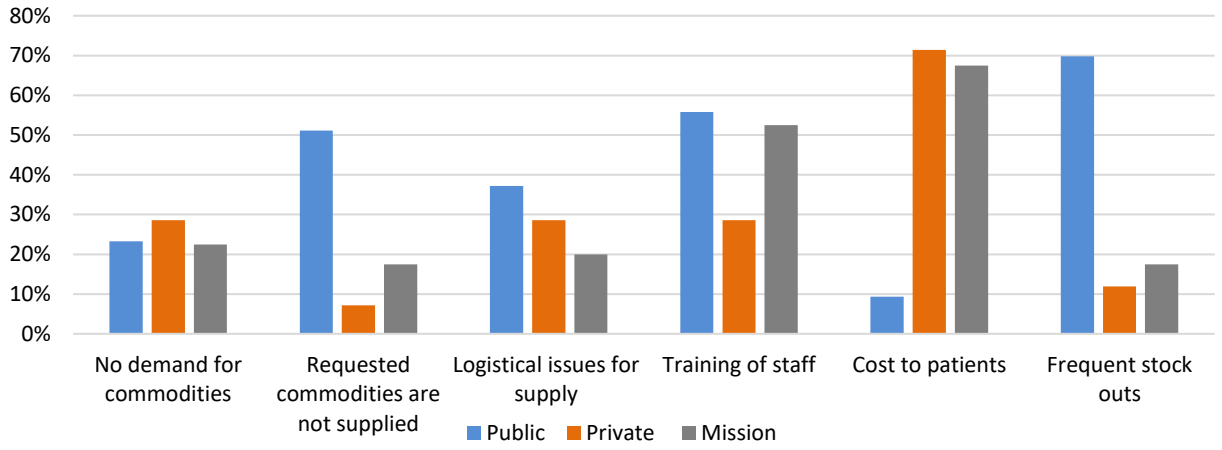


Figure 10: Key challenges to SRHC access in public, private and mission sectors.

Improving Access to SRHC

Respondents were asked what they thought could be done to improve access to SRHC in Uganda. Where possible, they were also asked to list their top three priorities. Responses differed across the sectors (Figure 11). For instance, in the public sector, the most prioritised recommendation to improve access to SRHC was to improve the supply chain (58%), which was followed by the recommendations for continued training for staff and increased budget allocation to SRH from the government (37%). In the private sector, respondents believed that reducing costs (57%), educating clients on SRH (43%), and improving the supply chain (26%) were the best ways to improve access to SRHC. In the mission sector, continued training for staff was highest prioritised (55%), followed by reducing costs (53%) and educating clients on SRH (35%). A quarter of the respondents also believed the supply chain should be improved. Across the three sectors, when

respondents prioritised improvements to the supply chain, this covered accurate ordering of SRHC, efficient and accurate delivery, and a move to a 'pull system', rather than a 'push system', of SRHC stock ordering.

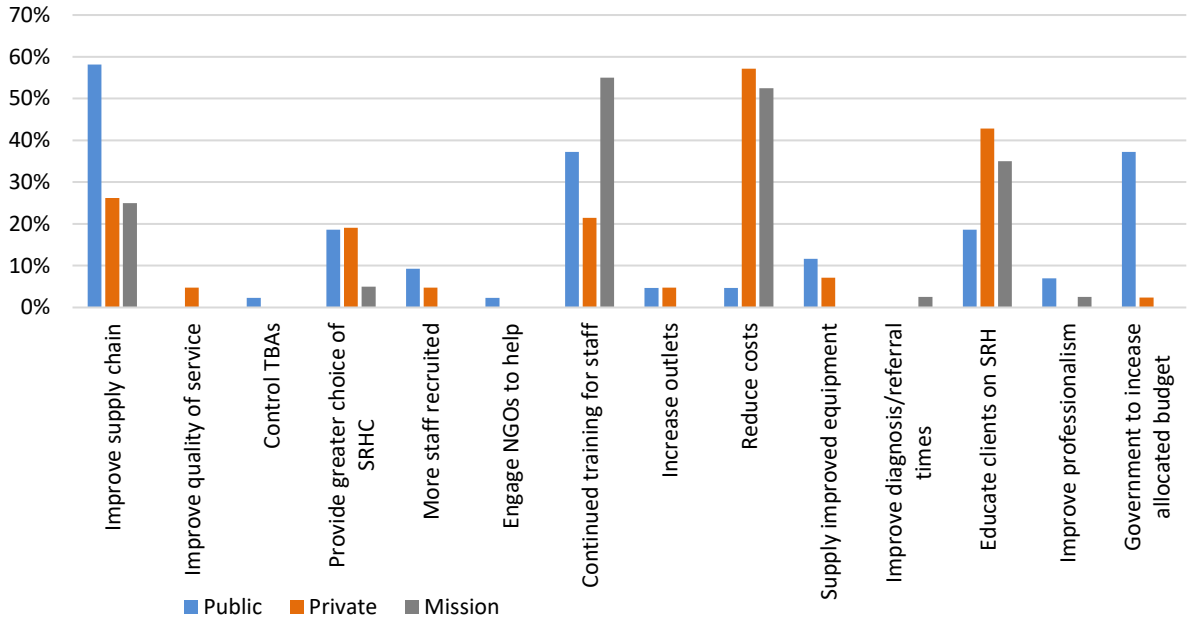


Figure 11: Improving access to SRHC in public, private and mission sectors.

Ensuring Access to SRH Services at Facilities

Respondents were also asked what could be done to ensure access to SRH services at the facility in which they worked. In all sectors, three recommendations were the most prioritised, namely improving the supply chain, educating communities on SRH services and commodities, and sensitisation of staff (see Figure 12). In the public sector, the highest prioritised recommendation was improving the supply chain (51%) and in the private and mission sectors, educating communities (67% and 53%, respectively). In the private sector, in addition to the top three prioritised recommendations, lowering the costs for clients was also mentioned by 29% of respondents to be a way of ensuring access to SRH services at their facilities.

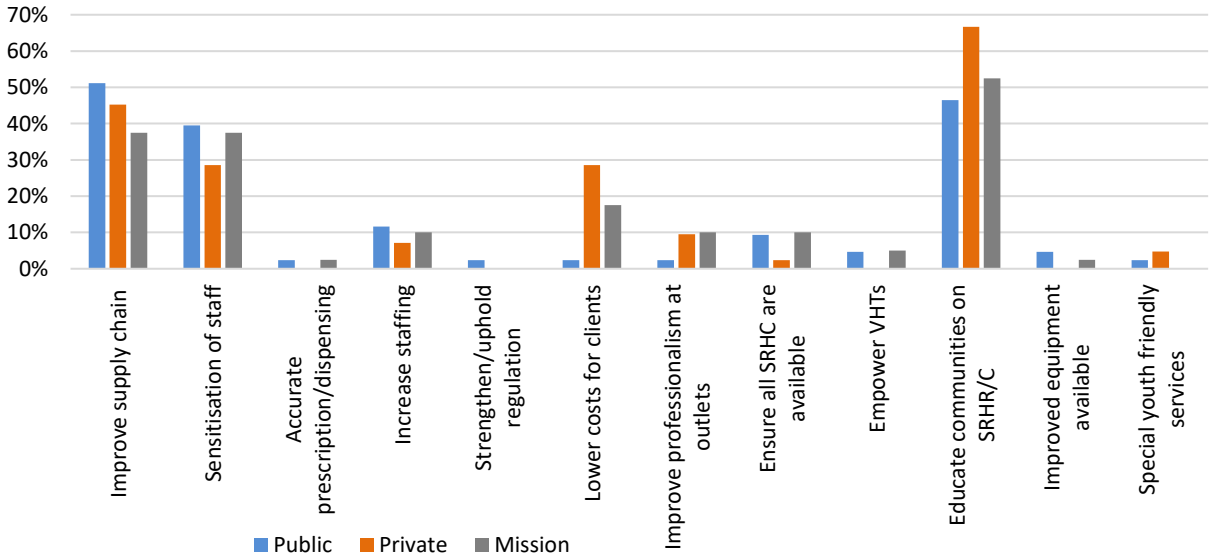


Figure 12: Ensuring access to SRH services in public, private and mission sector facilities.

Reluctance for Clients to Access SRHC

Respondents were asked if they thought clients who visited their facility were reluctant to visit for SRHC and SRH services. If respondents replied, 'Yes', they were then asked to provide their thoughts on the reasons for this reluctance and what they believed could be done to tackle this issue.

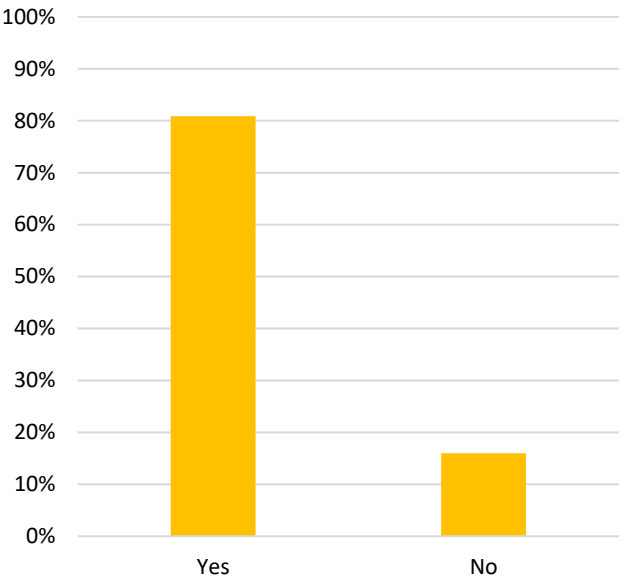


Figure 13: Reluctance for clients to access SRHC.

Of the respondents, 81% believed that clients were reluctant to access SRHC (see Figure 13). When they were asked why clients were reluctant to access SRH services, respondents answered that it was due to stigma from family members and the community (34%), clients' lack of knowledge (30%), and fear of side effects (23%). Figure 14 is an overview of the reasons for clients' reluctance given by the respondents. When respondents were asked about ways to decrease clients' reluctance to access SRHC, 58% recommended improving client education for everyone, meaning for both men and women (see Figure 15).

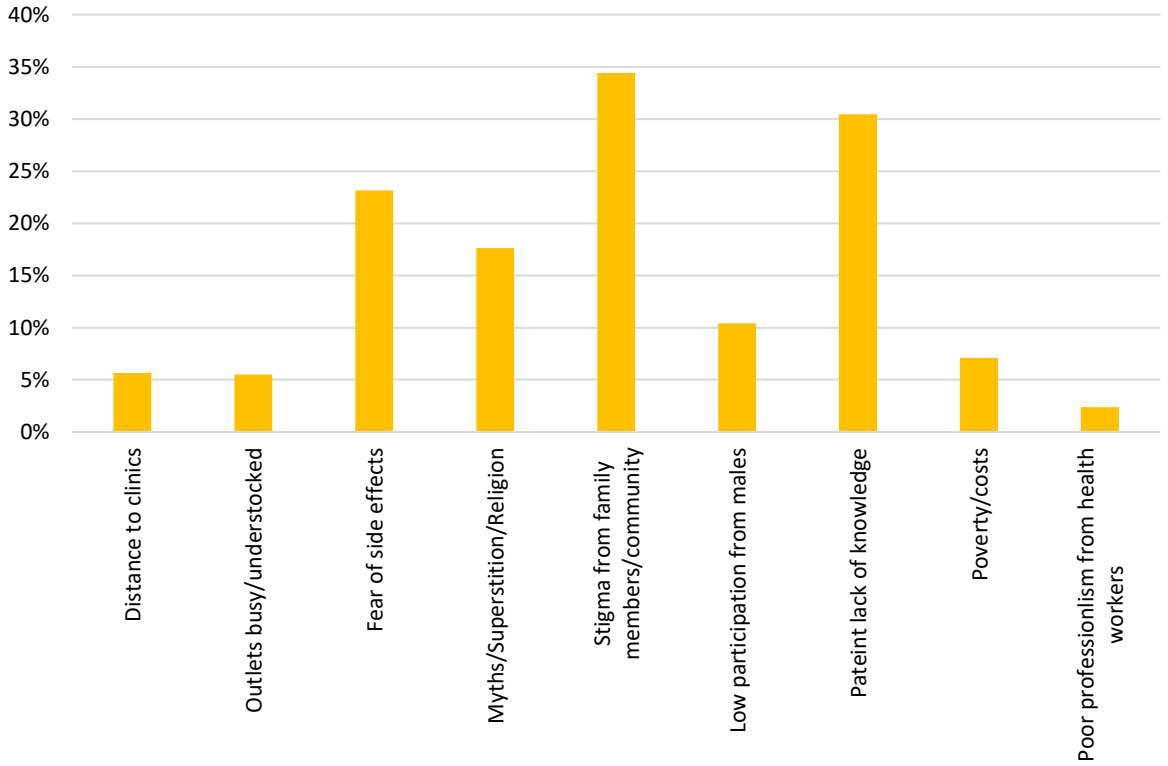
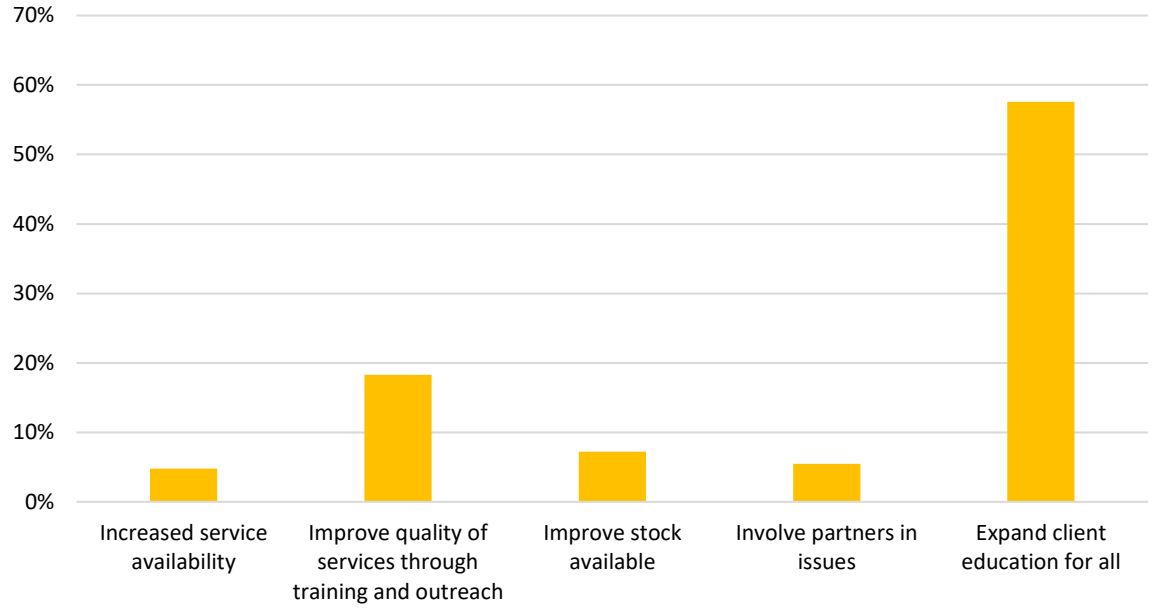


Figure 14: Reasons for client reluctance in accessing SRHC at facilities.



Note: "Involving partner in issues" was defined as involving males in the SRH of their female partners in order to aid understanding.

Figure 15: Possible improvements to overcome client reluctance to access SRHC at facilities.

4. Discussion

This is the first roll-out of a planned yearly survey as part of Health Action International's SRHC research under the Health Systems Advocacy (HSA) Partnership. This research aims to create a picture of Uganda's current situation regarding access to SRHC, and to identify solutions to improve access to these commodities.

In general, availability of SRHC was inconsistent and ranged from commodities being unavailable at all facilities to 89% availability. Contraceptives had a low availability; birth control pills, for instance, were available in only 47% of facilities. In addition, contraceptives were generally more commonly available in the public sector than in other sectors: Injectable contraceptive (medroxyprogesterone acetate), which is the most commonly used contraceptive in Uganda[3], was available in 86% of public sector facilities, and only available in 57% and 25% of private and mission sector facilities, respectively. Male condoms were also only regularly available in the public sector (90%), and did not surpass 55% availability in other sectors. Moreover, implants were unavailable in more than 50% of facilities. The sub-optimal availability of contraceptives makes it difficult to access the commodities, which likely contributes to the finding that about 30% of women in Uganda experienced unmet needs for family planning in 2015[4].

Some antenatal and post-natal commodities, such as oxytocin and misoprostol, used to induce labour, had relatively high availability in the public sector (90% and 88%, respectively), but, evidently, had lower availability in the other sectors. Magnesium sulphate was crucially low across all sectors, and dexamethasone was, on average, available in 44% of facilities. These medicines are crucial in ensuring a healthy pregnancy and lives for the mother and the baby and in preventing complications due to post-partum haemorrhaging and pre-eclampsia. If they are not regularly available in facilities, as is the case in Uganda, it can lead to serious morbidity and mortality. The irregular availability of these commodities therefore likely contributes to the 336 maternal deaths per 100,000 live births in Uganda[5].

Availability of commodities to treat sexually transmitted infections (STI) ranged from 45% to 95% of facilities. Given that in 2012, alone, there were an estimated 62 million new cases of curable STI in the sub-Saharan Africa region[6], access to commodities to treat these STI is important to ensure the health of a large proportion of the population. Moreover, important devices and procedures that had a low availability, such as ultrasound scans, incubators, and antiseptic, have a significant impact on the health outcomes of mothers and babies because they affect the quality of treatment offered to the clients.

Stock-outs were quite common in the public sector (12%) and lasted, on average, almost 20 days per month. Moreover, in the public sector, specific SRHC were stocked-out at up to 36% of all facilities. Also, since availability of SRHC is already low, stock-outs can have an even more significant impact on access to SRHC than presented with these numbers. Frequent stock-outs

[3] United Nations, Department of Economic and Social Affairs, Population Division. *Trends in Contraceptive Use Worldwide 2015*. (Geneva: United Nations, 2015), p. 1-63.
[4] United Nations, Department of Economic and Social Affairs, Population Division. p. 1-63.
[5] Uganda Bureau of Statistics. *Uganda Demographic and Health Survey 2016: key indicators report*. (Kampala: Uganda Bureau of Statistics, 2017), p 1-60.
[6] Newman L, Rowley J, Vander Hoorn S, Wijesooriya NS, Unemo M, Low N, et al. *Global Estimates of the Prevalence and Incidence of Four Curable Sexually Transmitted Infections in 2012 Based on Systematic Review and Global Reporting*. PLoS ONE, 10, no. 12 (2015), e0143304.

were also identified as a major challenge by 33% of the respondents, including 70% of respondents in the public sector. It is important to note that stock cards were not available in 34 facilities, so the stock-out situation may be underestimated.

Five SRHC in the private sector and one in the mission sector cost a lowest-paid government worker more than one day of wages. Nevertheless, respondents indicated that costs to the patients were still a major challenge in access to SRHC in the private (71%) and mission (68%) sectors. This is not surprising, given that Uganda's lowest-paid government worker earns the equivalent of USD 1.73[7] a day, while in 2016, 27% of the population lived below the poverty line of USD 1.25 a day[8].

Stock-outs and costs to patients were not the only key challenges believed to be affecting access to SRHC; other challenges mentioned were lack of staff training on SRH, the fact that requested commodities are not supplied, and logistical issues for supply. To improve access to SRHC, the following recommendations were made:

- Improve the supply chain.
  - Efficient and accurate delivery.
  - Move to a 'pull system' of SRHC stock ordering.
- Provide (continued) staff training.
- Provide client education and outreach.
- Increase the number of trained staff.

Recommendations to improve access to SRHC at their own facilities were of the same nature as the general recommendations. Exceptions to this are the recommendations to lower the costs for patients in private and mission sector facilities, and to increase the budget allocated by the government to SRH services in the public sector. Expanding client education was also recommended to decrease client reluctance to access SRHC, which was identified as a substantial problem.

[7] Based on currency conversion of ZMW to USD for the value of ZMW in USD on 13 September, 2017, via https://www.oanda.com/currency/converter/.
[8] Uganda Bureau of Statistics. Uganda National Household Survey 2016/17. Uganda: Uganda Bureau of Statistics, 2017. Accessed 23 November, 2017: http://www.ubos.org/onlinefiles/uploads/ubos/pdf%20documents/UNHS_VI_2017_Version_I_%2027th_September_2017.pdf

Conclusion

The lack of availability of commodities, the stock-outs, the unaffordability of SRHC and challenges at community and facility levels all contribute to the difficulties people experience in accessing SRH services, and to the 30% of women that still have unmet family planning needs. To achieve the Sustainable Development Goal of universal access to SRH services, improvements in accessing SRHC in Uganda are therefore needed.

This survey showed that community education may have a considerable impact on health-seeking behaviour of clients. Improving SRH knowledge in the community will tackle many of the reasons given as to why 81% of clients are reluctant to access SRH services. For instance, comprehensive education on SRH will reduce stigmatisation in the community and will improve general knowledge about SRH, which will, in turn, reduce the (ungrounded) fear of side effects.

Related to community education is staff sensitisation. Staff sensitisation and continued education is needed to ensure clients feel comfortable accessing SRH services at facilities. For this, it is important that staff are sufficiently knowledgeable about SRH and services available, that they are professional in their approach, and that no stigmatisation occurs within the facility.

Improving client and staff education is not enough, however. If the commodities are not available, they cannot be accessed. Therefore, another important area of focus to improve access to SRH services is the pharmacy chain, given that a sub-optimal pharmacy chain leads to problems with availability and stock-outs. To improve the pharmacy chain, SRHC should be accurately ordered, the delivery should be efficient, timely and accurate, and a closer look should be taken to see whether a ‘pull system’ would work better in the Ugandan situation than the ‘push system’ in use at the moment.

Finally, costs are also an important access-limiting factor in the private and mission sector for which solutions should be developed.

5. Appendices

5.1 Appendix A – SRHC Surveyed

Commodity
Ethinylestradiol + levonorgestrel (tablet, 30 mcg + 150 mcg)
Ethinylestradiol + norethisterone (tablet, 35 mcg + 1.0 mg)
Levonorgestrel (tablet, 30 mcg)
Levonorgestrel (tablet, 750 mcg)
Medroxyprogesterone acetate (150mg in 1 ml vial)
Norethisterone enanthate (200mg/ml in 1 ml vial)
Male condoms
Female condoms
Intrauterine contraceptive devices
Implants: Levonorgestrel
Implants: Etonogestrel
Diaphragm
Oxytocin injection (10IU, 1ml)
Misoprostol (200 mcg tablet)
Metronidazole (tablet, 200mg)
Methyldopa (tablet, 250mg)
Magnesium sulphate (500mg in 2ml)
Magnesium sulphate (500mg in 10ml)
Calcium gluconate (100mg in 10ml ampoule)
Clotrimazole (pessary 500mg)
Clotrimazole (cream 1% in 15g tube)
Gentamicin injection (40mg/ml in 2ml)
Ampicillin (500mg powder for injection)
Procaine benzylpenicillin, fort (powder for injection 4MU)
Benzathine benzylpenicillin G (2.4MU in 10ml)
Amoxicillin (125mg/250mg)
Dexamethasone (4mg/ml)
Ferrous salt tablet (200mg)
Folic acid tablet (tablet 5mg)
Ferrous salt and folic acid (tablet 60mg iron + 400mcg folic acid)
Ferrous salt and folic acid (tablet 150mg iron + 500mcg folic acid)
Zinc (10mg in 5ml syrup)
Zinc (20mg tablet)
Zinc oral rehydration salts co-pack (10mg tablet/1L)
Oral rehydration salts (sachets of 200ml)
Oral rehydration salts (sachets of 500ml)
Oral rehydration salts (sachets of 1L)
Vasectomy kits
Tubal ligation kits
Antiseptic (chlorhexidine/alcohol)
Manual vacuum aspiration kits
Speculum
Cervical dilators
Incubator
Monitor
Ultrasound scan
Ventilator
Foetal scope
Resuscitator
Bag and mask (size 0)
Suction device
Mama kit
Training mannequin for infant resuscitation

Table 5: Full list of SRHC surveyed.

5.2 Appendix B – SRHC Availability

Commodity	Percentage Mean Availability (%)					
	Public		Private		Mission	
	Urban	Rural	Urban	Rural	Urban	Rural
Ethinylestradiol + levonorgestrel Tablet, 30 mcg + 150 mcg	60%	59%	59%	30%	40%	30%
Ethinylestradiol + norethisterone Tablet, 35 mcg + 1.0 mg	10%	5%	0%	15%	5%	10%
Levonorgestrel Tablet, 30 mcg	40%	27%	23%	5%	30%	5%
Levonorgestrel Tablet, 750 mcg	45%	23%	18%	20%	15%	5%
Medroxyprogesterone acetate 150mg in 1 ml vial	85%	86%	59%	55%	35%	15%
Norethisterone enanthate 200mg/ml in 1 ml vial	35%	9%	18%	10%	15%	10%
Male Condoms	90%	91%	45%	55%	30%	35%
Female Condoms	15%	27%	18%	5%	25%	20%
Intrauterine contraceptive devices (IUCD)	55%	50%	59%	35%	35%	15%
Implants: Levonorgestrel	40%	55%	50%	20%	35%	5%
Implants: Etonogestrel	55%	77%	50%	45%	35%	15%
Diaphragm	0%	0%	0%	0%	0%	0%
Oxytocin injection 10IU, 1ml	85%	95%	50%	55%	75%	50%
Misoprostol 200 mcg Tablet	90%	86%	41%	60%	55%	55%
Metronidazole Tablet, 200mg	80%	64%	91%	95%	90%	90%
Methyldopa Tablet, 250mg	0%	9%	14%	5%	30%	15%
Magnesium sulphate 500mg in 2ml	30%	9%	9%	0%	10%	15%
Magnesium sulphate 500mg in 10ml	20%	14%	9%	20%	20%	25%
Calcium gluconate 100mg in 10ml amp	0%	0%	5%	0%	5%	10%
Clotrimazole pessary 500mg	60%	64%	73%	50%	50%	70%
Clotrimazole cream 1% in 15g tube	50%	41%	68%	50%	80%	75%
Gentamicin injection, 40mg/ml in 2ml	85%	64%	77%	85%	80%	80%
Ampicillin, 500mg powder for injection	65%	68%	41%	30%	55%	55%
Procaine benzylpenicillin (fort) powder for injection 4MU	40%	41%	59%	40%	45%	35%
Benzathine benzylpenicillin G, 2.4MU in 10ml	80%	64%	77%	80%	55%	70%
Amoxicillin 125mg/250mg	85%	64%	73%	90%	85%	75%
Dexamethasone 4mg/ml	40%	32%	59%	50%	45%	40%
Ferrous Salt Tablet 200mg	10%	5%	41%	35%	40%	40%
Folic Acid Tablet Tablet, 5mg	75%	86%	59%	70%	65%	65%

Ferrous Salt and Folic Acid Tablet 60mg iron + 400mcg Folic Acid	50%	14%	14%	25%	10%	0%
Ferrous Salt and Folic Acid Tablet 150mg iron + 500mcg Folic Acid	10%	9%	14%	5%	0%	25%
Zinc 10mg in 5ml syrup	0%	0%	5%	5%	0%	0%
Zinc 20mg tablet	0%	5%	59%	70%	30%	60%
Zinc ORS co-pack 10mg/1ml	85%	73%	23%	10%	30%	15%
Oral rehydration salts sachets of 200ml	0%	0%	0%	0%	5%	0%
Oral rehydration salts sachets of 500ml	0%	5%	9%	5%	10%	5%
Oral rehydration salts sachets of 1L	5%	0%	64%	70%	55%	60%
Vasectomy kits	15%	5%	9%	10%	20%	0%
Tubal ligation kits	25%	0%	9%	10%	20%	5%
Antiseptic	65%	50%	36%	40%	50%	45%
MVA	60%	9%	50%	50%	45%	50%
Speculum	80%	68%	73%	85%	80%	85%
Cervical dilators	70%	32%	55%	45%	65%	60%
Incubator	40%	9%	9%	20%	50%	15%
Monitor	40%	0%	27%	0%	40%	25%
Ultra sound	45%	23%	82%	30%	65%	55%
Ventilator	20%	0%	18%	0%	35%	20%
Foetal scope	95%	82%	86%	90%	90%	90%
Resuscitator	95%	59%	45%	35%	80%	65%
Bag and mask	85%	55%	55%	30%	70%	65%
Suction device	85%	50%	59%	50%	75%	65%
Mama Kit	70%	45%	32%	5%	50%	50%
Training mannequin	30%	18%	23%	0%	30%	20%
Average	**47%**	**36%**	**40%**	**34%**	**41%**	**36%**

Table 6: Percentage availability of SRHC across all sectors and locations.

5.3 Appendix C – SRHC Stock-out Data

	Percentage of Facilities Reporting a Stock-out (in the last 6 months)			Average Number of Stock-out Days/ Month		
Commodity	**Public**	**Private**	**Mission**	**Public**	**Private**	**Mission**
Ethinylestradiol + levonorgestrel (tablet, 30 mcg + 150 mcg)	7	2	3	17	30	30
Ethinylestradiol + norethisterone (tablet, 35 mcg + 1.0 mg)	2	2	5	30	30	30
Levonorgestrel (tablet, 30 mcg)	10	5	3	29	18	30
Levonorgestrel (tablet, 750 mcg)	7	2	5	23	30	30
Medroxyprogesterone acetate (150mg in 1 ml vial)	5	0	0	8	0	0
Norethisterone enanthate (200mg/ml in 1 ml vial)	10	2	3	24	30	30
Male condoms	5	0	3	11	0	5
Female condoms	10	2	3	30	30	11
Intrauterine contraceptive devices	5	0	3	30	0	30
Implants: Levonorgestrel	5	2	3	30	1	30
Implants: Etonogestrel	7	0	3	21	0	30
Diaphragm	5	7	8	30	30	30
Oxytocin injection (10IU, 1ml)	7	0	0	5	0	0
Misoprostol (tablet, 200 mcg)	19	2	3	14	4	10
Metronidazole (tablet, 200mg)	36	5	5	11	2	5
Methyldopa (tablet, 250mg)	5	10	8	30	30	30
Magnesium sulphate (500mg in 2ml)	10	7	5	17	30	30
Magnesium sulphate (500mg in 10ml)	5	7	13	18	23	21
Calcium gluconate (100mg in 10ml ampoule)	7	12	10	15	27	30
Clotrimazole (pessary 500mg)	26	5	0	10	7	0
Clotrimazole (cream 1% in 15g tube)	29	5	3	10	14	8
Gentamicin injection (40mg/ml in 2ml)	14	5	8	13	8	13
Ampicillin (500mg powder for injection)	19	2	10	9	4	7
Procaine benzylpenicillin, fort (powder for injection 4MU)	2	7	10	19	10	19

Benzathine benzylpenicillin G (2.4MU in 10ml)	26	2	8	13	3	9
Amoxicillin (125mg/250mg)	33	2	13	9	2	4
Dexamethasone (4mg/ml)	14	5	3	16	6	30
Ferrous salt (tablet, 200mg)	10	7	8	22	30	30
Folic acid (tablet, 5mg)	19	2	5	5	9	21
Ferrous salt and folic acid (tablet 60mg iron + 400mcg folic acid)	17	7	10	17	30	30
Ferrous salt and folic acid (tablet 150mg iron + 500mcg folic acid)	10	7	13	19	30	26
Zinc (10mg in 5ml syrup)	5	5	8	30	30	30
Zinc (tablet, 20mg)	5	5	10	30	30	12
Zinc oral rehydration salts(co-pack 10mg/1ml)	24	5	10	8	19	30
Oral rehydration salts (sachets of 200ml)	5	7	10	30	30	30
Oral rehydration salts (sachets of 500ml)	5	7	10	30	30	30
Oral rehydration salts (sachets of 1L)	7	7	0	25	30	0
Average	**11.8**	**4.4**	**5.8**	**19**	**17**	**20**

Table 7: Facilities reporting stock-out days in the six months prior to survey and the average number of stock-out days for SRHC.

5.4 Appendix D – SRHC Prices and Affordability Data

	Mean Unit Price (UGX)			Treatment Units	Affordability (Days of Wages)		
Commodity	**Public**	**Private**	**Mission**		**Public**	**Private**	**Mission**
Ethinylestradiol + levonorgestrel (tablet, 30 mcg + 150 mcg)	0	1132	607	28	0	0.181	0.097
Ethinylestradiol + norethisterone (tablet, 35 mcg + 1.0 mg)	0	500	1000	28	0	0.080	0.160
Levonorgestrel (tablet, 30 mcg)	0	1502	524	28	0	0.240	0.084
Levonorgestrel (tablet, 750 mcg)	0	7313	2125	28	0	1.169	0.340
Medroxyprogesterone acetate (150mg in 1 ml vial)	0	2033	1400	1	0	0.325	0.224
Norethisterone enanthate (200mg/ml in 1 ml vial)	0	833	600	1	0	0.133	0.096
Male condoms	0	357	13	1	0	0.057	0.002
Female condoms	0	0	111	1	0	0.000	0.018
Intrauterine contraceptive devices	0	12550	6000	1	0	2.006	0.959
Implants: Levonorgestrel	0	6067	6563	1	0	0.970	1.049
Implants: Etonogestrel	0	10300	5500	1	0	1.647	0.879
Diaphragm	N/A	N/A	N/A	1	N/A	N/A	N/A
Oxytocin injection (10IU, 1ml)	0	3555	1455	1	0	0.568	0.233
Misoprostol (200 mcg tablet)	0	2100	1389	1	0	0.336	0.222
Metronidazole (tablet, 200mg)	0	123	120	1	0	0.020	0.019
Methyldopa (tablet, 250mg)	0	400	304	1	0	0.064	0.049
Magnesium sulphate (500mg in 2ml)	0	5400	912	1	0	0.863	0.146
Magnesium sulphate (500mg in 10ml)	0	6750	3009	1	0	1.079	0.481
Calcium gluconate (100mg in 10ml ampoule)	N/A	7500	1267	1	N/A	1.199	0.203
Clotrimazole (pessary 500mg)	0	991	754	1	0	0.158	0.120
Clotrimazole (cream 1% in 15g tube)	0	3023	2230	1	0	0.483	0.357
Gentamicin injection (40mg/ml in 2ml)	0	1856	1897	1	0	0.297	0.303
Ampicillin (500mg powder for injection)	0	2833	1361	1	0	0.453	0.218

Procaine benzylpenicillin, fort (powder for injection 4MU)	0	2667	2600	1	0	0.426	0.416
Benzathine benzylpenicillin G (2.4MU in 10ml)	0	3426	2378	1	0	0.548	0.380
Amoxicillin (125mg/250mg)	0	182	308	1	0	0.029	0.049
Dexamethasone (4mg/ml)	0	2665	1983	1	0	0.426	0.317
Ferrous salt tablet (200mg)	0	103	190	1	0	0.016	0.030
Folic acid tablet (5mg)	0	73	81	1	0	0.012	0.013
Ferrous salt and folic acid (tablet 60mg iron + 400mcg folic acid)	0	456	100	1	0	0.073	0.016
Ferrous salt and folic acid tablet (150mg iron + 500mcg folic acid)	0	308	94	1	0	0.049	0.015
Zinc (10mg in 5ml syrup)	N/A	2042	N/A	1	N/A	0.326	N/A
Zinc (20mg tablet)	0	181	211	1	0	0.029	0.034
Zinc oral rehydration salts (co-pack 10mg/1ml)	0	457	778	1	0	0.073	0.124
Oral rehydration salts (sachets of 200ml)	N/A	N/A	0	1	N/A	N/A	0.000
Oral rehydration salts (sachets of 500ml)	0	611	158	1	0	0.098	0.025
Oral rehydration salts (sachets of 1L)	0	536	483	1	0	0.086	0.077

Note: Affordability is based on the number of days of wages a commodity would cost. This is derived from the salary of the lowest-paid government worker in Uganda in 2017. 'N/A' denotes the commodity was not available in all facilities; therefore, price and affordability could not be calculated.

Table 8: Mean unit prices for SRHC and affordability of SRHC.

5.5 Appendix E – SRHC Access: Qualitative Data Analysis

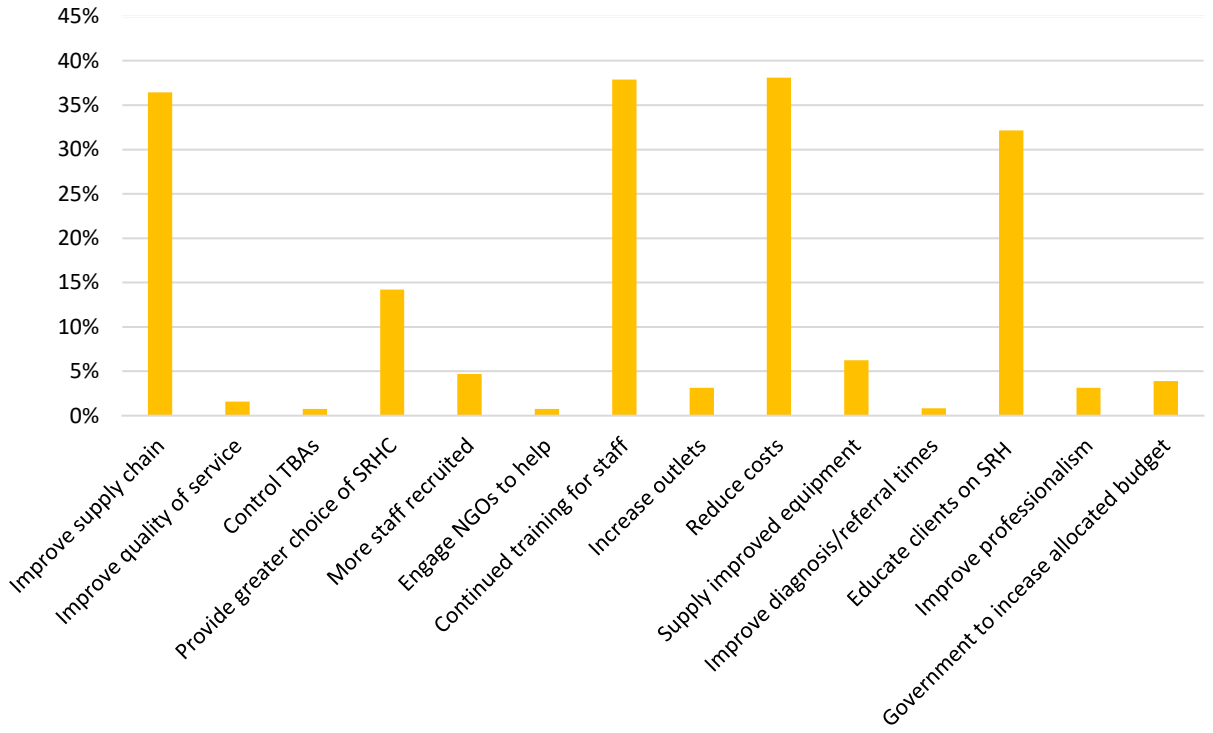


Figure 16: Improving access to SRHC in Uganda.

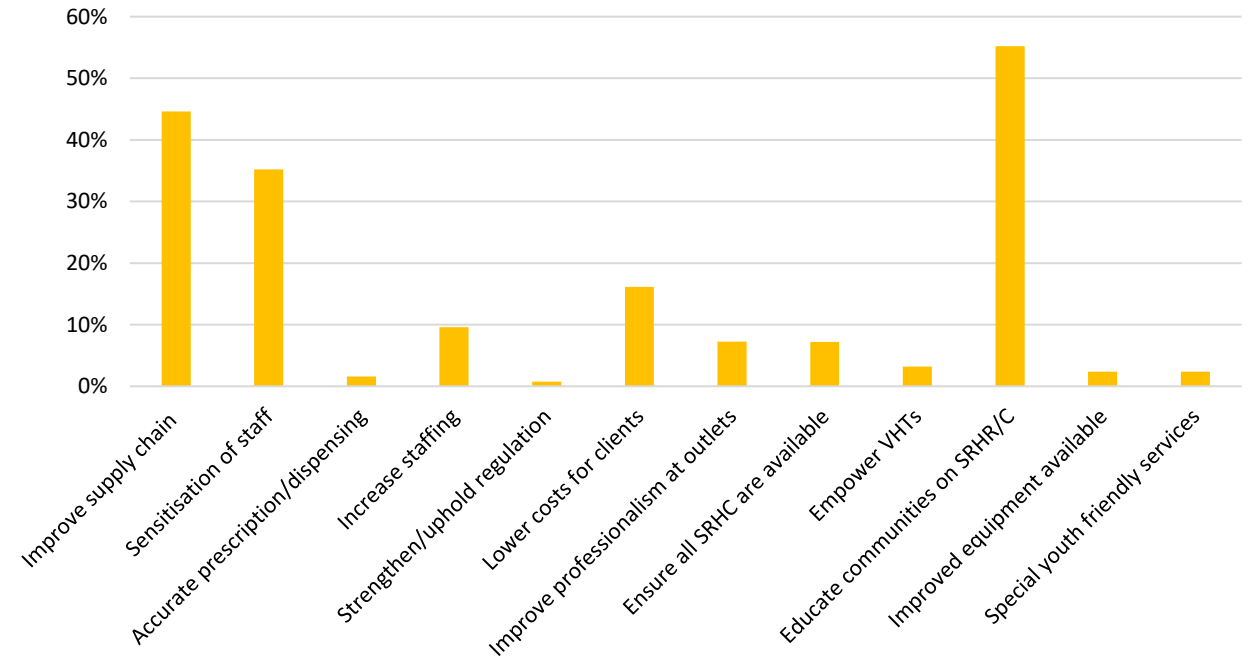


Figure 17: Ensuring access to SRH services at facilities.

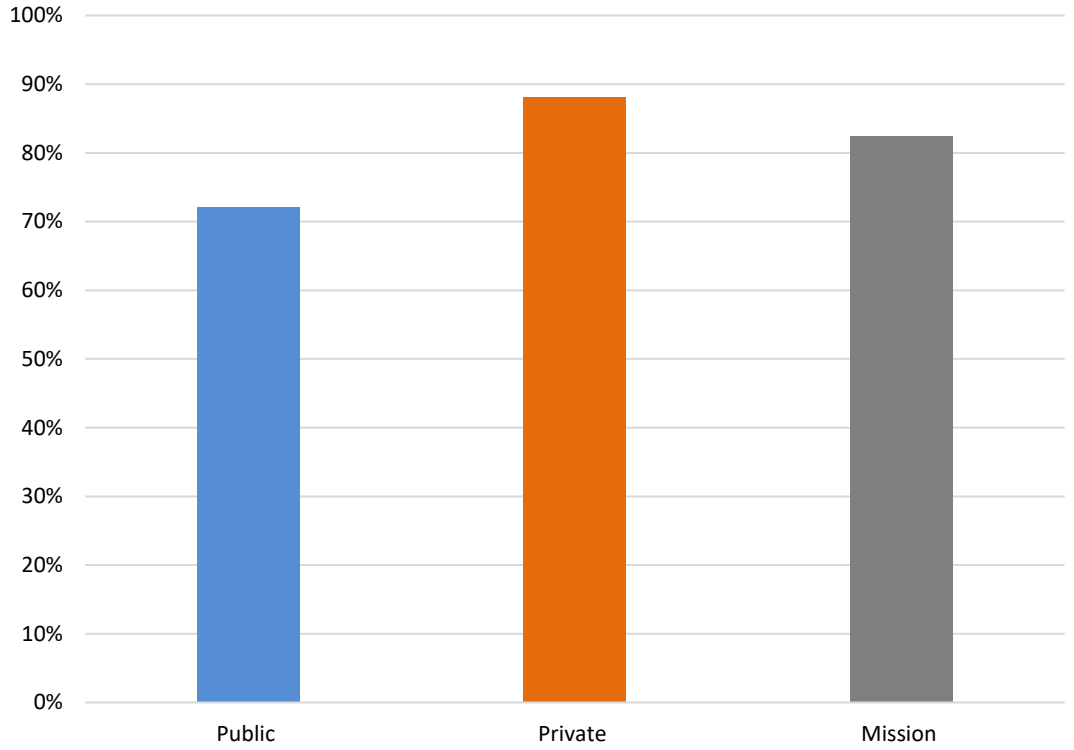


Figure 18: Reluctance to access SRHC at facilities in public, private and mission sector.

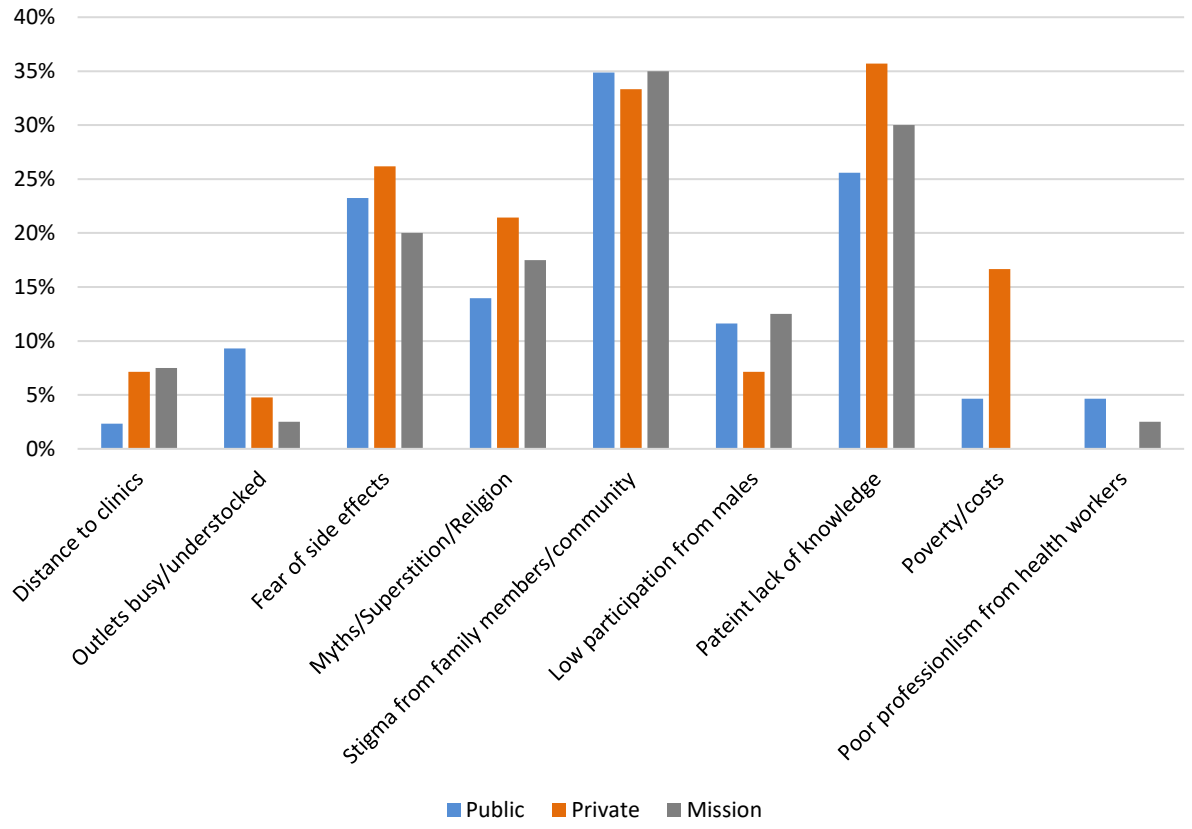


Figure 19: Reasons for client reluctance in accessing SRHC in public, private and mission sector facilities.

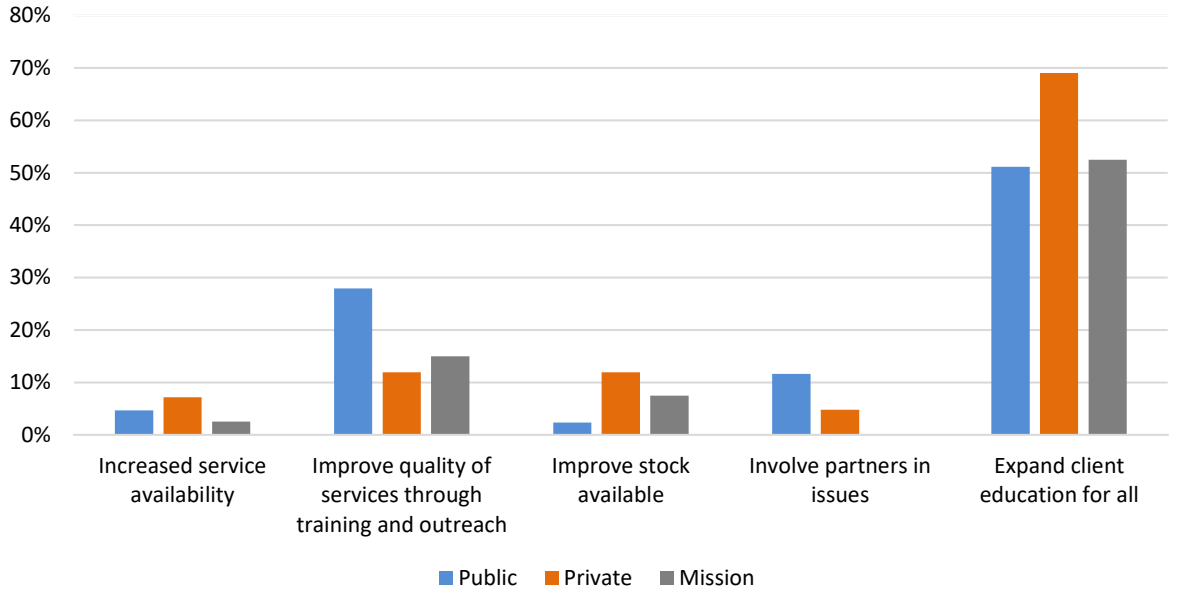


Figure 20: Possible improvements to overcome client reluctance to access SRHC in public, private and mission sector facilities.