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ZAMBIA PRIVATE HEALTH SECTOR ASSESSMENT: SRH & HIV - FINAL REPORT

September 2019

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FINAL REPORT

ZAMBIA PRIVATE HEALTH SECTOR ASSESSMENT: SRH & HIV

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DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS

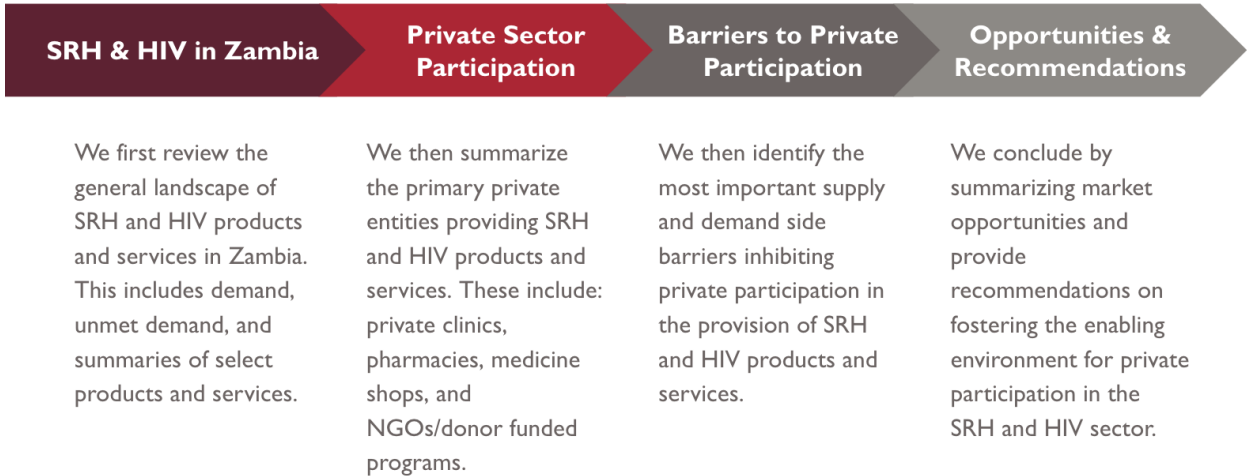
ART	Antiretroviral Therapy
ARVs	Antiretrovirals
CAC	Comprehensive Abortion Care
CDU	Central Dispensing Unit
CSW	Commercial Sex Worker
EQUIP	Education Quality Improvement Program
FGD	Focus Group Discussion
FP	Family Planning
GRZ	Government of the Republic of Zambia
HCD	Human Centered Design
HCW	Healthcare Worker
HIV	Human Immunodeficiency Viruses
HPCZ	Health Professions Council of Zambia
HTS	HIV Testing and Counselling
IUCD	Intrauterine Contraceptive Device
K	Kwacha
KII	Key Informant Interview
LARCs	Long-acting Reversible Contraceptives
MSL	Medical Stores Limited
NAC	National HIV/AIDS/STI/TB Council
OC	Oral Contraceptive
PrEP	Pre-exposure Prophylaxis
PSA	Private Sector Assessment
PSZ	Pharmaceutical Society of Zambia
SAFE	Supporting an AIDS-Free Era
SFH	Society for Family Health
SM	Social Marketing
SOP	Standard Operation Procedure
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
TMA	Total Market Assessment
USAID	United States Agency for International Development
VMMC	Voluntary Medical Male Circumcision
WTP	Willingness to Pay
ZAMRA	Zambia Medicines Regulatory Authority
ZDHS	Zambia Demographic Health Survey
ZMA	Zambia Medical Association

I. EXECUTIVE SUMMARY

In line with the interest of the Government of the Republic of Zambia (GRZ) to foster private sector development, USAID has commissioned a private sector assessment (PSA) of the Zambian health system, with a focus on sexual and reproductive health (SRH) and HIV products and services.

The purpose of this PSA is to present opportunities and recommendations regarding how the private sector can be leveraged to ensure a healthy total market that aims for equity, sustainability, quality and scale. These recommendations are based on an analysis of SRH and HIV landscapes including demand, unmet demand, willingness to pay among consumers, as well as a review of barriers to private participation.

The assessment is structured as follows:



This assessment was informed by primary data collected from consumers, retailers, private providers, and other key stakeholders that comprise, or interact with, the private health system, as well as secondary research of published and grey literature.

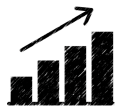
SRH & HIV LANDSCAPE & PRIVATE PARTICIPATION IN ZAMBIA

Despite public sector coverage of SRH and HIV products and services in Zambia, gaps in coverage and utilization remain. As of the 2018 ZDHS, 20% of married women have an unmet need for family planning [1], just down from 21% in the 2013-2014 ZDHS [2]. Although HIV/AIDS cases have steadily decreased since the 2002 DHS, from 15.6% to 11.4%, reductions have not been uniform across population groups [2][3]. While HIV prevalence decreased in men from 12.9% to 8.3%, prevalence among women has only dropped to 14.3% (from 17.8%) [3].

There are four main private entities that provide SRH & HIV products and services: private medical facilities (including private clinics, private hospitals, and mining industry facilities which account for ~6% of healthcare provision [4]), pharmacies, medicine shops and NGO/donor funded programs.

The private sector currently plays a relatively small role in addressing unmet demand for SRH and HIV products and services.

BARRIERS TO PRIVATE PARTICIPATION

 Supply side	<p>Limited public-private engagement Skewed market Regulatory & legal issues Policy lags Marketing restrictions Training & competencies</p>	 Demand side	<p>Awareness Ability to pay Cultural and social norms</p>
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PRODUCT & SERVICE SPECIFIC OPPORTUNITIES

Opportunity	Demand Dynamics	Supply Dynamics	Key Barriers/Enablers
Male condoms Medium	<p>Very low WTP due to free availability. Low use and decreasing HIV risk perception. There may be some interest in low-cost, differentiated options.</p>	<p>Many options (public sector - 45%, SM - 51%, commercial - 4%). Can be easily distributed through a variety of channels (clinics, pharmacies, bars).</p>	<p>Very few regulatory/legal hurdles. Main issue is volatile donor climate, minimal demand creation efforts, and limited market data.</p>
Female condoms Low	<p>Very low WTP (below cost-recovery). <1% women use. Less interest in this product due to usability and awareness issues, even though it is the only woman initiated triple protection method.</p>	<p>No SM or commercial female condoms currently available. Suppliers have struggled to move them in the past. Only select programs had success.</p>	<p>Currently there is no donor support or champion; hence demand generation activities are minimal. Risky product category for private sector.</p>
IUCDs Low/medium	<p>IUCDs are unpopular (<1% of women use). More common among women with 5+ children and ages 45-49. Concern about infection and discomfort with insertion/removal are deterrents.</p>	<p>Limited supply of IUCDs (in part due to low demand). Facilities need training on insertion/removal. Some opportunities (e.g. postpartum IUCD consultation).</p>	<p>Training investment required; demand generation would have to be supported to justify the investment. Even if products continue to be provided for free, insertion/removal would still have to be subsidized by (75-85%). Some opportunities for higher income consumers (postpartum consults)</p>
Implants Medium	<p>Implant use has been growing quickly since 2013 (~8.5% of women). They are more common among women ages 25-39.</p>	<p>Implants available in the public and private, but primarily accessed in the public sector.</p>	<p>Like with IUCDs, the product and insertion/removal are above WTP. However, it is less costly. Private clinics could charge smaller service fees for those interested in service differentiation (note this would still require subsidies, but smaller ones than IUCDs).</p>
Injectables High	<p>Fastest growing segment. Very popular among young women. Self-injection at scale has potential to increase demand.</p>	<p>Mostly accessed through GRZ. Limited private and SM provision. However, Depo-Provera® shortage is opening opportunities for Sayana®Press (self-injectable), but this will be provided in the public sector.</p>	<p>There are opportunities for distribution through many channels, including pharmacies (if task-shifting and training is supported). Human resource investment is more attractive than with LARCs given the high demand for injectables and privacy/convenience.</p>

<p>Oral contraceptives</p> <p>Low/medium</p>	<p>Decreasing in demand (replaced by injectables). Not popular among young people; difficulty in adherence. Chinese Pill (1 per month) was popular among low-income segment; now banned.</p>	<p>Free, socially marketed, and commercial options available. Commercial share is very cost-prohibitive (very low share of market).</p>	<p>Consumers are shifting to options with less user burden. For private sector while wide distribution options for opportunities (e.g. pharmacies), commercial options are extremely cost-prohibitive (7-8x WTP).</p>
<p>PrEP</p> <p>Medium</p>	<p>Demand and awareness are still low for this product. May change overtime, particularly among key populations.</p>	<p>Available for free in select sites, on a limited and targeted basis.</p>	<p>Policy guidance regarding PrEP provision needs to be clearer and disseminated. While the product is cost-prohibitive, opportunities to decongest public sector exist by charging dispensing fees in the private sector (e.g. CDUs).</p>
<p>ART</p> <p>Medium</p>	<p>Awareness is high, but use of ART is still not optimal among HIV+ individuals.</p>	<p>Available in the public and in select private sector clinics. However, private clinics generally refer patients to public clinics where it is free.</p>	<p>Like with PrEP, ART is very cost-prohibitive, and private clinics cannot charge for it. However, opportunities exist to decongest the public sector by charging dispensing fees (WTP for ART current exceeds dispensing fees).</p>
<p>HIV & Other STI Testing</p> <p>Low</p>	<p>Knowledge of testing is high but utilization can still be improved. Concern about overcrowding and stigma are barriers.</p>	<p>Available for free in the public sector. Cost-prohibitive in the private sector. There are also quality concerns regarding its provision by the private sector.</p>	<p>Quality concerns would have to be addressed if expanding to the private sector. Unlikely that investment in training will be justified given low demand. Unlike with PrEP/ART where access can be subsidized to decongest the public sector, limited options for comparable arrangement due to the high cost of service and labs.</p>
<p>Self-Test Kits</p> <p>High</p>	<p>Utilization of testing is low, but having a private and confidential option may increase demand.</p>	<p>Can be purchased at pharmacies and medicine shops. Few types are currently available (not all approved). Can be accessed for free in some areas (e.g. Universities).</p>	<p>Concerns regarding the lack of counselling, data capture and not linking to care. Some regulatory processes remain. However, even with these problems, there is optimism about this product among stakeholders. WTP exceeds cost-recovery for most lower cost commercial options.</p>
<p>VMMC</p> <p>Low/medium</p>	<p>High demand for this service; very successful marketing campaigns.</p>	<p>Available in the public sector. Limited availability in the private sector due to costs/training required. Furthermore, not covered by insurance. For clinics that offer VMMC, it is well above WTP.</p>	<p>Strategic approach could be to equip and train private clinics to bring down cost. However, not clear if this would result in cost-recovery for clinics.</p>

RECOMMENDATIONS

1. **Invest in demand generation.** This is particularly important for products and services that can be accessed in the private sector across income quintiles. Investing in training, equipment, accreditation, is otherwise unattractive for the private sector.
2. **Encourage better market segmentation among private clinics.** Consumers are willing to pay for service differentiation, including shorter wait times and greater privacy. Identify opportunities that can better match supply and demand such as dedicated clinic days for certain procedures for which there is lower demand, whereby a rotating midwife/nurse could help maintain proficiency at the clinic and create awareness so more women come in for those services on those particular days.
3. **Leverage pharmacies.** Pharmacies provide task-shifting opportunities for individuals seeking convenience and confidentiality. With task shifting and expanding scope of practice for pharmacists and pharmacy technicians, pharmacies can be a cost-effective way to decongest the public sector and reach populations with unmet demand for FP and HIV testing/management.
4. **Facilitate more formal and regular engagement with the private sector.** While now reflected in policy guidance, private sector engagement strategies must now be implemented. For example, intra- and inter-professional collaboration among public and private health facilities and training institutions is part of the Health Strategic Plan 2017-2021, however, platforms for ongoing engagement between the private sector, MoH and other relevant stakeholders for policy and planning should be established. A systematic and transparent approach is recommended.
5. **Introduce a MoH liaison for private sector engagement.** Similar to the quality assurance model used by SFH, where they have hired a full-time nurse to ensure proficiency of public sector staff in SRH products and services, USAID in collaboration with GRZ could hire a healthcare professional (nurse or otherwise) whose scope of work would be to bring the private sector on board and ensure proficiency in the delivery of key products and services, raise awareness, create demand, and lower the risk of non-compliance - key barriers to entry. Because of the requirement for technical familiarity and a potential oversight and capacity building function, such a role might best be fulfilled by an HCW, however pending on the terms of reference, specific qualifications may be flexible.
6. **Formalize use of private health facilities to manage stock outs.** Stock outs are common in the public sector; integrate private health facilities into the national commodity supply chain¹.
7. **Support timely policy guidance development and updates to help ensure pace with innovative approaches including m-health.** This is a key opportunity for closing gaps among adolescent, high-risk, and rural populations.
8. **Leverage health system touch-points and existing platforms to enhance opportunities for SRH and HIV education/promotion.** For example, train private providers to recognize when to talk to women about IUCDs. Leverage the high cesarean section rates in the private sector, as well as normal deliveries, to educate and introduce the option of postpartum IUCDs. Other opportunities include installing condom dispensers in bars/clubs. Installing in public areas has posed challenges in other LMICs including public resistance, irregular stocking, vandalism, theft, and poor maintenance. A plan to mitigate these should be considered before widespread installation.
9. **Support more piloting of marketing and BCC approaches.** Issues arose regarding the effective/appropriate messaging of SRH/HIV products and services, particularly given low literacy, poor conceptual equivalence of 'risk reduction', and concern over moral hazard.

¹ Recommendation was also noted in a report by SAFE; also review Kenya experience with the same.

10. **Apply lessons from Chinese clinics when targeting lower income consumers.** The Chinese Pill is a case study in the preferences of low-income consumers: physical access, cost, low burden of use (i.e. favourable dosage frequency to duration of effect ratio). Highlight such messages when targeting this market segment.
11. **Assess market readiness for social franchising models** and consider pilots with key partners. Review lessons learned from NewStart and BlueStar franchises with SFH and Marie Stopes Zambia, respectively.

II. INTRODUCTION

PRIVATE SECTOR ASSESSMENT OF SRH & HIV PRODUCTS AND SERVICES IN ZAMBIA

After a decade of sustained growth, Zambia was deemed a lower-middle income country (LMIC) in 2011 and had the 9th fastest growing economy in Sub-Saharan Africa in 2012. This progress has waned since 2013, when the copper market crashed, agricultural output slowed, and Zambia experienced an electricity crisis [5]. Debt payments to drug suppliers now account for top health budget line items and the Ministry of Health remains constrained. For this reason, interest in better leveraging the private health sector in Zambia has emerged.

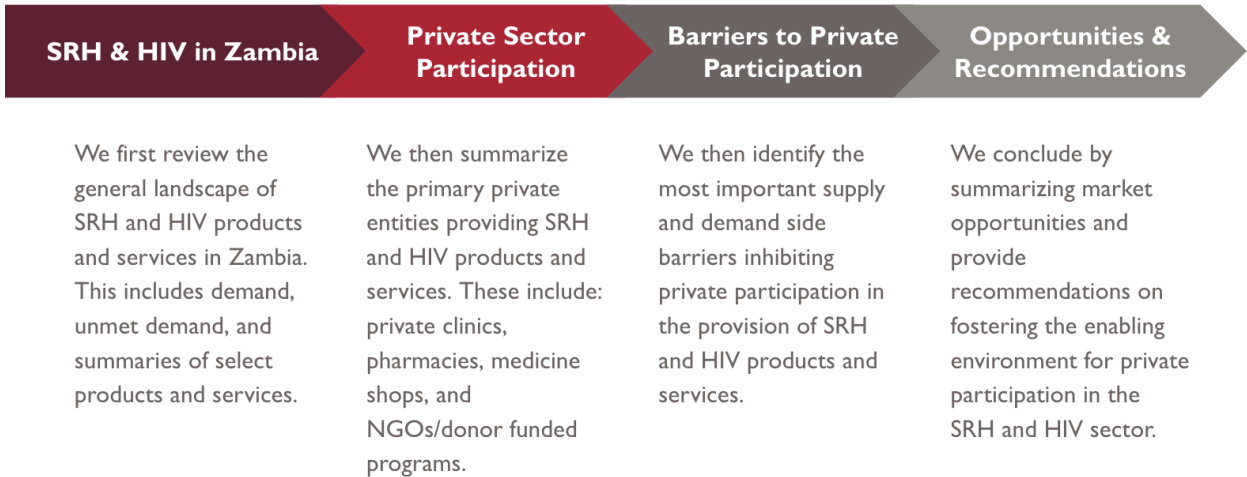
In line with the interest of the Government of the Republic of Zambia (GRZ) to foster private sector development, USAID commissioned a private sector assessment (PSA) of the Zambian health system, with a focus on sexual and reproductive health (SRH) and HIV products and services. The **purpose** of this PSA is to **present opportunities and recommendations regarding how the private sector can be leveraged** to ensure a healthy total market that aims for equity, sustainability, and scale.

We investigate five main assessment questions:

- What is the size, scope, and scale of private sector participation in the SRH and HIV space?
- What types of SRH and HIV products and services are offered by the private sector?
- What is the willingness to pay for SRH and HIV-related products and services?
- What policies and factors inhibit private sector participation in the health system?
- How can private sector engagement be improved in the future?

STRUCTURE OF THE ASSESSMENT

The structure of the assessment is summarized in the following figure. This is followed by a description of the methodology used to conduct this assessment.

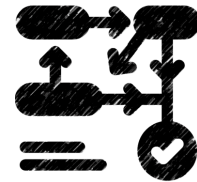


Under the SRH & HIV landscape assessment, we review eleven specific SRH and HIV products and services selected in consultation with USAID. These include: male condoms; female condoms;

long-acting reversible contraceptives (LARCs) including intrauterine devices (IUCDs) and implants; injectable contraceptives; oral contraceptives; pre-exposure prophylaxis (PrEP); antiretroviral therapy (ART); HIV testing and counselling (HTS) and other STI testing; self-test kits (HIV and other STIs), and voluntary medical male circumcision (VMMC).

This assessment is based on primary data collected from consumers, retailers, private providers, and other key stakeholders in Lusaka and Copperbelt from April to May 2019. This data, along with secondary research was synthesized to inform the recommendations.

Due to the higher prevalence of HIV in urban areas and the enabling environment for private sector engagement compared to rural areas, this assessment primarily focuses on generating recommendations for urban areas including Lusaka and Copperbelt.



What?	Why?	How?
<p>A private sector assessment of SRH and HIV products and services in Zambia.</p>	<p>To identify opportunities and generate recommendations on how the private sector can be leveraged to strengthen Zambia's health system.</p>	<p>Synthesizing insights from secondary market assessments and primary data collected from consumers, private providers, and other key stakeholders.</p>

III. METHODOLOGY

ASSESSMENT APPROACH

A mixed methods approach was adopted for this assessment. Qualitative and quantitative data were collected in-country from April to May 2019 (Table I).

Table I. Types of data collection instruments

Assessment Question	Quantitative	Qualitative
What is the size, scope, and scale of private sector participation in the SRH and HIV space?	Retailer survey	Stakeholder KIs Private clinic KIs
What types of SRH and HIV products and services are offered by the private sector?	Retailer survey	Stakeholder KIs Private clinic KIs
What is the willingness to pay for SRH and HIV-related products and services?	Consumer survey	Consumer FGDs
What policies and factors inhibit private sector participation in the health system?	Retailer survey	Stakeholder KIs Private clinic KIs
How can the private sector engagement be improved in the future?	Retailer survey Consumer survey	Stakeholder KIs Private clinic KIs Bar/club KIs Consumer FGDs

INSTRUMENT DESIGN

The process of instrument design varied by instrument type, however, generally began with (1) a review of the knowledge gaps identified through a desk review, (2) generation of potential questions covering themes of interest, and (3) evaluating the questions for content validity. Instruments underwent refinement to ensure alignment with validated approaches (e.g. for assessing willingness to pay), cultural appropriateness, and limiting response burden. These instruments were reviewed by USAID before deployment in the field. Annex A details the process of instrument design.



SAMPLING APPROACH

The sampling approach for retailers, consumers, clinics, bars/restaurants and other key informants is described below. Final samples are reported in Annex B.

PSA Retailer Survey

The main goal of the PSA Retailer Survey was to survey both formal (pharmacies) and less formal (medicine/drug shops) establishments. Beyond the inclusion criteria below, those that were willing to participate were surveyed (Table 2).





Table # 2. Target samples for PSA Retailer Survey

Retailers	Lusaka	Copperbelt	Total	Inclusion Criteria
 Pharmacies	5 Community and Facility Based Pharmacies	5 Community and Facility Based Pharmacies	10	Pharmacist on site
 Medicine/ drug shops	5 Community Based	5 Community Based	10	No pharmacist at site
Total	10	10	20	

PSA Consumer Survey

Due to the short window for data collection, a convenience sampling approach was adopted. Since this introduces concerns regarding selection bias, the team strategically selected data collection locations to sample across income quintiles, and included enough demographic questions to characterize the sample. **Table 3** reports the target samples per consumer groups and proposed sampling locations.

Table 3. Target samples for the PSA Consumer Survey

Consumers	Lusaka	Copperbelt	Total	Inclusion
 Adolescent girls	30 ~50% Universities ~50% Dreams/Diva center	30 ~50% Universities ~50% Dreams/Diva center	60	18-24 years
 Adolescent boys	30 ~50% Universities ~50% YMCA/sport complex	30 ~50% Universities ~50% YMCA/sport complex	60	18-24 years
 Women	30 ~50% markets (out of compounds) ~50% markets (in compounds)	30 ~50% markets (out of compounds) ~50% markets (in compounds)	60	25-49 years
 Men	30 ~50% markets (out of compounds) ~50% markets (in compounds)	30 Mines	60	25-59 years
Total	120	120	240	

Stakeholder, Private Clinic, and Bar/Restaurant KIIs



Stakeholders

Stakeholders were identified in consultation with USAID and through other stakeholders. These included NGOs, regulatory agencies, professional organizations, among others. Annex B contains the final list of stakeholders interviewed.



Private clinics

The target sample for private clinics was 3 KIIs per region for a total of 6 KIIs. However, during the out-brief, interest in surveying Chinese clinics emerged. This posed some initial challenges due to language barriers, so a soft target of 3-4 KIIs was selected, dependent on the identification of a Mandarin speaking researcher.



Bars/clubs

Bars/clubs that covered a range of clientele were identified in consultation with USAID and local partners. The target sample was 4 KIIs per region for a total of 8 KIIs with bars/clubs.

Consumer FGDs



Consumers

The sampling strategy was the same as with the consumer surveys. Those that participated in the survey were invited to participate in the consumer FGDs. The target sample was 1 FGD per group, per district, totaling 8 FGDs.

DATA COLLECTION

Ethics

Authorizations for data collection were issued by the Ministry of Health (National Health Research Authority). No formal IRB was required to conduct this assessment. Surveyed participants were asked for explicit consent and were made aware of the goals of the assessment, assured their personal information would not be collected, and that they could opt out at any time. We requested that KIIs and FGDs be recorded to ensure data quality. In the event that an interviewee did not feel comfortable with recording, only notes were taken.

Data Quality Control

With the exception of stakeholder KIIs, all data was collected by the data collection and research firm, RuralNet. RuralNet supervisors and enumerators received 3.5 days of training covering instruments, data collection, troubleshooting, best practices/ethics, and logistics. RuralNet used tablets to enter consumer and retailer data. This enabled the team to monitor incoming data in near real-time and identify quality issues immediately, enabling quick course correction. KIIs and FGDs were recorded, and then translated (where applicable) and transcribed.

ANALYSIS

Univariate and bivariate statistics were generated for quantitative data of interest and visualized using R software (R Core Team, 2016). Thematic analysis was used to process the qualitative data. Only main results are reported; see **Annex B** for the detailed data analysis.

IV. OVERVIEW OF SRH & HIV IN ZAMBIA

FAMILY PLANNING (FP)

Despite public sector coverage of sexual and reproductive health (SRH) and HIV prevention and management products and services in Zambia, gaps in coverage and utilization remain. As of the 2018 ZDHS, 19.7% of married women had an unmet need for family planning [1], just down from 21.1% reported in the 2013-2014 ZDHS [2]. Unmet demand is higher among those who have completed less education and those in the lower wealth quintiles (Figures 1-2). Notably, while unmet demand is lowest among those that completed more than secondary school and in the highest wealth quintile, it is this group that has seen an increase in unmet demand since the 2013 ZDHS. Finally, unmet demand has increased among women aged 35-49, while it has decreased in the other age groups.

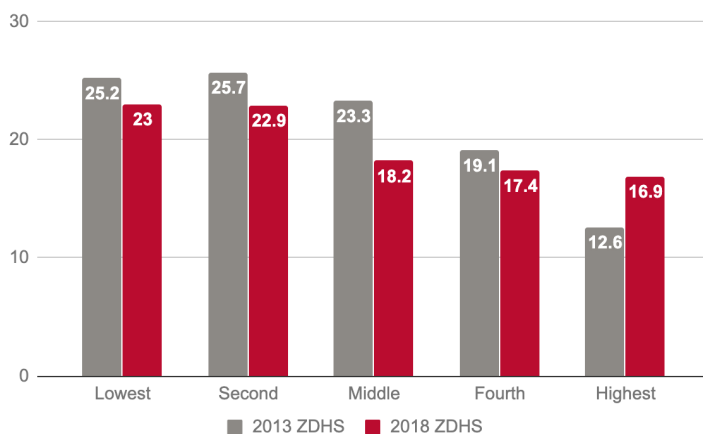


Figure 1. Unmet demand for family planning across wealth quintiles

While the highest wealth quintile has the lowest unmet demand, it is the only group that has seen an increase in unmet demand since the 2013 ZDHS.

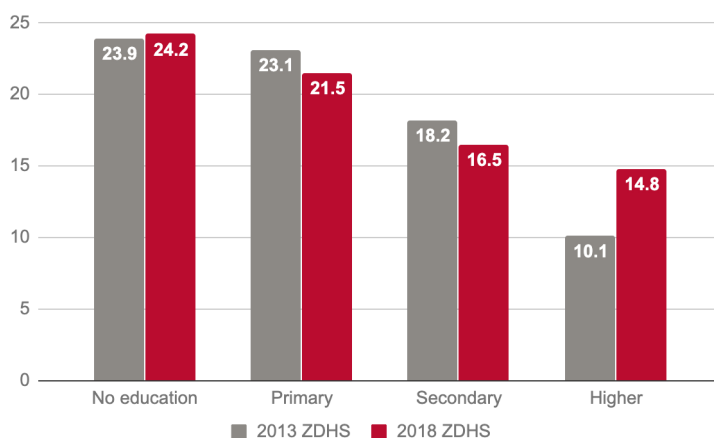


Figure 2. Unmet demand across educational attainment

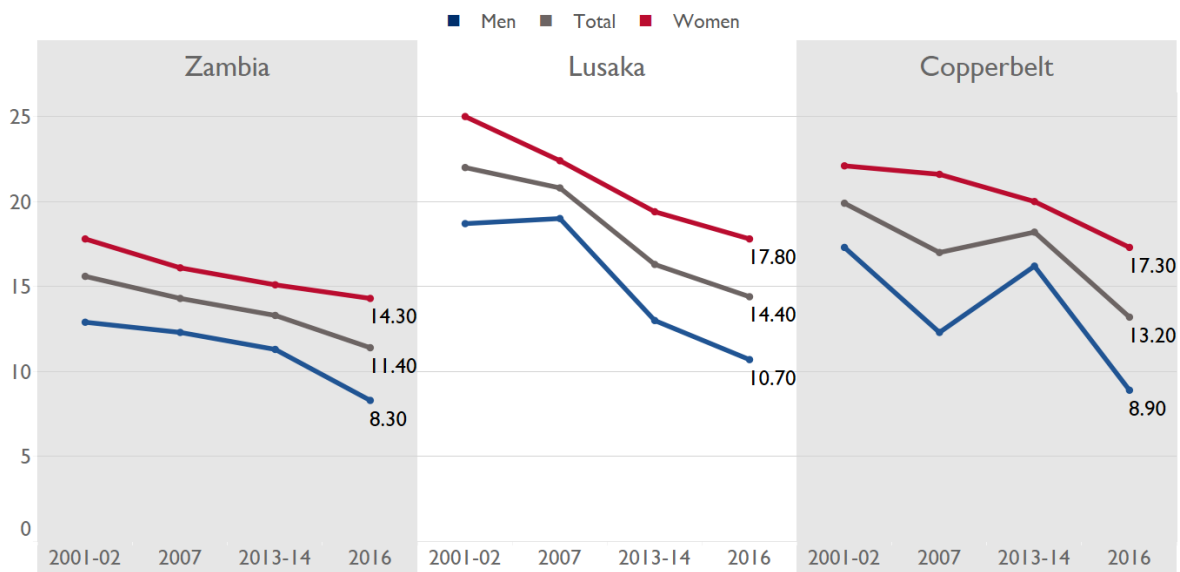
Consistent with the trend among women in the highest wealth quintile, women with more than secondary school education have seen an increase in unmet demand since the 2013 ZDHS.

Unmet demand for family planning among married women is lower in Lusaka (16.4%) and Copperbelt (19.4%) relative to the rest of the country (19.7%). Lusaka has the second lowest reported unmet demand for family planning in the country (16.4%), just after Muchinga province (14.8%).

Unmet demand among sexually active unmarried women is much higher than any married groups, at 42% [1].

HIV/AIDS

Although HIV/AIDS prevalence has steadily decreased since the 2002 DHS, from 15.6% to 11.4%, reductions have not been uniform across population groups [2][6]. For example, while HIV prevalence decreased in men from 12.9% to 8.3%, prevalence among women has dropped modestly, from 17.8% to 14.3% [6] (Figure 3)².



Source: ZAMPHIA 2016 dataset; ZDHS 2001-02, 2007, and 2013-14 datasets.

Figure 3. HIV Prevalence from 2001 to 2016

There have been modest improvements in knowledge regarding HIV prevention and condom use among those with two or more sexual partners (Table 4). The biggest general improvement has been the 8.3 percentage point increase in condom use among women with two or more sexual partners, compared to men who just increased use by 0.6 percentage points since the 2013 ZDHS.

² Note the 2018 ZDHS Key Indicators report did not include HIV prevalence. The most recent HIV prevalence estimates are from the 2016 ZAMPHIA study at this time of this report.

Table 4. Knowledge of HIV Prevention and Higher Risk Sex

ZDHS Question	2013 ZDHS	2018 ZDHS	Percentage Point Change
Knowledge that using a condom when a person has sexual intercourse can reduce the risk of contracting HIV.	Women: 82% Men: 85%	Women: 83% Men: 87%	Women: +1 p.p Men: +2 p.p
Comprehensive knowledge of HIV prevention among those aged 15-24	Women: 41.5% Men: 46.7%	Women: 42.6% Men: 40.6%	Women: +1.1 p.p Men: -6.1 p.p
Condom use during last sexual intercourse among those with 2+ partners	Women: 29.7% Men: 27.4%	Women: 38% Men: 28%	Women: +8.3 p.p Men: +0.6 p.p

SNAPSHOTS OF SRH & HIV PRODUCTS & SERVICES IN ZAMBIA

From the 2013 to 2018 ZDHS, contraceptive use among married women increased from 49.0% to 49.9% and modern contraceptive use increased from 44.8% to 47.5%.

Injectables and implants have been the fastest growing family planning products since the 2013 ZDHS. Male condom use has been dropping, particularly among unmarried women (**Table 5**). Female sterilization, lactational amenorrhea method, standard days method, and female condoms comprise the remaining modern methods at around 2% (this has remained relatively unchanged).

Table 5. Summary of most commonly used modern family planning methods

Product	2013 ZDHS	2018 ZDHS	Percentage Point Change
Oral contraceptive	Married: 11.8% Unmarried: 8.8%	Married: 7.6% Unmarried: 5.0%	Married: -4.2 p.p Unmarried: -3.8 p.p
IUCDs	Married: 1.2% Unmarried: 0.3%	Married: 0.7% Unmarried: 0.6%	Married: -0.5 p.p Unmarried: +0.3 p.p
Implants	Married: 5.5% Unmarried: 3.0%	Married: 7.9% Unmarried: 8.8%	Married: +2.4 p.p Unmarried: +5.8 p.p
Injectables	Married: 19.3% Unmarried: 13.7%	Married: 24.6% Unmarried: 20.7%	Married: +5.3 p.p Unmarried: +7.0 p.p
Male condoms	Married: 4.0% Unmarried: 10.9%	Married: 3.0% Unmarried: 6.8%	Married: -1.0 p.p Unmarried: -4.1 p.p

Since the 2013 ZDHS, there have been big improvements in the coverage of HIV testing (**Table 6**).

Table 6. Summary of HIV testing coverage

Product	2013 ZDHS	2018 ZDHS	Percentage Point Change
Percentage who know where to get an HIV test	Women: 95.5% Men: 96.0%	Women: 96.0% Men: 96.1%	Women: +0.5 p.p Men: +0.1 p.p
Percentage ever tested	Women: 80.2% Men: 64.0%	Women: 86.9% Men: 77.9%	Women: +6.7 p.p Men: +13.9 p.p
Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Women: 46.2% Men: 36.5%	Women: 64.1% Men: 52.0%	Women: +17.9 p.p Men: +15.5 p.p

The subsequent section describes the landscape of SRH and HIV products and services in Zambia including their demand, unmet demand, supply dynamics, price, willingness to pay among consumers (based on the PSA Consumer survey) and other findings of note. The following products were explored under this assessment:

- Male condoms
- Female condoms
- Long-acting reversible contraceptives (LARCs): IUCDs & Implants
- Injectables
- Oral contraceptives (OCs)
- Pre-exposure prophylaxis (PrEP)
- Antiretroviral therapy (ART)
- HIV Testing and Counselling (HTS) and other STI Testing
- Self-test kits (HIV and other STIs)
- Voluntary medical male circumcision (VMMC)

MALE CONDOMS

Demand & Unmet Demand

Awareness of male condoms is nearly universal (99%), however, utilization remains low [2]. As of the 2018 ZDHS, only 3% of married women, and 6.8% of unmarried women use male condoms as their primary method of family planning [1]. 83% of women and 87% of men report knowledge that using a condom can reduce the risk of contracting HIV, but among those with 2+ partners in the past 12 months, only 38% of women and 28% of men used a condom during their last sexual intercourse [1]. Educational attainment and wealth were associated with higher condom use [1] among those with 2+ partners in the past 12 months. Based on the 2017 National AIDS Strategic Framework (NASF) Zambia only meets 23% of condom need [7].

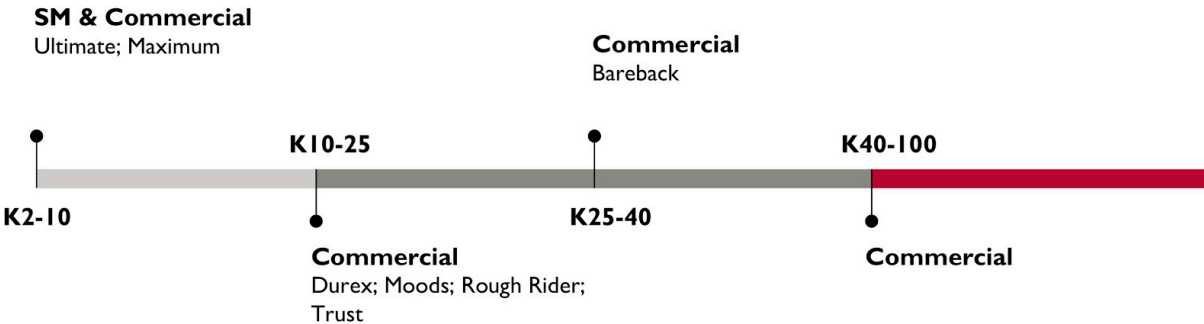
Supply

Male condom distribution increased from 34 million in 2013 to 66.5 million in 2015 and then scaled back to 59 million in 2016 [7]. This was unexpected given the departure of the socially marketed brand, Maximum, in 2015. Although no market data is available, the commercial market share is estimated at 5% [8]. Public sector, socially marketed (SM), and commercial condoms are available in Zambia:

- **Public sector:** AIDS Healthcare Foundation; Unbranded
- **Socially marketed:** Maximum; Ultimate
- **Commercial:** Durex; Moods; Trust; Rough Rider; Invigra; Ozomen; Ajanta’s Stamina

In the PSA Retailer Survey, all 22 retailers carried male condoms.

Price (3-pack)

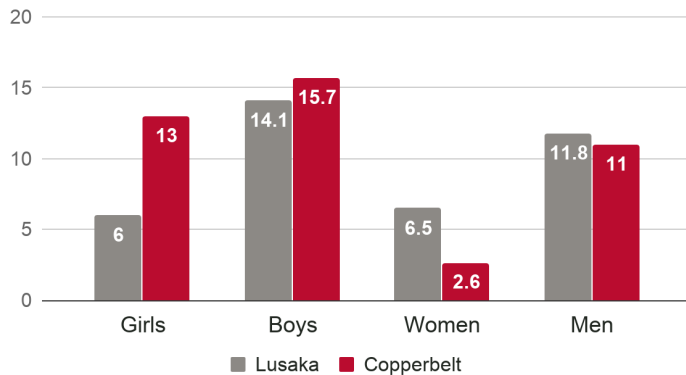


Based on the PSA Retailer survey, most condoms are priced between K2-25. However, there are higher-end condoms available (averaging K55, but can be as high as K100). These higher-end brands typically have some form of differentiation (e.g. flavored or textured) [7,9],[10],[11].

Willingness to Pay (WTP) (3-pack)

The PSA Consumer Survey showed that WTP for a 3-pack of condoms ranged between K2.6 (women in Copperbelt) to K15.7 (boys in Copperbelt). These pilot survey findings were consistent with a recent study that evaluated the WTP for male condoms in Zambia [12]. Zambian respondents were more price sensitive compared to other sampled countries, with only 60% of Zambians willing to pay half the normal price for socially marketed condoms [12]. Note this is already below cost-recovery. WTP was highly correlated with positive attitudes towards freely available condom brands. CHAI noted that people do not necessarily see the need to buy condoms if they are available for free [11].

Willingness to Pay for Male Condoms (K)



Perspectives on WTP

“The price of a condom I don’t know because some of us just get them for free, I don’t know in private facilities how the quality is but just about K5 is reasonable, yah, I think K5 is ok.”



Other Findings

Volatility of Social Marketing

By the end of 2014, there was a large procurement of Maximum condoms by USAID. The brand belonged to SFH but was licensed to DISCOVER-H. Issues around brand ownership resulted in an 18-month procurement lag. During this time other brands entered, and consumers switched to new brands. Maximum, while still popular, is not as popular as it was pre-2014. In 2020 it is expected that Maximum will transition back to SFH from DISCOVER-H [13]. Absence of socially marketed brands opened opportunities for commercial brands.

Issues with Storage

ZAMRA noted that storage is often an issue for condoms. Some private shops do not have proper temperature control [10].

Lack of market data

One of the big issues for commercial distribution is the lack of timely market and distribution of condoms data [7]. This, coupled with a volatile donor climate can make strategic entry challenging for the commercial sector.

Spotlight on Condom Dispensing Units

Condom dispensing units have been proposed as a way to bring products closer to their point of use, especially among higher risk populations. KIIs were conducted with 8 bars/clubs regarding their opinions of condom dispensers and having health promotion material in bars (such as posters). In rural areas, many bars already have free condom dispensers [11], but among bar owners interviewed in Lusaka and Copperbelt, none had heard of this. Key findings included:

- **5/8** bars/clubs already sell condoms (K5 for a 3-pack)
- **4/8** would potentially purchase a dispenser if likely to be profitable
- **7/8** would install dispensers if the machine was given for free
 - The bar/club that would not install it was worried about having machines that hold money (they compared it to jukeboxes) as they could invite theft
- **Theft, vandalism, stocking, and maintenance** were the most common concerns

Beyond dispensers and posting health promotion posters (all said they would be happy to display such material), no establishment thought that bars/clubs were appropriate channels for health promotion as “people are distracted” or “it could scare customers away”.

Perspectives among adolescents

Adolescents boys and girls both acknowledged that dispensers would potentially be used. However, they also noted that in some areas such as Universities and in health clinics, free condoms are readily available, so there may not be need for dispensers. K5 or less was proposed as a fair price.

Evidence from LMICs

K4D conducted a review of condom dispensers in LMICs [14]. Preliminary evidence regarding their uptake and effectiveness, though limited, is mixed. Key findings include:

- **Common issues:** irregular stocking, vandalism, theft, and poor maintenance. Tokens and/or coin denominations needed for use were an issue in select countries.
- **Public placement was met with resistance** in a number of countries (including India, China, El Salvador, Mongolia, and Jamaica).
- **Preconditions for success** included: maintenance by suitable stakeholders, acceptance that they should be located in public places, wide circulation of appropriate coins, establishment of a workable, long-term financial and managerial framework, and provisions for a repair person

Zambia experience to date

NAC, who has had the most experience in-country installing such dispensers noted that one of the main challenges was agreeing where to place them. SFH echoed this, and said that public placement may not be seen as acceptable. One option to improve accessibility might be to install health vending machines that contain a mix of health-related products such as ORS & Zinc co-packs, sanitary pads, mosquito nets, chlorine, etc. [13].

To date, NAC has distributed 181 condom dispensers across 10 provincial centers and districts in Zambia. From NAC’s point of view, this increased male condom distribution (female condom distribution remained comparatively low). Currently, there is no last mile condom distribution mechanism, and this increases distribution at community level, not just health facilities. Beyond placement, the main challenge in distributing condom dispensers was the issue of transportation from Lusaka to other provinces.

FEMALE CONDOMS

Demand & Unmet Demand

In the 2018 ZDHS, female condom use was reported under the ‘other modern method’ category, along with other uncommonly used primary family planning methods (male sterilization and emergency contraception). This category accounted for only 0.1% (married women) and 0.9% (unmarried women) of family planning methods [1].

Female condoms are not considered popular products, and many organizations have struggled to move them [15]. This can be attributed to declining donor funding for female condoms, resulting in less demand creation, low availability, and higher manufacturing costs relative to other methods [16].

However, research shows strong evidence that female condoms can increase the number of protected sex acts and decrease transmission of STIs within a population [16]. They are the only woman-initiated contraceptive that offers triple protection against unintended pregnancy, HIV, and other sexually transmitted infections (STIs) [16].

Perspectives on female condoms

“Those things are hard to wear, people don’t use them, they are difficult to use, people are getting more male condoms than the female condom, and people say they are difficult to wear, they are hard to insert something like that”

“I don’t know if it’s just me but I feel female condoms are not readily available and so people don’t know how to use them...People are not knowledgeable about female condoms”



Supply

Female condoms have historically been available for free in the public sector (FC2) and socially marketed (Care & Maximum Diva). The Maximum Diva was released in urban outlets in Lusaka from 2016-2018. A total of 98,408 units were socially marketed. No commercial female condom is currently available [16] and due to the close of programs such as PRISM (SFH) and EECO (USAID), there is currently no donor-funded social marketing project supporting female condoms.

From 2008 to 2015, public sector distribution increased, but has stayed relatively stagnant since 2015. Socially marketed female condom distribution sharply declined since 2008 [16]. Donor funding for female condoms has declined, resulting in decreased access and availability.

In the PSA Retailer survey, half of retailers (N=11) carried female condoms. All other retailers reported not stocking them due to low demand.

Price (3-pack)

There are four WHO/UNFPA prequalified female condoms [16]. In the PSA Retailer Surveys, female condoms ranged from K5-K15. Note these can also be accessed in some areas for free.

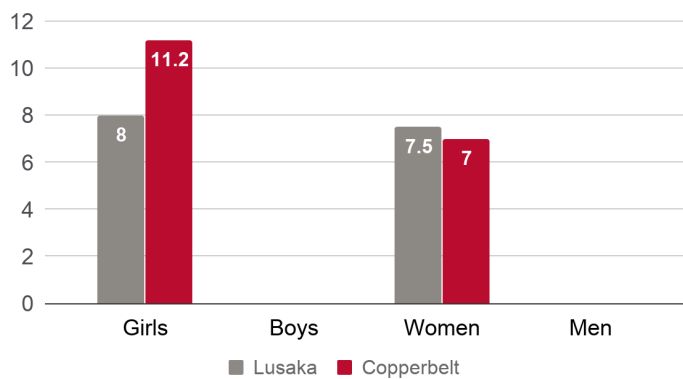
It is important to note that unit costs of female condoms are significantly higher than male condoms, and can be very cost-prohibitive if not highly subsidized/free [16,17]. This is unlikely to change unless economies of scale can be achieved through demand creation and manufacturing equipment efficiencies [16].



Willingness to Pay (WTP) (3-pack)

The PSA Consumer Survey showed that WTP for female condoms ranged between K7 (women in Copperbelt) to K11.2 (women in Lusaka). This generally aligns with the prices of female condoms. In focus group discussions however, women expressed a lower WTP.

Willingness to Pay for Female Condoms (K)



Perspectives on WTP

“50 ngwee, since those are free.”

“I personally do not know because we have no clue how much condoms are, we know about the free ones at the clinic.”



Other Findings

Product Quality & Design

Maximum Diva Woman’s Condom introduced a new design made from non-latex, transparent polyurethane film, much softer and thinner, and with features including a small rounded cap to ease insertion, slightly higher price point, and was being marketed towards urban millennials. Similarly, following a human-centered design process led by PATH, SFH sold the entire stock through pharmacies at a subsidized price [13,16].

Data and Donors

The total market assessment of female condoms highlighted that in Zambia, there is a need to diversify the market to include options outside of free distribution [16]. However, donor commitments to female condoms are unclear which poses challenges for quantifying and forecasting future market dynamics. Furthermore, data limitations make it difficult for private actors to assess the market opportunities for female condoms, and consequently appropriately target consumers.

LONG ACTING REVERSIBLE CONTRACEPTIVES (LARCS)

Demand & Unmet Demand

Intrauterine Contraceptive Devices (IUCDs) (hormonal and copper), despite being among the most effective methods of reversible birth control, have not traditionally been available or utilized in developing markets. As of the 2018 ZDHS, 0.7% of married and 0.6% of unmarried women reported using IUCDs as their primary family planning method. Highest reported use was among women with 5+ children (1.3%) and 45-49 years of age (1.5%). IUCD use was highest in Lusaka (1.6%) and Copperbelt (1.1%) [1]. Concerns about infections and discomfort with insertion are among the reasons they are unpopular.

Implants, conversely, are more common, and growing in use. As of the 2018 ZDHS, 7.9% of married and 8.8% of unmarried women reported using implants as their primary family planning method. This represents a 2.4 and 5.8 percentage point increase, respectively, since the 2013 ZDHS.

Marie Stopes noted that the most intense unmet need is among LARCS [2,15,16].

Supply

The supply of LARCS depends on both the availability of the product and qualified staff for insertion. For example, a 2016 market assessment found only 2/34 facilities in Lusaka and Ndola offered insertions of IUCDs (one private and one social franchise). Mirena, a high-cost product can be purchased through some private clinics and select pharmacies. In addition, Medicines360 developed an affordable hormonal IUCD option, registered in April 2018 under the trade name “Avibela” [18]. Up to 2016, hormonal IUCDs were not available through the public sector, however, they were available to a limited extent through the private sector [19]. From 2016-2018 USAID’s EECO project piloted the LNG-IUS, a hormonal IUCD with a number of non-contraceptive benefits that appeared to be important differentiators for potential consumers. The LNG-IUS was made available in the public sector for free. Marie Stopes carries most of the brands registered in country including Jadelle, Implanon, Level plant, and a copper IUCD; Jadelle is the largest mover. They stopped carrying Mirena due to costs [15,20].

Noplant is the most popular implant, and can be accessed for free in the public sector [11][15][20]. As of the 2013 ZDHS (2018 ZDHS estimates unavailable), implants were accessed through the public (96.7%) and the private sector (3.1%).

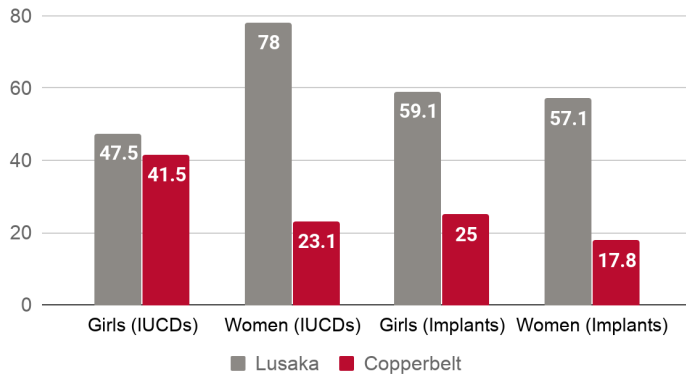
The findings from the PSA Retailer survey were consistent with this. None of the surveyed retailers carried hormonal IUCDs, copper IUCDs, or implants. Lack of trained staff was the most common reason for not carrying the products, followed by low demand and nature of the facility.

Price

Prices for both the product and insertion ranged widely [19]. At the lowest end, Marie Stopes offers some IUCDs and implants for free and charge K110 for insertion/removal. Implants are estimated at K100. Some private clinics charge up to K4000 for an IUCD plus K600 for insertion.

Willingness to Pay (WTP)

Willingness to Pay for IUCDs & Implants (K)



The PSA Consumer Survey showed that WTP for IUCDs ranged from K23.1 up to K78 and for implants ranged from K17.8 to K59.1, among adolescent and adult women. This is well below cost-recovery for IUCDs and below general insertion fees, even at providers like Marie Stopes.

Other Findings

Hurdles for Private Participation

Due to the higher cost of LARCs, in particular IUCDs, very few clinics/facilities are willing and able to invest in the appropriate training and equipment to safely insert (and remove) these devices. Furthermore, this is reinforced by the type of demand generation in family planning in Zambia. ZMA notes:



“Most advocacy and messaging is also around short-term FP, so clients come in asking for short-term FP rather than LARCs”
(KII with Professional Organization, April 2019).

When users do purchase them, they tend to go to pharmacies or access them through organizations like Marie Stopes, however, service fees can be a large deterrent.



“Users tend to purchase them at the pharmacy and then take them to the private clinic for insertion. Same story with implants” (KII with CHAI, April 2019).
“Specialized person in private sector may charge exorbitant fee for insertion”
(KII with NGO/Donor funded program, April 2019).

Therefore, at least for private clinics, there is a general preference for short-term family planning methods rather than LARCs [20], so that even if individuals procure their products elsewhere, consultations are more frequent, enabling clinics to earn through service fees.



“There has to be reasonable turnover for private clinics to invest and maintain provider skills. It’s not worth it if there is one woman a month. In order to maintain a certain level of proficiency in a particular service, there needs to be a certain number of women seeking that method, otherwise that proficiency is lost, hence the focus on the pill and injectables rather than implants and IUDs”
(KII with NGO/Donor funded program, April 2019)

INJECTABLES

Demand & Unmet Demand

Injectables are the fastest growing family planning method in Zambia [2,8,20]. As of the 2018 ZDHS, 24.6% of married and 20.7% of unmarried women use injectables as their primary form of family planning [1]. This represents a 5.3 and 7.0 percentage point increase since the 2013 ZDHS--the biggest change among modern methods.

Supply

The private sector and social marketing brands only play a very small role in the injectables market. As of the 2013 ZDHS, the majority of women accessed through government clinics and health centers (86.4%) and government hospitals (5.8%) (more recent data unavailable). Only 5 of 22 retailers in the PSA retailer survey carried an injectable (Depo-Provera®).

The most common injectable is Depo-Provera® [10,11,15], which is procured by the GRZ and donors, and accounts for 93% of the injectables market. What remains of the market is almost entirely through private sector facilities, including private hospitals (2.0%) and mission hospitals (2.4%).

Its sole manufacturer, Pfizer, however, is experiencing production constraints. Production is to restart in 2020. Mylan's generic injectable (DMPA-IM) received WHO Prequalification in 2018 and has now entered into long-term contracts both with UNFPA and USAID; production is racing to keep up with Depo-Provera® shortage. Mylan's DMPA-IM has a shelf life of 2 years (compared to 3 for Pfizer); the goal is to update the shelf life to 3 years next year.

At the same time, USAID began making plans in 2018 to distribute a self-injectable form (DMPA-SC), under the brand name Sayana® Press through private sector channels, including 150 private hospitals and clinics in Lusaka and Kitwe, 150 private pharmacies, and through trained community-based distributors. Pfizer has indicated that they will prioritize the production of Sayana® Press over Depo-Provera®.

Price

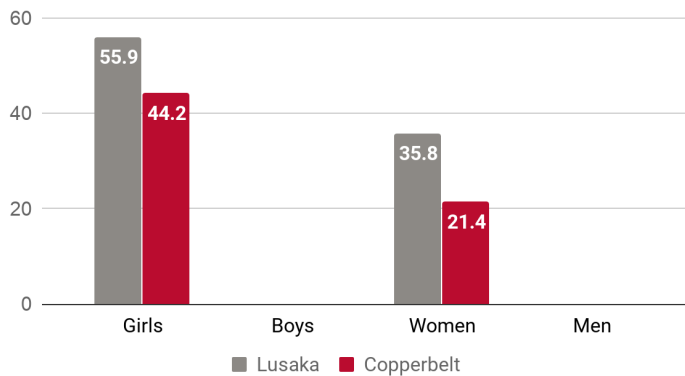
Most women access injectables for free through the public sector. Of the 5 retailers in the PSA retailer survey that carried the product, all sold it for K30. Marie Stopes charges K50 for short term methods (including injectables). More information is required from other clinics.

Perspectives on Price

When asked about potential pricing for self-injectables (i.e. Sayana® Press), SAFE was concerned that the country is moving toward free distribution, but “it should not be the case” [21]. Marie Stopes cautioned, however, that price for self-injectables would have to be low since family planning is not covered by insurance [15,21].

Willingness to Pay (WTP)

Willingness to Pay for Injectables (K)



The PSA Consumer Survey (2019) showed that WTP was higher among young women in both Lusaka and Copperbelt (K44.2-K55.9) compared to K21.4 to K35.8. Given that 70 percent of all injectable contraceptive users are between the ages of 20-34 in Zambia, this finding is unsurprising [8].

Other Findings

Opportunities for clinics and pharmacies

Sayana® Press has potential in the eyes of multiple stakeholders [13,15,21]. Currently injectables can be purchased in private facilities and some retailer pharmacies, and pharmacies have been responsive to this demand [10], although they cannot yet administer them [8]. Private for-profit hospitals can access free public sector injectables and just charge the client service fees. The challenge ahead will be ensuring that the free injectables offered in the private sector will not crowd out the private market for Sayana® Press.

Opportunities for closing unmet demand among young women

As noted above, injectables are highly popular among young women. FGDs with young women provide insights into why this method is so popular (May 2019):



“With pills, most people tend to forget because you have to take the pill at the same time, you don’t have to miss the time, you don’t have [to] miss a day, because when you miss a day or miss or drink at a different time, you are likely to fall pregnant. But for an injection, once it is given to you like for three months, you just have to get it once, then you know the next time you have to go, after three months again”



“And I feel that..., the other reason is that, when you talk about our peers ...yeah, most of [us] are being kept homes and if mum finds contraceptives, she will think this girl is sleeping with a man ...I don’t want people talking and what not, so what I will do is, I would rather go for an injectable where she will not know that this person is actually on family planning”.

ORAL CONTRACEPTIVES (OCs)

Demand & Unmet Demand

The use of oral contraceptives (OCs) has been decreasing steadily. As of the 2018 ZDHS, 7.6% of married and 5.0% unmarried women reported using OCs as their primary method of family planning. This represents a 4.2 and 3.8 percentage point decrease, respectively, since the 2013 ZDHS. OCs are significantly more common among urban dwelling women (10.7%) compared to rural dwelling (5.6%), and those in the highest wealth quintile (13.8%) compared to the lowest 4.1%.

One type of OC that has been increasingly popular among lower income women is the “Chinese Pill” (see “Spotlight on Chinese Clinics” below) [10,21]. This is a low cost, one a month pill, unapproved by ZAMRA. The exact scale of its use is unknown.

Supply

As of the 2013 ZDHS, while 60.6% of OCs were obtained through the public sector, 16.6% were obtained through private sector facilities and 22.7% were obtained through other sources [2] (More recent data unavailable). Shops (22.4%) and private pharmacies (12.7%) made up the largest share of distributors. Public sector, socially marketed (SM), and commercial OCs are available in Zambia:

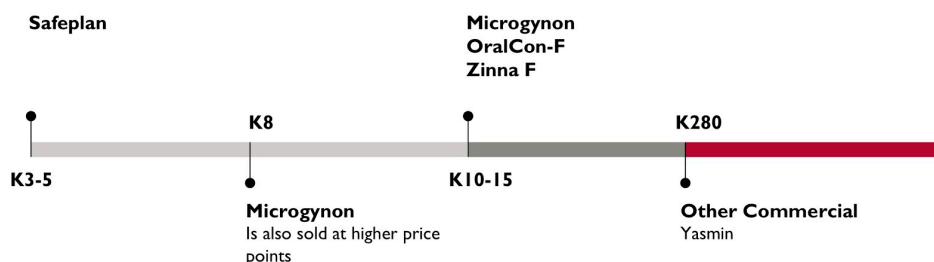
- **Public sector:** Microgynon; Oralcon-F
- **Socially marketed:** SafePlan
- **Commercial:** Yasmin; Yaz

SafePlan was the most popular brand at the time of the DHS 2013-2014 [2,8,10,21] and was distributed through commercial channels and private facilities and clinics. Microgynon and Oralcon-F were the second and third most popular brands, comprising 19.7% and 27.9% of the market, respectively [2,8]. Both are distributed through public and private sector facilities and private pharmacies. A small number of commercial brands, such as Yaz and Yasmin, are sold through private pharmacies, but are mainly targeted at high-end consumers [8]. It is estimated they make up 2% of the market.

18 of 22 retailers surveyed under the PSA Retailer survey carried OCs (SafePlan, Microgynon, Oralcon-F, and Zinna F).

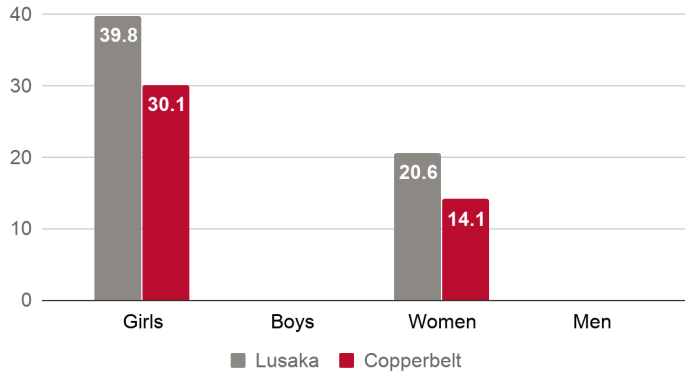
Price (3-Pack)

18 of 22 surveyed retailers carried OCs. They ranged from K3-K15. PSZ noted that higher price points OCs are available in select retailers.



Willingness to Pay (WTP)

Willingness to Pay for Oral Contraceptives (K)



The PSA Consumer Survey showed that WTP was higher among young women in both Lusaka and Copperbelt (K30.1-39.8) compared to adult women (K14.1-20.6).

Other Findings

Mixed perspectives on expanding OC distribution

There are mixed opinions regarding the role of OCs in filling unmet family planning needs, particularly with the rise of injectables. A Professional Organization (April 2019) noted that OCs faces the barrier of being a drug you have to take every day, and do not see an opportunity for the private sector since money has to be made in the service (product is free). A Private Enterprise noted SafePlan was not one of their high sellers since it requires training to sell. They mostly sold it when contraceptives at health centers ran out (e.g. of Microgynon) (April 2019). A Regulatory Organization, however, noted that individuals do go to pharmacies directly for refills and advice rather than going back to GPs, providing opportunities for pharmacy-based family planning delivery. A Professional Organization also noted that when women decide to switch away from a contraceptive (e.g. due to side effects), they often opt for oral contraceptives.

PRE-EXPOSURE PROPHYLAXIS (PrEP)

Demand & Unmet Demand

PrEP has recently rolled out in Zambia. The estimated number of current PrEP users is 3,500-4,000 with 8,647 targeted by PEPFAR [22]. EQUIP and PEPFAR are targeting key populations including adults and adolescents at risk of HIV infection. This includes commercial sex workers (CSWs). DREAMS is targeting adolescent girls and young women. Provision through EQUIP is coupled with contraception. Based on EQUIP experience, PrEP is popular with adolescents and young adults (19-29) which make up the bulk of their clients (~90%). Most are female and unmarried. Older users are typically serodiscordant couples. In the FGDs, young women in Lusaka and Copperbelt expressed that their peers would likely be interested in PrEP:



“For them they think like, okay I am secured, you know, I would be on these drugs and then literally sleep with anyone and, you know, like certain guys would refuse for you to use a condom. So once they take the PReP drug, they will be like, okay it’s fine we don’t have to use a condom, I am secured, I won’t get infected or get the infection even if you are infected.”

Conversely, among the adult women, concerns came up about having to take a daily pill even if uninfected. There was also indication that demand decreased amongst some users once they realized that PrEP was a daily course of ARVs.

Private providers report that they have not had many people requesting PrEP [23].

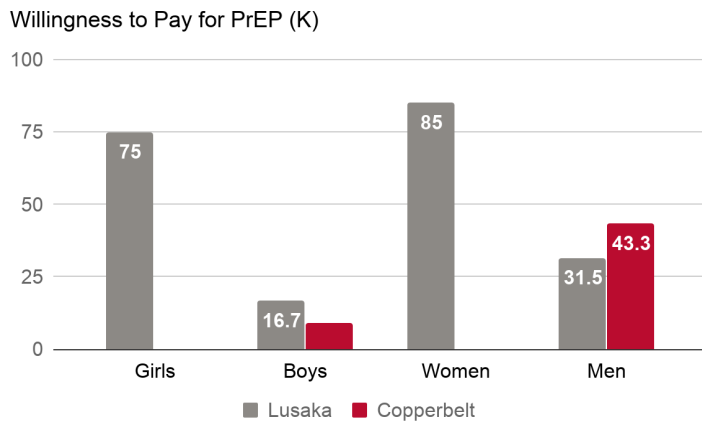
Supply

The government indirectly supports PrEP through cooperating programs such as CIDRZ, UoM, and EQUIP [11]. It can be accessed through the public sector and some NGO/donor funded programs [23]. Two types are approved: Gilead's Truvada (TDF/FTC) and the generic versions of TDF/FTC [22]. There is an ongoing demonstration project through PEPFAR providing PrEP to adults and adolescents at risk of HIV infection. An NGO noted that if the private sector could pick up PrEP, they could get a lot of business from key populations (April 2019).

Price

Currently PrEP is distributed for free in the select sites that offer it; therefore, market prices were unavailable, and it is not being sold in the private sector at this time. However, the cost of PrEP is very high. EQUIP estimated that a non-variable annual cost of providing PrEP to one person (in 2019 USD) would be approximately \$250 USD (K3300).

Willingness to Pay (WTP)



The PSA Consumer Survey showed that WTP was extremely scattered among age groups and districts with no obvious pattern. Too few adolescents and adult women were familiar with PrEP to generate a WTP. These heterogeneous findings signal that different approaches may have to be adopted to generate more meaningful estimates (see “Limitations”).

Other Findings

Marketing & Moral Hazard

In April 2019, awareness campaigns regarding PrEP rolled out and were met with a mixed response. Some organizations were concerned that the messaging may lead individuals to believe they are completely protected, and not adopt other safer sex practices. This occurred around messaging on VMMC and PEP as well [15]. One of the main concerns was use of celebrities. ZAMRA noted that use of celebrities is okay for social marketing sexual health generally, but not specific products [10].

During the FGDs (May 2019), multiple adolescent and adult women recalled seeing advertisements on Facebook and flyers regarding PrEP.

Guidelines on PrEP provision

Despite the availability of national guidelines, many stakeholders noted that policy guidance on PrEP provision was needed. This signals that awareness of these guidelines is low and/or the guidelines are insufficient.

There is a required 3-day training to distribute PrEP [11]. It is important that health providers ensure recipients are careful about adherence and are aware that they remain vulnerable to other STIs.

PrEP offers unique opportunities for addressing the needs of high-risk populations. However, due to stigmatization, such populations are reluctant to identify themselves. Universal coverage of PrEP to circumvent this issue may not be feasible long-term. Since PrEP is so expensive, it is unclear yet how the government will prioritize its provision and which sites should be targeted for distribution [24].

ANTIRETROVIRAL THERAPY (ART)

Demand & Unmet Demand

Knowledge of ART is nearly universal, with over 96% of men and women surveyed as part of the ZDHS 2013-2014 responding that they had heard of ART [2] (2018 ZDHS unavailable). Among youth, awareness of status is a larger problem than not receiving ART, however, older youth aged 20-24 are less likely to be receiving ART when aware of their status than their younger counterparts aged 15-19. Among girls aged 20-24, 26% aware of their status are not receiving ART, while that figure among boys is 24% [6]. 9.6% of men aged 15-49 living with HIV are aware of their status and not on ART [6].

Supply

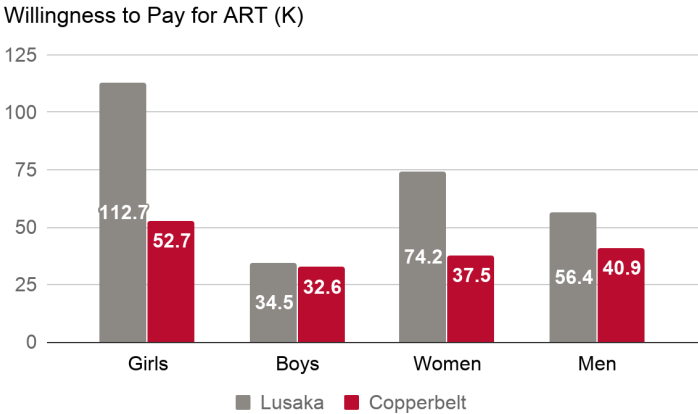
ART is available through the public sector for free, which proves a significant barrier to providing HIV-related services through the private sector. A study of private sector actors in Central Province found that while 12 out of 15 private sector facilities assessed provided HIV testing services, only 3 (20%) provided ART [25].

The government has partnered with a number of private clinics to provide ART. They provide commodities (ARVs) for free to the private sector, however private clinics will charge a dispensing fee. According to an MoU with the government, the dispensing fee is fixed at around \$2.00 USD (~K25) [11]. Dispensing fees are Insurance covers the dispensing fee for ARVs [23].

Price

ART is available from the public sector for free; and if accessed through the private sector, usually just a dispensing fee is charged. ART, however, is very expensive. A wide range of prices were shared by stakeholders from K40 to K1850 per month [9,23].

Willingness to Pay (WTP) (Consultation & 1-month of ARVs)



The PSA Consumer Survey (2019) showed that WTP was generally higher in Lusaka than Copperbelt, and was extremely high among girls in Lusaka. It is possible that a large proportion of the sample were HIV positive thereby increasing their WTP. Unfortunately, the survey could not ask this question directly to verify. However, despite this being free in the public sector, WTP was still above the quoted dispensing fee.

Other Findings

Solutions for public sector crowding

ART in of itself is extremely cost-prohibitive, particularly for vulnerable populations. It is unlikely that a shift to the private sector is feasible for most consumers. However, there is an opinion that since the public sector is overcrowded, private provision of ART should expand [21], whereby just like now, private facilities just charge dispensing fees.

A similar complementary approach is centralized dispensing units (CDUs) which are currently being piloted. These CDUs are premised on having a central pharmacy that receives 3-6-month ARV prescriptions from 15 different facilities within a region. The CDU prepares the script and dispenses ARVs through a network of private pharmacy pick-up points. Patients identify their preferred pick-up points, and are then informed by telephone where and when their prescriptions will be ready. Pick-up point pharmacies charge a small pick-up fee (\$2 USD or ~K25). Adaptation of the model for rural areas may involve partnering with health shops or health posts. This is one example of how the GRZ can leverage third-party delivery of essential medicines to achieve last mile distribution and increase private sector participation more generally. EQUIP noted that the private sector would be keen to get involved in the distribution of ARVs.

HIV TESTING & COUNSELLING (HTS) & OTHER STI TESTING

Demand & Unmet Demand

Knowledge of HIV testing services (HTS) in Zambia is nearly universal, with around 96% of both men and women surveyed stating that they knew where to get an HIV test [1]. Youth were among the least aware of where to get an HIV test, however, awareness was still very high. 93.2% of girls and 92.1% of boys aged 15-24 nationwide knew where to get an HIV test [1]. 64.% of women and 52.0% of men reported being tested for HIV in the past 12 months *and* receiving the results of their last test This represents a 17.9 and 15.5 percentage point increase since the 2013 ZDHS.

Targeted and strategic testing is required based on the gaps that have been highlighted in the ZAMPHIA study including males, those who were never married, and youths aged 15-19 years [6]. Use of male champions, as well as introducing HTS at locations where men seek STI testing, VMMC, and blood testing has improved uptake within the country [26].

Self-reported STI rates are slightly higher among urban than rural residents (2.3% vs 1.9% among women, 4.4% vs 3.5% among men). Self-reported STI rates among men are higher in Lusaka (4.8%) than the average for the country as a whole (3.9%), but slightly below average in Copperbelt Province (3.4%). Self-reported STI rates among women are about average in both Lusaka (1.9%) and Copperbelt Province (2.1%) compared to the national average (2.1%) [2].

The GRZ's 2017-2021 National Health Strategic Plan (2017) notes that curable STIs continue to represent a large burden of disease in Zambia, accounting for about 10% of out-patient department attendances. The actual incidence must be much higher considering that many STI clients seek care with private clinics and traditional healers where they feel more assured of privacy and confidentiality. Synergy between STIs and HIV is underscored by a significantly higher HIV prevalence among STI clients (36%) compared with a national prevalence rate of 14.3%. Controlling STIs is therefore a high priority for the country.

Supply

HTS are provided widely through both public and private facilities, with a recent assessment of private health sector facilities in Central Province finding that 80% of those facilities provided HTS. HIV testing services were part of the routine menu of services for the majority of private health facilities assessed (n = 15) in an assessment conducted by SAFE. This said, some issues in appropriate delivery remain. SAFE noted that Standard Operation Procedure (SOP) and IEC material on HTS were challenges. For example:

- 80% of facilities providing routine HTS - 80%
- 73% of facilities with trained HTS providers
- 40% of facilities with SOP for HTS - 40%
- 13% of facilities with IEC materials on HTS
- 40% of facilities integrating condom demonstration, promotion and distribution in HTS

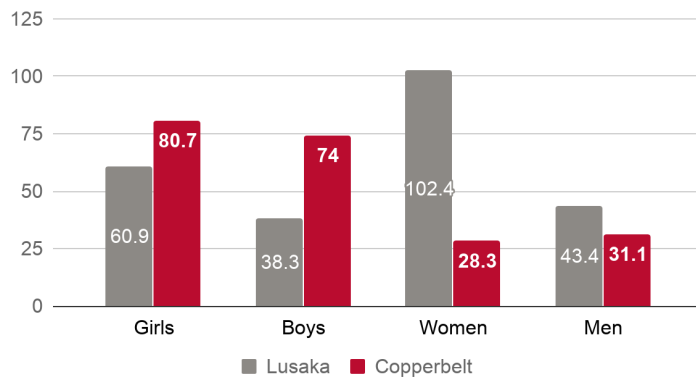
Public and private facilities provide other STI testing as well.

Price

HIV testing can be extremely expensive. A Professional Organization estimated that in the private sector, just the labs alone could range from \$50-\$100 USD (K650-K1300) (April 2019). A Private Hospital reported the following: HIV test (K55), CD4 count (K55), chemistry (K405) and noted these are subsidized and performed in their own lab. The viral load test is K430 (and is outsourced), consistent with estimates provided by others. HIV testing is covered by insurance (KII with Private Hospital, April 2019). Estimates for other STI testing are not available at this time.

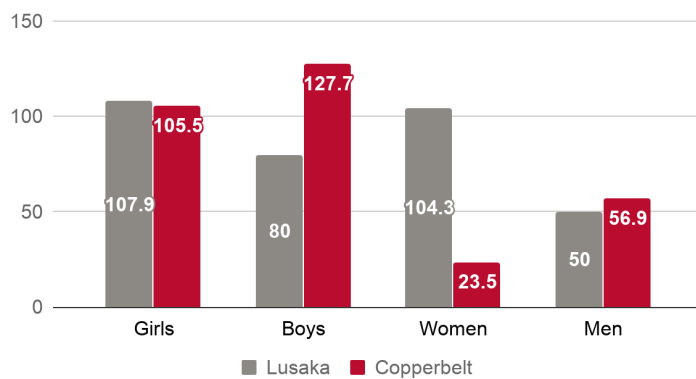
Willingness to Pay (WTP)

Willingness to Pay for HTS (K)



The PSA Consumer Survey (2019) showed that WTP was generally higher in Copperbelt than Lusaka among adolescents, but opposite for adult women and men. Again, this may be attributed to a large proportion of the sample being HIV positive thereby increasing their WTP. Unfortunately, the survey could not ask this question directly to verify.

Willingness to Pay for Other STI Testing (K)



Generally, WTP for other STI testing was higher than the WTP for HIV testing. PSA Consumer Survey showed that WTP was generally higher in Copperbelt than Lusaka among adolescents and men but opposite for adult women. The high WTP is a little surprising, but likely explained by sample characteristics.

HIV SELF-TEST KITS & STI SELF-TEST KITS

Demand & Unmet Demand

As noted above, HIV and STI testing rates are fairly low in Zambia, particularly among young people. One of the most cited reasons for low testing is concern around confidentiality, stigma, and crowding, opening potential for addressing unmet demand through self-test kits.

Supply

Self-test kits are still fairly sparse in Zambia. ZAMRA allows kits to be sold through pharmacies (primarily oral kits). A Private Enterprise (April 2019) noted that “the oral kit is definitely more user friendly and appealing, as it is less intimidating than pricking oneself.” Some pharmacies sell plasma-based tests, however, the MoH and ZAMRA may be unaware of this [11]. During the FGDs women noted that their University distributes kits for free (FGD with women in Lusaka, April 2019).

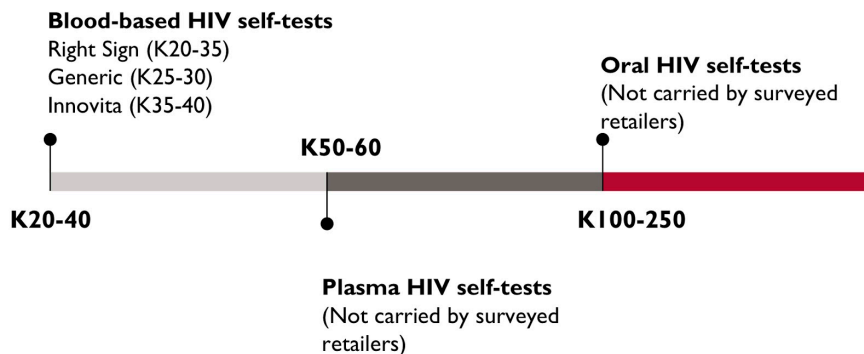
A Regulatory Organization (April 2019) noted that from a regulatory point of view, pharmacies dispensing self-test kits is challenging. Hospitals and clinics want pharmacies to have to go through some sort of accreditation process to be allowed to sell self-test kits. HPCZ as well has requirements regarding how such kits should be disposed and want shops to meet standards as well [10].

Private enterprises and distributors Orasure HIV self-test kits in Zambia, have attempted to distribute kits through local private sector channels like pharmacies, but report procurement costs as a key barrier to entry, citing higher costs for private sector players vs. public sector/NGOs. Orasure provides a subsidized cost for kits going into the public sector, but not for the private sector. A private enterprise interviewed notes that the price differentials can be as high as 60-75%, and so the market has not been properly tested yet. Furthermore, despite being a private sector player engaged in the HIV self-test kit space, a private enterprise noted there was a limited appetite to do much more, because the government has not done enough with regard to raising awareness and demand (with the exception of some billboards in Lusaka, Ndola and Kitwe). They highlighted that roll-out campaigns are planned to encourage the concept of self-testing, and that this may help [27].

Among surveyed retailers, 9/22 carried HIV self-test kits (Innovita, Right sign, and generic) and 6/22 carried other STI self-test kits (Biozek, one step, ST Bioline, Right sign, and generic).

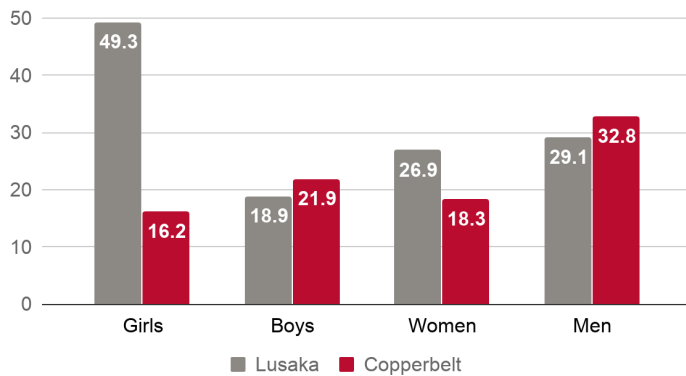
Price

Among surveyed retailers, HIV self-test kits ranged from K20-K40. It was reported by Axis Solutions that HIV self-tests can cost as much as K250. Among surveyed retailers, STI self-test kits ranged from K25-40.



Willingness to Pay (WTP) for HIV self-test

Willingness to Pay for HIV Self-Test Kit (K)



The PSA Consumer Survey only evaluated willingness to pay for HIV self-test kits. WTP was generally highest among young women in Lusaka. Other WTP amounts were below (or close) to some of the less expensive blood-based options. With respect to WTP, a Private Enterprise noted: “We have 10, 20, 50 and 100 kwacha notes. Once you talk about 100 kwacha notes, it is seen as a lot in the minds of many. [27]”

Other Findings

Private sector interest

A number of stakeholders stated that self-test kits could be a huge opportunity (KIs with CHAI, SAFE, SFH, April 2019). CHAI reported that in Namibia, more tests are coming from the private sector than from the public sector. SAFE see potential for kits to be marketed commercially, and SFH for social marketing, provided better branding strategies are adopted.

What about counselling?

The main issue that arose among stakeholders and consumer groups was concern about counselling. For this reason, an NGO said that the MoH is unsure what their official position is on self-test kits [15]. LiveWell said they had been approached to see if HIV/STI self-test kits would be something they would carry, and too noted concerns about counselling.



“When they test me, maybe, we will just be the two [of] us in the testing room, since they are counselors, they will counsel me about my status, saying “since your status is found to be this way, it is not the end of the world”. They will advise me on how to take care of myself and what to do but when I test myself, I will not counsel myself because I am not a counselor”



“There are counselors at the hospital once you get tested maybe you find that uuh you are positive they will counsel you they will encourage you to accept the situation, they will tell you that there is life beyond what has happened, but if I test myself and find that I am positive..., but if there is no one to help me, I can easily go out there and spread the disease, and even thinking of killing myself”

Linkage to care & data capture

Some stakeholders were concerned that self-test kits may result in missed opportunities for ensuring individuals are linked to appropriate care and tracking their progress. There corollary is that their data will not be captured in the HIS, which also makes population-level surveillance more challenging.

VOLUNTARY MEDICAL MALE CIRCUMCISION (VMMC)

Demand & Unmet Demand

22.2% of men 15-49 have been medically circumcised [6]. Urban men aged 15-59 are more likely to have been medically circumcised than their rural peers (29.2% vs. 14.6%) [6]. Copperbelt Province and Lusaka have above average VMMC rates compared to the rest of the country, at 29.4% and 27.8%, respectively. Individuals with higher wealth or higher levels of education are more likely to have been medically circumcised.

Between 2016 and 2020, Zambia aims to provide VMMC to an additional 1.9 million males aged 10-49 with a particular focus on circumcising young men (aged 15-29), as they will have a significant impact in terms of the number of new HIV infections averted. In 2016, the country achieved 75% of its annual VMMC target. As a result of these efforts, in 2017, around 22% of all adult men in Zambia were circumcised.

ZAMRA explained that demand is proportional to availability of an accredited facility and how much advocacy has been done in the region [10].

Supply

Currently, most VMMC is done by government health centers. Decentralization has improved availability of VMMC services in the public sector. For it to flow into private channels, training would be the key priority [27].

Almost all private sector actors interviewed in the Central Province noted that they procure equipment, supplies, and consumables from private sources, potentially resulting in a prohibitive cost to consumers for VMMC [25]. None of the facilities assessed had a plan to create demand for VMMC and IEC materials; service guidelines and protocols are also lacking.

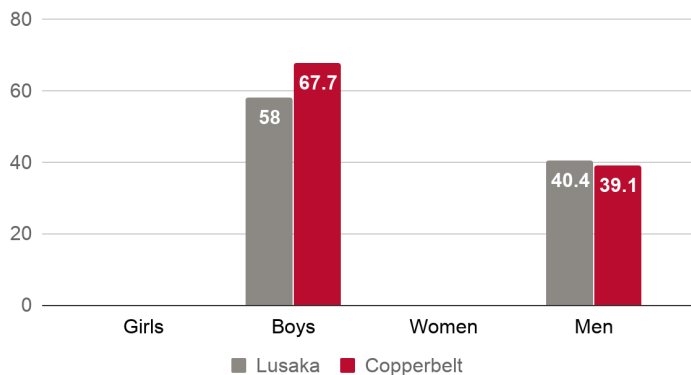
- 26% of private facilities providing comprehensive VMMC services
- 26% of private facilities with trained VMMC providers
- 20% of private facilities have equipment to provide VMMC
- 0% of facilities had IEC materials on VMMC

Price

VMMC is not covered by the insurance companies as it is not seen as 'prevention' [21,23,25]. Estimates of surgery cost was K1000 [23] to K10500 (~\$800 USD) [21,25].

Willingness to Pay (WTP)

Willingness to Pay for VMMC (K)



Perspectives on WTP

“Even with an attached fee, demand is such that it would be utilized. \$10-15 dollars for an operation would be a reasonable fee”

(KII with NGO/Donor funded program, April 2019)

Other Findings

Equipping the private sector

As mentioned above, few private sector facilities have the equipment to provide VMMC nor the skilled staff to perform the procedure. To address this hurdle, SAFE used a model through the district health office which provided a pack that contains the instruments, the gauze, etc., on the condition that the surgery fee is reduced dramatically [21]. HPCZ has developed standards for the accreditation of VMMC.

Marketing

VMMC campaigns appear to have been extremely successful.



“SFH VMMC campaigns have been successful with a variety of lessons learned. What convinced men most were one-to-one conversations with friends or CHWs. A BCC budget supporting TV and mass media was also very effective in creating awareness, but did not convince men to actually seek it out.”

(KII with NGO/Donor funded program, April 2019)

























However, some stakeholders mentioned that messaging around VMMC has been confusing, specifically noting that the concept of ‘risk reduction’ does not translate well, resulting in misconceptions around the effects of VMMC:



“Messaging, awareness and education seem to be central. At some level, the messaging around VMMC seems to have been skewed such that people thought if you were circumcised you could not contract HIV. That’s a very different message from a 60% reduction in risk.”

(KII with Private Enterprise, April 2019)

SUMMARY OF WILLINGNESS TO PAY ANALYSIS BY SUB-GROUPS

Product/Service	WTP			WTP vs. Price
	Range	Lowest	Highest	
Male condoms	K2.6-15.7	 Copperbelt	 Copperbelt	Most are priced between K2-25 (Higher-end average around K55). WTP aligns with price of SM options (below cost-recovery).
Female condoms	K7.0-11.2	 Copperbelt	 Copperbelt	Most are priced between K5-15. Since these are SM/public sector, WTP is below cost-recovery.
IUCDs	K23.1-78.0	 Copperbelt	 Lusaka	Clinics charge up to K4000 for the IUCD. insertions/removal range from K110 (Marie Stopes) up to K6000 (far exceeding WTP).
Implants	K17.8-59.1	 Copperbelt	 Lusaka	Implants are estimated at K100 and Marie Stopes charges K110 for insertion. This is a lower cost option and still below WTP.
Injectables	K21.4-55.9	 Copperbelt	 Lusaka	Retailers sold for K30 (aligning with WTP). Limited information on injection price but Marie stopes charges K50.
OCs	K14.1-39.8	 Copperbelt	 Lusaka	Most SM/public sector ranged from K3-15 (below WTP); commercial as high as K280 (7x max WTP).
PrEP	K9.0-85.0	 Copperbelt	 Lusaka	Annual cost per person is ~K3300; WTP well below cost recovery. Note WTP estimates very noisy (like due to newness of product).
ART	K34.5-112.7	 Lusaka	 Lusaka	Wide prices quoted in the private sector; but as high as K1850), which is 16x WTP.
HTS	K28.3-102.4	 Copperbelt	 Lusaka	Estimates for the consultation and labs ranged from K650-K1300, exceeding WTP.
STI Testing	K23.5-127.7	 Copperbelt	 Copperbelt	Cost of testing unavailable, but likely comparable to HTS, therefore WTP is very likely below cost-recovery.
HIV Self-Test Kits	K18.3-49.3	 Copperbelt	 Lusaka	Most cost between K20-40 (high end are K250). WTP is high enough for cost-recovery among lower-end options.
VMMC	K39.1-67.7	 Copperbelt	 Copperbelt	Wide range reported (K1000-K10500) which is 15-150x WTP.

Spotlight on Willingness to Pay for Differentiated Services

The private health sector in Zambia faces significant competition with regard to the provision of free or low-cost products and services through the public sector. This assessment sought to examine how the private sector might differentiate themselves from the public sector with regard to privacy, friendliness, wait times, or other factors to better attract patients. Consumers were asked to select up to five factors that would encourage their peers to pay more for each service. This allowed us to establish consumer profiles that might be associated with higher WTP.

Certain programs have sought to increase healthcare access through the private sector by allowing patients at private sector facilities to access free or subsidized public sector commodities. This includes patients accessing FP products such as IUCDs and implants that can be inserted at a private clinic or picking up ARVs from a convenient neighborhood pharmacy. Such programs may also benefit from an understanding of the comparative advantages of the private sector.

Despite the fact that WTP among Zambians is generally low, the WTP for certain products is higher than expected (see ARVs, STI testing). If the fee for such services could be brought below this WTP mark, it may be possible to open up a market in these areas. Population Council cited that the price for a differentiated service that fell between 50 and 100 kwacha might be reasonable [28].

Certain differentiated services have appeared more promising than others. Extending the hours of operation of clinics has been cited as a way to attract working individuals and particularly men. In the Western Province, extending clinic hours for HIV testing increased linkage to treatment from 24% to near 100% [20]. In Copperbelt, extended hours have shown promise as a way of reaching mine workers [20]. HPCZ also believes that extended hours are beneficial for reaching Zambian men [20,29]. Indeed, this assessment found that consumer preference for convenient hours was associated with higher willingness to pay for STI testing and ARV delivery and consultations. This was also true for injectables; however, this result was not statistically significant. The largest challenge cited with extending hours was with human resources. Indeed, among those sampled in the PSA Consumer Survey, individuals who stated that they valued convenient hours were willing to pay 45% more for ARV delivery and 96% more for HIV testing services that met their needs.

The gender of providers was believed to be a significant differentiating factor for men among key informants. Population Council cited the example of a 'men's clinic' pilot program in Nigeria that successfully attracted men at higher rates [28]. However, data from the PSA Consumer Survey did not find that men were willing to pay more to see a provider of the same gender as themselves.

Additionally, consumers' desire for a trustworthy provider was associated with higher WTP for services that require an insertion procedure, such as IUDs and Implants. Several key informant interviews support this finding, noting that if an insertion procedure causes a woman pain, this will be conveyed to her friends and relatives, lowering trust in the procedure and the woman's willingness to undergo or pay for such a contraceptive method [11].

V. PRIVATE PARTICIPATION IN THE SRH & HIV SECTOR

OVERVIEW

In 2013, private sector health facilities played a large role in providing female sterilization and oral contraceptives (OCs) [2]. 82% of patients seek care in facilities owned and run by the Government [2]. Private non-health facilities, such as shops, played a significant role provisioning male condoms and oral contraceptives (Table 7).

Table 7. Sources of Modern Contraception (Adapted from 2013 DHS)

	Public Sector	Private Medical Sector	Other (Shops)
Female sterilization	68.3%	31.2%	0.0%
OCs	60.5%	16.6%	22.7%
IUCDs	90.2%	9.6%	0.0%
Injectables	95.0%	4.7%	0.2%
Implants	96.7%	3.1%	0.0%
Male Condoms	62.3%	9.5%	26.5%
Total	81.6%	9.3%	8.8%

The public sector provides free HIV testing and counselling and ART. PrEP has recently been rolled out in select regions. Both supply and demand dynamics have limited private participation in the area of HIV prevention, testing, and management. These are described in detail in subsequent sections.

There are four³ main private sector actors that provide SRH and HIV products and services in urban Zambia. These are: private medical clinics, pharmacies, medicine/drug shops, and NGO/Donor funded programs.

PRIVATE MEDICAL CLINICS

Private medical clinics and hospitals fall under the jurisdiction of the HPCZ. As mentioned above, they play a smaller role in the delivery of SRH and HIV related products and services throughout Zambia. Regarding provision of pharmaceutical products, ZAMRA is now allowed to oversee hospitals and clinics in private and public sector. ZAMRA is also beginning to interact with private hospitals for the first time. Previously ZAMRA's jurisdiction was restricted to pharmaceutical facilities (wholesale or retail) [10].

³ Small retailers/intembas do sell some products (primarily condoms), however, otherwise make up a small share of SRH and HIV product provision, and have limited opportunities for expansion due to limited over-the-counter status of related products.

Product and Service Offerings

SRH and HIV-related products and services do not move as quickly through private sector facilities since FP has limited insurance coverage and most products and services are free or heavily subsidized through the public sector. It was noted that providers have a preference for short-term FP methods rather than LARCs (KII with Professional Organization, April 2019). Particularly given the free provision of LARCs through the public sector, short-term FP methods that allow for more appointments and touch-points with patients align with the fee-for-service model under which the private clinics operate.

While most private clinics do not provide HIV testing services or ARVs due to free public sector delivery, some clinics unofficially offer these services at a high price in exchange for privacy [11]. Officially reporting these services can risk the facility being shut down if the strict inspection requirements are not met. While private clinics are allowed to offer public commodities to their patients for a small delivery fee, participation in these programs is low because of the reporting requirements and potential to undercut their existing paid ARV services [11].

Perceptions of Private Medical Clinics

Three groups were surveyed with respect to their perceptions of private medical facilities. Interestingly, consumers had mixed perceptions regarding how the private sector compared to the public sector, but generally felt that private facilities have higher confidentiality and are less crowded. However, among NGOs, donor funded programs, and professional associations, concerns around quality frequently emerged.

Consumers



“The private sector is more expensive than the public but is more efficient”

“In the private sector, the work culture is somewhat different, there they are faster”

“In the private clinic you are guaranteed to come back better because of the readily available medication”



“In the private sector they have enough manpower”

“In the private sector ... there are a lot of medications”

“Some times [sic]... the private sector do not have certain types of machines and the patients are referred to the public sector”



“When you pay they show you a lot of care, but when you don't, they don't even pay attention to you”

“Others access [private health clinics] because they want things done in privacy”

“[The public sector nurses] tend to be very rude and take it for granted that they are working for the government”



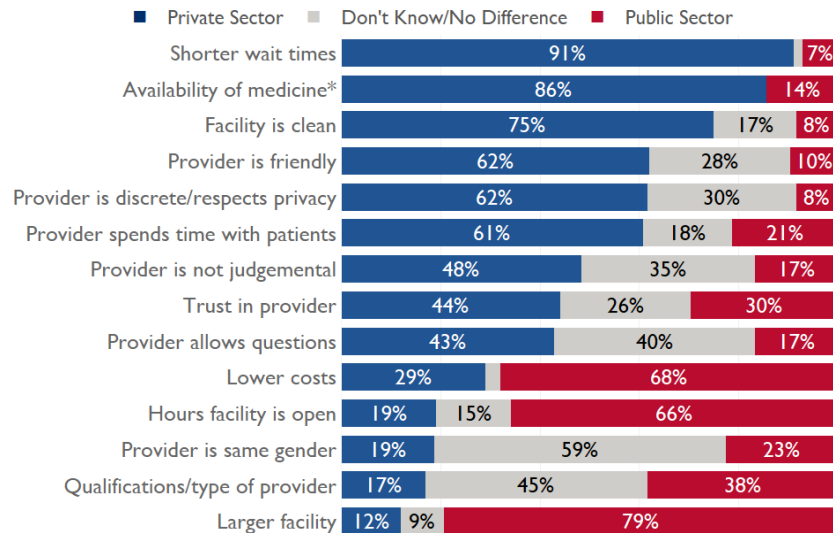
“You find that in public facilities, they lack drugs compared to the private health facilities”

“You feel valued at a private facility”

“There is no difference [between the private and public sectors]”

“I don't think people will pay for a service that is offered for free somewhere else”

Which sector do consumers believe delivers superior quality of service?



*Availability of medicine was not originally included in this question but was the most frequent response when respondents were asked to name other important factors. Seven responses are included in this row.

Among consumers, there is a general belief that lower patient-to-doctor ratios, friendlier staff, and a profit motive all lead to higher quality of care. However, this is often balanced against a low ability to pay for such services.

While perceptions of service were largely in agreement across demographic groups, there were several areas of interest where opinions diverged. For instance, men and boys were far more likely than women and girls to believe that the private sector was competitive on cost. Women and girls proportionally had less trust in private sector providers, particularly among adolescents, compared to men and boys. Finally, adult women were less likely to believe that the private sector provided additional privacy and discreteness than any other demographic group.

NGOs/Donor Funded Programs

When asked about the quality of private medical clinics, a number of NGOs/Donor funded programs highlighted concerns regarding quality. For example, one NGO noted that it is rare that private clinics meet standards, and they would prefer not to send adolescent girls there. SAFE noted that company-owned clinics “tend to operate below optimal level” (KII conducted April 2019). Concerns around service delivery arose as well: “Current delivery of services through private sector is not the best. [It is] very expensive, [and you] get routed through several doctors before you receive services” (KII with NGO/Donor funded program, April 2019).

Professional Associations

Professional associations highlighted issues around quality in the private sector due to having less skilled staff, a 5-10 year lag in practice [20], and dependency on part-time staff [29]. Concerns around over-servicing were also raised [29]. Over-servicing in this case refers to the potential of patients being taken advantage of by private providers who offer products or services that are not necessary to address the patient’s needs. The information asymmetry that is prevalent in healthcare, between patients

and providers, increases the risk of patients being offered or misguided into undergoing unnecessary procedures or purchasing unnecessary products.

Spotlight on Chinese Clinics

Private sector investment by Chinese companies has been growing in Zambia. Among these investments are private health clinics. Seven KIIs were conducted with Chinese clinics regarding their role in the provision of SRH and HIV products and services. This was prompted specifically by the popularity of “The Chinese Pill”, which was reported to have recently gained traction in low-income markets.

Controversy: Chinese Pill

Chinese clinics generated some controversy due to their provision of the Chinese contraceptive pill. This pill was highly popular in the compounds [11] since it could be purchased without prior medical examination, was inexpensive (K30-K50), and only has to be taken once a month.

A July 2018 article in the Zambia Daily Mail quoted Precious Kagulula of Lusaka’s Madras area, noting that she first heard of the Chinese pill in 2015 and a year later, tried it. *“I have had no side effects and I think it has worked well for me. I have been on it since 2016. I would gladly recommend any woman, especially working women to consider being on the Chinese pill”* Mrs Kagulula said.

Health authorities, including ZAMRA, have maintained that the Chinese contraceptive pills are illegal in Zambia [30]:

“One of the big fights has been assuring its safety, efficacy, and quality. There are reports/myths that the product may induce irreversible effects. Women reporting that they have become sterile”
(KII with ZAMRA, April 2019)

MoH Permanent Secretary, Kennedy Malama, noted that women should be cautious when using them because it’s not clear what they contain, and some women have reported serious side-effects, including heavy bleeding.

“It is not recommended to take medication that has no name. People should be worried of such medication and desist from taking it” (Dr. Kennedy Malama, Daily Mail, July 2018).

However, 3/7 Chinese clinics interviewed by the assessment team did not necessarily align with ZAMRA’s concerns, citing that apart from nausea it was a safe option (KII with Clinic 3, May 2019), or that the only side effect seen was weight gain (KII with Clinic 2, May 2019). Clinic 6 (May 2019) was particularly concerned about the barriers to provision of alternative medicines:

“We used to provide Chinese family planning last year but were refused to continue because Government refused to clear our drugs. We used to work with ZAMRA as well. But since then we do not provide any of these services. [We] would like the MoH to review certain alternative medicines that are currently banned or currently not on the market in order to continue to sensitizing the general public on all health products and services being provided by private/ Chinese clinics.”

At the dispensary section of a Chinese clinic, the attendant told the Daily Mail that the pills are an herbal contraceptive and have no major side-effects.

“We have had no complaints from the time we started dispensing the pill. Actually we have a lot of new clients coming for it on a daily basis. The Chinese pill is a popular option for Zambian women seeking non-hormonal contraceptives.”

None of the Chinese clinics visited by the assessment team reported to currently be carrying the Chinese pill. In general, the role of these clinics in SRH and HIV is limited, covering only select products and services including condoms, injectables, and HIV testing (**Table 8**). Two clinics noted that when patients are HIV positive, they refer them to the public sector (KII with Clinic 5 and 7, May 2019).

Table 8. Product and Service Clinics among Chinese Clinics in Lusaka and Copperbelt

Product/Service	Clinic 1	Clinic 2	Clinic 3	Clinic 4	Clinic 5	Clinic 6	Clinic 7
Male condoms					✓		✓
Female condoms					✓		✓
OCs	None of the clinics visited said they were providing an OC, including the “Chinese Pill”						
Injectables		✓					
Other FP services							
HIV Testing					✓		

Take-Away: While the Chinese Pill may have been banned in Zambia, there seems to be demand for a longer acting (monthly), single dose contraceptive. The ratio of frequency of administration to duration of effect is an important aspect of demand for women.

PHARMACIES

Private sector pharmacies are accredited by HPCZ and are able to sell the full gamut of medical products: prescription-only, OTC, and general sale. These pharmacies may be attached to a hospital or clinic or may be independently operated. Currently, there are 214 registered pharmacies in Zambia, with the majority in Lusaka (148) and Copperbelt (39).

Private sector pharmacies have organized a representative body in the form of the Pharmaceutical Society of Zambia (PSZ) which provides support and professional development for its members while also representing the industry at government forums.

Private sector pharmacies are in some cases able to distribute public sector-provided free products, undercutting the ability of commercial products to enter the market or effectively compete. This was cited in particular as a challenge for oral contraception [8]. Additionally, potential leakages from public sector supply chains into private sector supply chains may also harm competition.

Private pharmacies were noted by several stakeholders as an important place for adolescent girls and key populations to access SRH products and services.

Table 9. Products & Services Offered Through Pharmacies

Snapshot	
Male Condoms	All of the pharmacies sampled in the PSA Retailer Survey stocked male condoms and ranked them at or near the top of their best-selling products. Pharmacies stocked a wide range of socially marketed and commercial condoms, including Maximum, Rough Rider, Moods, Carex, and others.
Female Condoms	Six of eleven pharmacies sampled carried female condoms. Six stocked the Diva brand. Female condoms were reported as a lower-selling item.
Oral Contraceptives	All but one pharmacy stocked oral contraceptives, with each pharmacy ranking them at or near their best-selling SRH or HIV product. Popular brands include <i>Safepan</i> (6 of 10), <i>Microgynon</i> (3 of 11), and <i>Oralcon-F</i> (2 of 11). One shop also carried <i>Zinnia F</i> while another carried <i>Depregdina</i> .
LARCs	While CHAI described that “users tend to purchase them [IUCDs] at the pharmacy and then take them to the private clinic for insertion” (KII with CHAI, April 2019), our retailer survey did not find any pharmacies that stocked IUCDs or implantable contraceptives.
Injectable contraceptives	Three pharmacies in Lusaka stocked Depo-Provera®. None of these pharmacies indicated that this was a public sector commodity.
HIV self-test kits STI self-test kits	Seven pharmacies stocked HIV self-test kits, while three stocked STI self-test kits.
Other HIV products	Two pharmacies stocked drugs for secondary infections.

MEDICINE/DRUG SHOPS

Medicine shops, also referred to as drug shops, are typically unlicensed entities without a pharmacist where basic medical goods, OTC drugs, and other products may be sold. These types of shops are common in compounds and generally provide access to lower income Zambians who cannot afford to visit pharmacies [10]. The overall scope and scale of this market is unknown due to the unregulated nature of the shops; however, it has been estimated that there are between 1000 and 2000 of these unlicensed shops selling medicines across the country⁴. ZAMRA has stated that they would like to see the government professionalize these outfits so that they can extend regulatory oversight to them. The current system of health shops being developed in Zambia (discussed later in this report) will help accomplish this in rural and peri-urban areas, but will not extend to urban medicine shops. Currently, ZAMRA's largest concerns are that medicines are not being stored properly, dispensers are not sufficiently knowledgeable about the products they are selling, and the fostering of antimicrobial resistance due to improperly dispensed medications [10].

Table 10. Products & Services Offered Through Medicine/Drug Shops

Snapshot	
Male Condoms	All eleven medicine shops sampled carried male condoms. Seven carried a single brand while four had a selection. Common brands included <i>Maximum</i> (9 of 11 shops), <i>Ultimate</i> (4 of 11), <i>Moods</i> (3 of 11), and <i>Rough Riders</i> (3 of 11).
Female Condoms	Five of eleven shops carried female condoms. Four carried the <i>Diva</i> brand while one carried a generic brand.
Oral Contraceptives	Eight of eleven shops carried oral contraceptives, despite their prescription-only designation. Popular brands included <i>Microgynon</i> (4 of 11), <i>Safepan</i> (5 of 11) and <i>Oralcon-F</i> (1 of 11).
Other contraceptives	None of the health shops carried any type of LARC. One health shop carried injectable contraception (<i>Depo-Provera</i> ®).
HIV self-test kits STI self-test kits	Two shops carried both HIV self-test kits and STI self-test kits.
Other HIV products	Three shops carried drugs for secondary infections.

NGO/DONOR FUNDED PROGRAMS

There are a number of NGO/Donor funded programs providing free, subsidized, and socially marketed SRH and HIV related products, services, and education/advocacy around these products/services. Channels of delivery vary from adolescent friendly centres (Diva Centres and DREAMS Centres by Marie Stopes and PEPFAR, respectively), mobile service delivery (Marie Stopes and SFH), and Social Marketing (SFH, DISCOVER-HEALTH, Marie Stopes, etc.). Most family planning products are procured

⁴ Mackay B. Private Sector for Health Scoping Study in Zambia, 2014

through MSL, with these organizations contributing to the national accounting process (KII with NGO, April 2019).

Several of these groups provide support to key population in Zambia, including Population Council, SARAI, Marie Stopes, and EQUIP.

A NOTE ON HEALTH SHOPS

Health shops are a relatively new innovation in Zambia. The intention of health shops is to fill gaps in the market by allowing small, licensed shops staffed by trained technicians rather than pharmacists to sell selected prescription, OTC and general sale products. The health shops are largely seen as a way of meeting demand in rural and peri-urban areas where it is difficult to find and retain pharmacists [10]. They will help bring legitimacy to drug shops in these areas, who have typically had compromised quality of medicines, in turn, enhancing the quality of products and services offered. HPCZ has looked to other countries where similar models have been rolled out, such as Tanzania, and hopes to send staff to meet with regulators in these countries as well as view working shops [10,29].

HPCZ finalized the regulations governing health shops and has begun licensing as part of a pilot program. These shops must be outside of a fixed radius of registered pharmacies and will be staffed by “dispensers” - a person who is trained pharmaceutically to handle medications on the approved list. According to the current regulation, dispensers must have at least a high school diploma. ZAMRA has noted that human resources have posed the most significant challenge in setting up health shops given the necessary education and training requirements. Thus, health shops will also be supervised by a “responsible person”. HPCZ noted they will “deputize” pharmacists within each district to oversee the health shops. Health shops would then be licensed to sell products from a fixed, predetermined list approved by HPCZ. At this time, ARVs are not on that list, however, FP products like condoms are. Other SRH products on the list include Ethinylestadiol+Northisterone tablets (0.03mg/0.3mg; Patient pack 28s) and Ethinylestadiol+Levonogestrel tablets (0.03mg/0.15mg; Patient pack 28s). Guidelines for health shops have been developed [31], and to date, approximately 10 applications have been received by ZAMRA [10].

VI. BARRIERS FOR PRIVATE SECTOR PARTICIPATION

There are a variety of recognized reasons for the lack of access to and low utilization of SRH and HIV products and services globally. These include: low awareness of the risks of sexual activity, such as pregnancy and HIV; cost; gender inequality; and laws that require women and girls to be of a certain age to utilize services [32,33]. In addition to these barriers, our analysis noted Zambia-specific challenges (some of which are also present in other countries) including limited public-private engagement, skewed markets due to various interventions such as free distribution and socially marketed products, no insurance coverage for family planning (although there are plans to change this under the new National Health Insurance scheme), restrictions related to marketing of related products and services, as well as the level of proficiency in the provision of certain SRH and /HIV products and services. Here we discuss some of the key barriers that came up within the context of our research.

Summary of Supply and Demand Side Barriers



- Limited public-private engagement
- Skewed market: social marketing & free distribution
- Regulatory & legal issues
- Policy lags
- Marketing restrictions
- Training & competencies



- Awareness
 - Ability to pay
 - Cultural and social norms
-

LIMITED PUBLIC-PRIVATE ENGAGEMENT

A lack of formalized and regular involvement of the private sector in SRH and HIV related technical working groups and policy discussions was cited by multiple stakeholders as a major barrier to effective private sector participation. Historic distrust between public and private sectors has led to a lack of collaboration and limited partnerships. A Professional Organization also highlighted that the MoH had various disincentives for engaging with the private sector, including difficulties with sharing public resources with private facilities due to optics and concerns over public finances supporting private entities.

In recent years, however, the GRZ has shifted its outlook, and today recognizes the potential of the private sector in expanding access to care and contributing to equity and sustainability of the health system. For example, the 2017-2021 National Health Strategic Plan notes that “to provide optimal availability, appropriateness, and distribution of essential medical and non-medical equipment in order to facilitate equity of access to quality health services, private sector participation and PPPs must be promoted” [34]. As an example, it now highlights one strategy for strengthening national logistical management information systems (LMIS) (including storage and distribution) to improve efficiency, data

accuracy, and visibility as needing to support private sector service delivery initiatives through effective supply.

While recognizing the benefits of partnering with the private sector are now stated in relevant policy documents, implementation, coordination and the establishment of relevant platforms to achieve this objective will be crucial. Private sector associations such as PSZ, ZMA, and ZNA, as well as practitioners (doctors and nurses) that work in both the public and private sectors are strategically relevant partners that should be involved in developing an engagement plan for strengthening coordination with the private sector.

SKEWING THE MARKET: SOCIAL MARKETING & FREE DISTRIBUTION WITHOUT COMMERCIAL SALES

The reliance on, but also the inconsistent nature of donor-support in the Zambian condom market has created difficulties for distribution through both public and private sector channels. Currently, CHAI, CHAZ and other major donors fund products that are given to end-users for free through the public sector [11]. The Bill and Melinda Gates Foundation notes that “the focus of the national condom program in Zambia has been on access and affordability, leading to an over-reliance on free and subsidized condoms for everyone, thereby creating an entry barrier for the commercial sector[7]”. They, along with DISCOVER-HEALTH noted that during the absence of the Maximum brand (starting in 2014), the commercial sector market share grew, including the introduction of several new brands. SFH described this period as a serendipitous controlled experiment during which cessation of the socially marketed condom brand led to a rise in private sector provision and uptake of commercial condoms highlighting demand and WTP from certain segments of the population. The return of the Maximum brand appears to have then led to a market reversal for the commercial brands.

In another example of market skew, private sector pharmacies are in some cases able to distribute free products provided by the public sector, undercutting the ability of commercial products to enter the market or effectively compete. This was cited in particular as a challenge for oral contraception [8]. Additionally, potential leakages from public sector supply chains into private sector supply chains may also harm competition.

Debates about efficiency, particularly regarding cost-recovery, optimal pricing strategies and social marketing agencies holding high condom market share, as well as long-term sustainability of subsidized condom markets, have prompted the concept of a total market approach (TMA), also known as a ‘whole of market approach’. This is a system whereby all sectors—public, commercial and NGO (or donor-financed social marketing)—are integrated within one ‘market’ segmented by willingness to pay. Multiple sectors work together to deliver health choices for all population segments in need, ensuring product coverage in a cost-effective and efficient way: the poorest through free distribution, those with slightly greater resources through partial subsidies and those with an even greater ability to pay, through commercial sales without subsidy. This is particularly important in LMICs like Zambia, where economic development is taking place, but often unevenly. While there are increasing segments of the population with the ability to pay for commercial products, a large proportion is still dependent on subsidized or even free products. A TMA aims to improve the sustainability of the market by better targeting subsidies and reducing ‘crowding out’ of the commercial sector. This means the three sectors must work together to grow the market and maximize their core competencies to meet the needs of different population segments. Such market segmentation allows for a more efficient use of limited resources and better targeting of subsidies [35].

Myanmar Case Study: Total Market Assessment for Condoms [36]

The market for male condoms was stagnant in Myanmar due to limited demand for condoms among key populations, the dominance of free and socially marketed condoms, and a neglected commercial sector. Although donor subsidies have remained fairly constant over time, they were poorly allocated. Some wealthier populations benefited from partially and fully subsidized condoms, despite their ability to pay a higher price for their condoms. These inefficiencies and poor targeting demonstrated the value of a TMA approach to increasing levels of condom use, whilst using subsidies more efficiently.

Free and socially marketed condoms dominated the Myanmar market and there was an increase in the proportion of free condoms on the market over time, which crowded out the socially marketed sector. Likewise, the price for Aphaw socially marketed condoms was artificially low at 44 kyats (\$0.05 USD) in 2011 and there was room in the market for a quality commercial condom at the 119–399 kyats price range (\$0.15– 0.49 USD). The market structure at that time prevented the commercial sector from growing. The market share of free condoms increased from 33.4% in 2009, to 51.7% in 2011. This was to the detriment of socially marketed condoms: the market share for socially marketed condoms decreased from 53.6% to 40.5% between 2009 and 2011. The market share for commercial condoms was just below 6% each year. Additionally, in 2009, 8% of the market comprised fully subsidized ‘free’ condoms leaked in the market for which a retail price was being charged; this reduced to 2.95% in 2011.

After PSI worked with UNFPA to improve the targeted distribution of free condoms, leakage (from public to private) that was present reduced gradually. Public sector partners, led by the National AIDS Program (NAP), coordinated on measures that more accurately forecasted demand for free condoms and prevented large influxes of condoms from entering the market. International donors also attempted to better target resources.

In an effort to open up the market to the commercial sector, PSI/M established partnerships with commercial brands that meet quality standards. The support they offered included product promotion and distribution at restaurants, high-end bars, fitness clubs and nightclubs. These partnerships were intended to increase demand and willingness to pay for commercial brand condoms among those with the ability to pay for them. Additionally, PSI/M planned to integrate commercial brands into its existing sales and distribution channels to scale up coverage and increase access to low-cost commercial condoms in a range of non-traditional outlets.

PSI/M focused on three areas to help strengthen the commercial sector: 1) helping to control leaked free condoms that were undermining the market, 2) endorsing two commercial brands and segmenting the MC market according to their ability to pay, and 3) closing price gaps in the market and expanding brand choices for key populations. Through these processes, PSI/M learned about the volatility and strength of the commercial sector. M-Lite decided not to continue promoting condoms for wealthier men: they focused their efforts on other businesses and products. Market share for SPUR+, grew and the company introduced a new brand, One Touch, which now serves as the new “high-end” brand. A new commercial brand, Max Mate, also entered the market and PSI/M has been working with SPUR+ and Max Mate on new promotional activities. Finally, PSI/M increased the price of Aphaw and moved to a cost-recovery strategy.

The most recent DHS from Myanmar (2015/16) found that 47% of male condoms were sourced from the private sector (7.3% - private hospital/clinic, 37.3% - pharmacy, 2% private doctor, 36% - shops).

REGULATORY & LEGAL ISSUES

A number of private actors noted that the process for getting products to market is long:



“The process for getting a new product on the market can be long and tedious - there is a long application process requiring back-and-forth letters and responses, ZAMRA must give approval for marketing, if one is going to stock they must get certified for warehousing, if medicines one must have a qualified pharmacist, etc. It is a drawn out process that could be simplified.” (KII with Private Enterprise, April 2019).



“They [ZAMRA] ask a lot of questions about a lot of things, and put you through the ringer, which can be a good thing, but sometimes feels like they are barking up the wrong tree.” LiveWell had been waiting 1.5 yrs prior to being able to offer Chlorhexidine (KII with Private Enterprise, April 2019)

It was noted that for diagnostics it can take 6+ months. Among private actors, beyond the review period, three concerns emerged: (1) that Zambia is very strict about WHO prequalification unless a product is completely novel, (2) enforcement of the regulatory frameworks (e.g. provision of the kits (prick) in private market is a challenge), and (3) perceptions of institutional bias by the government [27]:



“There are also suspicions that there are certain people and organizations (described as “cartels”) that have a grip within the government and other systems; they supply and would want to keep it that way” (KII with Private Enterprise, April 2019)



“NGOs have good working relationships with MoH, so they can overcome regulatory and other barriers to providing service. Private sector outside of NGOs work in isolation and don’t have good relationships with MoH, so can’t overcome those barriers” (KII with NGO, April 2019)

Laws Regarding Adolescents & Key Populations

Two groups that are chronically underserved for SRH and HIV care are adolescents and high-risk populations including commercial sex workers (CSWs) and men who have sex with men (MSM). It is also these populations that place a high value on privacy and confidentiality and may find value in accessing products and services in the private sector. However due to the restrictive and in some cases unclear guidelines regarding providing SRH and HIV products and services to these populations, private providers are reluctant to cater to these groups [20]

One of the key barriers for effective utilization of SRH services by adolescents is the legal age requirement to access those services. Those who are under the age of 16 and not married require parental or guardian consent to access SRH services, which is a barrier for many adolescents [3]. The majority of girls who become pregnant while in school (86%) are in primary school (10–14 years), indicating that such laws may be a contributing barrier for those truly in need of services.

Progress is too slow among rural populations and uneducated women and girls with regard to such issues as the use of modern contraceptive methods and access to information on SRH, including FP.

A Professional Organization noted that previously there was ambiguity with respect to the legality of providing services to key populations, however new guidelines have been developed. Nevertheless, there is still fear among providers to service these populations (and in many cases, stigma) [20].

Implications of Non-Compliance

The risk of closure is very high for private clinics. The main implication for SRH and HIV is that facilities may be reluctant to advertise or even simplify offer certain products or services. In a KII with Professional Organization (2019) it was noted that:



“Very few private facilities will declare that they have an HIV program, so there is no audit. If you are not up to standards for HIV programs and fail an assessment, the whole facility will be closed” (KII with Professional Organization, April 2019)

This was echoed by an NGO (KII, April 2019) who acknowledged there are high cost risks for private sector in terms of closure if they offer services that are not up to standards and guidelines or are in-line with policies. Therefore, given the high risk of closure but low demand for these services through the private sector, the disincentives to expand these services are high.

Last year, 32 facilities were closed due to low standards (not specific to ART) [20]. Cited reasons for closure included: stocking and dispensing expired drugs and medical supplies, operating despite poor infrastructure, lack of clinical supervision, and inadequate essential equipment [37].

POLICY LAGS

A number of policy/guideline lags limit potential private sector entry and effective regulation. Challenges include both the difficulty in keeping up with advances in m-health and other innovative approaches, as well as the clarity of product-specific guidelines (e.g. PrEP).

Keeping Pace with Innovation (e.g. m-Health)

Without effective policy backing, it can be difficult for regulators to carry out accreditation and enforcement functions. Currently, certain areas like m-Health (including telemedicine and e-health approaches) are not captured under the Health Professions Act (2009) [10,29] (KIIs with Professional and Regulatory Organizations, April 2019). While they are expected to be incorporated in a forthcoming update, it was noted that without the proper legal backing, it can be difficult to regulate particular areas until proper guidelines and policies are published. Organizations/initiatives, such as those discussed in section VI below (Innovations in Delivery), would likely fall into this category.

Product Guidelines

Professional Organizations noted that guidelines regarding provision of PrEP, particularly with regard to distribution, need to be clearer (KIIs, April 2019). With PEP, guidelines are clear; however, with PrEP some providers are unclear how to assess eligibility, particularly among key populations.

Self-test kits similarly pose challenges. ZAMRA noted that from a regulatory point of view, there may be some issues with pharmacies dispensing self-test kits as hospitals and clinics would want these pharmacies to undergo some accreditation to sell such products (KII, April 2019).

TRAINING & COMPETENCIES

HPCZ develops standards for accreditation of various services such as ART [38] or VMMC [38,39] for both public and private providers. These standards need to be met before providers are accredited. Typically, there is an application process that is involved where providers must indicate how they meet certain standards including: minimum utilities/equipment, infrastructure, proof of required training, staff required to support services, etc.

Inadequate levels of appropriate training, limited quality assurance, supervision, and feedback in the private sector were noted by multiple stakeholders. Therefore, for many of these private clinics to pursue opportunities providing SRH and HIV related services such as insertion/removal of IUCDs, implants, or performing VMMC, heavy investment in training and infrastructure would be required.

MARKETING RESTRICTIONS

Both key health regulatory agencies—HPCZ and ZAMRA—have established guidelines and a code of ethics related to advertising. Section 5.4 of HPCZ’s Professional Code of Ethics and Discipline (HPCZ, 2014) focuses on improper advertising, and regulates professional code of conduct in relation to advertising of health services or professional status. It states that any level of advertising must not contain false, inaccurate, misleading or incomplete information either on the services provided, on individual professional status, nor should it be self-promoting [40].

Other components of the code note that practitioners should not:

- Agree to be paid or remunerated based on the number of patients solicited to the health facility.
- In communications addressed to the lay public, use or permit the use of his/her professional qualification as an advertisement for the organisation or be personally involved in advertising its services.
- Accept any pecuniary, material or any other inducement from pharmaceutical industry or any other industry which might compromise, or be regarded as likely to compromise, the independent exercise of their professional judgement in prescribing matters.



“We are not allowed to advertise. No advertising whatsoever, except maybe a road sign that says we offer GYN services” (KII with Private Hospital, April 2019)

Given the free provision of most SRH and HIV products and services through the public sector, the ability to effectively market services is important for private providers. There while established to ensure non-harm, non-compliance with these guidelines can lead to regulatory challenges that may delay, limit effectiveness, lead to wasted time and resources, and at worst, result in misuse of health products and services.

Spotlight on Marketing Restrictions & PrEP Promotion

In 2008, ZAMRA established its first edition of Guidelines on Advertising and Promotion of Medicines. These **guidelines currently lack clarity and according to ZAMRA are in the process of being updated**. The guidelines apply to prescription and non-prescription medicines, including herbal medicines as appropriate, and to any other product promoted as a medicine or for medicinal purposes under the Medicines & Allied Substances Act (No. 3) of 2013. The guidelines are meant to apply to a wide-range of stakeholders including governments, pharmaceutical industry (manufacturers, wholesalers and retailers), the promotion industry (advertising agencies, market research organizations), health professionals involved in prescription, dispensing, supply and distribution of medicines, universities and other teaching institutions, professional associations, patients' and consumer groups and the media, including professional media such as publishers and editors of medical journals and related publications.

Examples of relevant clauses for advertising SRH and HIV related medicines include:

- Only a medicine that is registered and with a valid product license issued by ZAMRA may be advertised or promoted. If the medicine is registered as a “prescription only medicine or non-prescription medicine”, it should not be advertised or promoted without prior written authorization from ZAMRA.
- Advertising should include factual, accurate, informative announcements and reference material (e.g. adverse reaction warnings, trade catalogue and price lists and should not include product claims, measures or trade practices relating to price, margins or discounts.
- An advertisement or promotion of a medicine should not refer, directly or by implication, to alleviation or cure of any disease, condition or disorder that is prohibited under the Public Health Act and pharmaceutical regulations.
- Information should include the approved name and quantity of each active ingredient in lettering having a minimum legibility
- Information on indications and side effects must reflect available evidence or be capable of substantiation by clinical experience. It must not be stated that a product has no side effects, toxic hazards or risks of addiction. The word ‘safe’ must not be used without qualification.
- Advertising should not suggest that the safety or efficacy of a product is due to the fact that it is natural unless this has been clinically proven
- Advertising should not claim that a product is ‘natural’ unless all of its components/ingredients are naturally occurring.
- Advertising should not suggest that the medicine has been recommended by scientists or health professionals.
- Advertising should not include a recommendation by a person who, **because of their celebrity status, may encourage consumers to take a medicine.**

The full list of relevant marketing clauses is included in **Annex C**.

The final clause above was cited by ZAMRA as one of the reasons a recent viral video about PrEP was challenged as being problematic, along with it being criticized as lacking clarity (“important aspects about the product itself not coming out” [10]. Concerns including the fact that such promotion may lead to abuse of the product and that the commercial may not have been cleared with ZAMRA were cited.

AWARENESS & MARKETING ISSUES AND A LACK OF HUMAN-CENTERED DESIGN

A sizeable proportion of messaging and demand creation is led by NGOs and donor-funded programs. ZMA reported that most advocacy is around short-term FP products, so clients tend to ask for short-term FP rather than LARCs. This reflects a broader observation, that awareness related to the breadth of family planning options is limited, particularly amongst adolescent girls. Our survey found that 70% of adolescent girls were familiar with no more than 4 family planning products, while the same was true for 24% of adult women.

With respect to IUCDs, a market assessment conducted in 2016 by FHI 360 [19] and other partner organizations found that both copper and hormonal IUCDs faced barriers due to myths and misconceptions, as well as insufficient public awareness, extending to both patients and providers. Among providers interviewed, none were aware of hormonal IUCDs, however, all of them said the decreased bleeding associated with their use would interest patients with many of them expressing willingness to use the product in their practice going forward. Furthermore, provider bias for certain methods was also raised as an issue, with respondents highlighting for example, that methods requiring less technical skill and time might be preferred by overburdened public health facilities (e.g. OCs vs. LARCs).

Recent experience suggests that adopting a human centered design (HCD) approach can lead to better targeting and improved uptake of products and services in global health [41][42]. Taking such an approach to product (including packaging and instructions) and service design, was repeatedly linked to the themes of demand, marketing and opportunity for enhanced awareness by respondents [13,15]. HCD is a process and set of methods to create solutions (products, services, spaces, systems) that incorporate end-user insights to move beyond assumptions [43].

The various lenses applied in human-centered design (desirability, feasibility, viability) reflect both supply and demand related dimensions, with desirability being central to demand [43]. Product desirability can be thought of as a function of factors including: usability; core benefits; aesthetics and sensory appeal; symbolic value; visual clarity; product novelty & differentiation; and relative advantage [43]. Consideration of these factors and adoption of a HCD approach has been shown to lead to improved uptake of health products [43]. Many NGOs and service providers, including Marie Stopes and SFH have recently begun to leverage HCD to improve the quality and uptake of their products and services, including in SRH. For example, SFH noted that application of HCD methods led them to develop a Zambia-specific insert for the Oraquick HIV self-test kit. During the earlier stages of their self-test kit pilot, the instructions were being interpreted incorrectly, and the kit was being used as intended. Upon introducing the Zambian-specific instructions, people began to accurately perform the test. In addition, SFH pointed out that the Oraquick kit was not currently branded for sale, and that overbranding of the kit - “a package that is more appealing to clients and makes it amenable to marketing” would be preferred and is being explored [13]. Analogously, a 2003 study of youth friendly interventions at NGO operated centers in Lusaka found that youth-friendly elements improved the clinic experience for young people. The majority of “youth intervention” clinics that leveraged HCD approaches served more young clients compared to non-intervention sites [44].

ABILITY TO PAY

Cost is a factor for many people, particularly among the segments with the greatest unmet demand. This issue was highlighted as critical among many key informants. Private providers acknowledged that some

products and services are expensive, however, some cannot be reduced. For example, Lusaka Trust acknowledged that for HIV services, cost is high, but they cannot give it away for free. If costs of testing were lower, they noted, it would be better.

The National Health Insurance Scheme

The government of Zambia established universal health coverage (UHC) as a priority in its most recent National Health Strategic Plan (2017-2021). As a step toward UHC financing, the government developed a 10-year national health financing strategy in September 2017. This technical framework outlines the plan for health system financing, and is meant to serve as a roadmap for key policy reforms related to health financing. While insurance companies in Zambia generally do not cover family planning products, costs have typically been out-of-pocket if not accessed for free via public provision [15,23]. However, domestic resource mobilization is a central component of the strategy, including the launch of a mandatory, National Health Insurance Scheme (NHIS), which was passed into law in April 2018. The scheme will be managed by a National Health Insurance Authority (NHIA) and its governing board.

The NHI Benefits Package will cover the set of services that NHI Beneficiaries are entitled to. It will also stipulate the accredited health facilities that are registered to offer the set of services under the NHI Scheme. What is covered under the package will be determined based on [45]:

1. The national health priorities set by the Ministry of Health
2. The country's epidemiological profile
3. The cost of health services.

The level of contributions to the scheme will determine the comprehensiveness of the NHI Benefits Package. Furthermore, the contributory rates and the set of services under the NHI Scheme will determine the solvency of the scheme. Three potential categories of benefits have been defined as:

1. **Improved NHI basic package** would cover a comprehensive list of services prioritized by the GRZ, including both in-patient and out-patient services accessed **exclusively at public hospitals**.
2. **Enhanced NHI package** would, in addition to providing the improved basic services above, **relax the restrictions on private providers for essential services** (testing, drugs, admissions). In cases where patients elect to access services at a private facility, the NHIS would pay the cost of services up to an agreed tariff, beyond which the patient would have to co-pay.
3. **Premium NHI package** would be the most comprehensive package where access would be **expanded to accredited private facilities**, where beneficiaries would have the choice to access in either the public or private sector. All services would be covered without the need for co-payment.

A recent Assessment of Feasible Revenues shared with the authors of this report found that almost a million citizens with an average monthly wage of K5500 will form the base on which the NHI contributory rate will be applied and corresponding revenues collected on a monthly basis. This equates to between 19.3% to 48.3% of the 2018 budget for the Ministry of Health, as allocated in the National Budget at contributory rates of 1% to 2.5%, respectively.

While most of the details are forthcoming, the scheme is expected to provide an opportunity for increased financial allocation to contraceptive commodities and HIV treatment. Specifically, according to the Draft Benefits, inclusions will cover pharmaceutical and prescription drugs limited to those on the

national list of essential drugs⁵ as well as treatment and laboratory services for HIV. Current estimates project that reproductive and maternal health would account for 7% of the benefits, while HIV/AIDS would account for 24%.

It is important that the national list of essential medicines be up to date and cover the latest SRH and HIV methods, otherwise there is a risk that only certain products will be covered, minimizing choice and directing women to certain ‘covered products’, rather than facilitating choice based on alignment with their individual preferences and situations.

CULTURAL/SOCIAL NORMS & RISK PERCEPTIONS

Many stakeholders highlighted that perception of risk regarding HIV seems to have decreased, in part due to advancements in care. Moreover, a range of other factors have contributed to unmet need for family planning: “limited access to family planning services, fears about side effects, opposition from partners and religious beliefs have led to Zambia having one of the highest unmet needs for contraception in Southern Africa,” according to United Nations Population Fund (UNFPA) report on access to family planning.

Multiple stakeholders interviewed who had experience providing SRH products and services (e.g. Lusaka Trust Hospital, SFH, Marie Stopes), as well as end-users themselves (e.g. adolescent girls and adult women) cited a fear of real or perceived side-effects as a concern. Specifically, side-effects such as heavy bleeding, weight gain, nausea and decreased pleasure were mentioned along with fears of not being able to bear children later. These factors, along with gender norms, including power asymmetries between men and women with regard to sexual agency, can influence health seeking behavior, choice of provider and method [46–48].

⁵ Based on the 2013 National Essential Medicines List for Zambia, contraceptives included would be: Ethinylloestradiol/levonorgestrel, Levonorgestrel, Medroxyprogesterone acetate, Norethisterone enanthate, female condoms, Intrauterine device (copper long coil type), male condoms, Menefegol vaginal foaming, and Levonorgestrel implant 38mg in silicone

VII. INNOVATIONS & FINANCING MECHANISMS

INNOVATIONS IN DISTRIBUTION

A variety of innovative companies are emerging in sub-Saharan Africa whose focus is to improve the movement of health products from ports to consumers. A recent analysis funded by the Gates Foundation [49] analyzed 30 companies in this space that are operating mainly in Kenya, Nigeria, Ghana, and South Africa, with a few also operating in Zambia. Their focus is upstream from the retailer level and on various problems related to supply chain. Take for example the problem of emergency contraception (EC) distribution. In the private sector there are multiple opportunities for markups and visibility can be limited. EC (e.g. Levonorgestrel) might move from manufacturers to manufacturer subsidiaries or importers/wholesalers. It is then sold to distributors, who from there might sell it to sub-wholesalers or directly to private and NGO retailers. While markups along the value-chain vary widely, and from country-to-country, they can result in retail prices that are 10x the first line buyer's cost and 50x the ex-manufacturers cost. Virtually no visibility on the end-to-end distribution of the product exists.

Social marketing too can face similar challenges. While it offers a complementary distribution channel for subsidized ECs, markups can occur at several points between local private sector distributors (following receipt from social marketing organizations) and end consumers. Social marketing organizations may also distribute subsidized products to private clinics and local NGOs, who sell to their customers, with markups potentially occurring in between. Whatever the channel, organizations that do social marketing typically have good data on the amount of product being sold to distributors or retailers, but there is less visibility beyond that level, to other providers or consumers.

The opportunity offered by many of the private sector companies innovating in the distribution space is that they offer asset-light opportunities to drive consolidated improvements across markets for basic care. Exploring new business models, the Gates funded work explored whether moving beyond downstream investments in value-chains, social marketing, etc. could improve quality, cost, geographic reach and availability in new ways. While it is still too early to conclude anything with certainty, there were some interesting findings pointing to future opportunities:

- Companies are trying to disrupt current supply mechanisms via disintermediation so that they can offer their customers lower prices
- Companies are generating new opportunities for supply chain visibility into movement of products to facilities and pharmacies (and in some cases consumers), generating novel relationships with consumers to directly understand their use of products and then influence their behavior
- The breadth of providers served by the companies explored is greater than anticipated; they are serving hospitals, clinics, retail pharmacies and 2nd tier drug shops with new supplier models, meaning not only high-end private providers.
- Companies are primarily serving wealthier consumers, and insurers who stand to benefit from cost-savings are increasingly engaging with them.
- Companies are primarily operating in urban areas. In addition, a few companies are serving rural pharmacies and second tier drug shops. Direct-to-consumer offerings are evolving to bring rural consumers high-cost chronic medications.

- Most companies are new and very small (**Figure 5**)
- Companies are offering six categories of services as solutions to critical distribution challenges: 1) consumer information, 2) direct-to-consumer distribution, 3) stock financing and ownership, 4) inventory management, 5) marketplace fulfillment and 6) group purchasing. Categories 1 to 4 are being offered by consumer facing companies, and categories 3 to 6 are being offered by provider-facing companies (overlap in categories 3 and 4).

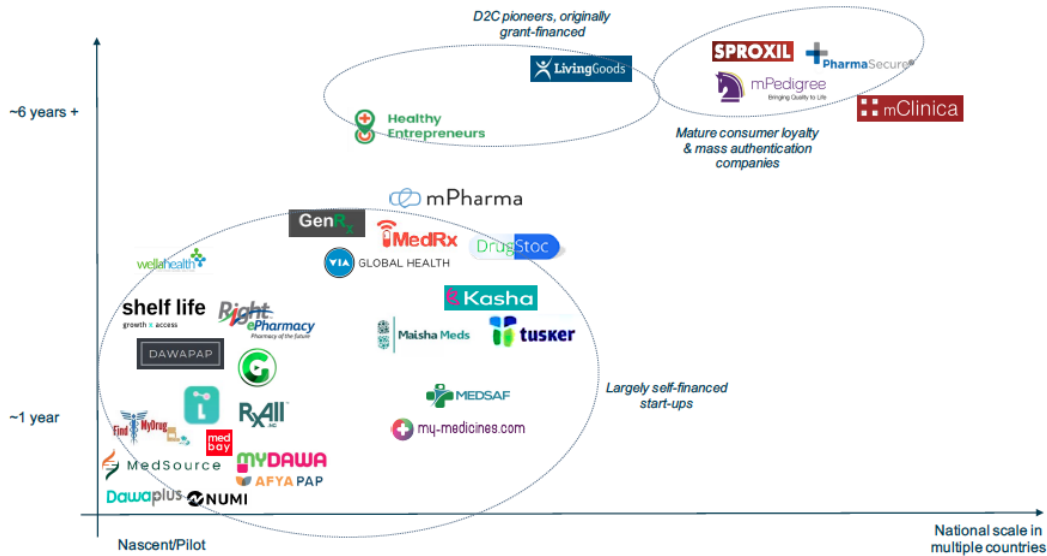


Figure 5. Company Snapshots

Of the companies explored, four have operations in Zambia: Via Global Health, mPedigree, Right ePharmacy, and mPharma.

Launched in 2015, Via Global Health is a leading global health purchasing platform operating in 27 countries and boasting a network of over 300 verified medical distributors. They work to streamline the medical supply chain into emerging markets, acting as an intermediary between global device manufacturers and in-country distributors. Global health innovators can quickly and efficiently build product awareness and sales while avoiding common pitfalls. They can do this by tapping into Via's targeted marketing campaigns, in-country sales teams, and the networks of distributors already mentioned.

Via Global Health

Zambia, along with India, are two of their largest markets by value, although total volumes are still small, with only dozens of transactions per month. However, growth is high. They have automated the quote process (including shipping) and suggest standard volume purchasing. This creates transparency and visibility in pricing, which in turn breaks down information asymmetry, allowing for product pricing comparison. In this way, they are able to de-risk payment and shipping. In addition, they have diversified their offerings and also provide market insights including demand and price point analysis, use case and needs analysis within individual or regional markets, product

positioning and branding insights, and competitive analysis. Their catalogue of over 50,000 products, from basic consumables to the latest innovations, include products related to both SRH and HIV. While they do not sell contraceptives or pharmaceuticals, they do offer equipment and commodities including HIV rapid tests.

mPedigree

mPedigree launched non-profit activities in 2007 and for-profit activities in 2012. They offer several B2B services including: mass authentication of products, smart labels for serialization, thermosensitive smart labels for use in vaccine and cold chains, “track and trace” services as determined by manufacturers, and consumer loyalty campaigns for companies like Unilever, Marie Stopes, SC Johnson, Nestle, Toyota, etc. In addition, they can provide regulatory agencies with visibility into potential breaches so as to inform enforcement strategies. They operate in 12 geographies including Zambia. As a global leader in the use of mobile and web technologies for securing products against counterfeiting and diversion, they have partnered with the Common Market for Eastern and Southern Africa (COMESA) to expand their traceability technology, in Zambia’s case for agro-inputs (seeds, fertilizers, crop protection products) for the moment, but with the potential to expand to SRH/HIV products.

Right ePharmacy

Launched in 2017, Right ePharmacy’s ATM dispensers automate the process of dispensation and resupply for ongoing therapies for stable patients (mostly chronic conditions) in high traffic areas (e.g. malls), and ensure quality dispensing advice through telepharmacy. Right ePharmacy’s controlled parcel collection units offer confidential, secure and temperature-controlled lockers for medication delivery. These solutions are particularly relevant in the midst of increasing needs for ART and chronic therapies within the context of overburdened facilities and long wait times for patients. The ATMs, for example, accurately dispense vital repeat medication for chronic stable patients who have HIV/AIDS, diabetes, high blood pressure, asthma, epilepsy, or tuberculosis — in just under three minutes. In Zambia, Right ePharmacy has at least 3 parcel collection units, and EQUIP has engaged them as the potential service provider for their Centralised Chronic Medicines Dispensing and Distribution (CCMDD) IT system [50].

mPharma

Founded in 2014 and launched in Zambia in 2015, mPharma operates in Ghana, Kenya, Nigeria, Zimbabwe and Zambia. In Lusaka, Central Copperbelt, and Eastern province, mPharma manages the pharmaceutical inventory of 30+ health facilities. The company focuses on making medicines, including those for SRH and HIV, accessible and affordable by taking ownership of the supply chain, eliminating inefficiencies and introducing price controls. Primarily through group purchasing and inventory management, they buy drugs on behalf of pharmacies/facilities, saving them the up-front cost, alleviating supply constraints and introducing an efficiency checkpoint. Providers pay on what is dispensed which reduces risk, in addition to providing access to health products at or below market prices. Medium sized

clinics and community pharmacies have seen price reductions of up to 30%. Many pharmacies in its network have managed to eliminate stockouts. The company has formed partnerships with major drug manufacturers including Novartis, Bayer and Pfizer.

SOCIAL FRANCHISING

While more of a market intervention than a specific financing mechanism, social franchising builds an ongoing relationship with providers and typically involves a contractual arrangement for sustaining behaviour change. This form of ‘contracting’ typically involves private providers agreeing to join a branded franchised chain and maintaining certain quality standards and often paying an agreed fee structure. In exchange, the franchising agent (often an iNGO like PSI/SFH) performs such activities as:

- Demand-generation such as interpersonal communication and mass media advertising;
- Training of clinical staff;
- Supplying products such as contraceptives and sometimes equipment

Franchise members typically agree to participate because of the promise of increased business [51]. Social franchising can provide new stimulus to provide higher quality services and increase the number of clients who are willing to pay for them. Generating awareness of the quality of care offered can lead to an increase in the uptake of services, which generates further income for the franchisee.

Studies provide strong evidence that franchising can result in improved uptake of family planning services, and there is moderate evidence of increased utilization of services by the poor[52]⁶ [52] . Papers reviewed also present moderate evidence of improved quality of care.

The first generation of SRH social franchising programs began in the early 1990s, including in Zambia. The main SRH social franchise experiences in Zambia include SFH’s New Start and MSI’s Blue Star.

New Start Testing and Counselling Centre [53]

Launched in 2002 by SFH, New Start was a service delivery mechanism that promoted Voluntary Counselling and Treatment (VCT) through mass media and interpersonal communication, while simultaneously supporting a franchised network of branded, high-quality VCT centers, some of which were managed by SFH and others by public and private institutions. SFH provided human and operational resources, technical assistance, M&E, and training to public and private VCT centers in the network. The centers provided daily local mobile VCT within designated districts across 8 provinces, as well as mobile units which served different districts within the province. SFH also offered post-test support group services for clients who tested positive, including serodiscordant couples. In addition, franchisees and public health facilities had agreements to refer patients to each other. Franchisees and the franchisor also offered technical inputs for policy development, with stakeholders sharing data reporting, quality assurance, and supply management systems.

⁶Evidence based on Social Franchise experiences including: Pathfinder International’s ‘Ray of Hope’ network in Ethiopia; Greenstar (affiliated with PSI) in Pakistan; and The Indian Janani network in Bihar.

New Start offered FP counselling and provision of contraceptive services including condoms, ECs, OCs, injectables, implants, and IUCDs; BCC and referrals for VMMC; screening for cervical cancer; and services for HIV including VCT and point of care CD4 testing and treatment. Franchisees included 352 clinically trained health workers (clinical officers and nurses) and 79 lay health workers or traditional healers. In addition to donor funding, additional sources of revenue included sales of condoms and Clorin, as well as fees from VCT client intake. Revenues were approximately USD \$1,768,943 with the number of client visits being 383,947. Some health products, supplies, or services were subsidized, with vouchers also being distributed to promote the use of services. The franchise model contributed to 787,790 DALYs averted, with 93% of them falling under HIV services and 7% under family planning services.

Blue Star Healthcare Network [53]

Launched in 2012 across four Zambian provinces, Marie Stopes' Blue Star network in Zambia had 38 urban locations, encompassing 30 clinically trained health workers (clinical officers, doctors, midwives, and nurses) who focused on short- and long-acting FP methods. Franchisees and public health facilities had agreements to refer patients to each other. Many, if not all franchisees were public sector employees. Franchisees and the franchisor both offered technical inputs into policy development, and shared data reporting and supply management systems with the public sector. While no longer operating, the franchise handled 3,841 client visits, resulting in 1415 DALYs averted including 67% from long-acting or permanent FP methods and 32% short-acting FP methods.

Before participation in the network, most clinics were only providing curative services that clients were willing to pay for. Upon membership in the franchise network, franchisees were trained in FP service delivery and linked to FP commodities from the public sector. This enabled them to provide FP services at a reduced cost to clients.

In summary, the benefits of social franchising are as follows:

- Replication of a proven system and brand: consumer awareness
- Standardization of products/services
- Economies of scale
- Rapid expansion to scale
- Centralized systems and controls – all facilities are measured, monitored and controlled in the same way, easing comparative performance based on established standards and operating procedures.

VIII. ENABLERS, OPPORTUNITIES FOR PRODUCTS & SERVICES, AND RECOMMENDATIONS

ENABLERS

Despite the volume of barriers making private participation in the SRH and HIV space challenging, there are nevertheless a number of enablers that offer unique opportunities for private sector entry.

Willingness to Pay	Despite public sector provision of products and services, surveyed consumers (from across income quintiles) were willing to pay between K10-K100, depending on the group and product/service. While in many cases, this may still be below cost-recovery, it does open opportunities for charging small fees through the private sector and social marketing, as well as enhanced opportunities for choice and products.
Decongesting the Public Sector	The main issue with the public sector voiced by consumers is overcrowding and wait-times. This results in perceptions of stigma and lack of confidentiality, which are of particular importance in accessing SRH and HIV products and services. A number of private sector channels were highlighted as feasible for addressing this issue. Pharmacies for example offer a number of products, and with appropriate training, pharmacists and pharmacy technicians can extend their scope of practice (such as injectables). Some already offer counselling. ZAMRA, PSZ, CHAI, and SAFE all noted that pharmacies can be key for satisfying unmet demand. An alternate approach is the use of CDUs, which are being used by EQUIP to distribute ARVs.
Filling Supply Gaps	It was noted that the private sector currently fills gaps when the government experiences stock outs and hence is a key player in ensuring commodity security for family planning and other products, such as HIV self-test kits [14].
Openness to Manufacturing	Some stakeholders mentioned opportunities in manufacturing [14][20], particularly with IUCDs. Marie Stopes for example noted some industries are capable of manufacturing IUCDs in Zambia. Pharmanova noted that if an “uptake agreement”, similar to the concept of an Advanced Market Commitment, were in place with the government, guaranteeing a buyer for whatever they produced, they would be more likely to manufacture. In fact, under the Government of the late Michael Sata, they were encouraged to conduct a feasibility study to set up an ARV plant, but this never went through because no formal agreement was in place.

OPPORTUNITIES FOR ADDRESSING UNMET DEMAND THROUGH PRODUCT/SERVICES

Based on our understanding of the demand dynamics (including ability and willingness to pay, awareness, and interest), supply dynamics (including distribution options and interest), and general enabling environment (regulatory, legal, etc.) for the private sector, we identified products/services with low, medium, and high potential for private delivery. Those with medium potential have some key barriers that have to be addressed/considered, but these barriers are known and can be possibly overcome. Those with low potential require investments in a number of capacities, coordination across many stakeholders, and/or contain certain data uncertainties that would render the product/service category less attractive to private entities.

Opportunity	Demand Dynamics	Supply Dynamics	Key Barriers/Enablers
Male condoms Medium	Very low WTP due to free availability. Low use and decreasing HIV risk perception. There may be some interest in low-cost, differentiated options.	Many options (public sector - 45%, SM - 51%, commercial - 4%). Can be easily distributed through a variety of channels (clinics, pharmacies, bars).	Very few regulatory/legal hurdles. Main issue is volatile donor climate, minimal demand creation efforts, and limited market data.
Female condoms Low	Very low WTP (below cost-recovery). <1% women use. Less interest in this product due to usability and awareness issues, even though it is the only woman initiated triple protection method.	No SM or commercial female condoms currently available. Suppliers have struggled to move them in the past. Only select programs had success.	Currently there is no donor support or champion; hence demand generation activities are minimal. Risky product category for private sector.
IUCDs Low/medium	IUCDs are unpopular (<1% of women use). More common among women with 5+ children and ages 45-49. Concern about infection and discomfort with insertion/removal are deterrents.	Limited supply of IUCDs (in part due to low demand). Facilities need training on insertion/removal. Some opportunities in postpartum IUCD consultation.	Training investment required; demand generation would have to be supported to justify the investment. Even if products continue to be provided for free, insertion/removal would still have to be subsidized by (75-85%). Some opportunities for higher income consumers (postpartum consults)
Implants Medium	Implant use has been growing quickly since 2013 (~8.5% of women). They are more common among women ages 25-39.	Implants available in the public and private, and primarily accessed in the public sector.	Like with IUCDs, the product and insertion/removal are above WTP. However, it is less costly. Private clinics could charge smaller service fees for those interested in service differentiation (note this would still require subsidies, but smaller ones than IUCDs).

Injectables High	<p>Fastest growing segment. Very popular among young women. Self-injection at scale has potential to increase demand.</p>	<p>Mostly accessed through GRZ. Limited private and SM provision. However, Depo-Provera® shortage is opening opportunities for Sayana®Press (self-injectable), but this will be provided in the public sector.</p>	<p>There are opportunities for distribution through many channels, including pharmacies (if task-shifting and training is supported). Human resource investment is more attractive than with LARCs given the high demand for injectables and privacy/convenience.</p>
Oral contraceptives Low/medium	<p>Decreasing in demand (replaced by injectables). Not popular among young people; difficulty in adherence. Chinese Pill (1 per month) is popular among low-income segment; now banned.</p>	<p>Free, socially marketed, and commercial options available. Commercial share is very cost-prohibitive (very low share of market).</p>	<p>Consumers are shifting to options with less user burden. For private sector while wide distribution options for opportunities (e.g. pharmacies), commercial options are extremely cost-prohibitive (7-8x WTP).</p>
PrEP Medium	<p>Demand and awareness are still low for this product. May change overtime, particularly among key populations.</p>	<p>Available for free in select sites, on a limited and targeted basis.</p>	<p>Policy guidance regarding PrEP provision needs to be clearer and disseminated. While the product is cost-prohibitive, opportunities to decongest public sector exist by charging dispensing fees in the private sector (e.g. CDUs).</p>
ART Medium	<p>Awareness is high, but use of ART is still not optimal among HIV+ individuals.</p>	<p>Available in the public and in select private sector clinics. However, private clinics generally refer patients to the public clinic where it is free.</p>	<p>Like with PrEP, ART is very cost-prohibitive, and private clinics cannot charge for it. However, opportunities exist to decongest the public sector by charging dispensing fees (WTP for ART current exceeds dispensing fees).</p>
HIV & Other STI Testing Low	<p>Knowledge of testing is high but utilization can still be improved. Concern about overcrowding and stigma are barriers.</p>	<p>Available for free in the public sector. Cost-prohibitive in the private sector. There are also quality concerns regarding its provision by the private sector.</p>	<p>Quality concerns would have to be addressed if expanding to the private sector. Unlikely that investment in training will be justified given low demand. Unlike with PrEP/ART where access can be subsidized to decongest the public sector, limited options for comparable arrangement due to the high cost of service and labs.</p>
Self-Test Kits High	<p>Utilization of testing is low, but having a private and confidential option may increase demand.</p>	<p>Can be purchased at pharmacies and medicine shops. Few types are currently available (not all approved). Can be accessed for free in some areas (e.g. Universities).</p>	<p>Concerns regarding the lack of counselling, data capture and not linking to care. Some regulatory processes remain. However, even with these problems, there is optimism about this product among stakeholders. WTP exceeds cost-recovery for most lower cost commercial options.</p>

<p>VMMC</p> <p>Low/medium</p>	<p>High demand for this service; very successful marketing campaigns.</p>	<p>Available in the public sector. Limited availability in the private sector due to costs/training required. Furthermore, not covered by insurance. For clinics that offer VMMC, it is well above WTP.</p>	<p>Strategic approach could be to equip and train private clinics to bring down cost. However, not clear if that would still result in cost-recovery for clinics.</p>
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RECOMMENDATIONS

1. **Invest in demand generation.** This is particularly important for products and services that can be accessed in the private sector across income quintiles. Investing in training, equipment, accreditation, is otherwise unattractive for the private sector.
2. **Encourage better market segmentation among private clinics.** Consumers are willing to pay for service differentiation, including shorter wait times and greater privacy. Identify opportunities that can better match supply and demand such as dedicated clinic days for certain procedures for which there is lower demand, whereby a rotating midwife/nurse could help maintain proficiency at the clinic and create awareness so more women come in for those services on those particular days.
3. **Leverage pharmacies.** Pharmacies provide task-shifting opportunities for individuals seeking convenience and confidentiality. With task shifting and expanding scope of practice for pharmacists and pharmacy technicians, pharmacies can be a cost-effective way to decongest the public sector and reach populations with unmet demand for FP and HIV testing/management.
4. **Facilitate more formal and regular engagement with the private sector.** While now reflected in policy guidance, private sector engagement strategies must be implemented. For example, intra- and inter-professional collaboration among public and private health facilities and training institutions is part of the Health Strategic Plan 2017-2021, however, platforms for ongoing engagement between the private sector, MoH and other relevant stakeholders for policy and planning should be established. A systematic and transparent approach is recommended.
5. **Introduce a MoH liaison for private sector engagement.** Similar to the quality assurance model used by SFH, where they have hired a full-time nurse to ensure proficiency of public sector staff in SRH products and services, USAID in collaboration with GRZ could hire a healthcare professional (nurse or otherwise) whose scope of work would be to bring the private sector on board and ensure proficiency in the delivery of key products and services, raise awareness, create demand, and lower the risk of non-compliance - key barriers to entry. Because of the requirement for technical familiarity and a potential oversight and capacity building function, such a role might best be fulfilled by an HCW, however pending on the terms of reference, specific qualifications may be flexible.
6. **Formalize use of private health facilities to manage stock outs.** Stock outs are common in the public sector; integrate private health facilities into the national commodity supply chain⁷.
7. **Support timely policy guidance development and updates to help ensure pace with innovative approaches including m-health.** This is a key opportunity for closing gaps among adolescent, high-risk, and rural populations.
8. **Leverage health system touch-points and existing platforms to enhance opportunities for SRH and HIV education/promotion.** For example, train private providers to recognize when to talk to women about IUCDs. Leverage the high cesarean section

⁷ Recommendation was also noted in a report by SAFE; also review Kenya experience with the same.

rates in the private sector; as well as normal deliveries, to educate and introduce the option of postpartum IUCDs. Other opportunities include installing condom dispensers in bars/clubs. Installing in public areas has posed challenges in other LMICs including public resistance, irregular stocking, vandalism, theft, and poor maintenance. A plan to mitigate these should be considered before widespread installation.

9. **Support more piloting of marketing and BCC approaches.** Issues arose regarding the effective/ appropriate messaging of SRH/HIV products and services, particularly given low literacy, poor conceptual equivalence of 'risk reduction', and concern over moral hazard.
10. **Apply lessons from Chinese clinics when targeting lower income consumers.** The Chinese Pill is a case study in the preferences of low-income consumers: physical access, cost, low burden of use (i.e. favourable dosage frequency to duration of effect ratio). Highlight such messages when targeting this market segment.
11. **Assess market readiness for social franchising models** and consider pilots with key partners. Review lessons learned from NewStart and BlueStar franchises with SFH and Marie Stopes Zambia, respectively.

IX. SUMMARY & CONCLUSIONS

The purpose of this PSA was to identify opportunities and recommendations regarding how the private sector can be leveraged to ensure a healthy total market that aims for equity, sustainability, quality and scale. While private sector participation in SRH/HIV product and service provision in Zambia is minimal, some opportunities exist. Below we summarize the findings pertaining to the five assessment questions.

Assessment Question 1: What is the size, scope, and scale of private sector participation in the SRH and HIV space?

The private plays a small role in the provision of SRH and HIV products and services. This is largely due to the free provision of such products and services in the public sector. In 2013, private sector health facilities played a role in providing female sterilization and OCs. Private non-health facilities, such as shops, played a significant role provisioning male condoms and oral contraceptives. The public sector provides free HIV testing and counselling and ART. PrEP has recently been rolled out in select regions. Both supply and demand dynamics have limited private participation in the area of HIV prevention, testing, and management.

The four main private sector actors that provide SRH and HIV products and services in urban Zambia are: private medical clinics, pharmacies, medicine/drug shops, and NGO/Donor funded programs.



SRH and HIV products and services do not move quickly through private clinics since FP has limited insurance coverage and most products and services are free or heavily subsidized through the public sector. Short-term FP methods that allow for more appointments and touch-points with patients are more common. While most private clinics do not provide HIV testing services or ARVs due to free public sector delivery, some clinics unofficially offer these services at a high price. Finally, while private clinics are allowed to offer public commodities to their patients for a small delivery fee, participation in these programs is low because of the reporting requirements.



Private sector pharmacies are in some cases able to distribute public sector-provided free products, undercutting the ability of commercial products to enter the market or effectively compete. Products offered through pharmacies include: male condoms, female condoms, OCs, occasionally stock LARCs, injectables, HIV self-test kits and STI self-test kits.



Medicine/drug shops, are typically unlicensed entities without a pharmacist where basic medical goods, OTC drugs, and other products may be sold. These types of shops are common in compounds. Products offered through medicine/drug shops include: male condoms, female condoms, OCs, HIV self-test kits and STI self-test kits.



There are a number of NGO/Donor funded programs providing free, subsidized, and socially marketed SRH and HIV products, services, and education/advocacy around these products/services. Channels of delivery vary from adolescent friendly centers, mobile service delivery, and social marketing.

Assessment Question 2: What types of SRH and HIV products and services are offered by the private sector?

Of the products and services evaluated as part of this assessment, apart from PrEP, all can be accessed through the private sector, but not everywhere. For example, while male condoms, oral contraceptives, self-test kits are fairly widely available in the private sector, LARCs, ART, HIV and STI Testing and VMMC are offered only in select clinics. This is because (1) many clinics lack the expertise and equipment to perform these services safely, (2) demand for these services is low, and (3) the services are cost-prohibitive for most consumers that consumers access them in the public sector, where they are free.

Assessment Question 3: What is the willingness to pay for SRH and HIV-related products and services?

Average WTPs (by consumer groups) fell in the following ranges. Full analyses are summarized in **Annex B**.

- Male condoms (K2.6-15.7)
- Female condoms (K7.0-11.2)
- IUCDs (K23.1-78.0)
- Implants (K17.8-59.1)
- Injectables (K21.4-55.9)
- OCs (K14.1-39.8)
- PrEP (K9.0-85.0)
- ART (K34.5-112.7)
- HTS (K28.3-102.4)
- STI Testing (K23.5-127.7)
- HIV Self-Test Kits (K18.3-49.3)
- VMMC (K39.1-67.7)

In general, adolescent girls had the highest WTP for most family planning options. This is unsurprising given the stigma regarding unplanned pregnancy. As one woman noted in an FGD:



“People are more scared of getting pregnant...Would rather walk around with sickness than pregnancy”

Consumer preferences for differentiated services that were associated with higher WTP varied across services. Factors like facility hours was associated with high WTP for ARV delivery and consultations as well as STI testing. Trust in the provider was associated with higher WTP for services with an insertion procedure, such as IUCDs and Implants.

Assessment Question 4: What are the policies & factors that inhibit private sector participation in the health system

The primary supply side barriers include: limited public-private engagement, skewed market due to social marketing and free distribution, regulatory and legal issues, policy lags, marketing restrictions, and training and competency issues. The primary demand side barriers include: awareness, ability to pay, and cultural and social norms.

Assessment Question 5: What are ways the private sector could be further engaged?

Within products and services, high potential exists for the distribution of injectables and self-test kits through private channels. Female condoms and daily oral contraceptives have the lowest opportunity, largely due to a shift in demand to other FP products. Traditional HIV & STI testing and VMMC were

also of lower priority due to cost-recovery constraints for the private sector. Among other product categories, the willingness to pay analysis suggests small fees can be charged for service delivery or product dispensing to decongest the public sector (with smaller subsidies).

Investing in demand generation, leveraging pharmacies, and introducing better market segmentation by private clinics are among recommended strategies for leveraging the private sector.

LIMITATIONS

This assessment had a number of limitations. First, data was collected from a convenience sample, with the sample size being limited. While efforts were adopted to ensure representation across quintiles at least, there are still selection issues potentially affecting the external validity of some findings, particularly with respect to willingness to pay. Since consumers could not be asked about their own behaviours or health status, interpretation of some results is challenging. Furthermore, some population groups such as CSWs and MSM were not sampled, in part due to sensitivities regarding their identification. Where possible, opportunities voiced through other organizations were reflected. Finally, data availability was limited, and again the team relied on short retailer surveys and KIIs with select private players, which may not necessarily be representative of all private players in Zambia.

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IMAGES & ICONS

All icons used in this report were from Flaticon (and modified), under a Creative Commons license. Freepik icons (Adolescent girl; Adolescent boy; Woman; Man; Pharmacy; Beer; Doctor; Group Discussion; Target; Question; Flowchart; NGO; Demand), Kiranshastry (Medication), Eucalypt (Stakeholder) and Smashicons (Supply).

ANNEX A: INSTRUMENT DESIGN

Retailer survey

The retailer survey was designed to collect data from pharmacies and medicine/drug shops. Themes included:

- Product offerings
- Product demand
- Product pricing
- Marketing
- Potential offerings
- Training, skill, and willingness to learn
- Collaboration with public sector
- Regulatory and policy environment.

Once questions under each theme were identified, they were reviewed for sensitivity, appropriate response options (e.g. open-ended vs. closed options), and response burden. The final version was piloted with the enumeration firm RuralNet, who confirmed whether the questions could be translated to maintain conceptual equivalence. No challenges arose in the development of the retailer survey.

Consumer survey

The consumer survey was designed to collect data from potential consumers in Lusaka and Copperbelt. Consumer groups included adolescent girls and boys and adult women and men. Themes included:

- Perceptions of service differentiation
- Attitudes towards health facilities
- Knowledge of SRH and HIV products and services
- Perceptions of HIV/AIDS risk
- Channels for accessing information
- Product and service preferences within peer group
- Willingness to pay
- Perception of marketing

Questions under each theme were informed by existing surveys and methodologies and insights from the qualitative data collection. For example, when generating the list of differentiating factors, we used a number of validated surveys for use in general populations. The willingness to pay modules were developed in accordance to the USAID guidelines.

Consumer survey design was considerably more challenging compared to the other instruments:

- Due to the type of data collection authorization issued, surveyed consumers could not be directly asked about their behaviour/preferences. Therefore, questions had to be framed to ask about peers or general cases.
- Given the volume of products and services, response burden was high.
- Some questions were more sensitive; phrasing and response options had to be carefully designed to limit the likelihood of non-response
- Due to potential concerns around literacy and data quality, the selected mode of administration was an interview with enumerators inputting data into tablets on behalf of participants. This increased the time requirements and so questions/response options had to be sensitive to this mode of administration.

The consumer survey underwent a number of iterations, and was piloted with many individuals at RuralNet who assessed content validity, translatability, response burden, sensitivity, among other things, before deployment in the field.

Stakeholder KIIs

This instrument was designed to collect data from a range of stakeholders, and was to be administered as an in-person KII. It contained a large question bank covering themes under the assessment questions. Questions appropriate to a given stakeholder were pulled from a general bank. No challenges arose in the development of this instrument.

Private clinic KIIs

This instrument was designed to collect data from private clinics, and was to be administered as an in-person KII. This was a brief instrument covering:

- Product/service offerings
- Product/service demand
- Challenges of provision of products/services
- Training requirements/willingness
- Offering of public sector products.

A question list was generated and reviewed by the team for appropriateness, clarity, and response burden. No challenges arose in the development of this instrument.

Bar/club KIIs

This instrument was designed to collect data from bar/restaurants and clubs, and was to be administered as an in-person KII. This was a brief instrument covering:

- Interest/awareness of condom dispensers
- Interest/experience in having health promotion materials in their establishment (e.g. posters)
- Demand/supply of condoms at establishment

A question list was generated and reviewed by the team for appropriateness, clarity, and response burden. No challenges arose in the development of this instrument.

Consumer FGDs

The consumer FGD instrument was designed to collect data from potential consumers in Lusaka and Copperbelt. Consumer groups included adolescent girls and boys and adult women and men. While they were slightly tailored depending on the specific consumer group, all FGDs covered the following themes:

- Perceptions of public versus private health care
- Contraceptive preferences
- HIV testing/prevention preferences
- Health promotion/marketing

As with the consumer survey, issues around sensitivity and inability to ask about direct behaviour/preferences posed challenges requiring careful design to limit the likelihood of non-response.

ANNEX B: SAMPLES & DATA ANALYSIS

FINAL SAMPLES

PSA Retailer Survey

Retailers	Target			Final Sample		
	Lusaka	Copperbelt	Total	Lusaka	Copperbelt	Total
Pharmacies	5	5	10	7	4	11
Medicine/drug shops	5	5	10	5	6	11
Total	10	10	20	12	10	22

PSA Consumer Survey

Consumers	Target			Final Sample		
	Lusaka	Copperbelt	Total	Lusaka	Copperbelt	Total
Adolescent girls	30	30	60	32	31	63
Adolescent boys	30	30	60	30	29	59
Women	30	30	60	32	31	63
Men	30	30	60	24	31	55
Total	120	120	240	118	122	240

Stakeholders

There was no target number of stakeholders. Senior representatives of the following were interviewed:

- Population Council
- Zambia Medical Association (ZMA)
- Melcome
- Medical Stores Limited (MSL)
- EQUIP
- Pharmanova
- Pharmaceutical Society of Zambia (PSZ)
- Health Professions Council of Zambia (HPCZ)
- SAFE Program (JSI)

- Live Well
- Axis Solutions Africa
- Clinton Health Access Initiative (CHAI)
- Marie Stopes
- Zambia Medicines Regulatory Authority (ZAMRA)
- Lusaka Trust Hospital
- DISCOVER-HEALTH
- National HIV/AIDS/STI/TB Council (NAC)

Private Clinics

Retailers	Target			Final Sample		
	Lusaka	Copperbelt	Total	Lusaka	Copperbelt	Total
Private Clinics	4	4	8	3	3	6
Chinese Clinics	3-4	3-4	6-8	7	0	7
Total	8	8	8	10	3	13

Bar/Restaurant Klls

Retailers	Target			Final Sample		
	Lusaka	Copperbelt	Total	Lusaka	Copperbelt	Total
Bars/Restaurants	4	4	8	4	4	8
Total	4	4	8	4	4	8

Consumer FGDs

Consumers	Target			Final Sample		
	Lusaka	Copperbelt	Total	Lusaka	Copperbelt	Total
Adolescent girls	1	1	2	1	1	2
Adolescent boys	1	1	2	1	1	2
Women	1	1	2	1	1	2
Men	1	1	2	1	1	2
Total	4	4	8	4	4	8

DATA ANALYSIS

Male Survey Respondent Characteristics

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
n	30	24	54	29	31	60	114
Age, mean, y	22.3	38.6	29.6	21.7	34.9	28.5	29.0
Wealth index, mean	0.644	0.609	0.629	0.650	0.596	0.622	0.625
Marital status, n (%)							
Monogamous marriage	0 (0)	15 (63)	15 (28)	1 (3)	24 (77)	25 (42)	40 (35)
Polygamous marriage	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	1 (2)	1 (1)
Living together with partner	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	1 (2)	1 (1)
Widowed, divorced, or separated	0 (0)	3 (13)	3 (6)	0 (0)	2 (6)	2 (3)	5 (4)
Single	30 (100)	6 (25)	36 (67)	27 (93)	4 (13)	31 (52)	67 (59)
Highest level of education completed, n (%)							
Grade 1 to 4	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	1 (2)	1 (1)
Grade 5 to 7	0 (0)	5 (21)	5 (9)	1 (3)	3 (10)	4 (7)	9 (8)
Grade 8 to 9	2 (7)	4 (17)	6 (11)	2 (7)	6 (19)	8 (13)	14 (12)
Grade 10 to 12	17 (57)	9 (38)	26 (48)	22 (76)	16 (52)	38 (63)	64 (56)
Higher learning	11 (37)	6 (25)	17 (31)	4 (14)	5 (16)	9 (15)	26 (23)
None	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Number of living children, mean	0.13	2.79	1.31	0.14	2.61	1.42	1.37
Range	0-1	0-7	0-7	0-1	0-7	0-7	0-7

Female Survey Respondent Characteristics

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
n	32	32	64	31	31	62	126
Age, mean, y	21.94	33.34	27.64	21.26	36.65	28.95	28.29
Wealth index, mean	0.609	0.594	0.601	0.646	0.650	0.648	0.624
Marital status, n (%)							
Monogamous marriage	6 (19)	22 (69)	28 (44)	5 (16)	13 (42)	18 (29)	46 (37)
Polygamous marriage	0 (0)	1 (3)	1 (2)	0 (0)	0 (0)	0 (0)	1 (1)
Living together with partner	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Widowed, divorced, or separated	0 (0)	5 (16)	5 (8)	0 (0)	8 (26)	8 (13)	13 (10)
Single	26 (81)	4 (13)	30 (47)	26 (84)	10 (32)	36 (58)	66 (52)
Highest level of education completed, n (%)							
Grade 1 to 4	0 (0)	2 (6)	2 (3)	1 (3)	1 (3)	2 (3)	4 (3)
Grade 5 to 7	3 (9)	9 (28)	12 (19)	1 (3)	8 (26)	9 (15)	21 (17)
Grade 8 to 9	5 (16)	6 (19)	11 (17)	3 (10)	8 (26)	11 (18)	22 (17)
Grade 10 to 12	23 (72)	8 (25)	31 (48)	22 (71)	9 (29)	31 (50)	62 (49)
Higher learning	1 (3)	5 (16)	6 (9)	3 (10)	5 (16)	8 (13)	14 (11)
None	0 (0)	2 (6)	2 (3)	1 (3)	0 (0)	1 (2)	3 (2)
Number of living children, mean	0.53	2.59	1.56	0.52	2.45	1.48	1.52
Range	0-2	0-5	0-5	0-3	0-7	0-7	0-7

Male Willingness to Pay (WTP) for Contraceptive Products

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
Male Condoms							
Aware of Product, n (%)	30 (100)	24 (100)	54 (100)	29 (100)	31 (100)	60 (100)	114 (100)
WTP ≥3, n (% of pop. aware of product)	28 (93)	24 (100)	52 (96)	28 (97)	29 (94)	57 (95)	109 (96)
WTP ≥10, n (% of pop. aware of product)	15 (50)	12 (50)	27 (50)	19 (66)	11 (35)	30 (50)	57 (50)
WTP ≥20, n (% of pop. aware of product)	8 (27)	5 (21)	13 (24)	6 (21)	5 (16)	11 (18)	24 (21)
Mean WTP	12.5	13.3	12.8	15.5	11.1	13.2	13.0
Female Condoms							
Aware of Product, n (%)	1 (3)	3 (13)	4 (7)	0 (0)	0 (0)	0 (0)	4 (4)
WTP ≥3, n (% of pop. aware of product)	1 (100)	2 (67)	3 (75)	--	--	--	3 (75)
WTP ≥10, n (% of pop. aware of product)	1 (100)	2 (67)	3 (75)	--	--	--	3 (75)
WTP ≥20, n (% of pop. aware of product)	0 (0)	2 (67)	2 (50)	--	--	--	2 (50)
Mean WTP	10.0	18.3	16.3	--	--	--	16.3

Female Willingness to Pay (WTP) for Contraceptive Products

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
Oral Contraceptives							
Aware of Product, n (%)	29 (91)	32 (100)	61 (95)	27 (87)	31 (100)	58 (94)	119 (94)
WTP ≥15, n (% of pop. aware of product)	17 (59)	14 (44)	31 (51)	18 (67)	11 (35)	29 (50)	60 (50)
WTP ≥25, n (% of pop. aware of product)	11 (38)	9 (28)	20 (33)	13 (48)	6 (19)	19 (33)	39 (33)
WTP ≥50, n (% of pop. aware of product)	9 (31)	6 (19)	15 (25)	5 (19)	2 (6)	7 (12)	22 (18)
Mean WTP	41.6	17.2	28.8	28.3	13.6	20.4	24.7
Male Condoms							
Aware of Product, n (%)	14 (44)	14 (44)	28 (44)	24 (77)	27 (87)	51 (82)	79 (63)
WTP ≥3, n (% of pop. aware of product)	12 (86)	11 (79)	23 (82)	22 (92)	20 (74)	42 (82)	65 (82)
WTP ≥10, n (% of pop. aware of product)	4 (29)	3 (21)	7 (25)	11 (46)	8 (30)	19 (37)	26 (33)
WTP ≥20, n (% of pop. aware of product)	3 (21)	0 (0)	3 (11)	6 (25)	5 (19)	11 (22)	14 (18)
Mean WTP	7.7	4.9	6.3	14.3	11.4	12.8	10.5
Female Condoms							
Aware of Product, n (%)	27 (84)	30 (94)	57 (89)	21 (68)	22 (71)	43 (69)	100 (79)
WTP ≥3, n (% of pop. aware of product)	20 (74)	23 (77)	43 (75)	17 (81)	13 (59)	30 (70)	73 (73)
WTP ≥10, n (% of pop. aware of product)	10 (37)	11 (37)	21 (37)	8 (38)	5 (23)	13 (30)	34 (34)
WTP ≥20, n (% of pop. aware of product)	4 (15)	2 (7)	6 (11)	3 (14)	4 (18)	7 (16)	13 (13)
Mean WTP	8.4	7.1	7.7	10.7	6.9	8.7	8.2

Male Willingness to Pay (WTP) for HIV/AIDS and STI Products

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
HIV Testing Kits							
Aware of Product, n (%)	15 (50)	15 (63)	30 (56)	17 (59)	13 (42)	30 (50)	60 (53)
WTP ≥15, n (% of pop. aware of product)	9 (60)	8 (53)	17 (57)	10 (59)	8 (62)	18 (60)	35 (58)
WTP ≥30, n (% of pop. aware of product)	7 (47)	5 (33)	12 (40)	8 (47)	8 (62)	16 (53)	28 (47)
WTP ≥50, n (% of pop. aware of product)	1 (7)	3 (20)	4 (13)	5 (29)	4 (31)	9 (30)	13 (22)
Mean WTP	19.7	29.7	24.7	23.5	31.5	27.0	25.8
STI Testing Kits							
Aware of Product, n (%)	1 (3)	0 (0)	1 (2)	1 (3)	3 (10)	4 (7)	5 (4)
WTP ≥15, n (% of pop. aware of product)	1 (100)	--	1 (100)	1 (100)	2 (67)	3 (75)	4 (80)
WTP ≥30, n (% of pop. aware of product)	1 (100)	--	1 (100)	1 (100)	2 (67)	3 (75)	4 (80)
WTP ≥50, n (% of pop. aware of product)	1 (100)	--	1 (100)	1 (100)	1 (33)	2 (50)	3 (60)
Mean WTP	50.0	--	50.0	50.0	26.7	32.5	36.0
Pre-Exposure Prophylaxis (PrEP)							
Aware of Product, n (%)	5 (17)	8 (33)	13 (24)	1 (3)	6 (19)	7 (12)	20 (18)
WTP ≥50, n (% of pop. aware of product)	2 (40)	4 (50)	6 (46)	0 (0)	3 (50)	3 (43)	9 (45)
WTP ≥75, n (% of pop. aware of product)	1 (20)	0 (0)	1 (8)	0 (0)	2 (33)	2 (29)	3 (15)
WTP ≥100, n (% of pop. aware of product)	1 (20)	0 (0)	1 (8)	0 (0)	2 (33)	2 (29)	3 (15)
Mean WTP	30.0	26.9	28.1	0.0	43.3	37.1	31.3

Female Willingness to Pay (WTP) for HIV/AIDS and STI Products

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
HIV Testing Kits							
Aware of Product, n (%)	18 (56)	23 (72)	41 (64)	19 (61)	19 (61)	38 (61)	79 (63)
WTP ≥15, n (% of pop. aware of product)	10 (56)	11 (48)	21 (51)	8 (42)	10 (53)	18 (47)	39 (49)
WTP ≥30, n (% of pop. aware of product)	8 (44)	7 (30)	15 (37)	5 (26)	4 (21)	9 (24)	24 (30)
WTP ≥50, n (% of pop. aware of product)	4 (22)	4 (17)	8 (20)	3 (16)	2 (11)	5 (13)	13 (16)
Mean WTP	49.3	25.9	36.2	16.2	18.4	17.3	27.1
STI Testing Kits							
Aware of Product, n (%)	2 (6)	1 (3)	3 (5)	1 (3)	1 (3)	2 (3)	5 (4)
WTP ≥15, n (% of pop. aware of product)	2 (100)	1 (100)	3 (100)	1 (100)	0 (0)	1 (50)	4 (80)
WTP ≥30, n (% of pop. aware of product)	2 (100)	1 (100)	3 (100)	1 (100)	0 (0)	1 (50)	4 (80)
WTP ≥50, n (% of pop. aware of product)	0 (0)	1 (100)	1 (33)	1 (100)	0 (0)	1 (50)	2 (40)
Mean WTP	30.0	100.0	53.3	100.0	5.0	52.5	53.0
Pre-Exposure Prophylaxis (PrEP)							
Aware of Product, n (%)	2 (6)	7 (22)	9 (14)	0 (0)	1 (3)	1 (2)	10 (8)
WTP ≥50, n (% of pop. aware of product)	2 (100)	2 (29)	4 (44)	--	0 (0)	0 (0)	4 (40)
WTP ≥75, n (% of pop. aware of product)	2 (100)	1 (14)	3 (33)	--	0 (0)	0 (0)	3 (30)
WTP ≥100, n (% of pop. aware of product)	0 (0)	1 (14)	1 (11)	--	0 (0)	0 (0)	1 (10)
Mean WTP	75.0	85.0	82.8	--	0.0	0.0	74.5

Female Willingness to Pay (WTP) for HIV/AIDS and STI Products

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
Intrauterine Devices (IUDs)							
Aware of Product, n (%)	10 (31)	25 (78)	35 (55)	15 (48)	24 (77)	39 (63)	74 (59)
WTP ≥85, n (% of pop. aware of service)	4 (40)	8 (32)	12 (34)	3 (20)	1 (4)	4 (10)	16 (22)
WTP ≥100, n (% of pop. aware of service)	4 (40)	8 (32)	12 (34)	1 (7)	1 (4)	2 (5)	14 (19)
WTP ≥150, n (% of pop. aware of service)	4 (40)	5 (20)	9 (26)	0 (0)	0 (0)	0 (0)	9 (12)
Mean WTP	73.0	70.3	71.1	38.7	23.3	29.2	49.0
Implantable Contraception							
Aware of Product, n (%)	13 (41)	26 (81)	39 (61)	15 (48)	26 (84)	41 (66)	80 (63)
WTP ≥50, n (% of pop. aware of service)	7 (54)	9 (35)	16 (41)	3 (20)	6 (23)	9 (22)	25 (31)
WTP ≥60, n (% of pop. aware of service)	6 (46)	7 (27)	13 (33)	1 (7)	3 (12)	4 (10)	17 (21)
WTP ≥75, n (% of pop. aware of service)	5 (38)	5 (19)	10 (26)	1 (7)	1 (4)	2 (5)	12 (15)
Mean WTP	57.7	57.7	57.7	22.7	18.3	19.9	38.3
Injectable Contraception							
Aware of Product, n (%)	25 (78)	32 (100)	57 (89)	27 (87)	30 (97)	57 (92)	114 (90)
WTP ≥50, n (% of pop. aware of service)	10 (40)	11 (34)	21 (37)	9 (33)	6 (20)	15 (26)	36 (32)
WTP ≥60, n (% of pop. aware of service)	7 (28)	7 (22)	14 (25)	8 (30)	4 (13)	12 (21)	26 (23)
WTP ≥75, n (% of pop. aware of service)	3 (12)	2 (6)	5 (9)	7 (26)	2 (7)	9 (16)	14 (12)
Mean WTP	54.2	35.9	43.9	40.0	22.1	30.6	37.3

Male Willingness to Pay (WTP) for HIV/AIDS and STI Services

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
HIV Testing Services							
Aware of Product, n (%)	28 (93)	24 (100)	52 (96)	28 (97)	31 (100)	59 (98)	111 (97)
WTP ≥50, n (% of pop. aware of product)	8 (29)	3 (13)	11 (21)	12 (43)	7 (23)	19 (32)	30 (27)
WTP ≥200, n (% of pop. aware of product)	2 (7)	1 (4)	3 (6)	3 (11)	1 (3)	4 (7)	7 (6)
WTP ≥400, n (% of pop. aware of product)	2 (7)	1 (4)	3 (6)	2 (7)	1 (3)	3 (5)	6 (5)
Mean WTP	54.8	25.0	41.1	73.1	30.5	50.7	46.2
STI Testing Services							
Aware of Product, n (%)	13 (43)	13 (54)	26 (48)	11 (38)	13 (42)	24 (40)	50 (44)
WTP ≥50, n (% of pop. aware of product)	6 (46)	5 (38)	11 (42)	7 (64)	6 (46)	13 (54)	24 (48)
WTP ≥200, n (% of pop. aware of product)	3 (23)	1 (8)	4 (15)	4 (36)	0 (0)	4 (17)	8 (16)
WTP ≥400, n (% of pop. aware of product)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	1 (4)	1 (2)
Mean WTP	80.8	42.3	61.5	127.7	56.9	89.4	74.9
Antiretrovirals & Consultation							
Aware of Product, n (%)	29 (97)	22 (92)	51 (94)	29 (100)	31 (100)	60 (100)	111 (97)
WTP ≥50, n (% of pop. aware of product)	12 (41)	6 (27)	18 (35)	17 (59)	8 (26)	25 (42)	43 (39)
WTP ≥75, n (% of pop. aware of product)	6 (21)	5 (23)	11 (22)	9 (31)	7 (23)	16 (27)	27 (24)
WTP ≥100, n (% of pop. aware of product)	5 (17)	5 (23)	10 (20)	8 (28)	6 (19)	14 (23)	24 (22)
Mean WTP	34.0	34.0	34.0	57.9	39.0	48.2	41.6

Female Willingness to Pay (WTP) for HIV/AIDS and STI Services

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
HIV Testing Services							
Aware of Product, n (%)	31 (97)	32 (100)	63 (98)	30 (97)	31 (100)	61 (98)	124 (98)
WTP ≥50, n (% of pop. aware of product)	5 (16)	9 (28)	14 (22)	12 (40)	5 (16)	17 (28)	31 (25)
WTP ≥200, n (% of pop. aware of product)	2 (6)	3 (9)	5 (8)	8 (27)	2 (6)	10 (16)	15 (12)
WTP ≥400, n (% of pop. aware of product)	2 (6)	3 (9)	5 (8)	1 (3)	0 (0)	1 (2)	6 (5)
Mean WTP	56.8	110.3	83.9	74.6	27.5	50.7	67.6
STI Testing Services							
Aware of Product, n (%)	15 (47)	23 (72)	38 (59)	17 (55)	21 (68)	38 (61)	76 (60)
WTP ≥50, n (% of pop. aware of product)	7 (47)	10 (43)	17 (45)	8 (47)	6 (29)	14 (37)	31 (41)
WTP ≥200, n (% of pop. aware of product)	2 (13)	4 (17)	6 (16)	4 (24)	0 (0)	4 (11)	10 (13)
WTP ≥400, n (% of pop. aware of product)	1 (7)	2 (9)	3 (8)	2 (12)	0 (0)	2 (5)	5 (7)
Mean WTP	114.0	100.1	105.6	94.9	24.3	55.9	80.7
Antiretrovirals & Consultation							
Aware of Product, n (%)	30 (94)	31 (97)	61 (95)	29 (94)	29 (94)	58 (94)	119 (94)
WTP ≥50, n (% of pop. aware of product)	15 (50)	12 (39)	27 (44)	12 (41)	5 (17)	17 (29)	44 (37)
WTP ≥75, n (% of pop. aware of product)	15 (50)	10 (32)	25 (41)	7 (24)	4 (14)	11 (19)	36 (30)
WTP ≥100, n (% of pop. aware of product)	10 (33)	7 (23)	17 (28)	6 (21)	3 (10)	9 (16)	26 (22)
Mean WTP	113.5	68.5	90.6	52.1	36.6	44.3	68.0

Male Willingness to Pay (WTP) for Voluntary Medical Male Circumcision

Characteristic	Lusaka			Copperbelt			Grand Total
	Age 18-24	Age 25-49	Total	Age 18-24	Age 25-49	Total	
VMMC							
Aware of Product, n (%)	29 (97)	23 (96)	52 (96)	29 (100)	31 (100)	60 (100)	112 (98)
WTP ≥50, n (% of pop. aware of product)	14 (48)	9 (39)	23 (44)	16 (55)	13 (42)	29 (48)	52 (46)
WTP ≥100, n (% of pop. aware of product)	9 (31)	6 (26)	15 (29)	9 (31)	7 (23)	16 (27)	31 (28)
WTP ≥150, n (% of pop. aware of product)	4 (14)	1 (4)	5 (10)	4 (14)	1 (3)	5 (8)	10 (9)
Mean WTP	57.6	37.8	48.8	66.0	39.7	52.4	50.8

Correlation of consumer preferences to willingness to pay (WTP) for differentiated services

Respondents were asked to choose up to five (5) differentiating factors that would influence them to pay more for SRH or HIV related services from a pre-selected list. Characteristics with positive correlations to WTP should be interpreted as being associated with the consumer preferences of higher-paying individuals, while characteristics with negative correlations to WTP should be interpreted as being associated with the consumer preferences of lower-paying individuals.

Note that not all consumers provided information regarding their preferences for differentiated services. Seven responses were also discarded due to the fact that more than five differentiating factors were selected.

Characteristic	IUDs	Implants	Injectables	HIV Testing Services	STI Testing Services	ARVs	VMMC
Cost	0.0234	-0.0549	0.0520	-0.0681	0.0350	-0.0350	-0.0096
Wait times	-0.2653	-0.0842	-0.1238	-0.0359	-0.1215	-0.0396	0.0993
Privacy/ discreteness	-0.1377	-0.0851	0.0026	-0.0158	-0.1296	0.0057	-0.0479
Size of facility	-0.1320	-0.0788	-0.0730	-0.0440	-0.0216	-0.0155	NA
Cleanliness of facility	-0.1936	-0.1103	-0.1228	-0.0169	-0.0259	-0.0550	-0.0015
Qualifications of provider	-0.0661	0.1126	-0.1496	-0.0351	0.0727	-0.1701	0.0872
Provider is same gender	-0.0873	-0.0925	0.0056	-0.0385	-0.0312	-0.0572	-0.1537
Provider is friendly	-0.2126	0.1438	0.1141	0.0469	0.0508	0.0959	0.3853
Provider is not judgmental	0.0071	-0.0543	0.1187	0.0207	-0.0301	0.0482	0.2416
Provider allows questions	0.3248	-0.0800	0.1083	0.0311	-0.1407	0.0837	0.0818
Provider spends time with patient	-0.0260	-0.0625	-0.0461	0.0259	-0.0560	-0.0277	-0.0321
Trust in provider	0.2980	0.2334	0.0399	0.0260	0.1245	0.0062	0.1264
Hours facility is open	-0.0319	0.0030	0.1019	-0.0188	0.2890	0.1472	NA

Analysis of differentiated services and consumer willingness to pay (WTP)

A regression analysis was conducted on consumer preferences for differentiated service characteristics. Due to the small sample of individuals and the number of choices for differentiations, there was not a high degree of certainty for why consumers may be willing to pay more. However, certain characteristics yielded statistically significant results which aligned with the qualitative data collected through key informant interviews and focus group discussions and form a coherent story about consumer choice. For instance, willingness to pay for contraceptives that require a procedure, such as IUCD or implant insertion, was most closely associated with consumers wanting a provider they could trust. By comparison, willingness to pay more for services that require frequent visits, such as injectable contraception or ARV delivery and counseling, were associated with high value for facility hours. These results are discussed further in the “Spotlight on Willingness to Pay for Differentiated Services” box on p.42.

Wealth Index

To better understand the effects of ability to pay on consumer’s willingness to pay for products, a wealth index was developed based upon the wealth index from the 2013-2014 Zambia DHS [54]. A subset of questions was selected from the overall DHS survey to collect a snapshot of each survey respondents’ wealth. The questions selected from the survey included household commodities, floor and roof materials, toilet facilities in the household, source of drinking water, and cooking fuel. Weights were assigned according to the Zambia DHS 2013-2014 and results were normalized.

Summary table of differentiated service factors correlated with highest willingness to pay (WTP)

Service	Most influential differentiating factors
IUDs	Provider allows questions Trust in provider Cost
Implantable contraceptives	Trust in provider Provider is friendly Qualifications/type of provider
Injectable contraceptives	Facility hours Provider is friendly Provider is non-judgmental
HIV Testing Services	Provider is friendly Provider allows questions Provider spends adequate time with patients
STI Testing Services	Facility hours Trust in provider Qualifications/type of provider
Antiretroviral delivery and counseling	Facility hours Provider allows questions Provider is friendly
Voluntary Medical Male Circumcision	Provider is non-judgmental Provider is friendly Provider allows questions

Consumer preferences for IUD insertion services

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	49.4	(0.000)***	3.9	(0.862)	--	--	0.00	-0.02
	17.4	(0.686)	3.5	(0.873)	49.58013	(0.435)	0.01	-0.02
Wait times	66.4	(0.000)***	-43.3	(0.044)*	--	--	0.07	0.05
	42.5	(0.322)	-41.9	(0.054)	36.06871	(0.559)	0.08	0.04
Privacy/ discreteness	60.8	(0.000)***	-21.7	(0.303)	--	--	0.02	0.00
	32.4	(0.468)	-19.9	(0.348)	42.55899	(0.503)	0.03	-0.01
Size of facility	53.9	(0.000)***	-36.9	(0.323)	--	--	0.02	0.00
	17.1	(0.684)	-40.7	(0.280)	57.35562	(0.365)	0.03	0.00
Cleanliness of facility	58.9	(0.000)***	-36.4	(0.145)	--	--	0.04	0.02
	13.4	(0.747)	-42.6	(0.096)	72.3408	(0.256)	0.06	0.03
Qualifications of provider	54.8	(0.000)***	-10.7	(0.622)	--	--	0.00	-0.01
	19.7	(0.641)	-13.6	(0.536)	55.8323	(0.384)	0.02	-0.02
Provider is same gender	54.8	(0.000)***	-15.6	(0.515)	--	--	0.01	-0.01
	18.5	(0.662)	-19.0	(0.436)	57.38232	(0.370)	0.02	-0.01
Provider is friendly	61.5	(0.000)***	-36.6	(0.109)	--	--	0.05	0.03
	31.8	(0.454)	-35.9	(0.118)	45.47566	(0.465)	0.05	0.02
Provider is not judgmental	50.4	(0.000)***	1.2	(0.958)	--	--	0.00	-0.02
	18.1	(0.670)	-3.2	(0.894)	51.78066	(0.428)	0.01	-0.02
Provider allows questions	34.3	(0.005)**	56.0	(0.013)*	--	--	0.11	0.09
	8.7	(0.829)	55.0	(0.015)*	39.91655	(0.508)	0.11	0.08
Provider spends time with patient	51.5	(0.000)***	-5.9	(0.846)	--	--	0.00	-0.02
	19.1	(0.653)	-6.8	(0.825)	50.27189	(0.429)	0.01	-0.02
Trust in provider	31.8	(0.017)*	47.8	(0.023)*	--	--	0.09	0.07
	-20.3	(0.638)	52.5	(0.014)*	77.40708	(0.208)	0.11	0.08
Hours facility is open	51.2	(0.000)***	-13.7	(0.812)	--	--	0.00	-0.02
	19.4	(0.650)	-10.2	(0.861)	48.87968	(0.443)	0.01	-0.02

Consumer preferences for Implantable contraception insertion services

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	41.7	(0.002)**	-10.3	(0.657)	--	--	0.00	-0.01
	-9.6	(0.794)	-8.9	(0.698)	84.131417	(0.138)	0.04	0.01
Wait times	45.0	(0.002)**	-14.7	(0.495)	--	--	0.01	-0.01
	-6.5	(0.859)	-15.1	(0.478)	85.533742	(0.130)	0.04	0.01
Privacy/ discreteness	45.3	(0.002)**	-14.8	(0.490)	--	--	0.01	-0.01
	-5.6	(0.881)	-12.0	(0.574)	82.130268	(0.148)	0.04	0.01
Size of facility	40.2	(0.000)***	-29.0	(0.523)	--	--	0.01	-0.01
	-15.2	(0.669)	-40.5	(0.373)	92.815235	(0.104)	0.05	0.02
Cleanliness of facility	42.7	(0.000)***	-25.9	(0.371)	--	--	0.01	0.00
	-11.2	(0.752)	-30.1	(0.296)	90.295135	(0.110)	0.05	0.02
Qualifications of provider	30.1	(0.035)*	19.7	(0.360)	--	--	0.01	0.00
	-20.9	(0.566)	19.5	(0.361)	84.672562	(0.133)	0.05	0.02
Provider is same gender	42.2	(0.001)***	-21.0	(0.453)	--	--	0.01	-0.01
	-11.0	(0.757)	-24.6	(0.376)	89.078779	(0.116)	0.05	0.02
Provider is friendly	28.1	(0.045)*	25.3	(0.242)	--	--	0.02	0.01
	-17.5	(0.624)	21.6	(0.318)	78.006806	(0.168)	0.05	0.02
Provider is not judgmental	41.6	(0.002)**	-10.3	(0.660)	--	--	0.00	-0.01
	-11.8	(0.741)	-16.2	(0.491)	91.08764	(0.112)	0.04	0.01
Provider allows questions	44.1	(0.002)**	-14.1	(0.517)	--	--	0.01	-0.01
	-10.0	(0.778)	-20.0	(0.359)	93.512767	(0.102)	0.05	0.02
Provider spends time with patient	40.8	(0.001)***	-15.3	(0.612)	--	--	0.00	-0.01
	-10.1	(0.780)	-12.3	(0.682)	83.445487	(0.141)	0.04	0.01
Trust in provider	24.6	(0.055)	43.2	(0.055)	--	--	0.05	0.04
	-34.1	(0.343)	46.5	(0.037)*	95.220906	(0.085)	0.10	0.07
Hours facility is open	38.5	(0.001)***	1.5	(0.981)	--	--	0.00	-0.02
	-14.7	(0.686)	16.3	(0.798)	87.217641	(0.128)	0.04	0.01

Consumer preferences for Injectable contraception insertion services

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	35.2	(0.000)***	7.1	(0.600)	--	--	0.00	-0.01
	17.7	(0.445)	7.4	(0.588)	28.1238318	(0.425)	0.01	-0.01
Wait times	44.7	(0.000)***	-15.7	(0.211)	--	--	0.02	0.01
	30.4	(0.211)	-14.6	(0.248)	22.2235118	(0.530)	0.02	0.00
Privacy/ discreteness	37.3	(0.000)***	0.3	(0.979)	--	--	0.00	-0.01
	19.9	(0.401)	0.8	(0.951)	27.7739157	(0.432)	0.01	-0.01
Size of facility	38.9	(0.000)***	-15.6	(0.462)	--	--	0.01	0.00
	23.0	(0.320)	-14.2	(0.505)	25.5567146	(0.470)	0.01	-0.01
Cleanliness of facility	40.9	(0.000)***	-21.0	(0.214)	--	--	0.02	0.01
	19.2	(0.394)	-23.7	(0.166)	35.6100807	(0.315)	0.02	0.01
Qualifications of provider	44.7	(0.000)***	-19.5	(0.130)	--	--	0.02	0.01
	26.0	(0.255)	-20.1	(0.119)	30.591039	(0.381)	0.03	0.01
Provider is same gender	37.3	(0.000)***	1.2	(0.955)	--	--	0.00	-0.01
	20.0	(0.383)	1.7	(0.935)	27.7675041	(0.432)	0.01	-0.01
Provider is friendly	32.0	(0.000)***	15.0	(0.249)	--	--	0.01	0.00
	10.4	(0.663)	16.7	(0.204)	33.7965788	(0.339)	0.02	0.00
Provider is not judgmental	32.0	(0.000)***	15.8	(0.230)	--	--	0.01	0.00
	15.2	(0.509)	15.6	(0.235)	27.1714577	(0.438)	0.02	0.00
Provider allows questions	33.1	(0.000)***	15.1	(0.274)	--	--	0.01	0.00
	17.4	(0.446)	14.5	(0.294)	25.5848722	(0.467)	0.02	0.00
Provider spends time with patient	38.4	(0.000)***	-9.9	(0.642)	--	--	0.00	-0.01
	21.7	(0.346)	-8.8	(0.680)	26.7040687	(0.450)	0.01	-0.01
Trust in provider	35.8	(0.000)***	5.5	(0.687)	--	--	0.00	-0.01
	18.4	(0.426)	5.7	(0.679)	27.8951993	(0.429)	0.01	-0.01
Hours facility is open	35.4	(0.000)***	22.9	(0.303)	--	--	0.01	0.00
	17.4	(0.445)	23.5	(0.291)	28.9905676	(0.409)	0.02	0.00

Consumer preferences for HIV testing services

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	63.9	(0.000)***	-29.7	(0.316)	--	--	0.00	0.00
	9.5	(0.829)	-36.2	(0.228)	89.4808581	(0.196)	0.01	0.00
Wait times	63.6	(0.000)***	-12.3	(0.597)	--	--	0.00	0.00
	17.5	(0.706)	-9.4	(0.688)	72.2213948	(0.294)	0.01	0.00
Privacy/ discreteness	63.3	(0.008)**	-6.2	(0.816)	--	--	0.00	0.00
	14.0	(0.784)	-2.5	(0.925)	74.6641355	(0.279)	0.01	0.00
Size of facility	59.6	(0.000)***	-49.6	(0.517)	--	--	0.00	0.00
	10.7	(0.808)	-55.9	(0.467)	78.9727695	(0.249)	0.01	0.00
Cleanliness of facility	59.5	(0.000)***	-8.9	(0.804)	--	--	0.00	0.00
	11.3	(0.798)	-13.8	(0.704)	78.544349	(0.254)	0.01	0.00
Qualifications of provider	63.0	(0.000)***	-12.3	(0.605)	--	--	0.00	0.00
	15.2	(0.732)	-13.8	(0.563)	77.6501436	(0.257)	0.01	0.00
Provider is same gender	60.4	(0.000)***	-24.2	(0.571)	--	--	0.00	0.00
	12.6	(0.775)	-26.1	(0.541)	77.1384755	(0.260)	0.01	0.00
Provider is friendly	53.7	(0.000)***	17.8	(0.490)	--	--	0.00	0.00
	5.9	(0.894)	18.5	(0.474)	76.5609825	(0.263)	0.01	0.00
Provider is not judgmental	56.5	(0.000)***	8.0	(0.760)	--	--	0.00	0.00
	9.7	(0.828)	7.8	(0.766)	75.3460604	(0.271)	0.01	0.00
Provider allows questions	56.4	(0.000)***	15.2	(0.647)	--	--	0.00	0.00
	9.7	(0.826)	14.9	(0.654)	75.1829319	(0.272)	0.01	0.00
Provider spends time with patient	57.1	(0.000)***	15.1	(0.703)	--	--	0.00	0.00
	10.7	(0.807)	13.9	(0.727)	74.7972819	(0.274)	0.01	0.00
Trust in provider	54.8	(0.000)***	8.9	(0.702)	--	--	0.00	0.00
	6.5	(0.887)	10.2	(0.662)	76.9382377	(0.261)	0.01	0.00
Hours facility is open	59.2	(0.000)***	-15.2	(0.782)	--	--	0.00	0.00
	11.3	(0.798)	-20.1	(0.714)	77.4690534	(0.259)	0.01	0.00

Consumer preferences for STI testing services

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	68.0	(0.000)***	10.3	(0.717)	--	--	0.00	-0.01
	60.5	(0.209)	10.1	(0.724)	12.1021537	(0.869)	0.00	-0.02
Wait times	84.3	(0.000)***	-32.2	(0.206)	--	--	0.01	0.01
	85.9	(0.093)	-32.4	(0.213)	-2.52972694	(0.973)	0.01	0.00
Privacy/ discreteness	98.5	(0.000)***	-38.1	(0.177)	--	--	0.02	0.01
	92.6	(0.079)	-37.9	(0.181)	9.20661461	(0.900)	0.02	0.00
Size of facility	71.2	(0.000)***	-21.2	(0.823)	--	--	0.00	-0.01
	62.7	(0.190)	-21.5	(0.821)	13.6201269	(0.853)	0.00	-0.02
Cleanliness of facility	72.0	(0.000)***	-10.5	(0.788)	--	--	0.00	-0.01
	63.4	(0.186)	-10.7	(0.785)	13.857312	(0.851)	0.00	-0.02
Qualifications of provider	65.1	(0.000)***	21.6	(0.450)	--	--	0.01	0.00
	55.0	(0.258)	21.9	(0.447)	15.9731484	(0.828)	0.01	-0.01
Provider is same gender	72.2	(0.000)***	-13.6	(0.746)	--	--	0.00	-0.01
	63.1	(0.188)	-14.1	(0.740)	14.6396441	(0.842)	0.00	-0.02
Provider is friendly	66.7	(0.000)***	14.9	(0.598)	--	--	0.00	-0.01
	57.0	(0.242)	15.2	(0.593)	15.3605456	(0.835)	0.00	-0.02
Provider is not judgmental	73.7	(0.000)***	-8.3	(0.755)	--	--	0.00	-0.01
	66.0	(0.180)	-8.1	(0.763)	12.1940924	(0.868)	0.00	-0.02
Provider allows questions	79.5	(0.000)***	-47.7	(0.143)	--	--	0.02	0.01
	73.7	(0.125)	-47.6	(0.146)	9.23008459	(0.899)	0.02	0.00
Provider spends time with patient	73.5	(0.000)***	-22.7	(0.561)	--	--	0.00	-0.01
	66.4	(0.169)	-22.4	(0.568)	11.3483654	(0.877)	0.00	-0.02
Trust in provider	58.5	(0.000)***	33.8	(0.195)	--	--	0.02	0.01
	37.2	(0.465)	36.1	(0.177)	32.8044065	(0.659)	0.02	0.00
Hours facility is open	62.5	(0.000)***	181.5	(0.002)**	--	--	0.08	0.08
	46.0	(0.317)	182.8	(0.002)**	26.4149816	(0.708)	0.08	0.07

Consumer preferences for Antiretrovirals and consultation

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	49.8	(0.000)***	-8.7	(0.616)	--	--	0.00	0.00
	-19.2	(0.476)	-15.9	(0.357)	114.611707	(0.008)**	0.04	0.03
Wait times	51.2	(0.000)***	-8.2	(0.571)	--	--	0.00	0.00
	-17.5	(0.546)	-1.9	(0.897)	107.448395	(0.013)*	0.03	0.02
Privacy/ discreteness	46.9	(0.003)**	1.4	(0.936)	--	--	0.00	0.00
	-30.8	(0.354)	10.9	(0.536)	113.906382	(0.009)**	0.03	0.02
Size of facility	48.2	(0.000)***	-10.2	(0.825)	--	--	0.00	0.00
	-18.8	(0.486)	-15.2	(0.739)	109.021606	(0.011)*	0.03	0.02
Cleanliness of facility	49.5	(0.000)***	-21.5	(0.431)	--	--	0.00	0.00
	-21.4	(0.429)	-33.0	(0.226)	116.435626	(0.007)**	0.04	0.03
Qualifications of provider	60.5	(0.000)***	-36.4	(0.014)*	--	--	0.03	0.02
	-12.1	(0.650)	-40.6	(0.006)**	120.109133	(0.004)**	0.07	0.06
Provider is same gender	49.5	(0.000)***	-23.1	(0.413)	--	--	0.00	0.00
	-20.7	(0.443)	-33.2	(0.237)	115.172246	(0.007)**	0.04	0.03
Provider is friendly	42.4	(0.000)***	22.6	(0.169)	--	--	0.01	0.00
	-24.4	(0.371)	22.6	(0.164)	108.388947	(0.011)*	0.04	0.03
Provider is not judgmental	45.1	(0.000)***	11.2	(0.490)	--	--	0.00	0.00
	-19.8	(0.464)	8.0	(0.618)	106.755639	(0.013)*	0.03	0.02
Provider allows questions	44.4	(0.000)***	23.8	(0.230)	--	--	0.01	0.00
	-23.1	(0.396)	24.7	(0.208)	109.333533	(0.010)*	0.04	0.03
Provider spends time with patient	48.7	(0.000)***	-12.0	(0.692)	--	--	0.00	0.00
	-18.5	(0.493)	-15.5	(0.606)	109.400418	(0.010)*	0.03	0.02
Trust in provider	47.4	(0.000)***	1.3	(0.929)	--	--	0.00	0.00
	-21.5	(0.448)	4.4	(0.754)	109.577683	(0.011)*	0.03	0.02
Hours facility is open	45.0	(0.000)***	77.5	(0.034)*	--	--	0.02	0.02
	-17.8	(0.506)	71.1	(0.050)*	102.334817	(0.016)*	0.05	0.04

Consumer preferences for Voluntary Medical Male Circumcision (VMMC)

Characteristic	Intercept		Consumer preference for differentiated factor		Wealth of consumer		R ²	Adj. R ²
	Est.	p-value	Est.	p-value	Est.	p-value		
Cost	49.3	(0.000)***	-1.7	(0.922)	--	--	0.00	-0.01
	32.4	(0.206)	-2.9	(0.864)	27.7084632	(0.491)	0.00	-0.01
Wait times	45.0	(0.000)***	12.9	(0.309)	--	--	0.01	0.00
	20.1	(0.461)	15.9	(0.226)	38.6669757	(0.345)	0.02	0.00
Privacy/ discreteness	53.0	(0.000)***	-6.1	(0.624)	--	--	0.00	-0.01
	36.7	(0.180)	-5.5	(0.660)	25.6849211	(0.522)	0.01	-0.01
Size of facility	49.1	(0.000)***	--	--	--	--	0.00	0.00
	32.4	(0.203)	27.0	(0.498)	--	--	0.00	-0.01
Cleanliness of facility	49.2	(0.000)***	-0.2	(0.988)	--	--	0.00	-0.01
	32.5	(0.204)	-1.4	(0.918)	27.5059566	(0.496)	0.00	-0.01
Qualifications of provider	43.8	(0.000)***	10.6	(0.372)	--	--	0.01	0.00
	22.7	(0.403)	12.0	(0.318)	32.8133273	(0.415)	0.01	-0.01
Provider is same gender	56.9	(0.000)***	-19.0	(0.114)	--	--	0.02	0.01
	44.8	(0.093)	-18.2	(0.134)	18.9748022	(0.635)	0.03	0.01
Provider is friendly	43.4	(0.000)***	101.6	(0.000)***	--	--	0.15	0.14
	43.4	(0.069)	101.6	(0.000)***	-0.00655161	(1.000)	0.15	0.13
Provider is not judgmental	47.7	(0.000)***	152.3	(0.012)*	--	--	0.06	0.05
	30.7	(0.216)	152.5	(0.012)*	27.4719045	(0.480)	0.06	0.04
Provider allows questions	48.3	(0.000)***	30.1	(0.402)	--	--	0.01	0.00
	34.4	(0.180)	27.1	(0.457)	22.5478533	(0.576)	0.01	-0.01
Provider spends time with patient	49.4	(0.000)***	-14.4	(0.743)	--	--	0.00	-0.01
	33.3	(0.197)	-11.4	(0.797)	25.8762911	(0.520)	0.01	-0.01
Trust in provider	44.9	(0.000)***	18.1	(0.194)	--	--	0.02	0.01
	27.5	(0.282)	18.3	(0.191)	27.938307	(0.482)	0.02	0.00
Hours facility is open	49.1	(0.000)***	--	--	--	--	0.00	0.00
	32.4	(0.203)	27.0	(0.498)	--	--	0.00	-0.01

Marketing techniques used by retailers to promote their shops

Characteristic	Posters	Wall Paintings	Billboards	Social Media	Other*	None	Total
Province, n (%)							
Lusaka	3 (25)	5 (42)	3 (25)	3 (25)	1 (8)	3 (25)	12 (100)
Copperbelt	2 (20)	4 (40)	0 (0)	3 (30)	2 (20)	3 (30)	10 (100)
Shop Type, n (%)							
Community-based pharmacy	5 (50)	3 (30)	2 (20)	2 (20)	2 (20)	1 (10)	10 (100)
Facility-based pharmacy	0 (0)	1 (100)	1 (100)	1 (100)	0 (0)	0 (0)	1 (100)
Medicine shop	0 (0)	5 (45)	0 (0)	3 (27)	1 (9)	5 (45)	11 (100)

*Open-ended responses included “Self-selling” and “Self-marketing”.

Marketing techniques used by retailers to promote SRH and HIV products and services

Characteristic	Posters	Wall Paintings	Social Media	Other*	None	Total
Province, n (%)						
Lusaka	3 (25)	0 (0)	1 (8)	4 (33)	4 (33)	12 (100)
Copperbelt	0 (0)	3 (30)	1 (10)	2 (20)	5 (50)	10 (100)
Shop Type, n (%)						
Community-based pharmacy	3 (30)	0 (0)	1 (10)	3 (30)	4 (40)	10 (100)
Facility-based pharmacy	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)
Medicine shop	0 (0)	3 (27)	1 (9)	2 (18)	5 (45)	11 (100)

*Open-ended responses include “community awareness campaigns”, “distributors do marketing”, “word of mouth” and “self-marketing”.

Where retailers receive the latest information on SRH and HIV products and services

Characteristic	NGO Training	Books	Radio & TV	Internet	Social Media	Pharmaceuticals	None	Total
Province, n (%)								
Lusaka	0 (0)	2 (17)	2 (17)	1 (8)	1 (8)	4 (25)	2 (13)	12 (100)
Copperbelt	1 (10)	3 (30)	1 (10)	4 (40)	0 (0)	2 (20)	1 (10)	10 (100)
Shop Type, n (%)								
Community-based pharmacy	0 (0)	2 (20)	1 (10)	1 (10)	0 (0)	3 (30)	3 (30)	10 (100)
Facility-based pharmacy	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)
Medicine shop	1 (9)	3 (27)	2 (18)	3 (27)	1 (9)	2 (18)	0 (0)	11 (100)

Types of SRH and HIV products carried by retailers

Product	# of shops carrying product (% of surveyed)	Range of prices (kwacha)	Brands
Male Condoms	22 (100)	K2-25	Maximum Moods Rough Rider Trust Ultimate Carex Other (Invigra, Ozomen, Ajanta's Stamina, 4play, Durex)
Female Condoms	11 (50)	K5-15	Maximum (K5-15) Generic (K10)
Oral Contraceptives	18 (82)	K3-15	Safe plan (K3-5) Microgynon (K8-15) Oralcon-F (K10) Zinnia F (K10)
Injectable Contraceptives	5 (23)	K30	Depo Provera (K30)
HIV Self-testing kits	9 (41)	K20-40	Innovita (K35-40) Right sign (K20-35) Generic (K25-30)
Other STI Self-testing kits	6 (27)	K25-40	Biozek (K40) One step (K40) ST Bioline (K25) Right sign (K25) Generic (K30)
Drugs for secondary infections	5 (23)	K6-110	Anti-TB medication (K110) Asdoxin (K50) Co-trimozazole (K6) Septrine (K10) Shalcip TZ (K20)
VMMC kits	1 (5)	K0	n/a

Reasons why retailers do not carry specific products

Product	Competition from public sector	Low demand	Lack of supplier	Lack of trained staff	Regulatory barriers	Nature of facility	Reasons given*
Female Condoms		100%					One retailer stated that male customers did not like female condoms because “women recycle [them]”.
Oral Contraceptives	75%					25%	
Copper IUDs	9%	32%		50%		14%	
Hormonal IUDs		32%		50%		14%	One retailer cited time consuming nature of insertion.
Implants**		30%		35%		5%	
Injectable Contraceptives		12%	6%	41%			One retailer (6%) said that injections should be done at a hospital. One retailer (6%) cited lack of money to purchase products.
PrEP	9%	18%	5%		32%	5%	14% did not know what PrEP was. 9% cited the newness of the product. One retailer (5%) stated that they have the product in stock but do not have permission to sell it yet. One retailer (5%) said they do not have access but would sell it if they could.
ARVs	14%				41%	5%	One retailer (5%) stated that they have the product in stock but do not have permission to sell it yet.
HIV Self-testing kits	15%	15%	31%			8%	15% stated that they were not stocking them now but had plans to stock them in the future.
Other STI Self-testing kits		38%	13%	25%		13%	
Drugs for secondary infections		35%		18%		6%	18% cited lack of certification or trained staff.
VMMC kits		27%	5%	45%		9%	

*Note that figures may not add to 100% if retailer did not provide a reason for not stocking product or provided more than one reason.

**Two retailers stated that they sold implantable contraceptive, but provided product names that were not implants. These responses were discarded. Figures are provided as a percentage of the remaining responses.

ANNEX C: MARKETING GUIDELINES

The list below includes relevant ZAMRA clauses for advertising SRH and HIV related medicines.

- Only a medicine that is registered and with a valid product licence issued by ZAMRA may be advertised or promoted. If the medicine is registered as a “prescription only medicine or non-prescription medicine”, it should not be advertised or promoted without prior written authorization from ZAMRA.
- Advertising should include factual, accurate, informative announcements and reference material (e.g. adverse reaction warnings, trade catalogue and price lists and should not include product claims, measures or trade practices relating to price, margins or discounts.
- An advertisement or promotion of a medicine should not refer, directly or by implication, to alleviation or cure of any disease, condition or disorder that is prohibited under the Public Health Act and pharmaceutical regulations.
- 4 Mandatory elements of written advertisement for a medicine:
 - trade/brand name or proprietary name, if any, including name(s) of the active ingredient(s) using either approved generic name or International Non-proprietary Name (INN) of medicine;
 - major indication(s) for use;
 - major precautions, contra-indications and warnings;
 - name and address of local distributor and for a local-based manufacturer, name and address of the manufacturer
- Advertising should be balanced, true and should not mislead or contain any exaggerated claims, either direct or implied
- Information should include the approved name and quantity of each active ingredient in lettering having a minimum legibility
- where a name other than the proprietary name is also used, the lettering should be one half the size of the largest type size in which the proprietary name appears in advertisements
- Information on indications and side effects must reflect available evidence or be capable of substantiation by clinical experience. It must not be stated that a product has no side effects, toxic hazards or risks of addiction. The word ‘safe’ must not be used without qualification.
- Advertising should not suggest that the safety or efficacy of a product is due to the fact that it is natural unless this has been clinically proven
- Advertising should not claim that a product is ‘natural’ unless all of its components/ingredients are naturally occurring.
- Advertising should not suggest that a product is herbal, unless all the active ingredients are plants or extracts of plants.
- Foodstuff should not be advertised as medicine or vice versa.
- A comparison is not permitted in advertising or promotional material
- Graphs and tables must be presented to give a clear, fair, balanced view, and must not be included unless relevant to the claims.
- The word ‘new’ must not be used to describe any product or presentation, which has been generally available for more than twelve months in the country.

- Promotional material must not imitate devices, copy slogans or general layout adopted by other companies, organisations or individuals, in a way that is likely to mislead or confuse.
- Advertising should not cause consumers unwarranted anxiety that they are suffering from any ailment. Nor should it imply that suffering may arise if a consumer fails to respond to the advertisement's claim. Communication which brings fear or distress should not be used.
- Advertisements should not be presented to suggest that the use of medicine will improve normal good health or vice versa.
- Advertising should not offer to diagnose, advise, prescribe or treat personally by correspondence.
- Advertising should not claim, or imply, that a product's effects are guaranteed.
- Advertising should use language or medical terminology that does not confuse or mislead the consumer.
- Advertising should not discourage consumers from seeking medical advice.
- Advertising should not suggest that the medicine has been recommended by scientists or health professionals.
- Indications can be based on evidence of traditional use of a substance or product, and/or on scientific evidence. Evidence must relate to the whole product or the same active ingredient(s) with similar dosage regimen, dose form and route of administration to the product/ingredient for which the claim is being made.
- When promotional material refers to published or unpublished studies, clear and complete references must be given
- Promotion activities must not be disguised as market research, post-marketing surveillance studies, clinical assessments and the like, nor contain or lead to disparaging comments about competitors or their products.
- Reprints of articles in journals must not be provided unsolicited unless they have been refereed. If a non-refereed article is requested by a consumer, a copy may be provided on written request, provided that each page is stamped with the text "non-refereed article".
- Promotional material must not be issued unless its final form, to which no subsequent amendments will be made, has been approved or certified by the Authority.
- No company should offer incentives to consumers through advertising for any incentive schemes/price discounts.
- Reproductions of official documents must not be used for promotional purposes unless permission has been given in writing by ZAMRA
- Advertising should not include a recommendation by a person who, because of their celebrity status, may encourage consumers to take a medicine.