



REPORT

**SEXUAL AND REPRODUCTIVE
HEALTH COMMODITIES:
PRICES, AVAILABILITY AND
AFFORDABILITY**

Zambia 2019



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SEXUAL AND REPRODUCTIVE HEALTH COMMODITIES: MEASURING PRICES, AVAILABILITY AND AFFORDABILITY

Zambia 2019

Gaby Ooms

Research Manager, Health Action International

Liyoka Liyoka

Director, Medicines Research and Access Platform (MedRAP)

Choolwe Jacobs

Assistant Dean, School of Public Health, University of Zambia

Janneke van Oirschot

Research Officer, Health Action International

For correspondence: gaby@haiweb.org

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Health Action International
Overtoom 60 (2) | 1054 HK Amsterdam
The Netherlands
+31 (0) 20 412 4523

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EXECUTIVE SUMMARY

Access to sexual and reproductive health (SRH) services and commodities plays an important role in improving the health of the Zambian population. Currently, the maternal mortality ratio remains high at 278 deaths per 100,000 live births, and in 2014 21% of women had unmet family planning needs. National policies on medicine pricing, procurement strategies, health infrastructure and financing are needed to ensure access to medicines. However, without reliable information on medicine prices and availability, governments are working in an evidence vacuum which impedes their ability to develop and implement meaningful policies. Thus, in order to develop evidence-based policies, robust data is required. An adapted version of the Health Action International (HAI)–World Health Organization (WHO) methodology to assess the price, availability, and affordability of medicines has been used since 2017 to measure access to SRH commodities (SRHC) in Zambia. In July 2019, the research was conducted in Zambia’s 10 provinces, in a total of 246 facilities across the public, private and mission sectors.

The results of this study show that availability of SRHC remains a challenge in Zambia, as overall availability was 36%. It was also found that availability of commodities is highest in the mission sector (40%), followed by the public sector (36%), and lowest in the private sector (29%). Male condoms had the highest availability amongst the contraceptives in all sectors, ranging from an 85% availability to a 91% availability. Availability of ethinylestradiol + levonorgestrel tablets, known as the birth control pill, was highest in the public sector (75%), closely followed by the other sectors. Levonorgestrel 750mcg, used as emergency contraceptive after birth control failure or unprotected intercourse, was not commonly available.

Availability of maternal health commodities was inconsistent in all sectors. For instance, oxytocin, used for the prevention and treatment of post-partum haemorrhage and to induce labour, was available in 94% of public facilities, and in 78% of mission facilities. Magnesium sulphate, used in the management of pre-term labour and pre-eclampsia, was infrequently available across the sectors, with highest availability found in the mission sector (22%).

A relatively high availability for most of the antibiotics used for treatment of sexually transmitted infections and other bacterial infections was observed. However, availability of clotrimazole pessary and cream, used to treat yeast infections, was considerably lower than other antibiotics and antifungals commodities. Availability of newborn and child health commodities was also inconsistent. ORS, used to treat diarrhoea and dehydration, had a low availability across the sectors for all formulations. For most of the SRH instruments, some variation in availability was observed, with the public and mission sectors having a better availability than the private sector for almost all instruments.

The study also looked at stock-outs at facilities. In a six-month period, stock-outs occurred in 47% of public facilities, 46% of private facilities, and 42% of mission facilities. The average number of days SRHC were stocked out per month was highest in the public sector (12 days), while they lasted 9 days in the private sector, and 10 days in the mission sector.

Affordability of SRHC was calculated using the wage of a lowest-paid government worker. In the public and mission sectors, all SRHC are free to the patient, so affordability was not a problem.

In the private sector, three SRHC were considered unaffordable: calcium gluconate (4.75 days), procaine benzylpenicillin (1.22 days) and benzyl penicillin (1.44 days).

As part of the research, healthcare providers were also asked their views on barriers to access. They believed that access to maternal health services was the most challenging, followed by family planning and STI management. Key challenges affecting access to SRHC were frequent stock-outs, issues or delays with the supply of the commodities at the facility, and cultural or religious beliefs. This study also established that according to healthcare providers, among the different client groups, young women (those aged 15 - 24) generally had the most challenges when accessing SRH services.

Based on the research, we have formulated the following recommendations:

1. Update and implement Supply Chain Implementation Strategy
2. Improve the commodity selection and quantification process
3. Ensure an efficient and accurate procurement system
4. Ensure locally funded Sexual Reproductive Health Commodities budget
5. Provide client education and outreach
6. Promote Local Production of SRH commodities.

1. INTRODUCTION

Sexual and reproductive health (SRH) is an essential right that contributes to the human right to health. It plays a vital role in meeting the specific health needs of not only girls and women, but also men.

Maintaining good SRH means people need access to reliable information and education and access to quality SRH services of their choosing. These services include access to contraceptives, treatment for sexually transmitted infections, and pregnancy- and childbirth care. In all of this, the rights of the individual are central, meaning everyone can choose for themselves about their SRH and family planning. All of this cannot be realised without access to sexual and reproductive health commodities (SRHC), such as contraceptives, essential medicines, supplies and family planning.

SRH provision also has a crucial role in improving maternal and newborn health outcomes. Currently, high maternal mortality ratios continue to be a challenge in Zambia, with an estimated 278 deaths per 100,000 live births being reported in 2018.¹ Zambia is making efforts to reduce this number by ensuring universal access to family planning, skilled attendance at birth, and both basic and comprehensive emergency obstetric care. Some improvements have been made in the provision of family planning services, such as contraceptive prevalence rate among populations in the reproductive age increasing to 45% in 2014 compared to 33% in 2007, and the unmet need in family planning reducing from 27% in 2007 to 21% in 2014. However, the improvements have been slow and inconsistent.²

National policies on medicine pricing and procurement strategies are needed to ensure

medicines are affordable and available. At the same time, policies to improve health infrastructure, health education and financing of a basket of essential medicines are also necessary to achieve universal health coverage.³ 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. Thus, in order to develop evidence-based policies, robust data is required.

Reliable information is also a useful means of comparison between countries with similar health budgets for knowledge transfer and learning. The Health Action International (HAI)-World Health Organization (WHO) methodology to assess the price, availability, and affordability components of medicines provides valuable data. Previously, the methodology has not specifically targeted commodities for SRH. In 2017, HAI adapted the methodology to focus on a specific set of sexual and reproductive health commodities (SRHC).⁴

The methodology allows for the collection of data on the availability and out-of-pocket patient prices of SRHC in the public, private and mission sectors. 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, with the

1. Central Statistical Office (CSO) [Zambia], Ministry of Health (MOH) [Zambia], and ICF. 2019. Zambia Demographic and Health Survey 2018: Key Indicators. Rockville, Maryland, USA: Central Statistical Office, Ministry of Health, and ICF

2. Zambia Demographic Health Survey (ZDHS) 2013-14. Rockville: Central Statistical Office, Ministry of Health, ICF International. 2014.

3. Wirtz VJ, Hogerzeil HV, Gray AL, Bigdeli M, de Joncheere CP, Ewen MA, et al. Essential medicines for universal health coverage. *The Lancet*. 2017;389(10067):403-76.

4. Please refer to the Sexual and Reproductive Health Commodities: Measuring Prices, Availability and Affordability methodology and data entry manual (1st edition) for a full description of the methodology used for data collection.

ultimate goal of improving access to affordable SRHC for all. SRHC data in Zambia has been collected annually since 2017 and comprises health facility research including a survey and semi-structured interviews with healthcare providers.

The following report presents the results of the survey carried out by HAI and in-country partner Medicines Research and Access Platform (MedRAP) between July and August 2019 in Zambia. The report provides data relating to the following questions:

- What commodities are available in the facilities across the different sectors?
- What price do people pay for SRH commodities?
- Do the prices and availability of the same commodities vary across the public, private and mission sectors?
- How affordable are commodities for ordinary people?
- What do health providers see as the main barriers to accessing SRH commodities?

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 Zambia.

2. METHODS

This report presents data from the 2019 roll-out of the HAI research methodology, SRHC: Measuring Prices, Availability and Affordability, in Zambia. The methodology used for the data collection follows HAI's SRHC [data collection manual](#), produced in 2017. Please refer to this manual for all details on the methodology. Data collectors were trained in July 2019.

Data collectors visited facilities at 'health post' levels and above belonging to public, private and mission sectors in both urban and rural areas. All the 10 provinces in Zambia were included in the study to provide a holistic picture for the country. The districts selected for data collection can be found in Table 1.

Table 1. Districts selected for data collection.

| Province | District |
|----------------------|--|
| Central | Chibombo Chisamba Mkushi Kabwe Kapiri Mposhi Mumbwa |
| Copperbelt | Ndola Kitwe Masaiti Luanshya Mpongwe |
| Eastern | Chipata Katete Mambwe Nyimba Petauke Sinda |
| Luapula | Chipili Mansa Samfya |
| Lusaka | Chilanga Chirundu Chongwe Kafue Lusaka Rufunsa |
| Northern | Kasama Mbala Mungwi |
| North-Western | Kalumbila Kasempa Solwezi |
| Southern | Chikantaka Choma Kalomo Mazabuka Monze |
| Western | Kaoma Luampa Mongu Nkeyema |

A total of 246 facilities were surveyed across the public, private and mission sectors. The distribution of these facilities is shown in Table 2.

Table 2. Distribution of the facilities surveyed.

| | Urban | Rural | Total |
|---------|-------|-------|-------|
| Public | 60 | 77 | 137 |
| Private | 58 | 9 | 67 |
| Mission | 4 | 38 | 42 |
| Total | 122 | 124 | 246 |

3. RESULTS

3.1 Overall Availability of SRH Commodities

The results show that overall, the mean availability of SRHC in Zambia was 36%. This is a slight increase in availability compared to the 34% reported in both the 2017 and 2018 survey reports. Differences in availability were observed across all sectors, shown in Table 3. In 2019, the average availability in the mission sector was highest at 40%, followed by the public and private sectors at 39% and 29%, respectively.

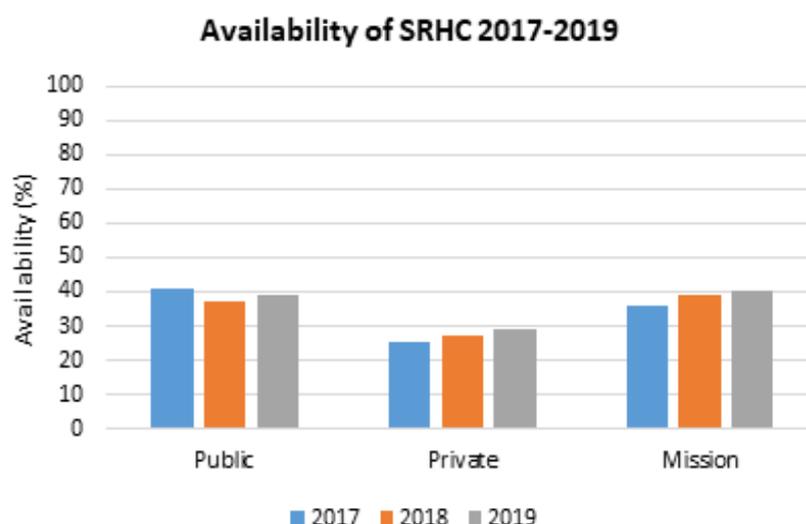
The differences in availability of SRHC for urban and rural areas across the sectors were not

considerable, except in the public sector where SRHC were slightly more likely to be available in urban facilities than rural facilities (41% versus 37%, respectively).

This research reveals that the mean availability of SRHC has remained below 50% during the three-year period in all the sectors. Moreover, across the three years of research, availability of SRHC was not dependent on whether the facility was located in an urban or rural area. The private sector had considerably less SRHC available than the public and mission sectors.

Table 3. Mean availability of SRHC, by sector and location.

| | SRHC availability (%) | | | | | | | | |
|---------|-----------------------|-------|---------|-------|-------|---------|-------|-------|---------|
| | 2017 | | | 2018 | | | 2019 | | |
| | Urban | Rural | Overall | Urban | Rural | Overall | Urban | Rural | Overall |
| Public | 45 | 37 | 41 | 43 | 33 | 37 | 41 | 37 | 39 |
| Private | 25 | 27 | 25 | 27 | 24 | 27 | 29 | 28 | 29 |
| Mission | 39 | 35 | 36 | 44 | 38 | 39 | 39 | 40 | 40 |
| Total | 37 | 34 | 34 | 38 | 32 | 34 | 36 | 35 | 36 |

Figure 1. Availability of SRHC in 2017-2019, per sector.

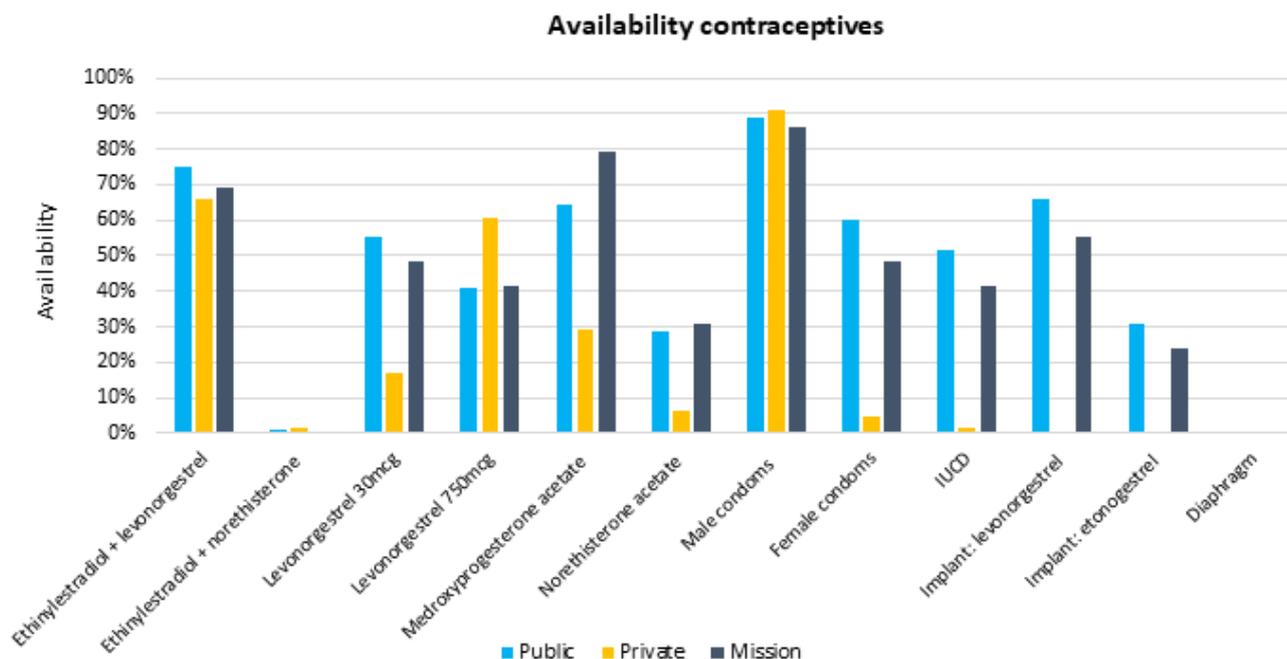
3.2 Availability of SRH Commodities by Sector

Availability of Contraceptives

Differences in availability of contraceptives across the sectors were noticeable. Overall, most contraceptives had a higher availability in the public sector than the private and mission sectors. However, it is important to note that availability of contraceptives in the mission sector was only measured if the facility provided family planning services to clients. So, many facilities, such as Catholic facilities, were not included in the analysis because they do not offer family planning services. Figure 1 provides an overview of contraceptive availability across sectors. Please refer to Appendix B for a full breakdown of the availability data across sectors.

As shown in Figure 2, availability of ethinylestradiol + levonorgestrel tablets, known as the birth control pill, was highest in the public sector (75%), closely followed by the mission (69%) and private (66%) sectors. Rural public facilities had a slightly higher availability for ethinylestradiol + levonorgestrel tablets than urban public facilities (77% versus 73%, respectively), while in the private sector

availability was slightly higher in urban facilities (67%) than in rural facilities (63%) (see Appendix B). In the public sector, levonorgestrel 30mcg tablets, another type of birth control pill, was available at 56% of facilities, compared to 17% and 48% of private and mission sector facilities. Levonorgestrel 750mcg, used as emergency contraceptive after birth control failure or unprotected intercourse, was more commonly available in the private sector (61%) than the public or mission sectors (41%). Overall, levonorgestrel 750mcg was not commonly available at facilities. Availability of male condoms was high in all three sectors, ranging from 86% in the mission sector to 91% in the private sector. Female condoms were on average less available than male condoms, ranging from 0% in urban mission and rural private facilities to 61% in rural public facilities (see Appendix B). Interestingly, levonorgestrel implants had a high availability in the public sector (66%) but were unavailable in all private sector facilities. Availability of the intra-uterine contraceptive device (IUCD) varied across sectors, ranging from 2% in the private sector to 52% in the public sector. Comparisons between the urban and rural areas showed that IUCDs are more commonly available in urban public facilities (61%) than in rural public facilities (44%).

Figure 2. Availability of contraceptives, per sector

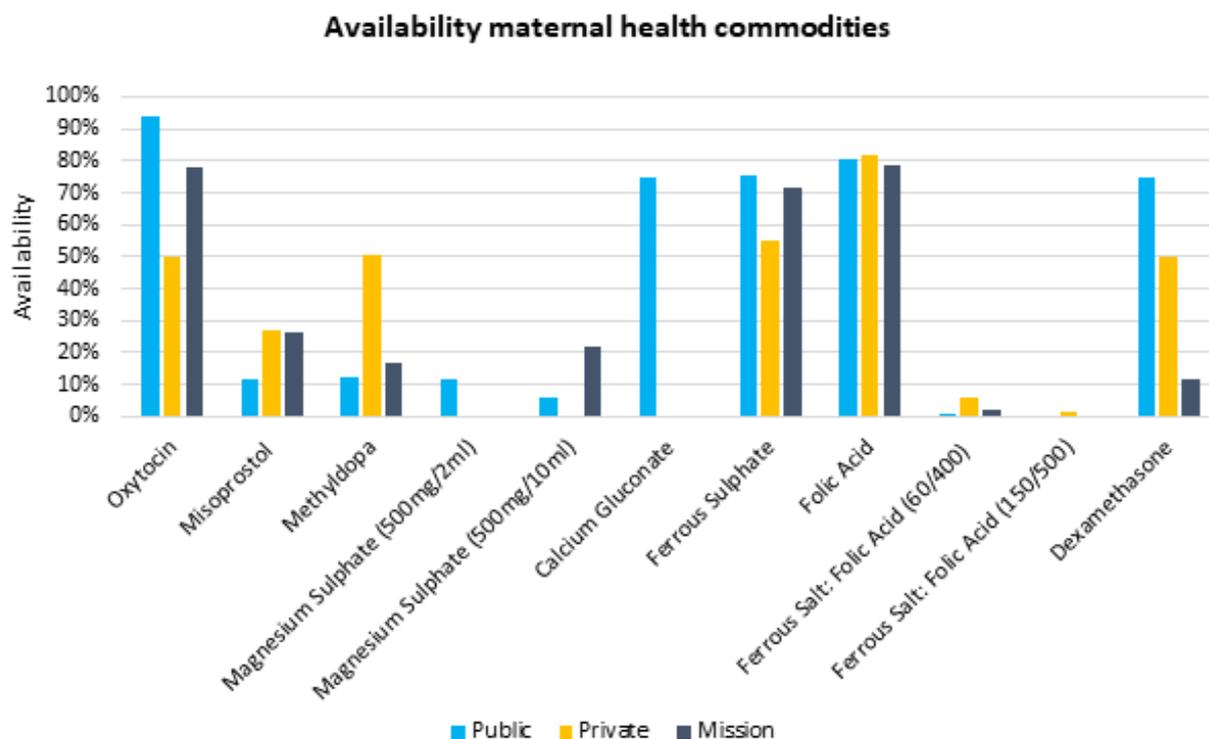
Availability of Maternal Health Commodities

Availability of maternal health commodities was inconsistent in all sectors (see Figure 3). For instance, oxytocin, used for the prevention and treatment of post-partum haemorrhage and to induce labour, was available in 94% of public facilities, and in 78% of mission facilities. In the private sector it was less commonly available with only half (50%) of facilities having it in stock. Misoprostol, also used to treat post-partum haemorrhage and to induce labour, had a much lower availability in the public (12%), private (27%) and mission (26%) sectors.

Magnesium sulphate, used in the management of pre-term labour and pre-eclampsia, was surveyed for two different strengths: 500mg in 2ml and 500mg in 10ml. Both strengths were infrequently available across the three sectors, with the highest availability found in the mission

sector for magnesium sulphate 500mg in 10 ml (22%). Neither formulation of magnesium sulphate was found in the private sector, while the public sector had availabilities of 12% (500mg/2ml) and 6% (500mg/10ml). Calcium gluconate, an antidote for magnesium toxicity in the treatment of pre-eclampsia and eclampsia, was only available in the public sector, at 75% of facilities.

Ferrous salt and folic acid, used as supplements to prevent iron and folic acid deficiency during pregnancy, had a relatively high availability. For instance, ferrous salt had a 75% availability in the public sector and a 71% availability in the mission sector, while folic acid had an 80% availability in the public sector, 82% in the private sector and 79% in the mission sector. The combination of ferrous salt and folic acid supplements were not the preferred choice used, as their availability was low across the sectors.

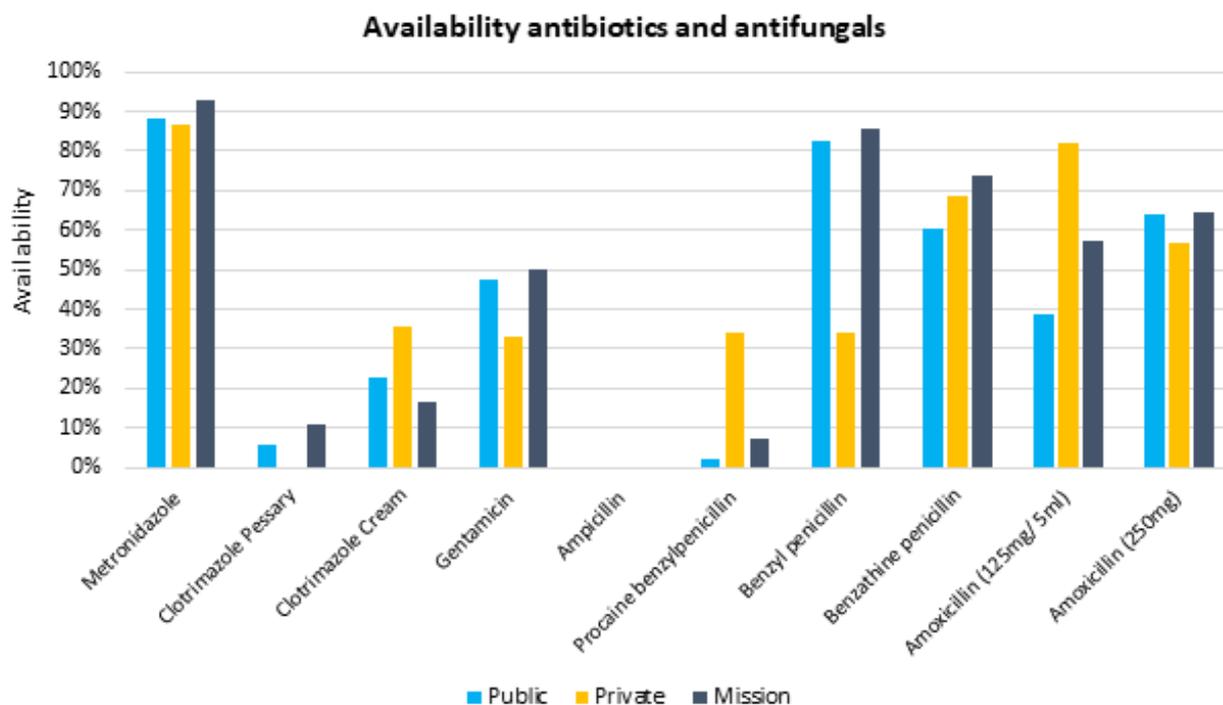
Figure 3. Availability of maternal health commodities, per sector.

Availability of Antibiotics and Antifungals

A relatively high availability for most of the antibiotics used for treatment of sexually transmitted infections and other bacterial infections was observed. For instance, benzathine penicillin, used in the treatment of syphilis, was available in 61% (public sector) to 74% (mission sector) of facilities (see Figure 4). Gentamicin, used to treat community acquired pneumonia and sepsis in neonates, was available in approximately half of the facilities in the public and mission sectors (47% and 50%, respectively), but in only one-third of private facilities. Benzyl penicillin, also used to treat pneumonia and sepsis, had a higher availability in the public (83%) and mission (86%) sectors compared to the private sector, where availability was 34%. Availability of metronidazole, used to treat a range of bacterial

infections, was above 80% across the sectors, with highest availability found in the mission sector (93%).

Availability of clotrimazole pessary and cream, used to treat yeast infections, was considerably lower than the above-mentioned commodities. For instance, clotrimazole pessary had a very low availability in all the sectors: in the mission sector, it was available in 11% of facilities, in the public sector in 6%, while in the private sector no facility had the commodity available. Meanwhile, while clotrimazole cream also had a low availability, the highest availability was found in the private sector (36%), followed by the public sector (23%), with lowest availability in the mission sector (17%).

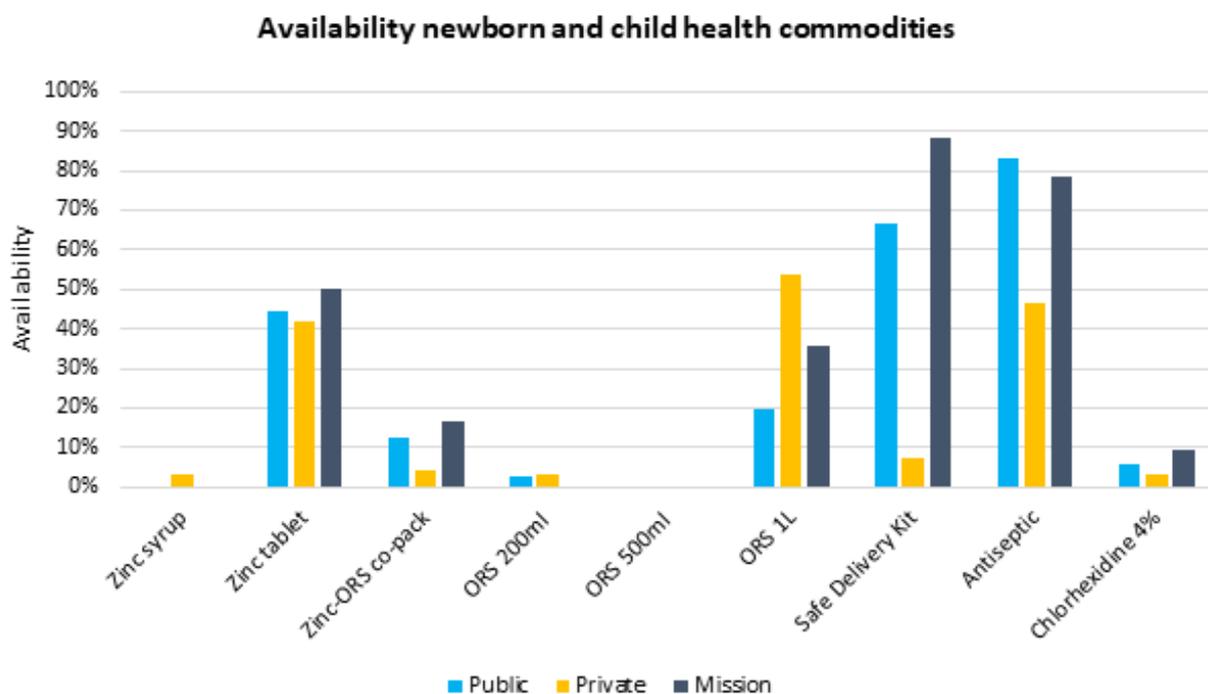
Figure 4. Availability of antibiotics and antifungals, per sector.

Availability of Newborn and Child Health Commodities

Availability of newborn and child health commodities was also inconsistent, with some commodities being relatively more available than others (see Figure 5). For instance, while zinc in syrup form, used for prevention of diarrheal illnesses and for a healthy immune system in children, was hardly available across the sectors, zinc tablets were available to a certain extent. Availability was highest in the mission sector (50%), while availability in the public and mission

sectors was comparable to each other (45% and 42%, respectively). ORS, used to treat diarrhoea and dehydration, had a low availability across the sectors for all formulations. In all sectors highest availability was found for ORS 1 litre sachets, but it was still low (54% private, 36% mission, 20% public). Comparisons between the public, private and mission sectors with regards to the availability of safe delivery kits showed that the mission sector had the best availability (88%), followed by the public sector (66%), with lowest availability found in the private sector (8%).

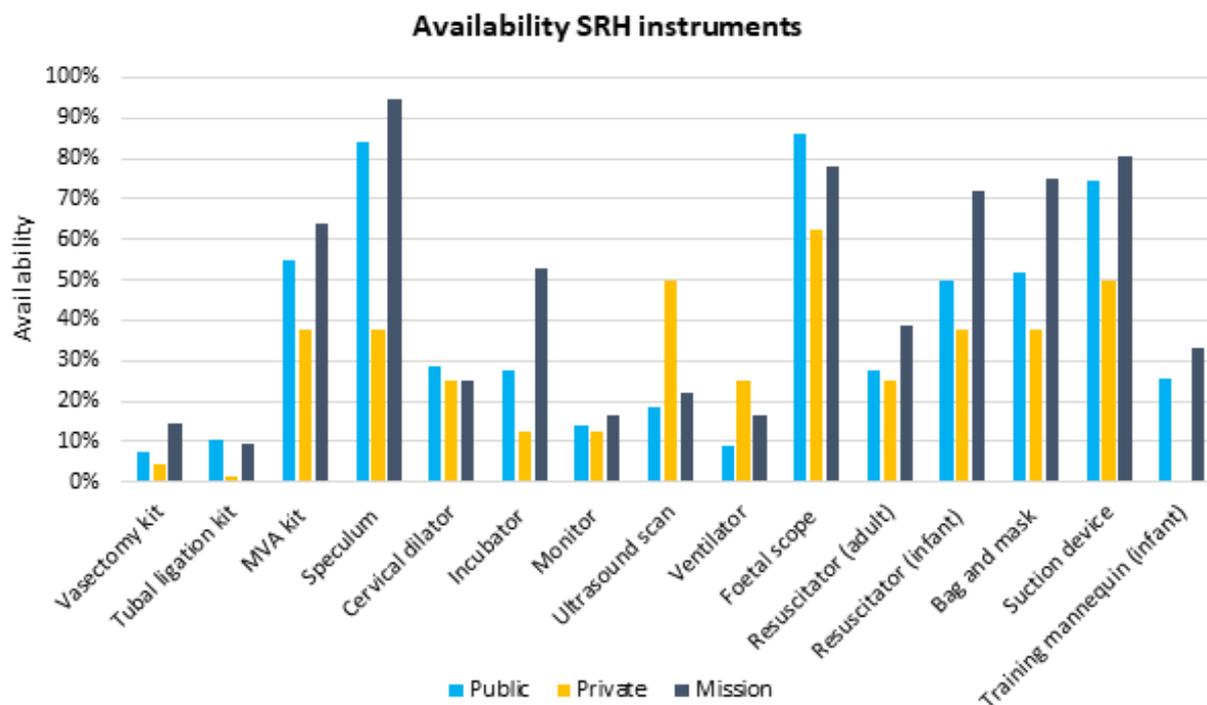
Figure 5. Availability of newborn and child health commodities, per sector.



Availability of SRH Instruments

For most of the SRH instruments, some variation in the availability was observed, with the public and mission sectors having a better availability than the private sector for all instruments except two (ultrasound scan and ventilator). For instance, as shown in Figure 6, both the public and mission sector had the speculum available at over 80% of facilities, while availability in the private sector

was 38%. Similarly, a suction device was available at 75% of public facilities, 50% of private facilities, and 81% of mission facilities. Nevertheless, many instruments, such as the vasectomy and tubal ligation kits, cervical dilators, monitors, ultrasound scans, ventilators, resuscitators (adult size), and infant size training mannequins also had a low availability in the public and mission sectors.

Figure 6. Availability of SRH instruments, per sector.

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 were not recorded. Stock cards were available in over half of the facilities researched (182 facilities; 105 public sector, 35 private sector, 42 mission sector), and covered 42

of the surveyed SRHC. Please refer to Appendix C for a full breakdown of the stock-out data across sectors. Stock-outs of any of the surveyed commodities that a facility stocked occurred in 47% of public sector facilities, 46% of private sector facilities, and 42% of mission sector facilities (see Table 3).

Table 4. Percentage of facilities reporting stock-outs in the six months prior to the survey and the average stock-out days per month.

| | Public | Private | Mission |
|---|--------|---------|---------|
| % of facilities reporting a stock-out in the previous 6 months | 47 | 46 | 42 |
| Average number of stock-out days per month if stock-out occurred | 12 | 9 | 10 |

As shown in Table 4, the average number of days SRHC were stocked out per month was highest in the public sector (12 days). The private and mission sectors were comparable in length of stock-out days per month (nine and 10 days, respectively). Only one commodity had not been stocked out in the previous six months at any of the reporting facilities (safe delivery kits).

Across the sectors, stock-outs ranged from 0% to 100%, within the public sector most stock-outs occurring for ORS 500ml, ferrous salt: folic acid 150mg + 500mcg, procaine benzylpenicillin, ampicillin and ORS 500ml (at more than 80% of

facilities, see Figures 7-10). In the private sector, etonogestrel implants, magnesium sulphate (500mg/ 10ml), ferrous salt: folic acid 60mg + 400mcg, ampicillin, zinc syrup, zinc-ORS co-packs, ORS 200ml, ORS 500ml and chlorhexidine 4% were stocked out at 100% of facilities that had stock information for these specific commodities. In the mission sector, ethinylestradiol+ norethisterone, ferrous salt: folic acid 150mg + 500mcg, zinc syrup and ORS 200ml had experienced stock-outs at all facilities with stock information for these commodities.

Figure 7. Facilities reporting contraceptives stock-outs, per sector.

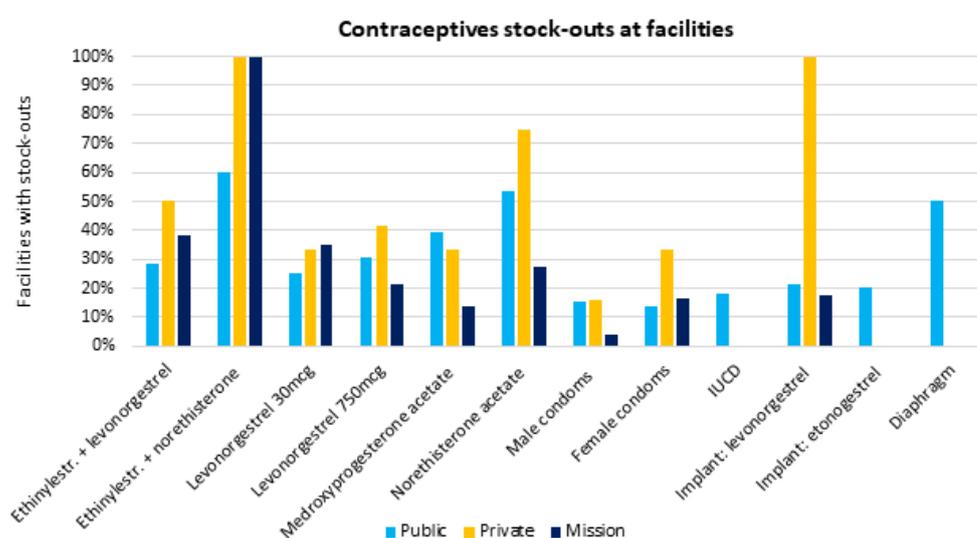


Figure 8. Facilities reporting maternal health commodities stock-outs, per sector.

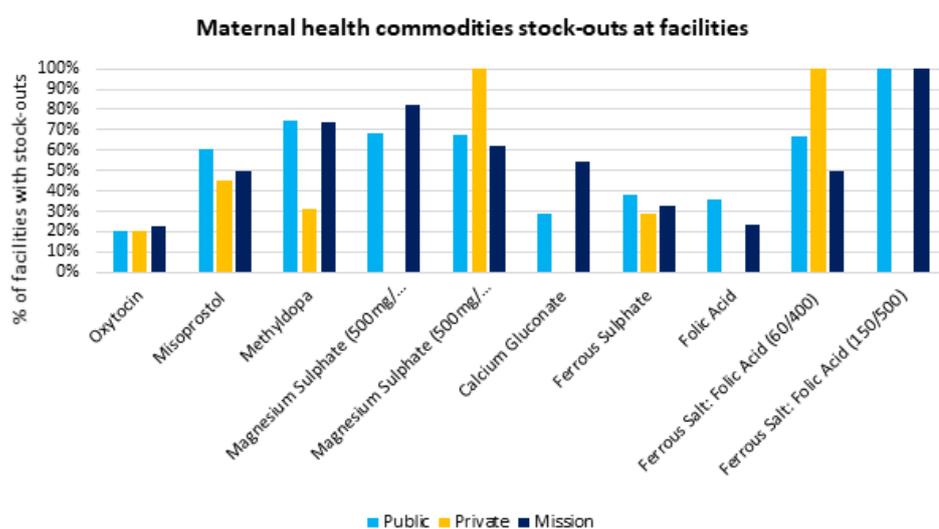
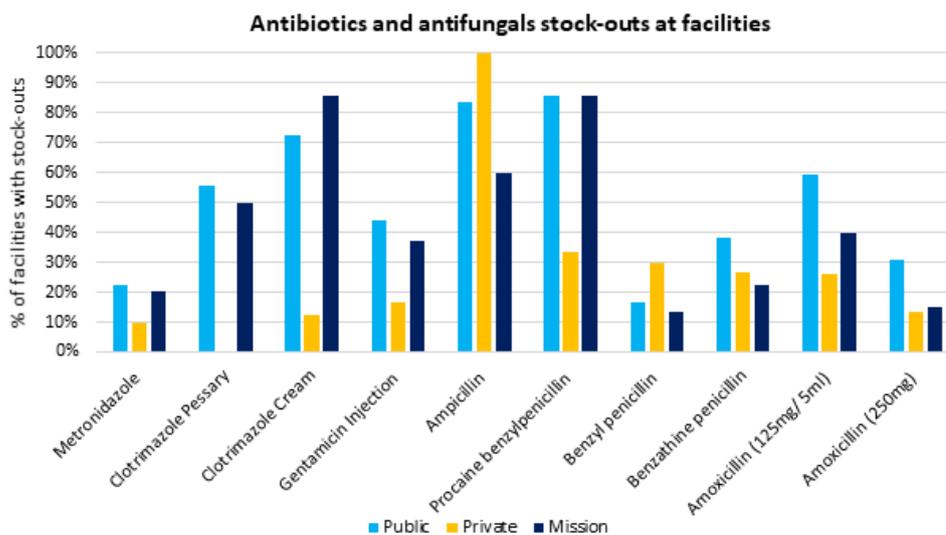
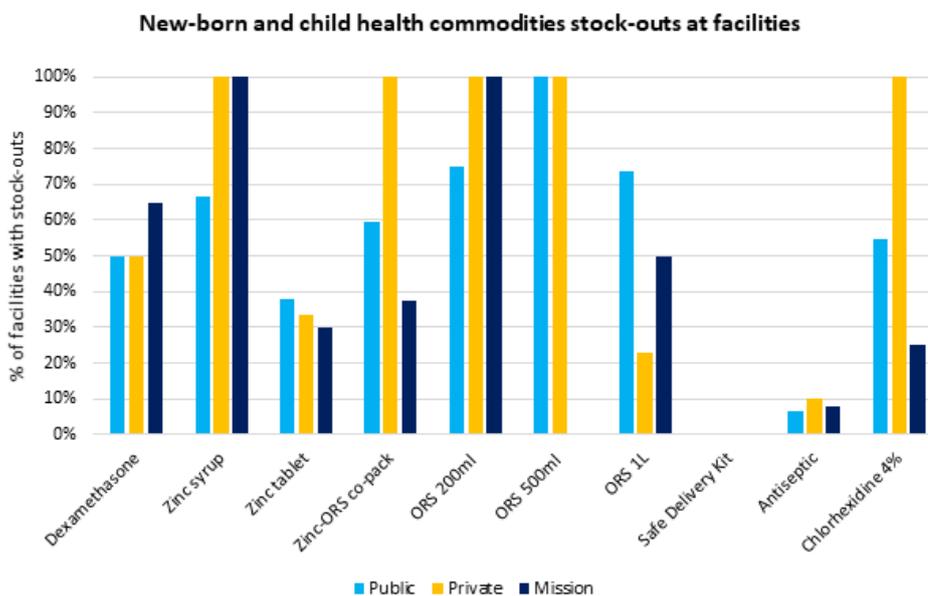


Figure 9. Facilities reporting antibiotics and antifungals stock-outs, per sector.**Figure 10.** Affordability of SRH Commodities in public, private and mission sectors.

In the public sector, for 13 of the 41 SRHC which had reported stock-outs, the stock-out duration was on average 15 days or longer per month. This included, amongst others, levonorgestrel 30mcg, norethisterone acetate, misoprostol, methyldopa, clotrimazole cream and pessary, procaine benzylpenicillin, and chlorhexidine 4%. In the private sector, one of the 33 commodities which had reported stock-outs (levonorgestrel 30mcg) was on average stocked out the entire month, while another eight were stocked out for more than 15 days per month. These included

ethinylestradiol + norethisterone, male and female condoms, ferrous salt: folic acid 60mg + 400mcg, metronidazole, clotrimazole cream, dexamethasone and zinc syrup. Ampicillin was stocked out for almost the entire month in the mission sector (an average of 29 days a month). Another 6 out of 37 SRHC were stocked out for more than half the month on average. These were levonorgestrel 30 mcg, ampicillin, procaine (benzyl) penicillin and clotrimazole cream. Figures 11-14 are an overview of the number of stock-out days per sector and commodity category.

Figure 11. Number of stock-out days per month for contraceptives, per sector.

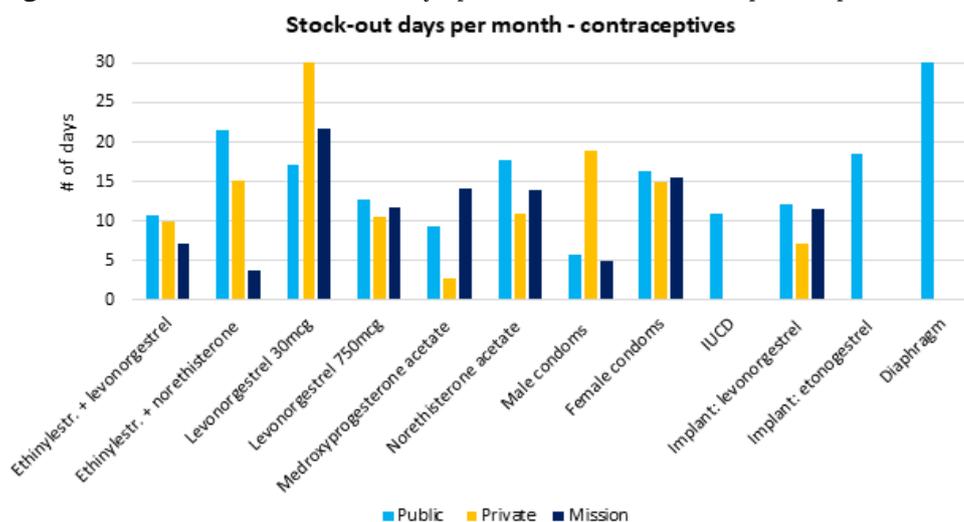


Figure 12. Number of stock-out days per month for contraceptives, per sector.

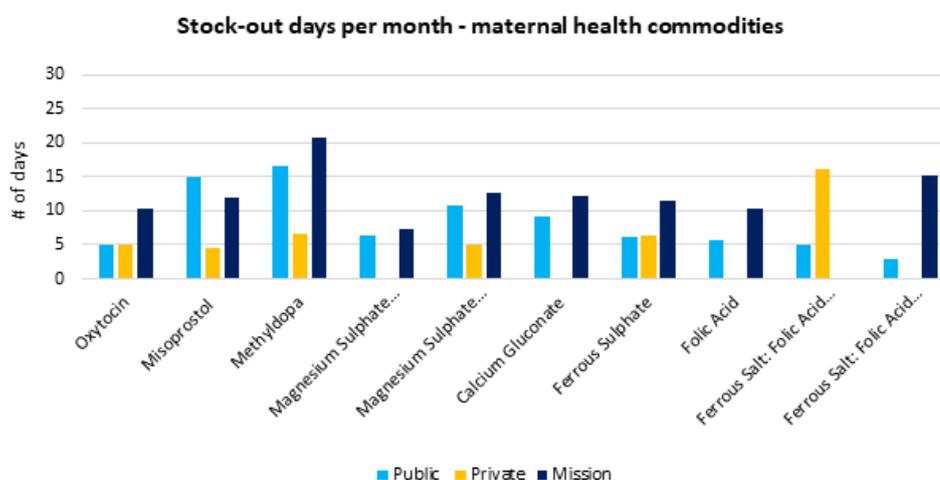


Figure 13. Number of stock-out days per month for antibiotics and antifungals, per sector.

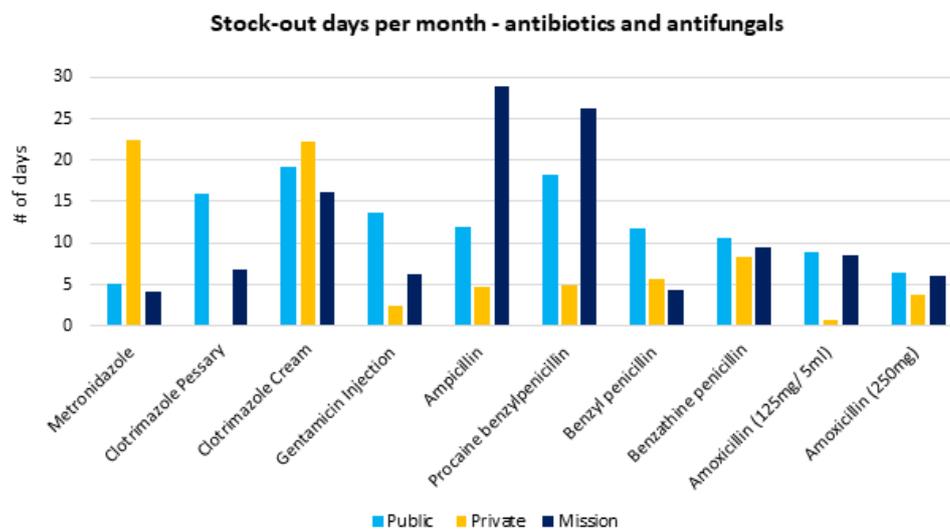
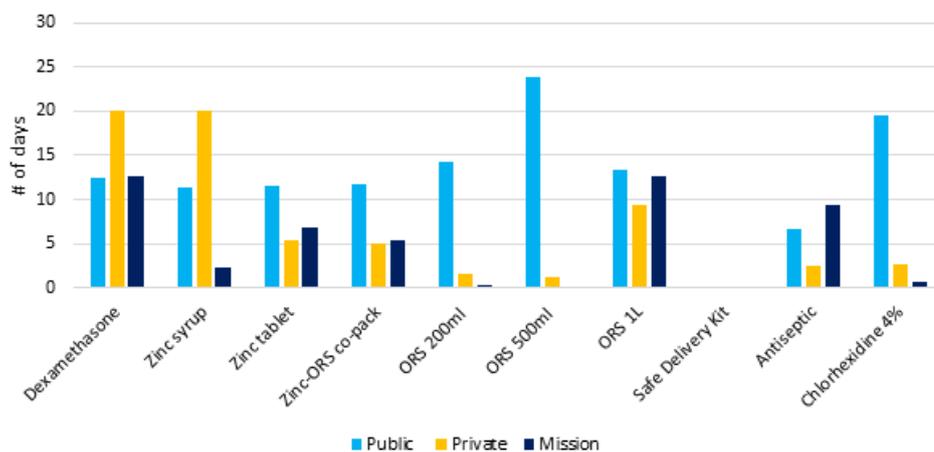


Figure 14. Number of stock-out days per month for newborn and child health commodities, per sector.



3.4 SRHC Prices in Public, Private and Mission Sectors

This section measures the pricing of commodities at facilities. Prices 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), and represent the out-of-pocket prices for clients. In the public and mission sectors, all SRHC were free to the patient. In the private sector, most clients had to pay for the SRHC, with the mean patient price ranging from 0 to 48.26 Kwacha (ZMW) (misoprostol). Appendix D is an overview of the prices of the SRHC.

3.5 SRHC Affordability in Public, Private and Mission Sectors

Affordability of the commodities was measured by collecting the pricing information of commodities at the facilities, and comparing it with the daily salary of the lowest-paid government worker (LPGW) in 2019 (96.67 ZMW). Per WHO guidelines, a commodity is considered affordable if it costs no more than a day's wage.

In the public and mission sectors, affordability of SRHC was optimal because the commodities were free to the patient (see Figure 15 and Appendix E). In the private sector, three SRHC were considered unaffordable to the patient: calcium gluconate (4.75 days), procaine benzylpenicillin (1.22 days) and benzyl penicillin (1.44 days).

3.6 Stakeholder Interviews

This section provides findings from the perspectives of the interviewed healthcare

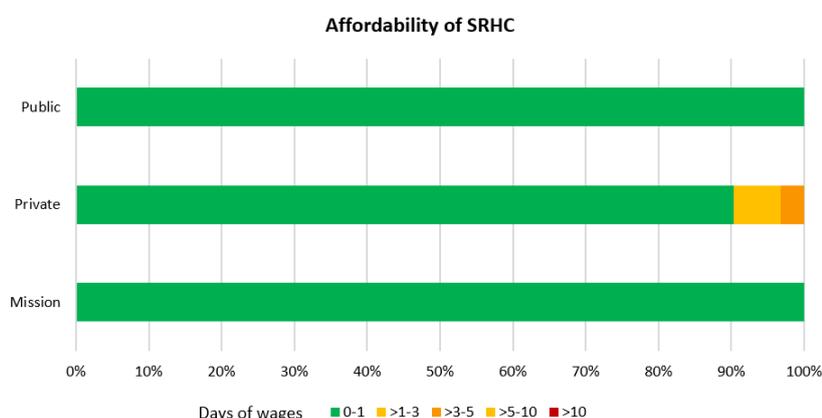
provider/healthcare providers interviewed on access to SRH commodities and services. The respondents were the same as those providing assistance in the SRH commodity survey. The response rate for the survey was 99%. Please refer to Appendix F for a full breakdown of the data across the sectors.

Respondents were asked which category of SRH services faces the most challenges related to access to commodities. They were given four options to choose from:

- Family planning.
- Maternal Health
- STI management
- Child health

Maternal health was the service most commonly reported as facing challenges with access (34%). Access challenges were also thought to be common for family planning services (30%) and STI management services (26%), while child health services were thought to experience the least challenges with access (10%). As shown in Figure 16, challenges with accessing commodities for maternal health services were more commonly reported in the mission sector (41%) compared to the public and private sectors, (35% and 28%, respectively). Challenges with accessing STI management services were more commonly reported in the private sector (34%) than in the public and mission sectors (24% and 17%, respectively).

Figure 15. Affordability of SRHC, per sector.



Healthcare providers were also asked for their opinion on the key challenges related to accessing the SRH commodities. Across the three sectors, the most reported key challenge was that commodities were frequently out-of-stock at facility level (28%), followed by lack of client knowledge about the SRH commodities and services (27%), and religious or cultural beliefs (25%) (see Appendix F).

In the public sector, frequent stock-outs at facility level was also the most reported challenge (32%), followed by issues or delays with supply

of commodities to the facility and lack of client knowledge about the SRH commodities and services (30% and 28%, respectively) (see Figure 17). Interestingly, in the mission sector, the most reported challenge was related to religious or cultural beliefs (39%), again followed by frequent stock-outs at the health facility (32%). In the private sector, frequent stock-outs at facility level was not the most commonly mentioned challenge: it was mentioned by 19% of health providers. Instead it was the costs of medicines to patients (39%), followed by clients' lack of knowledge about SRHC and services (28%).

Figure 16. SRH services facing the most challenges related to access to commodities, per sector.

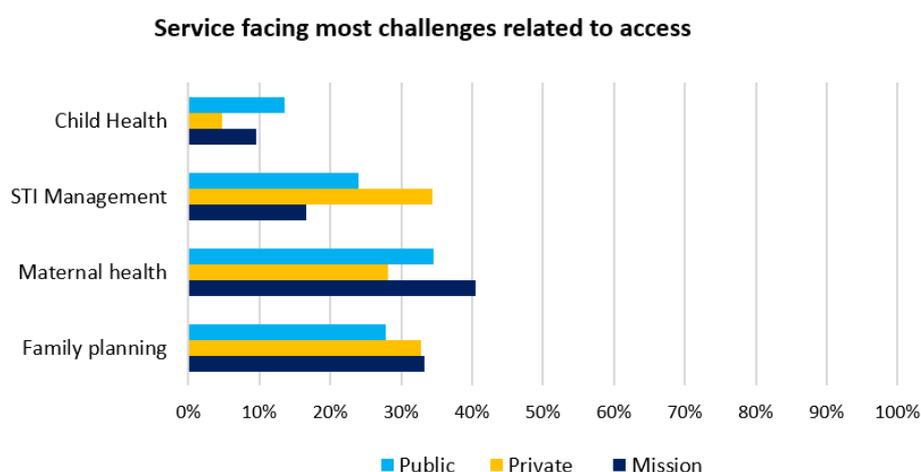
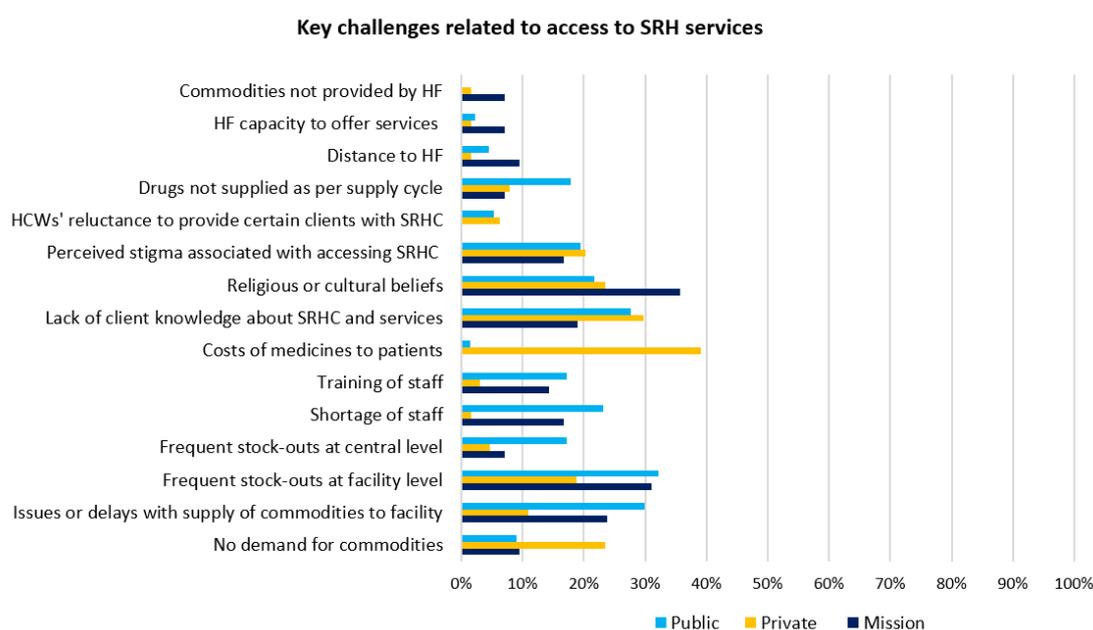
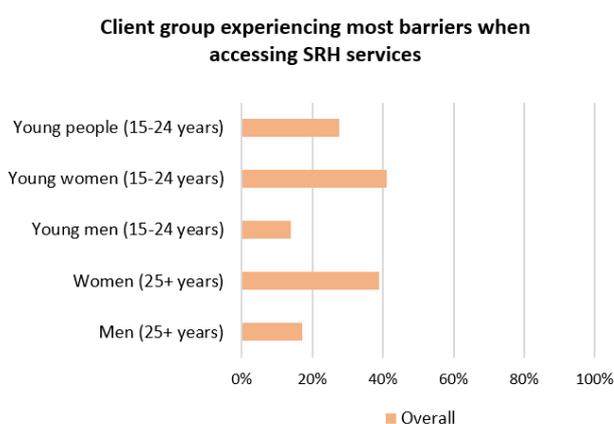


Figure 17. Key challenges related to accessing the SRH commodities, per sector.



Healthcare providers were also asked which client group they believed experienced the most barriers when accessing SRH commodities and services. Figure 18 shows that health providers believed that women experienced the most challenges when accessing SRH services regardless of age: 41% of healthcare providers believed those aged 15-24 experienced most barriers, and 39% believed this to be women aged 25 years or older.

Figure 18. Client group experiencing most barriers when accessing SRH services.



Perceptions of Causes of the SRHC Stock-outs at the Facilities

When the healthcare providers were asked about what they perceived were the causes of stock-outs of SRHC at the health facility, most of the respondents believed that supply chain issues played a major role in stock-outs (see Figure 19). For instance, delays in commodity delivery (59%), non-delivery of ordered commodities (46%) and problems with the stock at the central level (37%) were the most commonly reported causes of stock-outs by the healthcare providers in the public sector. Delay in commodity delivery was also the most reported cause of stock-outs by respondents in mission sector facilities (57%).

Clients' reluctance to access SRHC

Respondents were asked if they thought clients that visited their facility were reluctant to visit for SRH commodities and services. More healthcare providers in the private sector believed that clients were reluctant to access SRHC or SRH services compared to the public and mission sectors (45% versus 28% and 32%, respectively; see Figure 20).

Figure 19. Causes of the stock-outs at the health facility, per sector.

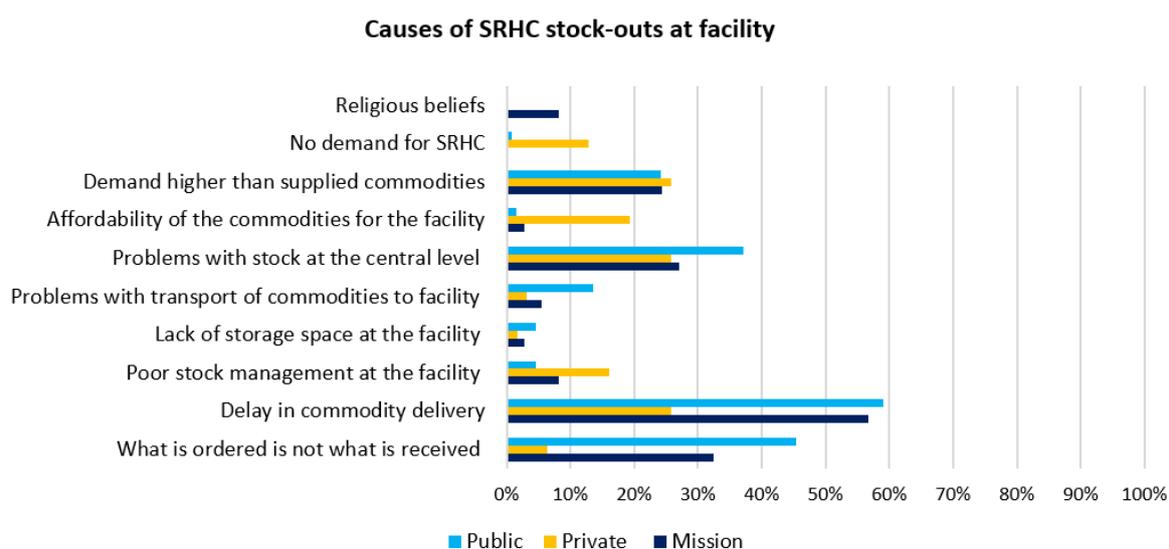
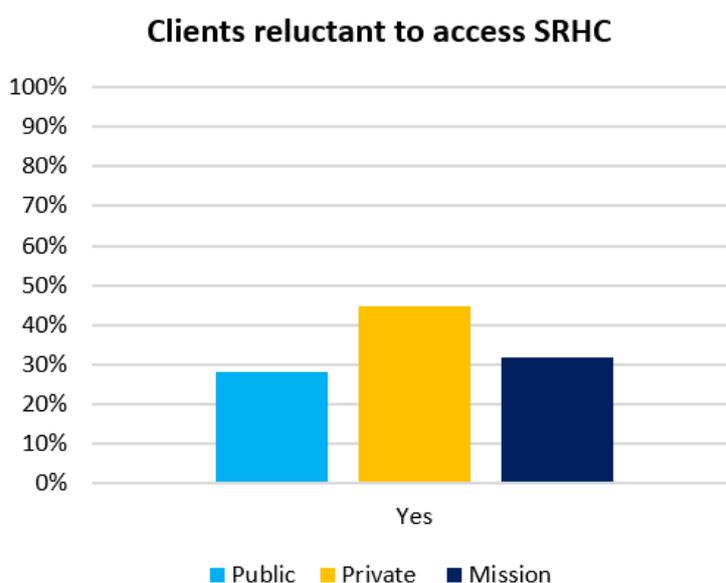
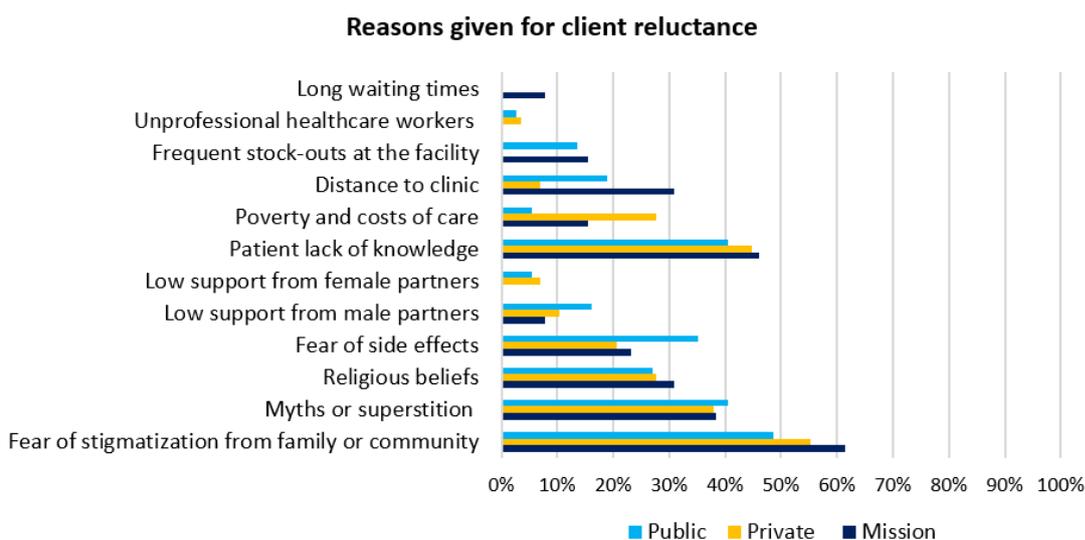
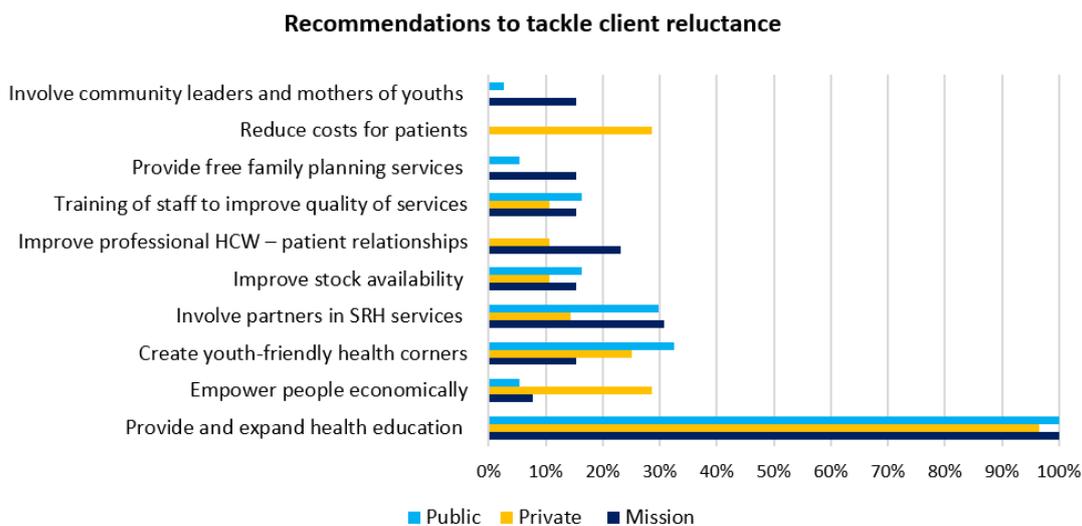


Figure 20. Clients reluctance to access to SRHC, per sector.

The reasons given by the healthcare providers for clients' reluctance to access the services varied to some extent. However, most responses were similar across the sectors (see Figure 21). For instance, approximately one third of respondents in all the sectors stated cultural and religious beliefs (27% public, 28% private and 31% mission) as major contributors to clients' reluctance. The most commonly mentioned reason for reluctance was fear of stigmatisation from family members or the community: this was mentioned by 49% of public, 55% of private and 62% of mission sector healthcare providers. Lack of patient knowledge about SRH commodities and services was mentioned by over 40% of healthcare providers across the sectors. Notably, fear of side effects as a reason for clients' reluctance was raised more often by public sector healthcare providers than by the healthcare providers in the private and mission sectors (35% versus 21% and 23%, respectively).

When asked about ways to tackle clients' reluctance to accessing SRHC, all healthcare providers in the public and mission sectors, and 96% of providers in the private sector, reported the need to provide and expand on client education in schools, churches and the community in general (see Figure 22). Further, 32% of public, 25% of private, and 15% of mission sector healthcare providers suggested there is a need for youth-friendly health corners in order to tackle the observed reluctance to access SRH commodities and services. In the private sector, 29% of healthcare providers believed patient costs needed to be reduced, while involving partners in SRH services was a commonly mentioned recommendation among public (30%) and mission (31%) sector healthcare providers.

Figure 21. Reasons for clients' reluctance to access SRHC, per sector.**Figure 22.** Suggestions given on how clients' reluctance can be tackled, per sector.

Improving Access to SRHC - Supply Side

During the interviews, healthcare providers were also asked what they thought could be done on the supply side to improve access to SRHC in Zambia. Overall, their perspectives were that improving the supply chain in general was key to improving access (see Figure 23). Improvements to the supply chain were most commonly recommended by public sector healthcare providers (72%), followed by those in the private sector (60%), and mission sector (55%). One recommendation was to ensure the timely supply of the commodities. This recommendation was especially common in the public and mission sectors, where 45% of healthcare providers made this recommendation. In the private sector, reducing costs of care was a common recommendation (34%).

Improving Access to SRHC - Demand Side

Healthcare providers were also asked what could be done to ensure access to SRH commodities and services for their clients and communities. As shown in Figure 24, most healthcare providers again raised the need to educate and sensitise communities on the importance of SRH commodities and services. Other recommendations included the need to increase the involvement of male partners, the need to increase the range of contraceptives offered to clients, and the need to ensure stock availability at the facility. Respondents from the private sector also suggested that lowering costs for clients would improve access.

Figure 23. Suggested strategies to improve access to SRHC on the supply side, per sector.

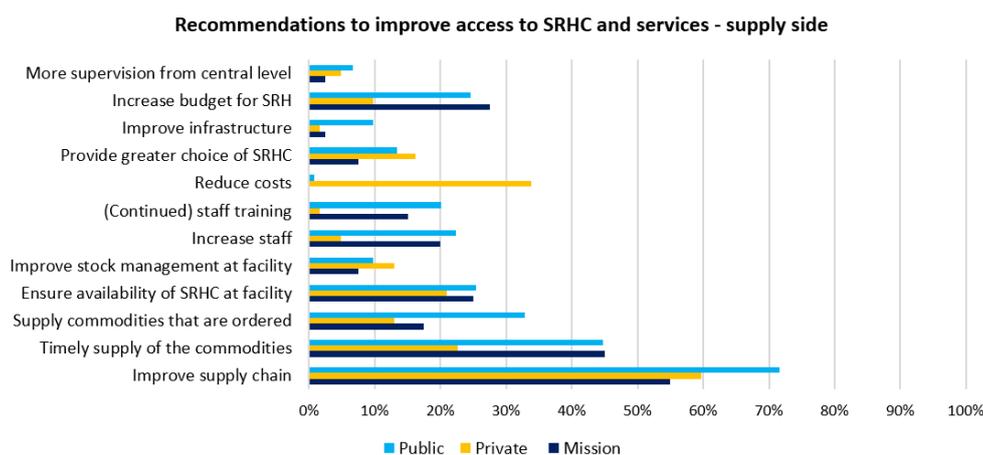
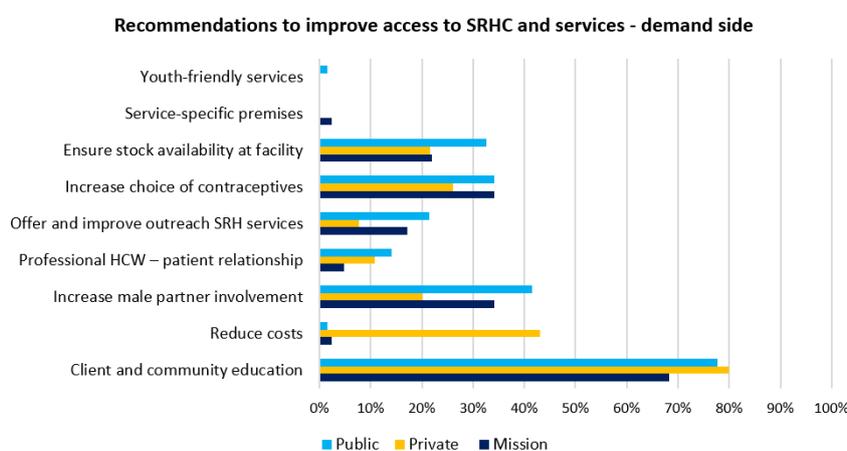


Figure 24. Suggested strategies to improve access to SRHC on the demand side, per sector.



4. DISCUSSION

This study is the third monitoring survey as part of the Health Systems Advocacy (HSA) – Sexual and Reproductive Health project. The study aims to create a snapshot of Zambia’s current situation regarding access to SRHC, and to identify ways to improve access to the services and commodities.

The results in this study show that availability of SRHC remains a challenge in Zambia, as overall, even though availability slightly increased from 34% in 2017 and 2018, to 36% in 2019. Also consistent with the 2018 survey, this study found that availability of commodities and services is highest in the mission sector (40%) followed by the public sector (36%) and lowest in the private sector (29%). Further, the study showed that there were no major differences in availability of SRHC between urban and rural areas within the sectors, which was also found in the 2018 research.

Availability

Availability of contraceptives by sector indicated that most contraceptives had a higher availability in the public sector than in the private and mission sectors. For instance, availability of ethinylestradiol + levonorgestrel tablets, known as the birth control pill, was 75% in the public sector and slightly lower in the mission (69%) and private (66%) sectors. As noted above, in the mission sector, only facilities that offered family planning services were included in the calculation: 13 out of 42 mission facilities offered no family planning services at all. Had they been included in the calculations, availability in the mission sector would have been considerably lower. This is important to take note of, as people might live closest to a mission sector facility where it is likely that family planning services are not offered, which poses a major barrier to them accessing these services. Additionally, the study also found that levonorgestrel and etonogestrel implants were unavailable in all private sector facilities. The irregular availability of most contraceptives (only male condoms had an overall availability of over 80%) suggests the need for targeted strategies to close the existing gaps.

Inconsistencies in the availability of maternal health commodities were observed. This finding is similar to the 2017 and 2018 surveys. Again, the public sector was generally performing better than the private and mission sectors. For instance, calcium gluconate, a crucial antidote for magnesium toxicity in the treatment of pre-eclampsia and eclampsia, was only available in the public sector, where 75% of facilities had it in stock. Notably, there continues to be very poor availability of methyldopa and magnesium sulphate, both used for the treatment of pregnancy induced hypertension and pre-eclampsia, and consequently crucial in ensuring a healthy pregnancy and life for both mother and baby. The finding that in the public sector only one out of 10 facilities have these important commodities available highlights the need for continued efforts by the government to increase the availability of these medicines to reduce maternal mortality in Zambia. The same is the case for some of the medical devices that had a low availability, including ultrasound scans and resuscitators (adult and child size), as these also have a significant impact on the health outcomes of mothers and babies. Further, the inconsistencies in the availability of newborn and child health commodities such as zinc and ORS (important in treatment of diarrhoea and dehydration), including antibiotics such as gentamicin (used to treat community acquired pneumonia and sepsis in neonates), particularly in the public facilities, is a threat to positive health outcomes of children.

Stock-outs

In addition to low commodity availabilities, this research also found that SRHC stock-outs were common across the sectors: more than 40% of facilities in each sector reported a stock-out in the previous six months, which is worse than the findings of the 2018 study, when an average of 19% of health facilities reported stock outs of SRH commodities in the six months prior to the survey. We also observed that when stock-outs occurred, they were not rectified quickly.

For instance, in the public sector they lasted on average 12 days per month, in the mission sector 10 days, and in the private sector nine days. Such patterns of stock-outs in facilities where availability is already a challenge have a significant impact on access to SRHC, as it further exacerbates issues related to poor access.

Affordability

In this research, we also investigated how much people pay for the SRH commodities and whether these commodities were affordable. Unlike the public and mission sectors where all SRHC were free to clients, in the private sector, clients had to pay for most of the SRHC. The affordability of SRHC was estimated as the number of days a lowest-paid government worker would need to work in order to purchase one standard treatment course. Comparable to the previous years, we found that three commodities in the private sector, calcium gluconate, procaine benzylpenicillin and benzyl penicillin, cost more than a day's wage for a lowest-paid government worker. However, healthcare providers believed that costs for the patients was still a major barrier. This is not surprising given that Zambia's lowest-paid government worker earns the equivalent of USD 6.25 per day⁵, while in 2015, 57.5% of Zambia's population was living below the international poverty line of USD 1.90.⁶

Challenges to Access

Deviating from the findings of the 2017 and 2018 surveys, the 2019 data showed that healthcare providers believed access to maternal health services were the most challenging, followed

by family planning and STI management. Contributing factors to this observation are not well understood and further exploration is needed to inform intervention and policy. According to healthcare providers, the key challenges affecting access to SRHC were frequent stock-outs, issues or delays with the supply of the commodities at the facility and cultural or religious beliefs. The same challenges were highlighted in the previous two surveys. Importantly, this study has also established that according to healthcare providers, among the different client groups, young women (those aged 15 – 24) generally had the most challenges when accessing SRH services. This finding could be related to the vulnerable economic position of some young women, coupled with existing gender norms around contraceptive use. This indicates that gender sensitive efforts to target populations most in need of the SRH commodities must be prioritised.⁷

Respondents were also asked their opinions on possible improvements to accessing SRHC. Key recommendations were: Improve the supply chain and ensure timely delivery of commodities to the facilities, ensure commodities are available and increase the choice in contraceptives offered, provide and improve client and community education on SRH services, and increase male partner involvement. Generally, these recommendations were similar in facilities across the sectors, except for some facilities in the private sector where respondents suggested a need to reduce costs for patients.

5. Based on currency conversion of ZMW to USD for the value of ZMW in USD on 12 December 2019, via <https://www.oanda.com/currency-converter/>.

6. The World Bank. Poverty & Equality Data Portal: Zambia. Accessed 12 December 2019: <http://povertydata.worldbank.org/poverty/country/ZMB>.

7. Svanemyr J. Adolescent pregnancy and social norms in Zambia. *Culture, health & sexuality*. 2019:1-15.

5. RECOMMENDATIONS

This study provides evidence that there still are large gaps in SRHC availability and that strengthening the supply chain is needed to improve availability and access to SRHC. To realise this, the following recommendations are made:

Update and implement Supply Chain Implementation Strategy

The Ministry of Health (MoH) has an important role in ensuring that policies and procedures for SRHC are in place, therefore we suggest continued efforts in updating and implementing the Supply Chain Implementation Strategy to improve availability of commodities in the facilities.⁸ The MoH is committed to this, but efforts are hampered by poor financing mechanisms.

Improve the selection and quantification process

Inadequate quantification and forecasting from local health facilities remains a major challenge and the quest for improved coordination and information sharing at a national level prevails. However, we believe that the enactment of Zambia Medicines and Medical Supplies Act No. 9 of 2019 will provide the legal basis for the new Medical Stores Limited (MSL) to lead the selection and quantification process of all essential medicines including SRH commodities, which in turn could strengthen the supply chain.⁹

Efficient and accurate procurement system

The enactment of the Zambia Medicines and Medical Supplies Act No. 9 of 2019 provides, amongst other things, for the transfer of the procurement function for medicines and medical supplies to the Medical Stores Limited. This will help deliver quality health services to the citizens of Zambia through improved procurement efficiency and pooled national procurement of generics for both the public and private sectors by MSL. This can be accomplished through the creation of adequate and sustainable financing to MSL.

With the National Health Insurance (NHI) being launched soon, health facilities may be able to make their own budgets and purchase medicines and medical supplies from medical stores using cash. This can be facilitated through policy change enabling decentralisation of the national drug budget allocated to each institution. The institutions will then recoup their money through the NHI in a sustainable way. Advantages of this will be three-fold:

1. It will improve the low availability of SRHC in both the public and private sectors,
2. Economies of scale help to negotiate lower procurement prices directly from manufacturers resulting in lower final prices to patients, and;
3. It will ensure self-sustainability of MSL while the profits may be used to secure increased and sustained availability of essential medicines in public institutions and reduce the financing strain on the government.

It is also envisaged that the new MSL will develop a time-bound robust strategic plan to create internal capacities to house and manage the national procurement of all essential medicines and commodities, including SRHC. This must also include a business plan of supply and sale of commodities to both the public and private sector.

Locally Funded Sexual Reproductive Health Commodities Budget

The Zambian MoH must develop comprehensive strategies to progressively increase government budget allocation towards SRH commodities and services to significantly increase access to a number of lifesaving commodities. Existing strategies include the Zambia Road Map for Accelerating the Reduction of Maternal, Newborn, and Child Mortality and the Integrated Family Planning Scale-Up Plan. The government should fully fund the implementation of these plans.

8. Zambia Health Sector Supply Chain Strategy and Implementation Plan (2015 – 2017)

9. Zambia Medicines and Medical Supplies Agency [No. 9 of 2019 247]

Provide client education and outreach

As recommended by the healthcare providers in this study, community education is a critical strategy with the potential to significantly influence health-seeking behaviour of clients and ensure sustained uptake of SRH commodities and services. Staff sensitisation and continued staff education is also needed to ensure clients feel comfortable in accessing SRH services at facilities. To achieve this, the Human Resource Development Department of MoH should ensure that staff at health facilities are sufficiently informed about SRH commodities and services available so they can offer quality care, are professional in their approach, and that no stigmatisation occurs within the facility.

Promote Local Production of SRH commodities

The contribution of the local pharmaceutical industry to the manufacturing of SRHC in Zambia is still relatively minimal. The current scenario is quite counter-productive because while there is no import duty levied on medicines, raw materials attract both excess duty and VAT, which

discourages local manufacturing of medicines. Moreover, while no excess duty and VAT are levied on imported essential medicines, mark-ups in the supply chain system may still be substantial, leading to high medicines costs. The pooled procurement model suggested above may provide essential long-term solutions. The medium to long term government strategy is to encourage establishment of local pharmaceutical industries in Zambia. This may be achieved through zero-rating excess and VAT on equipment and raw materials designated for the local manufacture of SRHCs. The Ministry of Commerce in conjunction with the Ministry of Finance and Economic Development should create a deliberate programme to completely remove both VAT and excess duty on all pharmaceutical raw material and equipment. Although government will incur loss on revenue collections in the short- to medium-term, increased reciprocal investment in the sector will guarantee sustainable revenue collections and job creation in the long-term.

10. Silumbwe A, Nkole T, Munakampe MN, Milford C, Cordero JP, Kriel Y, et al. Community and health systems barriers and enablers to family planning and contraceptive services provision and use in Kabwe District, Zambia. *BMC health services research*. 2018;18(1):390.

APPENDIX A: SRHC SURVEYED

Table 1. List of surveyed Commodities

| Commodity (strength) |
|--|
| Ethinylestradiol + levonorgestrel (tablet, 30mcg + 150 mcg) |
| Ethinylestradiol + norethisterone (tablet, 35mcg + 1.0 mg) |
| Levonorgestrel (tablet, 30 mcg) |
| Levonorgestrel (tablet, 750 mcg) |
| Medroxyprogesterone acetate (150 mg in 1 ml) |
| Medroxyprogesterone acetate (104 mg in 1 ml) |
| Estradiol cypionate + medroxyprogesterone acetate (5mg + 25mg) |
| Male condoms |
| Female condoms |
| Intrauterine Contraceptive Device (IUCD) |
| Implant: levonorgestrel |
| Implant: etonogestrel |
| Diaphragm |
| Oxytocin injection (10IU, 1ml) |
| Misoprostol (tablet, 200mcg) |
| Methyldopa (tablet, 250mg) |
| Magnesium Sulphate (500mg in 2ml) |
| Magnesium Sulphate (500mg in 10ml vial) |
| Calcium Gluconate (100mg/ml in 10ml ampoule)B |
| Ferrous Sulphate (tablet, 200mg) |
| Folic Acid (tablet, 5mg) |
| Ferrous Sulphate: Folic Acid (tablet, 60mg iron + 400mcg folic acid) |

| |
|--|
| Ferrous Sulphate: Folic Acid (tablet, 150mg iron + 500mcg folic acid) |
| Metronidazole (tablet, 200mg) |
| Clotrimazole Pessary (500mg) |
| Clotrimazole Cream (1%, 15g tube) |
| Gentamicin Injection (40mg/ml in 1ml) |
| Benzylpenicillin (sodium or potassium) (powder for injection 600mg (1MU)) |
| Benzathine penicillin G 900mg (1.2MU) |
| Amoxicillin (tablet, 125mg, dispersible) |
| Amoxicillin (tablet, 250mg, dispersible) |
| Dexamethasone (4mg/ml) |
| Zinc (10mg in 5ml syrup) |
| Zinc (tablet, 20mg) |
| Zinc-ORS co-pack (10mg tablet/1L) |
| Oral Rehydration Salts (ORS) sachets of 200ml |
| Oral Rehydration Salts (ORS) sachets of 500ml |
| ORS/ReSoMal sachets of 1L |
| Safe Delivery Kit/ Mama Kit |
| Antiseptic |
| Chlorhexidine 4% |
| Vasectomy kit |
| Tubal ligation kit |
| Manual Vacuum Aspiration (MVA) kit |
| Speculum |

| |
|--|
| Cervical dilator |
| Incubator |
| Monitor |
| Ultrasound scan |
| Ventilator |
| Foetal scope |
| Resuscitator (adult size) |
| Resuscitator (infant size) |
| Bag and mask (size 0) |
| Suction device |
| Training mannequin for infant resuscitation |

APPENDIX B: SRHC AVAILABILITY

Table 2. Availability of SRH commodities in the public, private and mission sectors per area.

| Commodity | Availability | | | | | |
|--|---------------|-------|----------------|-------|----------------|-------|
| | Public Sector | | Private Sector | | Mission Sector | |
| | Urban | Rural | Urban | Rural | Urban | Rural |
| Ethinylestradiol + levonorgestrel | 73 | 77 | 67 | 63 | 50 | 72 |
| Ethinylestradiol + norethisterone | 0 | 1 | 2 | 0 | 0 | 0 |
| Levonorgestrel (30 mcg) | 55 | 56 | 18 | 13 | 50 | 48 |
| Levonorgestrel (750 mcg) | 47 | 36 | 58 | 78 | 0 | 48 |
| Medroxyprogesterone acetate | 58 | 69 | 32 | 13 | 50 | 84 |
| Norethisterone acetate | 32 | 26 | 7 | 0 | 25 | 32 |
| Male condoms | 85 | 92 | 89 | 100 | 50 | 92 |
| Female condoms | 58 | 61 | 5 | 0 | 0 | 56 |
| Intrauterine Contraceptive Device | 61 | 44 | 2 | 0 | 50 | 40 |
| Implant: levonorgestrel | 63 | 68 | 0 | 0 | 25 | 60 |
| Implant: etonogestrel | 29 | 32 | 0 | 0 | 25 | 24 |
| Diaphragm | 0 | 0 | 0 | 0 | 0 | 0 |
| Oxytocin injection | 94 | NA | 50 | NA | 67 | 83 |
| Misoprostol | 22 | 4 | 29 | 11 | 75 | 21 |
| Methyldopa | 17 | 9 | 52 | 44 | 0 | 18 |
| Magnesium Sulphate (500mg/2ml) | 12 | NA | 0 | NA | 0 | 0 |
| Magnesium Sulphate (500mg/10ml) | 6 | NA | 0 | NA | 33 | 17 |
| Calcium Gluconate | 75 | NA | 0 | NA | 0 | 0 |
| Ferrous Sulphate | 82 | 70 | 55 | 56 | 75 | 71 |
| Folic Acid | 83 | 78 | 81 | 89 | 75 | 79 |
| Ferrous Sulphate: Folic Acid (60/400) | 2 | 0 | 7 | 0 | 0 | 3 |
| Ferrous Sulphate: Folic Acid (150/500) | 0 | 0 | 2 | 0 | 0 | 0 |
| Metronidazole | 93 | 84 | 86 | 89 | 100 | 92 |
| Clotrimazole Pessary | 5 | 0 | 24 | 67 | 0 | 5 |
| Clotrimazole Cream | 30 | 17 | 31 | 67 | 0 | 18 |
| Gentamicin Injection | 47 | 48 | 34 | 22 | 50 | 50 |
| Ampicillin | 0 | NA | 0 | NA | 0 | 0 |
| Procaine (benzyl)penicillin | 5 | 0 | 34 | 33 | 0 | 8 |
| Benzyl penicillin | 85 | 81 | 34 | 33 | 100 | 84 |
| Benzathine penicillin | 60 | 61 | 69 | 67 | 50 | 76 |
| Amoxicillin syrup | 45 | 34 | 81 | 89 | 75 | 55 |
| Amoxicillin tablet | 67 | 62 | 53 | 78 | 100 | 61 |
| Dexamethasone | 75 | NA | 50 | NA | 25 | 11 |
| Zinc syrup | 0 | 0 | 3 | 0 | 0 | 0 |
| Zinc tablet | 37 | 51 | 43 | 33 | 25 | 53 |
| Zinc-ORS co-pack | 13 | 12 | 5 | 0 | 0 | 18 |
| ORS 200ml | 2 | 4 | 3 | 0 | 0 | 0 |
| ORS 500ml | 0 | 0 | 0 | 0 | 0 | 0 |
| ORS 1L | 32 | 10 | 55 | 44 | 25 | 37 |
| Safe Delivery Kit | 73 | 61 | 9 | 0 | 100 | 87 |
| Antiseptic | 82 | 84 | 50 | 22 | 100 | 76 |
| Chlorhexidine 4% | 12 | 1 | 3 | 0 | 0 | 11 |
| Vasectomy kit | 10 | 5 | 5 | 0 | 50 | 11 |

| | | | | | | |
|---|----|----|----|----|-----|----|
| Tubal ligation kit | 15 | 6 | 2 | 0 | 0 | 11 |
| Manual Vacuum Aspiration (MVA) kit | 62 | 48 | 38 | NA | 100 | 59 |
| Speculum | 84 | 85 | 38 | NA | 100 | 94 |
| Cervical dilator | 30 | 27 | 25 | NA | 50 | 22 |
| Incubator | 44 | 12 | 13 | NA | 50 | 53 |
| Monitor | 22 | 6 | 13 | NA | 50 | 13 |
| Ultrasound scan | 32 | 6 | 50 | NA | 50 | 19 |
| Ventilator | 14 | 4 | 25 | NA | 0 | 19 |
| Foetal scope | 84 | 88 | 63 | NA | 50 | 81 |
| Resuscitator (adult size) | 26 | 29 | 25 | NA | 50 | 38 |
| Resuscitator (infant size) | 50 | 50 | 38 | NA | 100 | 69 |
| Bag and mask (size 0) | 56 | 48 | 38 | NA | 100 | 72 |
| Suction device | 70 | 79 | 50 | NA | 75 | 81 |
| Training mannequin (infant resuscitation) | 28 | 23 | 0 | NA | 25 | 34 |

* NA: this commodity is only required to be available in higher level facilities. For some of the sectors (public/private/mission), the sample did not include any high-level facilities in rural areas.

APPENDIX C: SRHC STOCK-OUT DATA

Table 3. Facilities reporting stock-outs and number of stock-out days per month, per sector.

| Commodity | Stock-outs | | | | | |
|--|----------------------------------|---------------------|----------------------------------|---------------------|----------------------------------|---------------------|
| | Public Sector | | Private Sector | | Mission Sector | |
| | % facilities reporting stock-out | # of stock-out days | % facilities reporting stock-out | # of stock-out days | % facilities reporting stock-out | # of stock-out days |
| Ethinylestradiol + levonorgestrel | 28 | 11 | 50 | 10 | 38 | 7 |
| Ethinylestradiol + norethisterone | 60 | 22 | 100 | 15 | 100 | 4 |
| Levonorgestrel (30 mcg) | 25 | 17 | 33 | 30 | 35 | 22 |
| Levonorgestrel (750 mcg) | 30 | 13 | 42 | 11 | 21 | 12 |
| Medroxyprogesterone acetate | 39 | 9 | 33 | 3 | 14 | 14 |
| Norethisterone acetate | 53 | 18 | 75 | 11 | 27 | 14 |
| Male condoms | 15 | 6 | 16 | 19 | 4 | 5 |
| Female condoms | 14 | 16 | 33 | 15 | 17 | 15 |
| Intrauterine Contraceptive Device | 18 | 11 | 0 | NA | 0 | NA |
| Implant: levonorgestrel | 21 | 12 | 100 | 7 | 18 | 11 |
| Implant: etonogestrel | 20 | 19 | NA | NA | 0 | NA |
| Diaphragm | 50 | 30 | NA | NA | NA | NA |
| Oxytocin injection | 20 | 5 | 20 | 5 | 22 | 10 |
| Misoprostol | 61 | 15 | 45 | 5 | 50 | 12 |
| Methyldopa | 75 | 17 | 31 | 7 | 74 | 21 |
| Magnesium Sulphate (500mg/2ml) | 69 | 6 | NA | NA | 82 | 7 |
| Magnesium Sulphate (500mg/10ml) | 67 | 11 | 100 | 5 | 63 | 13 |
| Calcium Gluconate | 29 | 9 | 0 | NA | 55 | 12 |
| Ferrous Sulphate | 38 | 6 | 29 | 6 | 32 | 11 |
| Folic Acid | 36 | 6 | 0 | NA | 23 | 10 |
| Ferrous Sulphate: Folic Acid (60/400) | 67 | 5 | 100 | 16 | 50 | 0 |
| Ferrous Sulphate: Folic Acid (150/500) | 100 | 3 | NA | NA | 100 | 15 |
| Metronidazole | 22 | 5 | 10 | 22 | 20 | 4 |
| Clotrimazole Pessary | 56 | 16 | 0 | NA | 50 | 7 |
| Clotrimazole Cream | 73 | 19 | 13 | 22 | 86 | 16 |
| Gentamicin Injection | 44 | 14 | 17 | 3 | 37 | 6 |
| Ampicillin | 83 | 12 | 100 | 5 | 60 | 29 |
| Procaine (benzyl)penicillin | 86 | 18 | 33 | 5 | 86 | 26 |
| Benzyl penicillin | 17 | 12 | 30 | 6 | 14 | 4 |
| Benzathine penicillin | 38 | 11 | 27 | 8 | 22 | 9 |
| Amoxicillin syrup | 59 | 9 | 26 | 1 | 40 | 9 |
| Amoxicillin tablet | 31 | 6 | 13 | 4 | 15 | 6 |
| Dexamethasone | 50 | 12 | 50 | 20 | 65 | 13 |
| Zinc syrup | 67 | 11 | 100 | 20 | 100 | 2 |
| Zinc tablet | 38 | 12 | 33 | 5 | 30 | 7 |
| Zinc-ORS co-pack | 59 | 12 | 100 | 5 | 38 | 5 |
| ORS 200ml | 75 | 14 | 100 | 2 | 100 | 0 |
| ORS 500ml | 100 | 24 | 100 | 1 | NA | NA |
| ORS 1L | 74 | 13 | 23 | 9 | 50 | 13 |
| Safe Delivery Kit | 0 | NA | NA | NA | 0 | NA |
| Antiseptic | 7 | 7 | 10 | 3 | 8 | 9 |
| Chlorhexidine 4% | 55 | 20 | 100 | 3 | 25 | 1 |

APPENDIX D: SRHC PRICES

Table 4. SRHC prices in the public, private and mission sectors.

| Commodity | Prices in Kenyan Shilling (KES) | | | | | | | | |
|--|---------------------------------|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|
| | 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 |
| Ethinylestradiol + levonorgestrel | 0 | 0 | 0 | 8 | 0 | 27 | 0 | 0 | 0 |
| Ethinylestradiol + norethisterone | 0 | 0 | 0 | 0 | 0 | 0 | NA | NA | NA |
| Levonorgestrel (30 mcg) | 0 | 0 | 0 | 13 | 0 | 28 | 0 | 0 | 0 |
| Levonorgestrel (750 mcg) | 0 | 0 | 0 | 16 | 0 | 51 | 0 | 0 | 0 |
| Medroxyprogesterone acetate | 0 | 0 | 0 | 20 | 0 | 50 | 0 | 0 | 0 |
| Norethisterone acetate | 0 | 0 | 0 | 31 | 21 | 50 | 0 | 0 | 0 |
| Male condoms | 0 | 0 | 0 | 8 | 0 | 36 | 0 | 0 | 0 |
| Female condoms | 0 | 0 | 0 | 6 | 0 | 10 | 0 | 0 | 0 |
| Intrauterine Contraceptive Device | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Implant: levonorgestrel | 0 | 0 | 0 | NA | NA | NA | 0 | 0 | 0 |
| Implant: etonogestrel | 0 | 0 | 0 | NA | NA | NA | 0 | 0 | 0 |
| Diaphragm | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Oxytocin injection | 0 | 0 | 0 | 12 | 0 | 20 | 0 | 0 | 0 |
| Misoprostol | 0 | 0 | 0 | 48 | 5 | 125 | 0 | 0 | 0 |
| Methyldopa | 0 | 0 | 0 | 5 | 0 | 20 | 0 | 0 | 0 |
| Magnesium Sulphate (500mg/2ml) | 0 | 0 | 0 | NA | NA | NA | 0 | 0 | 0 |
| Magnesium Sulphate (500mg/10ml) | 0 | 0 | 0 | NA | NA | NA | 0 | 0 | 0 |
| Calcium Gluconate | 0 | 0 | 0 | 26 | 0 | 35 | 0 | 0 | 0 |
| Ferrous Sulphate | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 |
| Folic Acid | 0 | 0 | 0 | 2 | 0 | 20 | 0 | 0 | 0 |
| Ferrous Sulphate: Folic Acid (60/400) | 0 | 0 | 0 | 3 | 0 | 10 | 0 | 0 | 0 |
| Ferrous Sulphate: Folic Acid (150/500) | NA | NA | NA | 3 | 3 | 3 | NA | NA | NA |
| Metronidazole | 0 | 0 | 0 | 3 | 0 | 15 | 0 | 0 | 0 |
| Clotrimazole Pessary | 0 | 0 | 0 | 27 | 0 | 85 | 0 | 0 | 0 |
| Clotrimazole Cream | 0 | 0 | 0 | 21 | 0 | 70 | 0 | 0 | 0 |
| Gentamicin Injection | 0 | 0 | 0 | 4 | 0 | 12 | 0 | 0 | 0 |
| Ampicillin | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Procaine (benzyl)penicillin | 0 | 0 | 0 | 12 | 0 | 20 | 0 | 0 | 0 |
| Benzyl penicillin | 0 | 0 | 0 | 14 | 0 | 50 | 0 | 0 | 0 |
| Benzathine penicillin | 0 | 0 | 0 | 14 | 0 | 50 | 0 | 0 | 0 |
| Amoxicillin syrup | 0 | 0 | 0 | 17 | 0 | 45 | 0 | 0 | 0 |
| Amoxicillin tablet | 0 | 0 | 0 | 4 | 0 | 30 | 0 | 0 | 0 |
| Dexamethasone | 0 | 0 | 0 | 18 | 15 | 20 | 0 | 0 | 0 |
| Zinc syrup | NA | NA | NA | 23 | 0 | 45 | NA | NA | NA |
| Zinc tablet | 0 | 0 | 0 | 6 | 0 | 20 | 0 | 0 | 0 |
| Zinc-ORS co-pack | 0 | 0 | 0 | 7 | 0 | 20 | 0 | 0 | 0 |
| ORS 200ml | 0 | 0 | 0 | 9 | 0 | 18 | NA | NA | NA |
| ORS 500ml | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ORS 1L | 0 | 0 | 0 | 4 | 0 | 10 | 0 | 0 | 0 |

APPENDIX E: TREATMENT UNITS

Table 5. Treatment regimens per SRHC.

| Commodity | Treatment Regimen | |
|---|-------------------|----------------|
| | Treatment Unit | Treatment Days |
| Ethinylestradiol + levonorgestrel | 1 strip | NA |
| Ethinylestradiol + norethisterone | 1 strip | NA |
| Levonorgestrel (30 mcg) | 1 strip | NA |
| Levonorgestrel (750 mcg) | 1 pill | NA |
| Medroxyprogesterone acetate | 1 vial | NA |
| Norethisterone acetate | 1 vial | NA |
| Male condoms | 1 pack | NA |
| Female condoms | 1 pack | NA |
| Intrauterine Contraceptive Device | 1 device | NA |
| Implant: levonorgestrel | 1 device | NA |
| Implant: etonogestrel | 1 device | NA |
| Diaphragm | 1 device | NA |
| Oxytocin injection | 1 vial | NA |
| Misoprostol | 1 tablet | NA |
| Methyldopa | 3 tablets | 30 |
| Magnesium Sulphate (500mg/2ml) | 18 vials | NA |
| Magnesium Sulphate (500mg/10ml) | 18 vials | NA |
| Calcium Gluconate | 1 ampoule | 1 |
| Ferrous Sulphate | 1 tablet | 30 |
| Folic Acid | 1 tablet | 30 |
| Ferrous Sulphate: Folic Acid (60mg/400mcg) | 1 tablet | 30 |
| Ferrous Sulphate: Folic Acid (150mg/500mcg) | 1 tablet | 30 |
| Metronidazole | 6 tablets | 5 |
| Clotrimazole Pessary | 1 ampoule | NA |
| Clotrimazole Cream | 1 tube | NA |
| Gentamicin Injection | 1 vial | 1 |
| Ampicillin | 1 vial | 1 |
| Procaine (benzyl)penicillin | 3 tablets | 5 |
| Benzyl penicillin | 3 tablets | 5 |
| Benzathine penicillin | 1 vial | 1 |
| Amoxicillin syrup | 1 vial | 1 |
| Amoxicillin tablet | 1 tablet | 10 |
| Dexamethasone | 1 tablet | 1 |
| Zinc syrup | 1 bottle | NA |
| Zinc tablet | 1 tablet | 10 |
| Zinc-ORS co-pack | 1 kit | NA |
| ORS 200ml | 1 sachet | NA |
| ORS 500ml | 1 sachet | NA |
| ORS 1L | 1 sachet | NA |

APPENDIX F: SRHC AFFORDABILITY

Table 6. Affordability of SRHC, per sector.

| Commodity | Affordability (days) | | |
|--|----------------------|----------------|----------------|
| | Public Sector | Private Sector | Mission Sector |
| Ethinylestradiol + levonorgestrel | 0 | 0.09 | 0 |
| Ethinylestradiol + norethisterone | 0 | NA | NA |
| Levonorgestrel (30 mcg) | 0 | 0.13 | 0 |
| Levonorgestrel (750 mcg) | 0 | 0.32 | 0 |
| Medroxyprogesterone acetate | 0 | 0.21 | 0 |
| Norethisterone acetate | 0 | 0.32 | 0 |
| Male condoms | 0 | 0.09 | 0 |
| Female condoms | 0 | 0.07 | 0 |
| Intrauterine Contraceptive Device | 0 | 0.00 | 0 |
| Implant: levonorgestrel | 0 | NA | 0 |
| Implant: etonogestrel | 0 | NA | 0 |
| Diaphragm | NA | NA | NA |
| Oxytocin injection | 0 | 0.12 | 0 |
| Misoprostol | 0 | 0.50 | 0 |
| Methyldopa | NA | NA | NA |
| Magnesium Sulphate (500mg/2ml) | 0 | NA | 0 |
| Magnesium Sulphate (500mg/10ml) | 0 | NA | 0 |
| Calcium Gluconate | 0 | 4.75 | 0 |
| Ferrous Sulphate | 0 | 0.43 | 0 |
| Folic Acid | 0 | 0.77 | 0 |
| Ferrous Sulphate: Folic Acid (60/400) | 0 | 0.81 | 0 |
| Ferrous Sulphate: Folic Acid (150/500) | NA | 0.78 | NA |
| Metronidazole | 0 | 0.84 | 0 |
| Clotrimazole Pessary | 0 | 0.28 | 0 |
| Clotrimazole Cream | 0 | 0.21 | 0 |
| Gentamicin Injection | 0 | 0.46 | 0 |
| Ampicillin | NA | NA | NA |
| Procaine (benzyl)penicillin | 0 | 1.22 | 0 |
| Benzyl penicillin | 0 | 1.44 | 0 |
| Benzathine penicillin | 0 | 0.15 | 0 |
| Amoxicillin syrup | 0 | 0.17 | 0 |
| Amoxicillin tablet | 0 | 0.62 | 0 |
| Dexamethasone | 0 | 0.19 | 0 |
| Zinc syrup | NA | 0.23 | NA |
| Zinc tablet | 0 | 0.67 | 0 |
| Zinc-ORS co-pack | 0 | 0.08 | 0 |
| ORS 200ml | 0 | 0.09 | NA |
| ORS 500ml | NA | NA | NA |
| ORS 1L | 0 | 0.04 | 0 |

APPENDIX G: SRHC ACCESS

QUALITATIVE DATA ANALYSIS

Figure 1. SRH services facing the most challenges related to access to commodities.

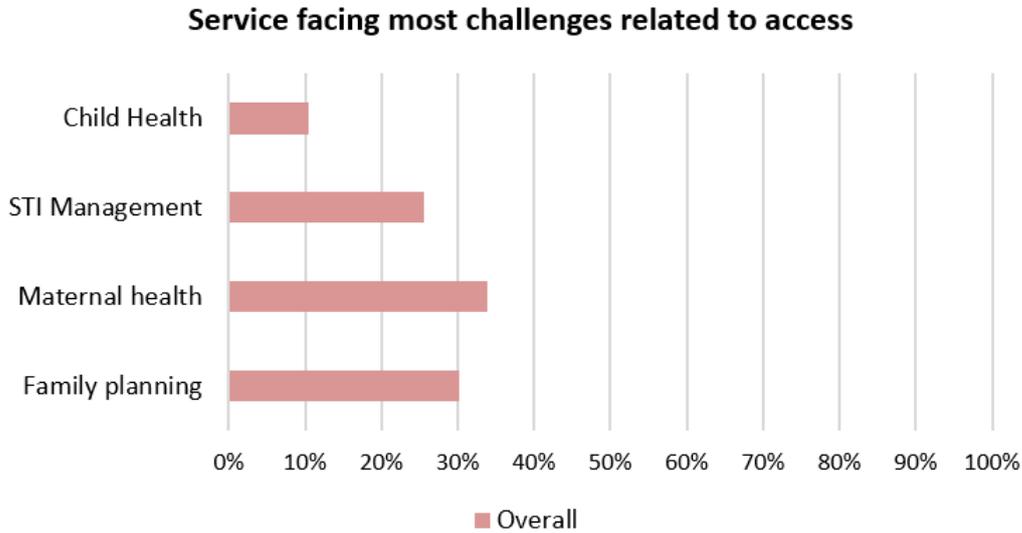


Figure 2. Client group experiencing most barriers when accessing SRH services, per sector.

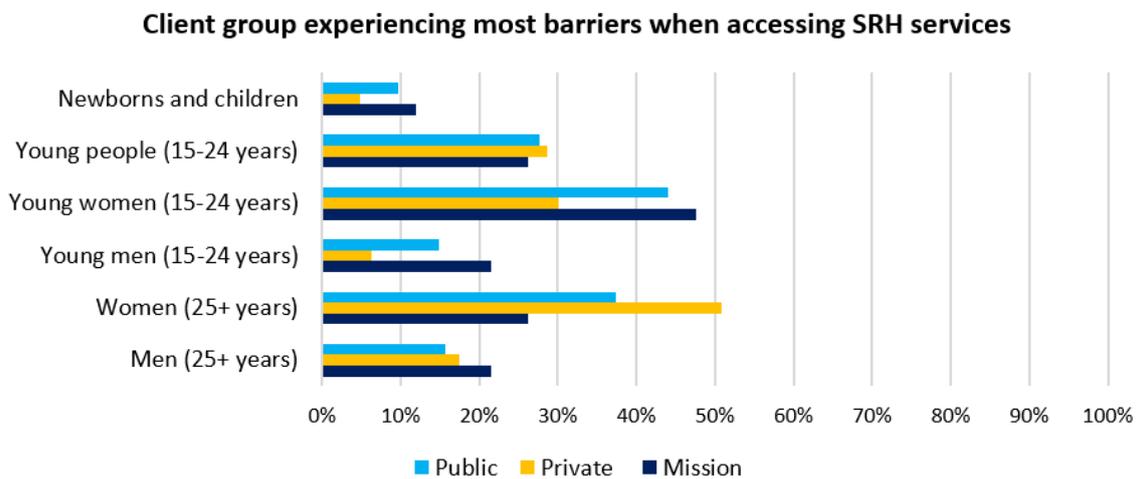
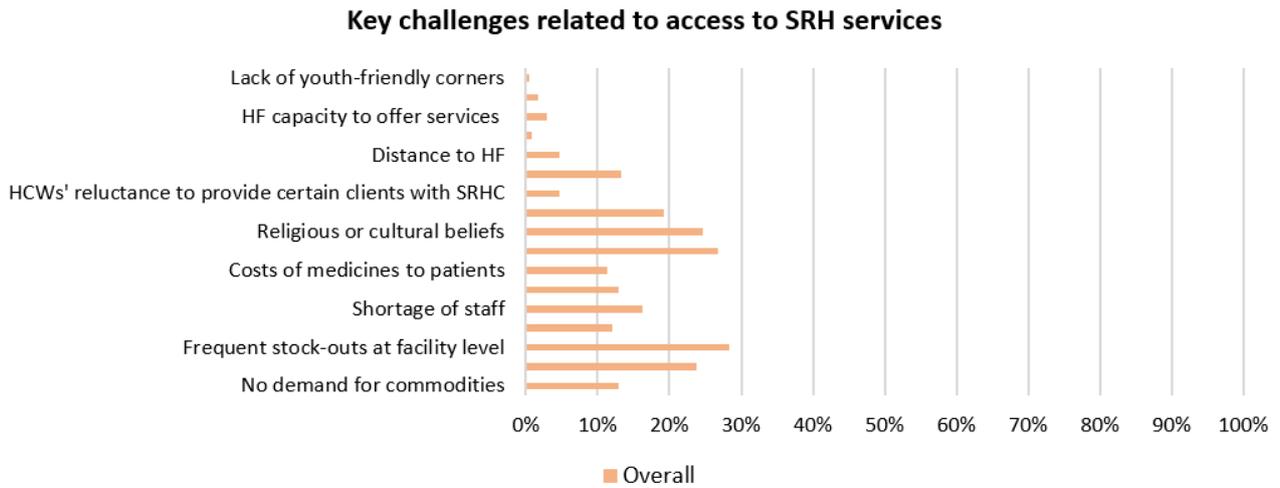


Figure 3. SRH services facing the most challenges related to access to commodities.



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