



WILLIAM DAVIDSON INSTITUTE
AT THE UNIVERSITY OF MICHIGAN

THE LONG ROAD TO THE LAST MILE

*A Total Market Approach to
Family Planning:
Learning from a Private
Sector Wholesaler Landscape
Analysis for Malawi*



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Acronyms and Key Definitions

BLM: Banja la Mtsogolo

CHAM: Christian Health Association of Malawi

CMST: Central Medical Store Trust

FP: family planning

FPAM: Family Planning Association of Malawi

HCP: Healthcare Provider

HIV/AIDS: Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome

LARC: Long-acting reversible contraception

LMIC: Low- and middle-income country

MCM: Medical Council of Malawi

mCPR: Modern contraceptive prevalence rate

MOH: Ministry of Health

MSI: Marie Stopes International

NMC: Nurses and Midwives Council of Malawi

OTC: over the counter

MPB: Pharmacy, Medicines, and Poisons Board

PSI: Population Services International

RH: reproductive health

RHSC: Reproductive Health Supplies Coalition

SMO: Social-marketing organization

TFR: Total fertility rate

TMA: Total Market Approach

WDI: William Davidson Institute

Executive Summary

Project Description

Developing the private sector to deliver family planning (FP) products and associated services in remote and rural areas of Malawi and similarly situated donor-dependent countries will require a long-term, multi-faceted and sustained effort. This will both develop the necessary conditions for market health and leverage those conditions once they exist. In a country like Malawi where 80% of the population lives in rural areas, it is a long road to the last mile – particularly for contraceptive products and supplies.

The project goal was to conduct a contraceptives distributor landscape analysis and deliver actionable and stakeholder receptivity-tested concepts for stimulating commercial distributor participation in rural, remote and other underserved populations. This project was conceptualized around the question of the role of the wholesaler in reaching the last mile and how to facilitate participation and engagement of these market actors in serving rural and remote communities in countries such as Malawi.

Three main objectives were included in this research: (1) to conduct a market landscape analysis in Malawi utilizing in-country interviews to generate market knowledge, (2) to develop a set of solution concepts with hypothesized potential to increase commercial participation in FP product distribution and then ‘concept test’ them with appropriate stakeholders, and (3) generate a final set of ideas on how to nurture the development of the private sector for contraceptives, with a specific focus on improving access in the rural and remote regions. The activities included in this project span desk research, document review, telephone and in-country stakeholder interviews, geo-mapping of health facilities, and cost exploration. Both qualitative and quantitative data was collected across the duration of the project to meet its objectives.

Introduction

The global reproductive health (RH) community is increasingly discussing the need to engage the private sector in meeting the needs for reproductive health in low resource regions of the world. Malawi is an excellent choice for study, given the dominance of donor funding in this small country of almost 18 million people facing rapid population growth (35% over the last 10 years) and a highly immature private sector. While it’s a long-term goal for a country such as Malawi, the idea of looking now, for a long view on what needs to be done to nurture the development of the private sector is an instructive and important exercise.

We define the FP private sector as services and products delivered outside the purview of the government, donors and subsidized social marketing. The market focus services and products used by women and men to manage their reproductive health objectives. In this paper, we do not directly examine the role of other private sector actors, such as financial institutions and logistics providers for capital and supply chain services.

Key Findings

Commercial pharmaceutical wholesalers in Malawi are established and prepared to serve a private sector market for family planning as it is developed. Currently, the private sector constitutes a small portion of the Malawi FP market, as all contraceptive products are accessed free of charge in public sector (when available) and for low-level service fees in the NGO and FBO sectors.

Demand-Side Findings

- Significant informational barriers exist for consumers, most particularly in rural areas and there are significant health literacy and awareness gaps
 - FP information campaigns generally only advertise public sector products
 - The private sector not currently invest in promotion or educational efforts to address the gaps and generate demand
 - Misconceptions regarding contraceptives, their use and side effects are common
- Youth constitute 50% of Malawi's population and their needs/preferences are not well understood
- Consumers may be dissuaded from the private sector by high retail pricing, given the high retail margins
- Emergency contraception has been a high demand, fast moving and growing product in Malawi's private sector
- Health insurance does not currently cover family planning and contraceptives, motivating even those citizens with health care coverage to utilize the public sector.

Supply-Side Findings

- Malawi has a large number of registered wholesalers, but with 6 – 8 active participants and wholesaler concentration does not appear to impact market effectiveness
- Wholesalers respond to demand and currently perceive limited opportunity due to the dominance of donor-funded FP products
- Low volumes in FP make it difficult for wholesalers to order in cost-effective quantities
- International manufacturers do not see a large opportunity in Malawi, so product registration fees may be perceived as high in comparison to market potential
- Current and entering pharmacy retailers are heavily concentrated in urban areas and medicine shops are concentrated in peri-urban and rural settings
- The wide variation in retail margins may in part reflect high operational costs (as well as the absence of regulation)
- Attracting / retaining qualified human resources in rural areas is highly challenging

- Malawi's Pharmacy, Medicines and Poisons Board (PMPB) has insufficient capacity to monitor the entire private sector, raising questions re: product and service quality
- Quality concerns in private sector, rural care delivery

Discussion

Discussion of Methodology

While landscaping assessments generally involve field research and in-country discussions with market actors, this project was unique in utilizing a stakeholder-centric methodology to generate and score ideas for market building. Participants were generally highly receptive and engaged, particularly during the field-based visits. The follow-up interviews for intervention review and scoring were challenging given the breadth of information to discuss and communication challenges with phone and internet.

This methodology was viable for a country and market the size of Malawi, but we still faced limitations in the depth of data which could be collected. Most of the market actors we needed to interview were located in either Lilongwe or Blantyre, and the short time in-country prohibited the research team's ability to visit the rural, remote areas for direct observation of private sector outlets. Data availability and insufficiencies limited the development of a costing analysis, but the pricing and margin data collected provides evidence of the need for further study. This type of stakeholder input and review process would be recommended for additional refinement and use.

Discussion of Key Findings

The research question for this project centered on how to facilitate the engagement of wholesalers in the development of the private sector to reach rural, remote and underserved communities with quality family planning products in highly donor-dependent countries like Malawi. We examined this issue through the lens of a Total Market Approach, incorporating the views and perceptions across all actors involved in the reproductive health landscape. Additionally, challenges discussed during the interviews were not limited to the wholesaler segment and spanned across all levels of the health system. These ranged from structural regulatory challenges to retailer-level challenges.

Wholesalers currently face several constraints that impact their ability and incentive to service the rural and remote areas of Malawi with family planning products, including the balance of demand versus operating costs and capital constraints. The most critical issue for wholesalers is that of private sector demand generation for family planning products, given the current limited retailer and clinical customer base in rural and remote Malawi. As passive actors, generally upstream from the retail and dispensing setting, wholesalers respond to demand rather than generate it.

Emergency contraception provides evidence that wholesalers will engage if they see market opportunity and room for their participation. Currently, wholesalers do not see a business reason to register, import and stock additional FP products, based on the predominance of the public sector and subsidized products. Improved payment timing from the government would improve the financial wherewithal of wholesalers and facilitate their financing of expansion, such as into rural regions. The emergency contraception case also gives evidence of demand for private sector family

planning even in rural areas. With more information campaigns, this segment of women with an ability to willingness-to-pay may be found to be even greater.

Major themes and concerns across interviewees included (1) the information needs of both the consumers and market players, (2) regulatory constraints, (3) consumer expectations of free and subsidized products and services, (4) misalignment of new pharmacy business locations with the population's needs, (5) the difficulty of incentivizing business placement in highly rural areas, (6) questions about appropriate product pricing, and (7) a need for shared efforts across the sectors. These factors variously contribute to the under-development of the private sector, resulting in the persistent difficulty of creating a vibrant and sustainable private model in the most rural areas.

Conclusions and Recommendations

For donor-dependent countries such as Malawi, a long-term vision is essential to developing the private sector family planning market throughout the country and specifically in the rural and remote regions. This landscaping process revealed market participants' recognition of the need to develop these private channels for family planning product demand as well as supply, while suggesting that there is currently no overarching view on how to do so. Although this project pre-supposed efforts focused on the wholesalers, our conclusions are that multiple market actors must be involved through a cross-sectional, staged set of market building steps. Facilitating the development of a private sector in donor-dependent countries requires a long-term view and utilization of multiple strategies on the part of governments, donors and sector partners, as well as a convener, which could be the Reproductive Health Supplies Coalition.

The stakeholder consultation process yielded a set of preferred interventions, based on perceived feasibility and impact, along with top choices of the stakeholders who were involved. With this set of stakeholder recommendations, we have further refined the ultimate set of recommendations based on additional analyses and information gathered throughout the process.

WDI recommends four 'next-step' ideas specifically for Malawi, with the foundational recommendation being to formally engage the private sector in joint efforts with the public sector. This will make possible private actor involvement in opportunities to co-build the market. Formal inclusion and participation of private sector representatives in the Family Planning Technical Working Group will generate common understanding and make the development of shared goals possible. It should be communicated to country leadership, particularly MOH representatives, that private sector representation should come from commercial entities and not only SMOs.

The list of ideas put forth from this project is a starting point, reflecting 30 in-country discussions. Certainly, there are additional invested individuals to engage and deeper-dive discussions to be conducted. We suggest that this preliminary set of recommendations be discussed within the Family Planning Technical Working Group in Malawi, including potential private sector representation from the wholesaler, retailer, provider, and professional societies. For Malawi specifically, WDI proposes that the following ideas be considered for follow-on investment, potentially through a partnership between RHSC and Malawi stakeholders, including the PMPB, the MOH, private sector representatives and donors:

1. Conduct a two-pronged, market level study of a nationally-representative sample that includes a) a retail price audit for contraceptives and b) a willingness-to-pay survey in order to better characterize the market in both urban and rural areas, measure potential demand, and facilitate market information.
2. Further develop the concept of a mobile pharmacy solution or additional alternative investment in expanding access to retail pharmacies in rural areas of the country. Next, pilot test the developed concept.
3. Initiate a joint public and private sector communications strategy to build family planning awareness and demand generation in specifically rural, remote areas of the country.
4. Initiate discussions with the Malawi MOH's Reproductive Health Unit and PSI on the potential to prioritize Sayana Press for rural and remote areas with a focus on ways to leverage private sector approaches

These four recommendations, along with adding private sector representation to the cross-sector stakeholder FP working group, were all in the most highly rated or selected ideas from the in-country stakeholders. An additional idea that stakeholders prioritized was the that of a public private partnership to increase the PMPB's regulatory capacity. More broadly, for other donor-dependent countries, WDI recommends the following:

5. Donors, SMOs, and country leadership should establish joint efforts to develop phased plans for the funding and roles of SMOS in donor-dependent countries and regions.

In part, this would be facilitated through the inclusion of private sector representation in the RHFP working groups within a country. Phased planning could facilitate a strategic approach, with an intentional and shared orientation towards goals for the short, medium and long term. Through this, all parties would know that funding and market roles would shift over time.

- Short term can include subsidized product distribution to urban areas, along with all the user and provider education, demand generation and advocacy activities.
- In the medium term, start to prioritize the funding and direct subsidies to the populations with greatest need, both in urban and rural settings. Have the SMOs take a leadership role in messaging around individual self-sufficiency and the reasons for cost recovery, to shift consumer expectations.
- Build towards a long-term view where SMOs are using their expertise to generate demand in support of non-subsidized private market development, including in the rural areas.

Acknowledgements

The authors acknowledge the funding support from RHSC and the many contributions from interviewees in Malawi and more broadly.

Project Description

Goals and Objectives

The project goal was to conduct a contraceptives distributor landscape analysis and deliver actionable and stakeholder receptivity-tested concepts for stimulating commercial distributor participation in rural, remote and other underserved populations. The timing is appropriate to revisit this challenge, as donors encourage transition planning and SMOs pursue sustainability strategies. We focused on an examination of both subsidized and commercial products available in Malawi.

This was achieved through examining the normative issues and barriers to optimizing commercial distributor participation through a two-component country examination. First, a landscape assessment of Malawi as an example of high donor involvement, strong SMO networks and limited commercial presence was performed. These characteristics allowed us to examine a context that exists in many LMICs including Uganda, Tanzania, Kenya, and Zambia - where there is a high proportion of contraceptives entering the market through donor funds and SMOs, the commercial sector is often 'crowded out' and unable to compete effectively. While the Malawi landscape was in-depth, we also conducted a high-level survey of other countries that exemplify less donor dependence and a growing commercial sector presence. This was used to identify success characteristics and lessons learned. Through both arms of this work, the purpose was to identify the market imperfections, incentive issues and other root causes which might be or have been addressed through market incentive or policy approaches and develop a hypothetical solution set that addresses them.

Supplementary activities were performed to help meet the project's objectives. These include a geo-mapping of healthcare facilities and contraceptive availability and an analysis of contraceptive cost and sales data. The project's overall objectives were:

Objective 1: Conduct a landscape assessment of the private distribution sector for both short and long-acting contraceptives for the country of Malawi. Additionally, conduct a targeted survey of distributor practices (not a full country analysis) in up to six countries with low or no donor dependence which are examples of more advanced commercial sectors (such as Cambodia, Guatemala, Morocco, and Vietnam). An extensive literature review will be warranted to ascertain what has been previously learned with respect to commercial distribution of FP products, followed by qualitative interviews. All activities will be performed for Malawi and the comparator countries, with greater depth on all activities for Malawi. This assessment will map what is currently working and not working for commercial distributors, with insights to their current business and service models, barriers to participation and opportunities for improvement.

Objective 2: Develop a set of solution concepts with hypothesized potential to increase commercial participation in FP products distribution which will be 'concept tested' with stakeholders. Qualitative data and costing analytics will guide concept development. A costing analysis will compare fully commercial models to social marketing/subsidized

sourcing, distribution and marketing models. Concept testing entails written and verbal presentation of hypothetical concepts to the relevant stakeholders in order to assess receptivity and further inform solutions development. These proposed solutions may be product-specific, i.e. for short-acting versus long-acting contraceptives or at a brand-level based upon challenges and opportunities. Evaluation will include pros/cons, feasibility and stakeholder implications.

Objective 3: Deliver a final set of potential/recommended solutions for increasing the role of the commercial sector in FP products distribution; and complete dissemination of the findings and recommendations.

Methodology

The activities included in this project span desk research, document review, telephone and in-country stakeholder interviews, geo-mapping of health facilities, and cost exploration. Both qualitative and quantitative data was collected across the duration of the project to meet its objectives. Initial desk research was conducted to assist in stakeholder mapping and identification of key organizations operating in the family planning market. Desk research was also used to create a preliminary set of challenges related to private sector wholesaling and distribution of contraceptives. This information was used to develop a set of interview guides.

In-country interview participants were selected through a convenience sample based upon desk research and guidance discussions with relevant stakeholders. Interviewees spanned the private, public, and NGO/FBO sectors, all from organizations that participate in or are related to the family planning market in Malawi. For wholesalers, WDI reached out to all registered wholesalers with available contact information to request interview participation. Interview participation was encouraged through the assistance of local contacts, participant anonymity, securement of an approval letter from the PMPB, and data aggregation. During interviews, data was also collected about contraceptive brands, prices, facility locations, and product availability from relevant stakeholders. Collected data includes:

- Geo-coordinates for public, private, and NGO/FBO health facilities, including retail pharmacies and medicines stores
- 2 years of sales data from one urban and one rural retail pharmacy
- Brand and pricing data for five retail pharmacies, one private clinic, and five wholesalers

Two rounds of interviews were conducted with participants. 30 stakeholders were interviewed in-country in Malawi. See *Table 1* for a breakdown of interviews by stakeholder type. Interviews were continued until thematic saturation was achieved. These interviews focused on descriptions of market participation, challenges, opportunities, and successes. Following analysis of qualitative data from first-round interviews, WDI developed a set of potential interventions to address family planning market challenges. The Healthy Markets Framework was utilized to map market challenges and successes reported during interviews.

WDI then held follow-up interviews via Skype and WhatsApp with XX stakeholders based on responsiveness and knowledge during initial interviews. During follow-up interviews, WDI presented 15 intervention options to participants. Feedback was gained on each option and then stakeholders were asked to rate each option from one to five for both potential feasibility and impact. Impact was defined as increasing private sector participation in the family planning market of Malawi. Finally, interviewees ranked their top three intervention choices.

Table 1: Number of In-Country Interviews by Stakeholder Type

Stakeholder Type	Interviews
Manufacturers	1
Wholesalers & Distributors	9
Policy & Regulatory Actors	4
Private Sector Healthcare Providers	8
Public Sector & SMO Providers	6
Other Key Actors	2
Total	30

Additional activities performed by WDI include a geo-mapping of health facilities in the Northern Region of Malawi and exploration of contraceptive costs and sales. The geo-mapping layered health facility location information on top of population density and product availability data. This mapping shows potential gaps in coverage for contraceptive method types. For the purposes of this exercise, availability at a facility type for any given method is defined as the legal ability to provide said method. We also consider information provided by key stakeholders on general method availability at each facility type to further tailor our definitions. All data and software used is publicly available and/or open-source. For an in-depth description of the methods and findings of the geo-mapping, see *Section VII*. The cost and sales data exploration utilized a small data set gathered from stakeholders to characterize contraceptive prices and sales in the private sector. Findings from this analysis was used to inform the generation of intervention ideas and illustrate potential opportunities for expansion.

Other country examples were researched through telephone interviews, desk research and literature review. Preliminary searches and discussions were conducted prior to the field research in Malawi, and then the research was completed afterwards. Based upon the Malawi findings, the search for other country examples was broadened to the development of private sector FP markets more generally, based upon the observation that demand generation and related market conditions were the primary issues, rather than wholesaler practices in Malawi.

Selection of Malawi

Malawi was selected for landscaping as an example of high donor involvement, strong SMO networks and limited commercial presence. These characteristics allowed WDI to examine a context that exists across many LMICs, allowing the research to be broadly generalized and increasing the opportunity for application to other countries.

Additionally, Malawi presented a unique opportunity based on its small size and number of total market actors. This allowed WDI to gain a representative view of the market that would not have been possible in larger countries, including a landscape assessment that incorporates all three major sectors. The Malawi government is also receptive to new ideas regarding use of the private sector for healthcare development. Numerous strategy documents mention the desire to develop public-private partnerships and better utilize private sector actors to meet family planning goals.

Though mCPR is relatively high Malawi, there is remaining unmet need, especially in rural and underserved areas. Women report they are having more babies than they desire suggesting gaps in coverage and/or knowledge on contraceptives. Malawi's population is also significantly characterized as fast-growing and primarily rural and adolescent. The existing public sector systems have difficulty in meeting this growing demand and reaching these two underserved populations, presenting a potential opportunity for the private sector to step in. Publication of the 2018 Population & Housing Census Preliminary Report in December 2018 provides supporting data (National Statistical Office Malawi 2018):

- The country's population is reported at **17,563,740** up from 13,029,498 in 2008
- Total population grew by **35%** between 2008 and 2018
 - This equated to an intercensal growth rate of 2.9 percent per annum
- Females make up **51%** of the total population (9,042,293)
- **84%** of Malawi's total population (13,780,385) **live in rural areas** of the country
- The Malawi population is very young, as **51%** of the total population (8,894,534) **are below the age of 18**

Introduction & Background

In Malawi, it is estimated that private practitioners and commercial health facilities make up only 2% of the entire healthcare delivery system (McCabe et al. 2011). An overwhelming majority of Malawians choose to seek healthcare services from the public sector where both products and services can be accessed for free. Despite the small size of the private sector, increasing numbers of patients in Malawi are foregoing visits to free public clinics and choosing private pharmacies or drug shops instead. This is often due to increased privacy and reduced wait times available in private facilities. High rates of drug stockouts in public facilities further influences Malawians choice to seek care at private pharmacies or drug shops as first and second options. It has been estimated that greater than 50% of patients in Malawi are unable to receive their necessary drugs at a public clinic (McCabe et al. 2011; MOF Malawi 2007). In addition, the number of private pharmacies in Malawi has increased by over 50% in the last 5 years (PMPB Malawi 2018). The increasing movement of patients towards private sector options highlights the need to ensure that the market is prepared with the appropriate mechanisms for procurement and distribution to guarantee access and affordability to all patients.

Recent reports show that Malawi has a high modern Contraceptive Prevalence Rate (mCPR) of 58% in comparison to many of its neighboring countries that sit between 25-45% ("World Bank Indicators" 2014). Though current mCPR levels are seen as positive, Malawi's Total Fertility Rate (TFR) remains high at 4.6 children per woman while the Total Wanted Fertility Rate (TWFR) is lower at 3.4 children per woman (National Statistical Office (NSO) [Malawi] and ICF 2017; "World Bank Indicators" 2014). This indicates that women are still on average having one more child than desired – potentially due to gaps in contraceptive coverage. Research from 2015 indicates that this disparity may be due to "long-term inconsistent use of short-term methods" caused by information gaps and unreliable access to oral pills and injectable DMPA (Dasgupta, Zaba, and Crampin 2015). This can be detrimental to women's long-term family planning in a country like Malawi where pills and injectables make up 32% of mCPR (National Statistical Office (NSO) [Malawi] and ICF 2017). Misinformation and misconceptions regarding contraceptive use and side effects is reported to be high in Malawi and may also influence high pregnancy rates (Chipeta, Chimwaza, and Kalilani-Phiri 2010; Ntata, Mvula, and Muula 2013). One study found that adolescents frequently believed that the use of contraception could cause sterility, illness, cancer, and weakening of the male libido (Self et al. 2018).

This evidence illustrates the necessity for an alternate source of reliable, affordable contraception and accurate family planning information where the free public sector supply can be plagued with stigma and stockouts. In the context of the continuing contraceptive commodity funding gap combined with an existing estimated 20% unmet need for contraceptives, exploration of opportunities for private sector expansion for family planning products is warranted (Miller, Weinberger, and Skibiak 2019; National Statistical Office (NSO) [Malawi] and ICF 2017). The early stages of growth seen in Malawi's private sector present an opportunity to build the necessary capacity early on.

Despite worries that increased provision of family planning through the private sector may increase inequitable access and disadvantage the poor, studies have found that increases in the private sector supply of contraceptives across African and Asian countries did not lead to increased inequity (Hotchkiss, Godha, and Do 2011; Agha and Do 2008). In Nigeria and Uganda, inequity was seen to decrease over the study period (Hotchkiss, Godha, and Do 2011). As more women who are able to pay access contraceptives in the private sector, it can free up resources and reduce stockouts in the public sector allowing more women in need to access free products.

The private sector presents an opportunity to expand access to a consistent and full method mix of contraceptives for those who are willing and able to pay in Malawi. The Malawian population grew by 35% from 2008 to 2018 (National Statistical Office Malawi 2018). In order to develop the private sector and ensure its readiness to serve this increasing population and demand, there needs to exist a healthy distribution market. This will incentivize quality distributors to participate, encouraging high-quality goods and affordable prices. Currently, there is little formal engagement between the public sector and private sector for family planning, though the government has expressed commitment to utilizing the private sector to meet family planning goals (Government of Malawi 2015). This research focused on exploring the challenges and successes in the current private sector landscape for family planning products in Malawi to develop recommendations and/or potential interventions to increase the private sector provision of contraceptives, particularly in rural and underserved areas.

Key Findings: Desk Research & Qualitative Interviews

Malawi's Family Planning Market

Malawi is generally described as a highly donor-dependent country, with an under-developed private health sector, particularly in family planning. There is currently no in-country manufacturing of contraceptives. The three primary sectors delivering family planning products and services in Malawi are the public governmental sector, private sector, and NGO/FBO sector. This paper does not include social-marketing organizations within the formal private sector, but instead places them within the NGO/FBO sector. This is because they do not function the same or have the same challenges as pure private sector organizations.

It is estimated that the public sector provides approximately 74% of all family planning services (Government of Malawi 2016). Both services and products are provided completely free-of-charge to all Malawi citizens in the public sector. All contraceptive methods available in these facilities are donated to the Malawi government by international donor organizations including UNFPA and USAID. They are distributed through the Central Medical Stores Trust, third-party logistics providers, or parallel supply chains established by donors. See *Figure 1* for an overview of Malawi's family planning distribution. The public sector system has different service levels each with their own set of method offerings. These include referral hospitals, district hospitals, rural hospitals, health centers, dispensaries, health posts, and community distribution agents. IUDs are only accessible from hospitals in the public system (Government of Malawi 2016). Implant insertion is permitted within any formal public facility with a Nurse-Midwife on staff, while injectables and orals can be accessed from any level of the system. Emergency contraception is legally permitted for dispensing at most levels of the public system, but many actors report that is difficult to gain access in these facilities due to issues of product stigma and stockouts. All methods in the public sector were reported as susceptible to frequent stockouts due to supply chain logistics challenges and global shortages.

Within formal public facilities, Nurse-Midwives are allowed to supply and administer all contraceptive method types (except for permanent tubal ligation). Outside of formal facilities, the Government of Malawi has two cadres of public healthcare workers who are permitted to dispense a set of contraceptive products: Health Surveillance Assistants (HSAs) and Community Based Distribution Agents (CBDAs). HSAs work within communities and are able to provide women with oral pills, condoms, and injectables in addition to their other regular duties. CBDAs are only permitted to supply oral pills and condoms to community members.

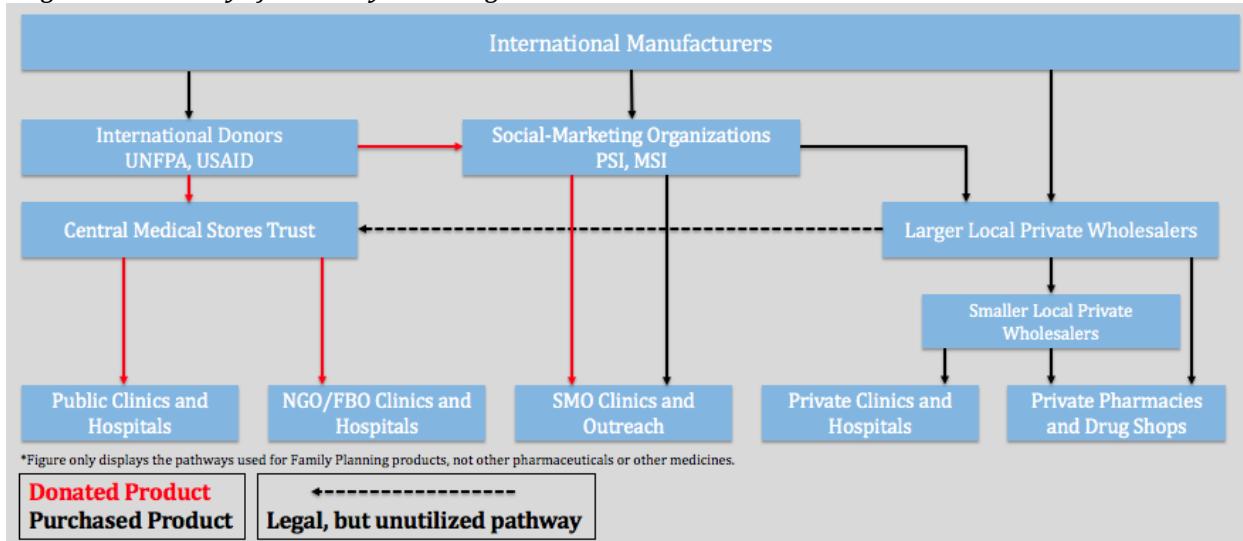
In the NGO/FBO sector, contraceptive products donated to the Malawi government are made available free-of-charge, but facilities will charge a modest service fee alongside them. The exception to this is the case of socially-marketed contraceptive brands like SafePlan by PSI. Users are asked to pay a subsidized price for these products in addition to the service fee. The socially-marketed brands are often also available for sale within the private sector. BLM and PSI both have static clinics where clients can come to access all contraceptive methods and family planning services. PSI's Tunza clinics are currently accessible only in the central region. Both organizations also operate outreach clinics to rural and hard-to-reach areas where they do not have static clinics in operation, usually based out of public sector clinics that may not have access to necessary resources. There is currently no social

franchising system for clinics in Malawi. CHAM has both hospitals and clinics throughout all three regions of Malawi that also provide all contraceptive method types and receive government product.

At the highest level in Malawi, the private sector includes wholesalers who source contraceptive products from both international suppliers and manufacturers and local social-marketing organizations, like PSI and BLM, who sell their own branded products. Private facilities including hospitals, clinics, pharmacies, and medicine stores then purchase contraceptives from a variety of wholesalers. Within private hospitals and clinics, clients will pay for both the product and service that is delivered. Within pharmacies and medicine stores, clients will only pay for the product. Service cannot be delivered in these facility types.

There are legal restrictions on what method types can be sold within different facility types. Pharmacies are legally permitted to dispense all methods, but injectables, implants, and IUDs must be taken to a clinic or hospital for administration. Due to this, implants and IUDs are rarely found for sale in pharmacies. Nurses are licensed to administer injections, so they are able to administer injectables in the retail pharmacy setting, but a pharmacist is not currently allowed to do so. Medicine stores are only able to dispense oral pills and injectables. Clinics and hospitals can dispense and administer all contraceptive method types. Women often prefer pharmacies and medicine stores to access contraceptives due to the privacy, quickness of service, and ease of access.

Figure 1: Pathways for Family Planning Product Distribution in Malawi



Family Planning Market Actors

This section highlights key market actors utilizing information both from desk research and provided during interviews. The key actors in Malawi's family planning market span the public, private, and NGO/FBO sectors. As illustrated in *Figure 1*, in Malawi, drugs are either imported by private wholesalers, manufactured by local manufacturers, or introduced into the local market via the government procurement arm, Central Medical Stores Trust (CMST). There is essentially no multinational manufacturer presence in Malawi.

Policy, Governmental, and Regulatory Actors

Ministry of Health, Reproductive Health Unit

Within Malawi's Ministry of Health, the Reproductive Health Unit is responsible for ensuring access to family planning products within the public sector and coordinating activities with other sectors, particularly the NGO/FBO sector. The Reproductive Health Unit is currently led by the Director of Reproductive Health, Fannie Kachale. Strategic plans and guidance released by the Reproductive Health Unit note the desire to collaborate with and utilize the private sector to meet national family planning goals. The Unit already works closely with NGO and FBO organizations, but collaboration with commercial entities is not yet visible. The Reproductive Health Unit is also focused on expanding youth friendly services and promoting long-acting reversible contraceptive (LARC) options. They also train and supervise CBDAs and HSAs. These agents help expand contraceptive access past static facilities. CBDAs can provide oral pills and condoms while HSAs can additionally provide injectables.

Pharmacy Medicines and Poisons Board (PMPB)

The vision of the PMPB is "a Malawi that promotes safe use of quality medicines and other healthcare products" (www.pmpb.mw). The PMPB acts as Malawi's pharmaceutical regulatory body and oversees both products and businesses within Malawi across all sectors. Regulatory functions of the PMPB includes:

- Registering pharmaceutical business establishments and enforcing provisions of the pharmacy, medicines and poisons ACT through inspections and policing
- Controlling the training and registration of pharmacy professionals for practice
- Conducting quality and safety evaluation of medicines, and registration for use
- Conducting post-market quality and safety surveillance of medicines marketed
- Reviewing and authorizing clinical trial application

Limited capacity was stressed as a major barrier for the PMPB to actively monitor all sectors and products within the country.

Central Medical Stores Trust (CMST)

The Central Medical Stores Trust is a parastatal trust that procures and distributes medical products on behalf of the public sector. The CMST purchases pharmaceuticals from international manufacturers and local wholesalers. It also received donations from international organizations like UNFPA, USAID, and DFID. All of the CMST's contraceptive supplies come from international donations. The CMST utilizes a tender system where the government's yearly buying needs are divided amongst local manufacturers and wholesalers based on capacity. CMST buys these drugs and supplies on credit but it is reported that they have difficulty settling their bills. Due to the Buy Malawi campaign, non-donated products are first sourced from local manufacturers and wholesalers where available.

Nurses & Midwives Council of Malawi (NMC)

The NMC of Malawi is a nonprofit organization and has been in existence since 1966. Its primary functions concern the regulation of education, training, and practice for nurses and midwives in Malawi. The NMC keeps a register of all approved nurses and midwives in Malawi with active licenses. Employers are able to check this register to ensure their employees are properly licensed in

the country. In Malawi, Nurses and Midwives are permitted to deliver all methods of contraception except for sterilization.

Medical Council of Malawi (MCM)

The MCM has been operational since 1988. While the PMPB is responsible for the regulation of all retail pharmaceutical facilities, the MCM is responsible for the regulation of all health facilities where care is given. This includes inspection of premises, supplies, equipment, and personnel. The MCM keeps a register of all clinicians that are licensed to deliver care within the country. This includes private providers. The MCM's functions are as follows ("Medical Council of Malawi: About Us"):

- "Assist in the promotion and improvement of the health of the population of Malawi
- Control and exercise authority effecting the training of persons in, and the performance of the practices pursued in connection with the diagnosis, treatment or prevention of physical or mental defects, illness or deficiencies in human beings
- Exercise disciplinary control over the professional conduct of all persons registered under the Medical Practitioners and Dentists Act and practicing in Malawi
- promote liaison in the field of medical training both in Malawi and elsewhere, and to promote the standards of such training in Malawi
advise the Minister of Health and information acquired by the Council relating to matters of public health"

Private Sector Actors

Private Retailers, Clinics, and Providers

All pharmaceutical retail outlets in Malawi are required to register with the PMPB. This includes wholesalers, retail pharmacies, and medicines stores. There are regulations surrounding what retail pharmacy versus medicine store can sell, but both can only supply products that are registered by a local wholesaler. These entities secure their product from local wholesalers, unless they have been given special permission to import a product on their own. Private clinicians are required to register with a separate entity, the Medical Council of Malawi. See *Table 2* for the total number of pharmaceutical businesses registered in Malawi by type as of June 2017 (PMPB Malawi 2018, 2017).

Table 2: Number of Registered Facilities by Pharmaceutical Business Type

Type of Business	# Registered
Dispensing License	551
Medicine Store	630
Retail Pharmacy	54
Wholesale Pharmacy	67

This represents rapid growth since there were approximately only 30 pharmacies in Malawi less than 5 years ago. Notably however, the growth has been focused in major cities including Blantyre, Lilongwe and Mzuzu. The majority of wholesalers and retail pharmacies are based Blantyre and Lilongwe which service the Central and Southern regions of Malawi. This presents a major gap in service for the Northern region which is highly rural.

At a private clinic WDI visited, the OB/GN physician (and clinic owner) described that he sources most of his products from PSI. He noted that 75 to 80% of his business is covered by insurance, and his focus is on obstetrics and gynecologic conditions. Insurance schemes do not cover 'elective contraceptives' or infertility treatment. Insurance will cover treatment for complications of contraception, as well as HIV care. He described that there have been lobbying efforts to change this insurance coverage, but with limited success.

Private Wholesalers

As of 2018, Malawi had 67 wholesalers registered officially through the PMPB. That said, fewer than ten companies make up the bulk of pharmaceutical sales at the wholesaler level. We visited and interviewed directors at ten wholesaling companies based in Lilongwe across the private, public, and NGO/FBO sectors. This section focuses on the eight private sector wholesalers that were interviewed.

Half of the wholesalers we interviewed were currently offering contraceptive products. For the predominant wholesalers, their main business source comes from CMST tenders, but this never includes orders for contraceptive products. Interviewees reported limited business potential in contraceptives within the current landscape due to an inability to compete with subsidized prices offered by BLM and PSI. Emergency contraception was consistently mentioned as a noted exception within interviews. Many wholesalers, including those not currently selling contraceptives, noted this product as a fast-moving and rapidly growing category.

Wholesalers in Malawi are predominantly owned by individuals from outside of the country, primarily India. Several of the larger wholesalers have additional operations in other sub-Saharan African and Asian markets including Mozambique, Zambia, and Sri Lanka. The wholesalers that were interviewed did not report challenges surrounding logistics or their ability to serve customers even in the most rural areas. Their primary issue surrounds demand and encouraging manufacturers to invest their products in a market that has seemingly low ability to pay. Though, recent dramatic increases in the number of retail pharmacies and medicines stores in Malawi are leading to an increased customer base for many wholesalers.

Artemis Pharmaceuticals: Artemis is a wholesaler that operates in ten different countries, including Malawi. They have branches in Lilongwe and Blantyre and a sales team present in Mzuzu. They report that the contraceptive market in Malawi is mainly supported by BLM and PSI. They are not currently offering any contraceptives, but recently decided to begin wholesaling emergency contraceptive pills because they saw evidence that it was a fast-moving product. Artemis reported that typically international manufacturers enforce a limit of only one in-country distributor for their brands leading to less wholesale competition for branded products, though he noted that illegal product infiltration does occur. The Artemis representative noted several challenges to wholesaling in Malawi. The market demand is often too small to meet manufacturers' minimum order quantities which can put inventory at risk of expiry. Many manufacturers do not see it as economical to register products in Malawi due to perceptions of low demand. Demand may be small for contraceptives in the private sector because many of the social marketing organizations focus their product promotion and training at the clinic level, often ignoring the retail pharmacies and medicines stores which are fast-growing with large customer bases. There is generally a large information gap surrounding contraceptives among current and potential users, and not many pharmacies promote product

awareness to their clients. Additionally, Artemis believes that the lack of regulation on retailer margins may be hurting potential demand for pharmaceuticals in the private sector.

Intermed: Intermed self-reports as one of the largest wholesalers in Malawi with branches in all three regions: North, Central, and South. They currently offer just two contraceptive product types: condoms and emergency contraceptive pills (levonorgestrel 1.5mg). Historically they have also imported and offered the Emily levonorgestrel intrauterine device based on demand from a singular gynecologist.

Intermed reported that emergency contraception is a very popular product and almost all of their customers purchase it. When it comes to introducing new products into Malawi, Intermed often waits for the manufacturer to initiate product registration or for a significant number of clinicians to request the product. They would be open to offering more contraceptive products if clinicians expressed demand for them or if manufacturers were willing to register the product in-country. Intermed has requested to be sellers for both Microgynon and Safeplan brands. Intermed reports the following major challenges of wholesaling in the Malawi market:

- 1) New product registration and gaining PMPB permission
- 2) Finding prices that are competitive for the Malawi market
- 3) Promotion of products to physicians and other healthcare professionals

Intermed described a mixed delivery model, depending on the geography and distance. For delivery, they utilize various transporter arrangements. While it varies by individual customer, a typical scenario is that customers located 50-100 kilometers from Intermed will order and do their own pick-up, every 15 days. For customers located 10-25 kilometers away, there is a mix of Intermed delivering or the customer picking up. Intermed does not do any consumer-directed marketing or education. They note that they can only sell to customers who are registered with the PMPB, and for the allowable products. For example, medicine stores are only allowed to stock/sell limited types of medicines. They do at times request to order contraceptives which are not allowed for sale based on their classification.

Pharmacare Pharmaceuticals: Pharmacare is a local wholesaler with its own chain of retail pharmacies. They had three pharmacies in September 2018 and are in the process of opening a fourth. Pharmacare currently stocks emergency contraception, oral contraceptives, and condoms. They occasionally import small quantities of commercial oral contraceptive brands like Yasmin and Diane35. They report that as the government supplies of products like Depo-Provera have improved (i.e. government facilities experiencing less stockouts), fewer customers are purchasing these items at retail outlets because they cannot get them administered there. It is of note that at the time of in-country interviews, the CMST was experiencing a months-long stockout of DMPA due to global shortages.

Pharmacare representatives see Malawi as lacking a mechanism in which the government can utilize the private sector as a distribution point for critical commodities and to meet public health needs. Pharmacare representatives often used the example of Malawi's private sector ARV program as a potential for reproductive health. Here the government trained private providers and dispersed

licenses for trained facilities to provide public sector ARVs at a set fee. This helped to lessen the market impact of free and subsidized product. PharmaCare described a dramatic risk in the requests for emergency contraception. They also noted that pregnancy tests are 'big sellers'. Regarding the role of retail pharmacies, it was described that people often come to pharmacies as their first access point for healthcare, but this somewhat less the case for reproductive health.

Pharmacie: Pharmacie self-describes as the oldest private wholesaler in Malawi and serves as local distributing agents for Johnson&Johnson, Adcock Ingram, Ranbaxy, and Sun Pharmaceuticals. The Pharmacie representative described the Malawi pharmaceutical market as, "similar to Sri Lanka but about 20 years behind it."

They currently do not supply any contraceptive products, but are in the process of sourcing oral contraceptive pills. Pharmacie previously made the deliberate choice to not stock emergency contraceptive pills due to challenges with product misuse. Pharmacie also made the decision not to be a supplier of PSI socially-marketed contraceptives. A major challenge in the market for contraceptives is that many suppliers are willing to offer the products, but there is very low demand for commercial brands due to the subsidized brands offered by PSI. Another challenge mentioned was that the high costs of operation in Malawi require both wholesalers and retailers to charge high margins to recover their costs. This may be preventing affordable access.

Pharmavet: Pharmavet is a prominent wholesaler in Malawi and has been in business for 20+ years. Their business is focused on medicines, they do not participate in medical equipment. Pharmavet's predominant product categories are antibiotics, injectables (such as insulin and oncology), and cosmetics. The main office is in Blantyre, and Lilongwe functions as a satellite office. They have a wide range of customers in the public and private sector, including PSI and BLM. Timely payments from CMST are a challenge. They import from 15 major suppliers in India, Kenya and South Africa. They additionally source public health products from PSI, such as Safeplan (Depo Provera), but described injectable contraceptives as slow-moving in the private sector.

Pharmavet has several sales representatives who promote products, educate the physicians, and generate demand for medicines they carry. Family planning products are not a focus currently, other than emergency contraception, because they do not perceive a market opportunity. Currently 75% of Pharmavet's volume is on a pre-order basis. They maintain two main warehouses in Lilongwe. For delivery and pickup, they use customer specific arrangements. For delivery, their three predominant methods are trucks, couriers and the post office. Twice a month, they send a delivery truck to Mzuzu.

A company representative described the Malawi market as price-sensitive, and that they seek to evaluate the market potential prior to deciding to add a new product. Wholesalers generally maintain exclusive product arrangements, and if the product is readily available in the market, then they usually don't want to carry it. Since Malawi is a small market, the few wholesalers want to stock and sell unique products. Pharmavet described a relationship with an Indian medicines manufacturer offering 100 products, 50 of which they source. For very common, high demand products, then they will have more suppliers. For example, in cardiac products, Pharmavet uses just one supplier, versus paracetamol where they use four suppliers.

Worldwide Pharmaceuticals: Worldwide Pharmaceuticals is one of the largest wholesalers in Malawi and also owns PharmaNova, a local manufacturer and distributor of over-the-counter products. Worldwide focuses primarily on prescription products. Worldwide's top customers are CMST and the Christian Health Association of Malawi (CHAM). They also serve as a distributor for PSI socially-marketed contraceptives and are developing a partnership to further supply a large portfolio of medicines/products to PSI Tunza clinics on potentially a monthly basis. These products would potentially be subsidized or discounted. In addition to selling the PSI socially-marketed contraceptives, Worldwide also holds the licenses for generic products direct from the manufacturers. They note that it is often too difficult to sell the generic, manufacturer version and be able to effectively compete with PSI's low prices. Worldwide owns their own trucks and believes that they can control their costs more effectively.

The biggest challenges Worldwide faces are the unpredictable market, bureaucracy, and delayed payments from the government. They believe many of these issues can be mitigated through the harmonization of the pharmaceutical market across Africa as it will help them expand their business and "grow the pie." Another challenge is the low prices for BLM contraceptives which disincentivize the private sector from participating in the market. Worldwide also noted that the majority of the population outside of cities is currently living too far from a private sector health facility for it to be a viable option. Relative to the issue of retailer margins, Worldwide's view was these margins are often very high due to the high operating costs they incur.

Ritechem Pharmaceuticals: Ritechem Pharmaceuticals has both retail and wholesale branches. During the in-country visit, we visited the Lilongwe wholesale branch but were not able to secure an interview. Few details about their wholesale operations could be gathered, however, Ritechem does both wholesale and retail contraceptive supplies. Contraceptive methods sold by Ritechem include oral pills and emergency contraception.

Sunrise Pharmaceuticals: Sunrise Pharmaceuticals is Malawian wholesaler with a focus on medical and dental equipment as well as pharmaceuticals and medical supplies. They are not currently stocking any family planning products, but have stocked Depo Provera in the past. When they stocked Depo Provera, Sunrise representatives noted that it was one of the fastest moving family planning products. They have been stocked out of family planning products for approximately one year, but still have clients requesting these products. Sunrise supplies mainly to private clinics, FPAM, and Family Health International. They estimate that the CMST makes up 30% of their business. They source products both from other local wholesalers and internationally from countries like India and Kenya.

Sunrise representatives also noted a few challenges to wholesaling in Malawi including currency conversions when purchasing internationally due to the Kwacha's fluctuating value, getting customers to pay on time, and selling products that are available for free in the public sector. The latter point being especially true for many family planning products. Sunrise does recognize the growing demand for emergency contraception and is looking for potential suppliers.

NGO and FBO Sector Actors

Action Medeor

Action Medeor is a faith-based German non-profit wholesaler formed in the 1960s that also has branches in Tanzania and Jerusalem. Action Medeor founded a branch in Malawi in 2014, because they saw the lack of access to essential drugs and medical supplies. They import primarily from China, Germany and Kenya and do not buy from local manufacturers because they believe the quality of drugs from local manufacturers is poor. Many local manufacturers have been reluctant to even have exploratory meetings with Action Medeor, perhaps fearing that closer inspection of their goods may damage their reputation. Action Medeor is a non-commercial business and its resale prices are not meant to be competitive. Although they have been approved as a possible supplier to CMST, they have not won any government tenders only stepping in to supply CMST if they have an urgent need for medicines. Action Medeor continues to face difficulty improving access to medicines with Malawi. Many drugs are not registered in Malawi as manufacturers are reluctant to incur the cost of registration when the market and potential profits are so small. The director observed that Malawi is very unique in comparison to other countries such as Tanzania, due to the conservative culture and religious institutions that are not comfortable with FP education and product dispensing.

Banja la Mtsogolo (BLM)

BLM is a Malawi NGO established in 1987 and is part of the Marie Stopes International (MSI) organization. BLM's goal is to provide services which will complement the government's efforts through static BLM clinics and outreach services. At the clinics, clients pay subsidized fees for the services and the products are funded by donors. Until 2017, BLM ran a social franchise clinic network with private sector providers, but they ultimately closed it due to concerns and challenges in maintaining MSI quality standards. In other countries, MSI works for wholesalers to source medicines for their primary health services. One BLM representative shared his view that there is potential in Malawi if the wholesalers could supplement with other products to achieve their needed margins. He said that for MSI in Malawi (i.e. BLM), it is more difficult because of their focus on sexual and reproductive health (SRH).

In Malawi, BLM has two branded, socially-marketed contraceptives, condoms and emergency contraception, which they provide for sale in the private sector. BLM additionally provides the entire method spectrum within their own clinics and outreach efforts. These products, including implants, IUDs and injectables, are sourced either through the Malawi government (from the CMST) or from MSI's central procurement. These products are not over-branded by BLM as socially-marketed brands. General medical products and primary healthcare supplies are sourced from local wholesalers. Representatives from the company described that the leading wholesalers have strong presence, "*everybody buys from them and they are all nearly equal*". However, representatives report issues related to wholesalers not being able to supply the appropriate volumes needed for BLM's operations.

For condoms and emergency contraception, BLM has experimented with different sales models but ultimately arrived at a distributor model through which the distributors are initially provided a 'basket of FP products' and then they return with the payment, they are issued the next round of product, based upon how much they sold. This removes the credit issue with the distributors. These

distributors are often usually also selling other products such as soap and chocolate. The distributors all buy from BLM at a set price, BLM suggests the retail price but cannot control the distributors' pricing. Challenges mentioned by BLM representatives in Malawi included:

- Singular focus on sexual and reproductive health, which limits their ability to supplement private sector activity with products beyond contraceptives
- Societal issues and stigma around family planning
- Immaturity of the Malawi market in terms of consumers' financial capacity, so very difficult to make money on family planning

Population Services International (PSI)

PSI is the second SMO operating within Malawi and they run PSI Tunza Clinics, a service delivery franchise in the Northern and Central Regions. It is estimated that they have 70-80% coverage of these areas. They do not operate in the Southern region due to an agreement with BLM. PSI also has a direct product distribution mechanism with 8 sales representatives for the country. Within PSI clinics and outreach efforts, their product portfolio includes: condoms, emergency contraception, HIV prevention, injectables, Levoplant, Microlet, mosquito nets and water treatment products. Their warehouse inventory mix reflects their market participation: 40% FP, 40% HIV, and 20% malaria.

PSI Malawi offers numerous socially-marketed contraceptives under the Safeplan brand including emergency contraception, DMPA injectables, and oral contraceptives. These products are sold to wholesalers at a set price who then sell to local private clinics and retail pharmacies. PSI enacts agreements with wholesalers that dictates the wholesale selling price. PSI staff described that they recognize the need to grow the country's private sector market for family planning in a sustainable way and are currently assessing the landscape for potential strategies. They see a need to catalyze the market in order to generate demand, and are seeking to conduct good market segmentation in order to understand different consumer groups.

PSI is leading Malawi's Sayana Press project, which is intended to be catalytic in introducing self-injection of Sayana Press. Initial training has been completed with 80 PSI providers as well as 20 private sector pharmacists, to prepare them for training consumers in self-injection. The timing of the Sayana Press pilot is being impacted by the supply disruption of DMPA, and concerns about management of the two products. Looking to the future, PSI sees an opportunity to serve women and increase method choice by making Sayana Press available in private sector pharmacies. This is highly consistent with the opportunity which WDI observed and which in-country stakeholders suggested.

Christian Health Association of Malawi (CHAM)

CHAM is faith-based organization that provides primary healthcare and national program services through a network of hospitals and clinics within Malawi. They have about 170 facilities in total, of which approximately 90 are hospitals with maternity services and 20 are community hospitals. Their footprint is such that they have facilities in all districts except Mwanza, an island district on Lake Malawi. CHAM recently celebrated its 50-year anniversary and is the second largest healthcare provider in Malawi, with approximately a 37% market share. Importantly, CHAM's ownership and facilities are both about 50% Catholic. FP products in the Catholic CHAM facilities are limited to

condoms and the natural method. CHAM maintains a relationship with BLM and PSI to conduct outreach near the Catholic facilities.

CHAM is often categorized as private sector, and they have a memorandum of understanding with the Malawi government to provide services. All program drugs (FP, HIV, TB and malaria) are provided to CHAM for free. CHAM is allowed to charge for the services provided, but not the products sourced from the national warehouse. CHAM procures additional medical products and drugs from local wholesalers, but expressed skepticism about their quality of medicine. CHAM is allowed to source and sell private sector products only if those products are not being provided by the government through CMST. One CHAM representative noted that this is the case even when a stockout is occurring at CMST.

Family Planning Association of Malawi (FPAM)

Established in 1999, FPAM has a total of 64 service points, including 4 static clinics, 4 youth centers and 53 mobile facilities. FPAM receives their contraceptive supplies from the CMST through a government collaboration that provides assistance with forecasting and distribution. FPAM facilities pick up their CMST-sourced products from the closest public District Hospital. These products are received for free, funded by UNFPA, and FPAM is not permitted to charge for these products. FPAM also sources some FP products from PSI. FPAM facilities have access to all contraceptives offered in Malawi: injectables, oral contraceptives (combined and progesterone only), emergency contraception, implants, and IUCDs.

FPAM structures their services to complement what the government is already doing. Through this, they have a focus on youth and those in hard-to-reach areas that may not be easily serviced by public facilities. They are currently focusing on scale-up of services which included the development of a cadre of youth peer educators. At their outreach clinics, FPAM does not charge the clients any service fees. FPAM was in the process of setting up service fees at their static locations to help finance training programs. Starting October 2018, they were planning to charge the following:

Table 3: FPAM Anticipated Service Fees

Service	Fee (kwacha)
IUD Placement	1500
Implant Placement	500
DMPA Injection	300

Representatives noted that Malawi suffers from issues surrounding contraceptive choice in that all methods are often not available to women due to low access for LARCs and preferences of service providers. FPAM's scale-up activities hope to help address this issue.

Family Planning Products in Malawi

Family Planning Methods by Sector and Outlet Type

Table 4 displays the outlet types by sector that are authorized to sell or administer each contraceptive type. This table was created from both interviewee feedback and Malawi regulations. In some cases a method type is not included for a specific outlet type when it was heard from stakeholders that though it is legally permitted for sale, it is never found there. For instance, IUDs are legally permitted for sale in retail pharmacies but you will likely never find one on the shelf. The more limited availability of emergency contraception in the public sector outlets is consistent with the dynamic and growing volumes described for the private sector. The fact that private clinics are able to dispense products such as emergency and oral contraceptives furthers the more limited business opportunities which retail pharmacies face, given that private sector clinics are authorized to both prescribe and dispense medications. According to some wholesalers, the availability of products across the wide array of outlets means that product expiration is a challenge for private sector wholesalers and retailers.

Table 4: Method Type Availability by Sector and Outlet Type

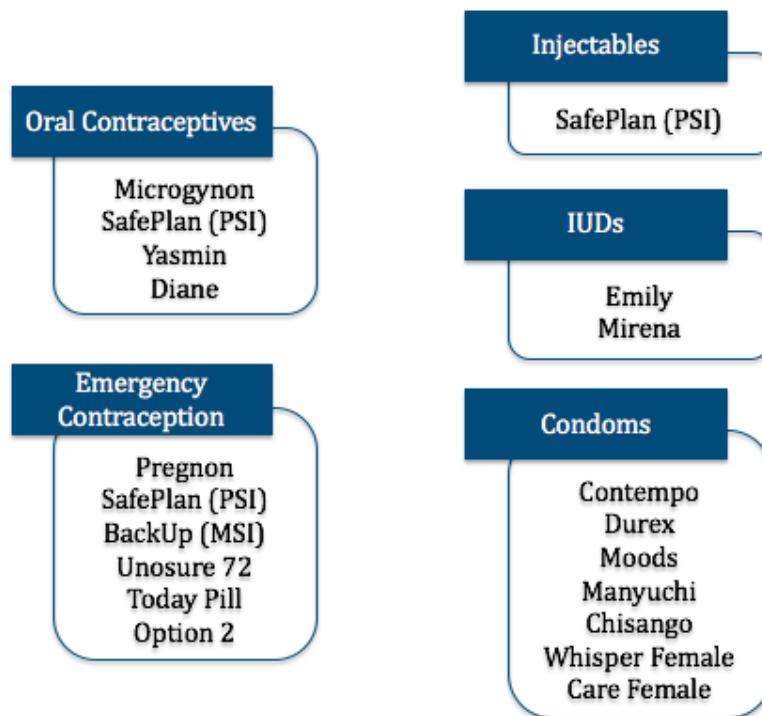
		Emergency Contraception	Oral Monthly	Sayana Press	Injectables	Implants	Intrauterine Devices
Drug Store	Private	X	X				
Pharmacy	Private	X	X	X	X		
Health Post	Public		X	X	X		
Dispensary	Public	X	X	X	X		
Health Centre	Public		X	X	X	X	
Clinic	Private	X	X	X	X	X	X
	Public		X	X	X	X	
	NGO/FBO	X	X	X	X	X	X
Hospital	Private	X	X	X	X	X	X
	Public	X	X	X	X	X	X
	NGO/FBO	X	X	X	X	X	X

Family Planning Products in the Private Sector

WDI visited ten wholesalers/distributors and eight private sector retail outlets in Malawi to observe contraceptive method availability and pricing. Across the ten wholesalers, eight were private sector, one was a government trust, and one was an NGO. WDI observed each facility to see available product types and determine sale prices.

Brands were found for the following method categories: Oral contraception, Injectables, Emergency contraception, IUDs, and condoms. No implant brands were seen at private retail or wholesale locations. The CMST is the only known distributor carrying implants. These are donated product from USAID or UNFPA. BLM and PSI may also bring their own supplies of implants into the country from their international warehouses when CMST is unable to provide them with product. *Figure X* displays all contraceptive brands that were observed in country. Additional brands may be present in private retail and wholesale locations, the researchers were constrained by time in the number of outlets they could observe.

Figure 2: Contraceptive Method Brands Carried by Private Retail Outlets or Private Wholesalers



Market Challenges and Gaps

During in-country interviews, WDI sought to learn wholesaler (and other actor) views about how to facilitate development of the private sector and specifically provision of family planning products to rural and remote areas. The stakeholders shared their viewpoints surrounding current market challenges to expanding the private sector provision of family planning products.

Provider and Channel Limitations

Not unlike other countries, Malawi has a mismatch between where women go to obtain family planning in the private sector, and what is available at those locations, most specifically at pharmacies and medicine stores.

Provider Limitations to Administer Preferred Methods

Injectables are currently a preferred contraceptive method in Malawi, and while they are available for sale in pharmacies, pharmacists are not currently authorized to administer the injections. Multiple stakeholders reported this as a barrier as to why women do not pursue this method in the private sector. A woman has to purchase the injectable and then take it to a clinic for administration. This causes time and travel burdens for women and creates a risk of not getting the product started when needed. HSAs are not medical professionals, but many stakeholders recognized that they are permitted to administer injectables after only a few months training. Retail stakeholders reported how pharmacists undergo years of training and could easily perform this function.

Channel Limitations

With respect to medicine stores, the issue of channel limitations is two-fold. On the one hand, these outlets are not authorized to stock and dispense the full range of contraceptives. At the same time, there is a proliferation and oversupply of medicine/drug shops, which may inhibit the location of pharmacies which could provide a broader array of products and services. The continued growth of medicine stores also strains the PMPB's capacity to monitor and enforce regulations.

"Medicine stores are mushrooming and jeopardizing the retail pharmacists."

There is an additional lack of any private sector outlets in the most rural and remote areas, exemplified by a geo-mapping analysis conducted for Malawi's northern region and reported in *Section VII* of this report. Wholesalers are not currently servicing these areas for this reason – there is little to no demand due to the lack of retail outlets. While there has been dramatic growth in the number of retail pharmacies in Malawi in the last 2-3 years, they are heavily concentrated in the urban and peri-urban areas of Blantyre, Lilongwe and Mzuzu. In-country discussions supported the geo-mapping results, that rural areas are lacking pharmacies and often even medicine stores. While outreach efforts by NGO and FBO organizations service these areas, they are not constant and the surrounding public sector facilities were reported to be plagued with frequent contraceptive stockouts. This leaves little options for women needing immediate contraceptive access (i.e. in the case of emergency contraception) or favor a more discrete outlet for making their purchases.

Pharmacists are rapidly opening new businesses, but they are not motivated to move to the more rural regions with the greatest need. An investment or financing guarantee to motivate and secure retailer placement in highly rural settings was suggested as an option to further develop the private sector channels which the wholesalers could then service.

Insufficient Private Sector Family Planning Demand

Family Planning Market Dominated by Public Sector Actors

Malawi's wholesaler sector for medicines is sufficiently prepared to serve a commercial market with family planning products. These actors have the technical skills and resources in place. Wholesalers and several other stakeholders perceive a significant barrier to be that the private family planning sector is crowded out by the free public sector product and the significantly subsidized socially-marketed brands in-country. This leaves (1) insufficient volumes to competitively develop commercial business and justify market investment and (2) insufficient margins to encourage the wholesale of socially-marketed brands.

"The government floods the market with predominant methods."

"We see some suppliers really focused on the private sector, can tell by their packaging. They are only being killed by the fact that healthcare is free."

International manufacturers also do not see the value of developing private markets for family planning products in Malawi due to the government's heavy role in free product provision and the little data available on potential demand. Stakeholders across all sectors expressed the concern that there is very little knowledge on what portion of the public sector's customers may actually be able and willing to pay for family planning services. The fact that even Malawi's private health insurers do

not cover routine FP services and products is a notable observation – employed individuals with insurance provided by their employers, are still incentivized to use the free services of the public sector for their FP needs.

"Free service in the public sector compromises the private sector ... can strengthen the private sector by collecting fees in the public sector, to even things out."

Lack of Market Scale

Wholesalers regard the private sector market for family planning in Malawi as currently too small, unpredictable, and bureaucratic – often due to the challenges described above. Company representatives described that due to small order sizes, they have difficulty meeting manufacturer volume requirements, or face the risk of product expiration because many private sector family planning products do not move that quickly. Additionally, they perceive that manufacturers do not wish to register products in Malawi due to the perceived small market opportunity, particularly in relation to the cost of registration. Wholesalers report that manufacturers often do not believe the family planning products will return revenues greater than the registration fees. Though, it should be noted that despite Malawi's small size geographically, its population is greater than that of countries like Zambia and Senegal who experience far greater commercial participation.

Scale also influences delivery and transportation from the wholesalers to the retail and clinic locations. Most wholesalers described mixed models, wherein the business owners may come to pick up their orders depending on the order size and delivery distance. This situation is likely exacerbated by the fact of single product wholesalers, so that retailers are sourcing from multiple wholesalers in order to fully stock their shelves (all retailers WDI spoke to reported sourcing from multiple wholesalers, often picking up product from most of them). If the retailers are assuming the transport costs, this is likely reflected in the pricing to the consumers and high reported retail margins.

Margins and Operating Costs

The wholesalers expressed concern with the absence of pricing regulation, noting that private retailers and clinics may be adding 100-200% margins to both medicines and FP products, thereby discouraging use of the private sector by making products less affordable. With additional questioning regarding how to stimulate the private sector, we heard the following suggestions:

"Help private practitioners understand the need to control price."

"We are negotiating with the manufacturers, but that benefit is not reaching the Malawians. Lots of retailers and medicines stores are opening, because the business owners see that the margins are very good. For example, we've got 11 pharmacies on this road now."

Some wholesalers operating in multiple countries drew comparisons between Malawi and other countries such as Mozambique. While Mozambique has margin regulation, with retailer margins capped at 59% and stickers denoting the manufacturer suggested retail price, the country also has fewer wholesalers and a different delivery mechanism, with the use of local couriers.

Some wholesalers report that they do not participate in the wholesaling of PSI or BLM socially-marketed contraceptives due to the restrictive margins in combination with low volumes, stating it

is not worth their time to keep them in stock. While contraceptives as a whole are reported to be a low-margin product at the wholesaler, commercial products offer a greater margin incentive than socially-marketed ones. However, wholesalers cannot successfully promote their commercial brands to retailers next to the low prices of PSI and BLM products.

Market Information Issues and Cross-Sector Understanding

Interviews suggested that addressing information issues and improving cross-sector understanding and cooperation would be key factors in the long-term goal to develop the private sector's role in improving rural and remote area provision of family planning services and products. Currently, there exists very little communication and information transfer between the public and private sectors regarding the family planning market.

Gaps in Knowledge on Market Potential

Several factors currently limit the potential for market building in the family planning sector. Motivating wholesalers to serve the rural regions of Malawi and similar countries requires information about market potential, as well as channels to deliver product all the way to the end-user. Potential demand and willingness to pay are large unknown factors for wholesalers and retailers alike. Most report an assumption that no demand exists in these areas. Additionally, there is no means-discrimination system to encourage those able to pay to do so.

Private Sector Image and Representation

Several wholesaler representatives expressed their investment in advancing Malawi economically and the need to meet public health objectives. They want to be a part of the solution and do not want to be perceived as only focused on profit generation. One stakeholder described it this way:

*"There's a need to shift the image of the private sector so it's not just a money-making perception ...
need to build on the concepts of quality, convenience and helping people."*

There appears to be limited interaction, discussion and information sharing between the government and the private sector. While the private sector is mentioned in many governmental strategic and planning documents, many interviewees reported that there is no true private sector representation in working groups outside of SMOs. Stakeholders described that if information could be shared with the private sector from the government, then the private sector will see the need and the market opportunity within contraceptives. In-turn, the private sector might be better understood by public sector and government officials. These points are demonstrated through the below quotes:

*"Conduct stakeholder meetings, so the public and private sectors are coming together to build
common understanding and goals."*

*"The Malawi government has the idea that the private sector is important. They have the good
will, but have not figured out how to engage with us yet."*

Information to Potential Family Planning Users, With an Emphasis on Youth

In-country interviews stressed the need to provide educational materials and to generate cultural acceptance of family planning to the Malawi public, in order to generate demand –

“Business people tend to be reactionary. We don’t need more wholesalers, instead we need to see demand generation.”

A key market failure in the private sector is the notable lack of information available to users about the value of family planning as well as education on family planning options, particularly in the case of stockouts of preferred methods. Given that 84% of the Malawian population lives in rural areas, healthcare literacy and availability of information is a key issue for demand generation. Stakeholders described to us that FP materials and information is distributed to rural women by CBDAs and HSAs. Due to this, it is limited to what is available in the public sector via donor funds. There is no distribution of information regarding what products and services are available in the private sector.

Manufacturers currently have no incentive to market their products or generate demand, given that their major markets are government tenders. Successful business generation currently depends on doing tenders well. The Malawi DHS shows that in 2016, 42% of women had not been exposed to any family planning messaging via any media source while 40% of women had heard a family planning message on the radio in the last 6 months (National Statistical Office (NSO) [Malawi] and ICF 2017). This data is consistent with the environment described during the in-country research. Lack of information and misinformation about family planning and contraceptives was consistently described as a major barrier by most stakeholders. Additionally, during WDI’s time in-country, no contraceptive advertising was observed outside BLM billboards (outside BLM locations) and a few posters in the windows of retail pharmacies.

A pharmacist who has worked in both urban and semi-rural pharmacies made the following comparison, based on his experience providing available FP services and products. See *Table 5*.

Table 5: Observations on Differences Between Urban and Rural Family Planning Clients

Urban	Semi-Rural
More literate	Less literate
Already tend to know what they want	Less aware of their options & what they want
Well aware of products	More depo used because it has been highly advertised
	Women perhaps more likely to be getting injectable DMPA without husband's knowledge or approval

He also described that pharmacies are selling contraceptives but usually not doing patient education on options. He perceives that women are primarily receiving their information from BLM, PSI and the public sector. Additionally, there is a perception that physicians provide limited information on family planning options to their patients.

A research paper from 2018 focusing on youth accessing reproductive health services in Malawi based on 34 focus groups with Malawian teens and parents highlights several challenges which are information-related (Self et al. 2018). Misconceptions about contraceptives and perceived side effects were identified as key barriers to use of FP methods. Cost and access (distance and privacy) were other barriers, along with societal attitudes towards family planning. Some parents

acknowledged their reluctance to support youth's use of contraceptives and likelihood to encourage abstinence. Given youth's preference for privacy and the need for education around reproductive health, private sector outlets which could increase access to information would be instrumental to demand generation. Supply of information is a critical need to develop the market for family planning.

Stakeholder discussions in-country reinforced the need for a sustained information and service delivery focus on youth, particularly in light of data showing that pregnancy rates increased among youth, between 2010-2015. Key concerns for youth paralleled the paper – that youth has expressed access as a challenge, attitudes of health workers, that they wanted a separate place in which to receive reproductive health services, the mindset of parents and that churches and other social forces in Malawi do not allow the provision of FP education and services at or near schools.

Insufficient Regulatory Capacity

The PMPB has a wide breadth of responsibility across the products, places and people involved in Malawi's pharmaceutical and family planning system. Medicine stores are perceived as causing problems due to poor care delivery as well as inhibiting the development and delivery of higher quality care delivery. Regulations exist for medicine stores but there is such a high volume of them throughout the country, regulations are not consistently followed, and there is insufficient capacity for enforcement. Retail pharmacies have the advantage of stricter regulatory requirements and higher service delivery than medicine stores, which may be a good starting point in working with the PMPB on ideas related to improving private sector access in the most rural and remote areas of the country. The PMPB can play an important role in supporting access in remote villages, which in turn would create additional demand for the wholesaler segment.

Labor Force Considerations and Incentives

Three major labor market factors were discussed during interviews as constraining the development of the private sector and limiting access in rural regions:

- Mismatch of training and accreditation for the professions who could increase access – i.e. pharmacies are often a first destination for women seeking care, but the pharmacists are not allowed to administer the injectable DMPA
- High demand for pharmacists, and significant retention challenges
- Lack of incentive for trained medical professionals to locate and/or open private sector clinics and businesses in rural, remote settings

Malawi has two institutions training pharmacists, the Malawi College of Medicines and the Malawi College of Life Sciences. The first class graduated in 2009, just ten years ago, contributing to a significant increase in the number of locally trained pharmacists. Stakeholders report that rather than filling existing gaps in the system, experienced pharmacists often open their own retail locations due to the high margin potential. New pharmacists are often required to then come into roles requiring significant increases in responsibility and workload in comparison to school, potentially leading to less patient interaction and instruction.

Currently there is high demand for pharmacists, and there appears to be a potentially significant retention challenge for employers, certainly for retail pharmacies. Competition for pharmacists is very high, and one-year contracts often include housing and car allowance, as well as a laptop and cellular service. After one-year, young pharmacists are often eager to advance their careers and move on to new opportunities, including opening their own pharmacies. While there has been rapid growth in the number of pharmacies in Malawi, this growth has concentrated in the urban and peri-urban areas such as Lilongwe. The rural regions are not currently attracting business investment by pharmacists seeking to start their own businesses and non-pharmacists seeking to open businesses in these locations often have difficulty attracting pharmacists or offering competitive salary packages. Beyond the pharmacists, there is an additional history of attracting and retaining medical professionals to work in the rural outreaches of the country. Malawi has previously attempted efforts to assign and locate newly trained medical providers to rural villages but struggle to achieve retention.

Market Opportunities

Emergency Contraception as a Proxy for Market Potential

Emergency contraception was consistently reported by stakeholders as an outlier to other contraceptives in the private sector. Emergency contraception was described by all wholesalers as a fast-moving OTC product in Malawi's private sector and a topic of frequent conversation in the discussion around family planning. There is a strong perception that adolescents and young women are using emergency contraception extensively. WDI collected both qualitative and quantitative evidence to support the idea that emergency contraception is fast-moving and quickly growing market. Data suggests support for the following:

- 1) As in other sub-Saharan African countries with vibrant EC markets (Nigeria), there is a market segment preferring emergency contraception, and they prefer to access this contraception in the private sector
- 2) This segment of users is drawn to emergency contraception, perhaps for the reason of self-managed contraception, for privacy and other reasons
- 3) There is a willingness and ability to pay for this method on a regular basis
- 4) There are significant barriers for the public, particularly adolescents, in accessing this product in the public sector

Interviews suggested that EC is in high demand in both urban and semi-rural areas, but with much lower awareness and access in rural areas due to the lack of private sector presence. A 2015-2016 study in Malawi showed that most customers are obtaining their emergency contraception from private pharmacies and our research supports this claim. Interviewees stated that public facilities are often out of stock of emergency contraception or refuse to sell the product to younger women due to stigma. Due to this, the private sector has become the primary source for emergency contraception. Wholesalers and retailers both described significant growth across a range of brands. Two of four private wholesalers who are not currently selling emergency contraception noted they are in process of gaining regulatory approval for this product due to the high market opportunity.

Retailers said this product brings in customers every day, despite the fact that pricing for one course of emergency contraception is often more than one month of oral contraceptives.

There is an opportunity to better understand emergency contraceptive use and users in Malawi and how it might inform development of the private sector for the more rural and remote areas. EC may be considered as an entry point, a 'gateway' to contraception for new users. There exists significant potential for education on appropriate use, method selection and cost effectiveness. Many women still remain uneducated about emergency contraception, its uses, and its side effects. Because it is often not found in the public sector, there are few informational campaigns. Interviewees said there may be over-use and improper usage of the product.



Segments of Family Planning Users with Ability- and Willingness-To-Pay

Directly overlapping with the EC opportunity is the observation that there are segments of family planning users who are able and willing to pay at some level for their family planning products and services. This includes users going to static FPAM, PSI, and BLM clinics as well as private pharmacies and private clinics. Generally speaking, the opportunity for ability and willingness to pay exists more in the urban and peri-urban areas, but stakeholders felt there was an opportunity to research this across a sample of the country in order to better characterize the market.

Preliminary quantitative data obtained from one rural and one urban pharmacy support these observations. One urban pharmacy sold over 1,100 units of contraceptives (excluding male and female condoms) in 2018. This data is explored further in *Section V*, but shows an existing population preferring the privacy and quickness of retail pharmacies despite the price. If this can be better characterized across the country, it could demonstrate a market potential which would attract greater participation by various actors throughout the channel.

Entrepreneurial Orientation of Malawi's Pharmacy Profession

As described earlier, Malawi is witnessing significant growth in the number of trained pharmacists along with the total number of registered retail pharmacies in the urban and peri-urban areas. Historically, the MOH has faced considerable difficulty in recruiting and placing new health professional within rural areas – in part due to lower interest in living in rural areas, but also due to funding gaps for placement of new students.

Interviewees described that entrepreneurs face difficulty in obtaining commercial loans to start new businesses, and often use private funding. However, when it comes to newly graduated pharmacy students (those who may be most likely to move to rural areas due to their younger ages, less likely to have children, etc....), private loans are incredibly difficult to obtain for starting a new business like a pharmacy. There is a large opportunity for catalytic investment through the financing of pharmacists for rural retail locations. This could stimulate a social enterprise environment.

Intervention Idea Development

Following all in-country interviews, interview notes were analyzed to find potential intervention ideas brought up by stakeholders. After this review, WDI consulted the market challenges, opportunities, and gaps also identified from interviews to develop additional intervention ideas. Intervention ideas were not limited to specific activities such as advocacy versus technical assistance. The goal of all intervention ideas is to expand private sector access to contraceptives and may focus upon actors at any level of the market. The result of this activity was the development of 15 intervention ideas. These ideas are presented in brief in *Table 6* and below with greater detail:

1. *Pharmacists authorized to provide injections:* Includes (1) Advocacy to both the PMPB and MCM for regulatory change to allow pharmacists to deliver a select set of injectables within the pharmacy itself (including a focus on DMPA-IM), (2) Formal policy change for pharmacists to provide injections, and (3) A training course for pharmacists developed and implemented either in schools or as a workforce initiative.
2. *Self-injectable Sayana Press approved for sale in pharmacies:* Includes (1) Engagement with the PMPB to use existing evidence base for self-injection of Sayana Press to extend regulations to permit its sale in retail pharmacies and (2) Formal status change to a drug permitted for sale in retail pharmacies.
3. *Bridge financing to cover late CMST payments for tenders:* Through a donor organization (ex: USAID), implementation of 'bridge financing' solution. Through this the donor organization would temporarily supply wholesalers and manufacturers with the necessary payments until the CMST is able to pay. This would need to be built into a longer plan for sustainability.
4. *Implementation of a nationally representative retail pricing audit:* Includes (1) Evaluation of private sector prices in-depth through the commissioning of a nationally representative pricing audit of contraceptives and (2) Potential pairing with Intervention #7, a consumer willingness-to-pay study, to gain a full market view. This may inform whether further policy change is warranted or aid in developing a contraceptives-specific pricing strategy across the public, private, and social marketing sectors.
5. *Incentivize local production of contraceptives through 'Buy Malawi':* Includes (1) Exploration with the Malawi government (as well as current FP funders and manufacturers) what might be potential options to add contraceptives to the *Buy Malawi* campaign in order to facilitate manufacturer investment in contraceptive production and tenders and (2) Exploration with the government on the potential to facilitate and lower the cost of new product registration (for specifically contraceptives) for importation and production.
6. *Public-private partnership to increase the PMPB's regulatory capacity:* Exploration of the potential for the development of a pilot public-private partnership to extend the PMPB's

regulatory capacity through engagement with groups like the Pharmaceutical Society of Malawi and the pharmacy colleges. This could potentially integrate a team-based approach to ensure transparency and accuracy. This could be designed to target hard-to-reach areas that have historically presented the greatest challenge for oversight.

7. *Implementation of a nationally representative willingness-to-pay evaluation:* Explore willingness to pay for contraceptives across multiple market segments through the commission of a Willingness-To-Pay evaluation study. This could be paired with Intervention #4, a pricing audit, to gain a full market view. The data from these studies could be used to increase participation throughout the chain and demonstrate business potential.
8. *Pilot business model of mobile pharmacy:* Design and deploy a pilot business model of a mobile pharmacy that is focused on delivering contraceptives along with other products deemed to be of high value and demand to rural areas. This pilot would test the potential to increase access and demand generation while utilizing cross subsidization. Pharmacists would act as the business owners so they have incentive to manage all assets well. A nurse would be employed by the pharmacist to ensure appropriate care delivery of all method types.
9. *Utilization of Sayana Press for rural women favoring self-managed FP:* Includes (1) Recognize a potential market segment with a preference for self-managed contraception and proceed to better understand and leverage this in rural Malawi and (2) Partner with Sayana Press program to design and pilot a private sector trial launch.
10. *Emergency contraception information campaign:* Due to popularity of EC (1) Initiate an information campaign to ensure women who are relying on EC are its target consumer (i.e. using it appropriately) and 2) Identify, and as appropriate, transition those who may be suited to longer term protection.
11. *Inclusion of private sector in existing working groups for contraceptives:* Organize a cross-sector stakeholder working group to align priorities and roles, understand gaps, define challenges, and assign responsibilities for the contraceptive market. This activity would be supported by results from Intervention #7 and Intervention #4.
12. *Creation of a program paralleling the Malawi ART service provision work:* Development of a model for Family Planning that mirrors the government engagement with the private sector used for the scale-up of ART treatment. Through this, publicly procured FP products could be made available at approved private sector facilities. An organization should be identified for monitoring the selected private sector sites to ensure compliance with program activities and quality of service.
13. *Private sector-based contraceptive information campaign:* Sponsor contraceptive information distribution for the private sector, in order to raise user knowledge and generate demand. Donor and social marketing organizations (and the government) can partner with the private sector to provide informational materials on Family Planning and contraceptive products/use. Distribution can be accomplished through multiple mechanisms, including a) inserts with wholesaler-sales to private sector and b) distribution in public clinics.
14. *Incentivization programs for human resources in rural areas:* Structure education and training opportunities for individuals to be recruited from and incentivized for term commitments post-training in the most rural and remote areas. This could include requiring a one to two-year term in a rural following graduation, particularly to earn specific scholarships. It may

also include subsidized loans for pharmacists interested in opening pharmacies in rural areas.

15. *Incorporation of FP products and services into insurance schemes:* Includes (1) Assembly of evidence and advocacy materials for working with Malawi government and insurance regulation and (2) Pursue public-private partnership with insurers to explore and develop policy change and timing to incorporate coverage of FP services and products.

Table 6: Intervention Ideas Presented to Stakeholders

#	Intervention	Timeframe
1	Pharmacists authorized to provide injections	Medium to Long
2	Self-injectable Sayana Press approved for sale in pharmacies	Short
3	Bridge financing to cover late payments for tenders	Short
4	Nationally representative retail pricing audit	Short
5	Incentivize local production of contraceptives through Buy Malawi	Medium to Long
6	Public-private partnership to increase PMPB's regulatory capacity	Short
7	Nationally representative willingness-to-pay evaluation	Short
8	Pilot business model of a mobile pharmacy	Short
9	Utilization of Sayana Press for rural women favoring self-managed FP	Short
10	Emergency contraception information campaign	Short
11	Inclusion of private sector in existing working groups for contraceptives	Short
12	Creation of a program paralleling the Malawi ART service provision work	Medium to Long
13	Private sector based contraceptive information campaign	Short
14	Incentivization programs for human resources in rural areas	Medium to Long
15	Incorporation of FP products and services into insurance schemes	Medium to Long

Stakeholder Scores from Receptivity-Testing of Intervention Ideas

Ten stakeholders were identified for second-round interviews based on their knowledge and responsiveness as demonstrated during in-country interviews. These interviews were performed via Skype or WhatsApp and interviewees were provided a deck to review prior to the interview. During interviews, stakeholders were presented with descriptions of 15 intervention ideas and the challenges that they addressed. See *Table X* for a full list of the 15 intervention ideas presented to stakeholders. Following the presentation of each intervention idea, stakeholders were asked to provide four pieces of information:

- General reactions and comments

- Feasibility score, 1 to 5 scale
- Impact score, 1 to 5 scale
- Ranking of top three interventions

Feasibility referred to the potential for the intervention to be implemented in Malawi including potential for stakeholder buy-in, fit with the Malawi context, and practicality of implementation. Impact was defined as increasing private sector participation in the family planning market of Malawi including the potential to increase demand, encourage participation of various actors, and ensure supply. The intervention options varied widely in their average feasibility and impact scores. For feasibility, the highest average score was 4.7 and the lowest average score was 2.7. For impact, the highest average score was 4.2 and the lowest average score was 2.7. Interventions commonly scored higher for feasibility than impact. The top five scoring interventions for both feasibility and impact are presented in *Table 7*. The two scoring categories differ in the top-rated interventions, indicating that the most feasible interventions may not be the most impactful ones. Three interventions had top scores in both categories:

- Cross-sector emergency contraception information campaign
- Nationally representative willingness-to-pay audit for contraceptive supplies
- Private sector based contraceptive information campaign

Table 7: Top 5 Stakeholder-Rated Interventions for Feasibility (left) and Impact (right)

Intervention Idea	Average Score	Intervention Idea	Average Score
1. Private sector based contraceptive information campaign	4.7	1. Utilize Sayana Press for rural women favoring self-managed contraception	4.2
2. Emergency contraception information campaign	4.6	2. Emergency contraception information campaign	4.1
3. Nationally representative willingness-to-pay audit	4.3	3. Nationally representative willingness-to-pay audit	4.1
4. Self-injectable Sayana Press for sale in pharmacies	4.0	4. Private sector based contraceptive information campaign	4.0
5. Addition of private sector to cross-sector contraceptive stakeholder working group	4.0	5. Create program that parallels ART service provision work	4.0

In contrast, the intervention options that were most commonly ranked as ‘favorite’ options by stakeholders do not fully align with those given the highest feasibility and impact scores. The top six ranked ‘favorite’ interventions from stakeholders are presented in *Table 8*. The only intervention appearing in all three categories is the ‘Nationally representative willingness-to-pay audit for contraceptive supplies’. Top feasibility and impact interventions tended to focus on information and advocacy while ranked ‘favorite’ interventions focused on addressing structural and systems barriers.

Table 8: Top Six Stakeholder-Ranked Intervention Options

Intervention Idea	Number of Votes
Pilot business model for a mobile pharmacy in rural/remotes areas	4 votes
Public private partnership to increase the PMPB's regulatory capacity	4 votes
Pharmacists authorized to provide contraceptive injections	3 votes
Self-injectable Sayana Press for sale in retail pharmacies	3 votes
Nationally representative willingness-to-pay audit	3 votes
Incentivization programs for key human resources in rural areas	3 votes

During these secondary interviews, stakeholders often offered their own additional ideas for how impact could be achieved for the private sector provision of family planning in rural areas and to hard-to-reach populations. These ideas spanned various topic areas and actors involved. A few of the discussed ideas include:

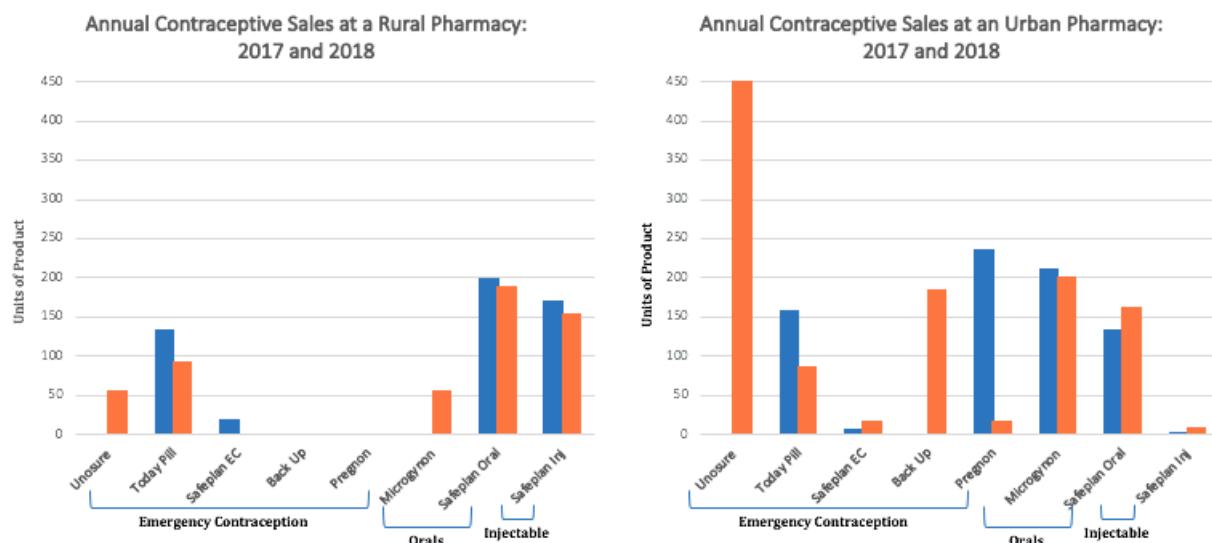
- The re-establishment of SMO franchise networks for rural clinics
- Expansion of efforts to implement performance-based financing for health workers in the area of family planning and reproductive health
- Development of a model mirroring the 'Duka la Dawa' system found in Tanzania

Key Findings: Sales, Margins, and Pricing Data

Contraceptive Sales Data

WDI was able to gain access to two years of contraceptive sales data from both a rural and an urban retail pharmacy in Malawi. While this is a small sample size, it does provide some preliminary insights and learnings that may be worth exploring further in future research efforts. *Figure 3* displays the average units of each contraceptive product sold over 2017 (blue) and 2018 (orange) for each retail pharmacy location. Annual contraceptive sales across the two pharmacies illustrates the differences in rural and urban markets. Injectables are far more popular in the rural location, while emergency contraceptive sales greatly dwarf all other methods in the urban location.

Figure 3: Average Units of Contraceptives Sold at a Rural and Urban Retail Pharmacy, 2017 and 2018



Annual contraceptive revenues vary significantly across the rural and urban pharmacies, but a large portion of revenues come from emergency contraceptive sales across both locations. See *Table 9* for contraceptive revenues (in Kwacha) for 2017 and 2018 across both retail pharmacies. Though greater volumes of oral contraceptives were sold in the rural location in comparison to emergency contraception, the emergency contraception sales make up a greater or similar portion of revenue in both years. This is due to the higher price point for emergency contraception. Brand preferences differ within contraceptive method categories across the urban and rural outlets, perhaps due to differing abilities to pay. Generally, the Unosure emergency contraceptive brand dominates urban sales while the Safeplan brand dominates rural sales. Contraceptive sales across the urban and rural pharmacy locations are differentiated by a few key factors. **Urban sales tend to be characterized by the following:**

- Overall higher sales dispersed across a wider variety of brands
- Generally skewed towards emergency contraception
- Commercial brands commonly outsell the socially-marketed brands

While rural sales tend to be characterized by the following:

- Overall lower sales with fewer available brands
- Generally skewed towards socially-marketed orals and injectables
- Socially-marketed brands commonly outsell the commercial brands

Table 9: Contraceptive Revenues for a Rural and Urban Retail Pharmacy, 2017 and 2018

Method Type	Emergency Contraception					Orals		Injectables	
Brand	Unosure	Today Pill	Safeplan	Back Up	Pregnon	Micro-gynon	Safeplan	Safeplan	Total Revenue
Price	2000 kw	1500 kw	1500 kw	2000 kw	2000 kw	1350 kw	600 kw	800 kw	
Rural 2017	0	202,500 kw	30,000 kw	0	0	0	119,400 kw	136,800 kw	488,700 kw
Rural 2018	114,000 kw	141,000 kw	0	0	0	76,950 kw	114,000 kw	124,000 kw	569,950 kw
Urban 2017	0	238,500 kw	12,000 kw	0	474,000 kw	286,200 kw	80,400 kw	2,400 kw	1,093,500 kw
Urban 2018	906,000 kw	130,500 kw	27,000 kw	372,000 kw	36,000 kw	272,700 kw	97,800 kw	7,200 kw	1,849,200 kw

When examining the sales data on a monthly level, customers do not appear to be brand loyal in regards to contraception. In the cases of both emergency contraception and oral monthly pills, sales shift between brands depending upon stockouts and new brand introductions. Within-category replacement seems to exist when a brand is out of stock, but there is little evidence of replacement between categories. This poses an issue for women using methods like injectables where there is only one available brand that is prone to stockouts.

Examples from the data show that during stockouts of the Safeplan oral contraceptive in the rural pharmacy, users appear to switch from this socially-marketed brand to the commercial version, Microgynon. Qualitative data from the pharmacy employees supports this conclusion. This switch is seen despite significant price differences between the two products. Safeplan is sold at 600 KW while Microgynon is sold at 1350 KW. This potentially indicates a greater ability to pay even in rural areas than was previously thought and should be explored further. In contrast there is no evidence of increased sales or spikes in sales of oral or emergency contraception when injectables are out of stock in either location. This may indicate an increased need for counseling at the pharmacy-level when a woman's preferred method is out of stock to ensure she remains protected.

Contraceptive Margins and Pricing Data

WDI asked both retail and wholesale interview participants for information regarding their average margins charged to pharmaceutical products and their pricing for contraceptive products, if applicable. Retail margins were reported as ranging from 50% to 200% on average. Though, there are reports that some products have been sold at margins of 400% or greater, particularly when retailers have sought-after and hard to come by branded products.

During interviews, wholesalers reported margins ranging from 10% to 40%. Wholesalers can generally charge larger margins on branded products due to exclusivity and less competition. Some manufacturers prefer to sign exclusivity agreements with individual wholesalers in order to limit the # of actors to interact with. Generic product margins are reported to average around 15% to 20%.

Table 10 displays averages from a small sample (including some single data points) for retail prices, wholesale prices, and retailer margins gathered from visited pharmacy and wholesale locations. Socially-marketed products are denoted by their associated SMO in parenthesis (e.g. PSI or BLM). WDI was able to calculate potential actual retailer margins for products where both retail and wholesale pricing was obtained. While multiple retailers often sold the same contraceptive brands, it was common for only one wholesaler to be selling each. Calculated retailer margins for contraceptive products tend to be on the lower end of the reported ranges from interviews. Calculated retailer margins range from 42% to 86%.

In regards to price, contraceptives found in retail locations ranged from 625 KW to 16,000 KW on average (\$0.83 to \$22.03 USD). Wholesale prices for contraceptives ranged from 300 KW to 1000 KW (\$0.41 to \$1.38 USD). Socially-marketed brands were on average 100% cheaper than their commercial counterparts. This results in a cost savings of typically 600-800 KW or \$0.83-\$1.10 USD.

Table 10: Avg/Point Estimate Contraceptive Retail & Wholesale Prices and Retailer Margins by Product

Method Type	Brand	Average (or Point Estimate) Retail Price (n)	Average (or Point Estimate) Wholesale Price (n)	Average Calculated Retailer Margin
Monthly Oral Pills	Microgynon	1300 KW (3)	750 KW (1)	42%
	Yasmin	16000 KW (1)	NA	NA
	Diane	8200 KW (1)	NA	NA
	Safeplan (PSI)	625 KW (4)	325 KW (2)	48%
Injectables	Safeplan (PSI)	800 KW (3)	400 KW (1)	50%
Emergency Contraception	Pregnon	2000 KW (1)	1000 KW (1)	50%
	Unosure	2000 KW (2)	280 KW (1)	86%
	Today Pill	1410 KW (4)	650 KW (1)	54%
	Option 2	1440 KW (1)	NA	NA
	Safeplan (PSI)	800 KW (2)	400 KW (1)	50%
	Backup (BLM)	1547 KW (3)	NA	NA

Key Findings: Learning from Other Sectors & Countries

Country and Sector Examples

There are a variety of examples of successful private sector development, both within family planning and across other health sectors, in developing country contexts. Several examples portray highly targeted efforts within given countries, focused on one or two related components of private sector development, such as business models for pharmacies and related outlets, cross-subsidization of products and markets, or models investing in entrepreneurial providers such as midwives. Policy changes are also noteworthy, targeting issues such as excessive concentration of pharmacies in urban areas and OTC sales of antibiotics. Leadership of the country's government and a strategic commitment to grow and work together with the private sector appears to be critical, including engagement of commercial representatives and other private sector viewpoints through coordination groups and commercial / SMO partnerships also appears as a key component in many efforts. By looking across multiple country and sector examples, we can begin to define critical success factors that helped lead to sustainable private sector development, particularly for rural areas and hard-to-reach populations.

Indonesia – Family planning market expansion from 1987 to 1997 and beyond

Indonesia presents the broadest, most comprehensive example of deliberate development of the family planning market through the private sector. A paper by USAID describes the many components and examines the resulting outcomes in the development of the private sector. At the core, a clear government vision and commitment was key to success (Chandani, O'Hanlon, and Zeliner 2006). This initiated with BKBN, formed in 1970, and leading up to the recognition by the Indonesian government in the mid-1980s that the government was bearing 90% of all costs related to family planning. Over a ten-year period, from 1987 to 1997, BKBN advanced a three-phase strategic set of initiatives that together created the necessary conditions and support for private sector development. These included:

- Consumer-based programs focused on behavior change:
 - Introducing user fees and demonstrating consumers' willingness and ability to pay
 - Normalizing fee-for-service within the country, i.e. the concept of making payments towards FP services and products
 - Encouraging users to seek out private sector providers for their FP needs
- Clear focus on stakeholders and providers:
 - Investing in a new cadre of providers, ultimately determining that midwives were the provider of choice for the population and so investing in them accordingly
 - Involving the commercial distributors
 - Engaging with religious leaders to work through concerns and gain their support
- Shifting attention and expanding the delivery model over time:
 - From a clinic delivery model suited to dense urban areas to an integrated community-based model tailored to the needs of remote rural communities

While there were challenges and not complete success with every aspect, BKKBN was quite successful in promoting private sector family planning programs such that they grew the private sector from 15% to 42% overall, and from 7% to 35% in rural areas from 1987 to 1997.

In addition to the literature, interviews with Indonesian market participants reinforced the significant contribution of the government in their national campaign, creating a conducive environment and enabling midwives in order to facilitate a private sector supply chain. With 13,000 islands and 80,000 villages – the initiative was structured to provide 40,000 practicing midwives, so one for every two villages. The government recognized that to get products out widely, they needed to link with the private sector in order to establish a steady supply chain all the way to the village. The government insured that the distributors and midwives were properly certified, including annual recertification. By working with the private sector, the products could go directly to the midwives and then to the end users, resulting in more affordable prices. Midwives were the customers, they had 30-45 day credit terms and a phone-based app to facilitate product ordering.

The entire process above is facilitated by the presence of local, high-quality manufacturer of contraceptive products including injectables and oral contraceptives. This adds to further price reductions and helps to ensure a steady supply without reliance on the global market. The initial product flow was from manufacturer to distributor to midwives, cutting out the need to pay a pharmacy margin. This was threatened by a 2014 regulatory change requiring that all products would have to flow through pharmacies, thereby adding cost to the products. While this regulatory shift was focused on consumer protection, it had an unintended consequence on the midwife-based contraception program. Manufacturers responded through an initiative to absorb the fees charged by the pharmacies, so the midwives do not incur additional costs.

In Indonesia, it was the long-term combination of multiple factors and initiatives that led to a huge increase in the percent of women accessing their contraceptives from private sector sources, particularly in rural and hard-to-reach populations.

The Malawi Business Coalition against AIDS (MBCA) for Prevention of Mother-to-Child HIV Transmission (PMTCT) Malawi – Private Sector ARV Program

Close to home, the MBCA in Malawi is described as a public-private mechanism and partnership, rather than a purely independent private sector-based initiative (White et al. 2016). This program is described for the case of PMTCT services. There are typically national PMTCT legislation and commodity access restrictions which dictate that the private commercial sector can typically not introduce PMTCT services without some level of government involvement. The MBCA was a group of private health providers and companies, launched in 2003 that came together to work on Malawi's HIV epidemic. The member private providers received training and support for delivering clinical care and were supplied with free product from the national system. Private providers were able to charge a service fee in exchange for expanding access to critical commodities. A monitoring body was set up and providers were additionally trained on reporting to the government and were represented by the MBCA at national HIV forums.

In 2005, Malawi's government fully engaged MBCA to coordinate the government's scale-up of ART in the private sector. MBCA led the engagement of private practitioners in the national HIV response,

advocating for these commercial facilities to access government-controlled PMTCT and ART commodities and allowing the providers to deliver the HIV interventions. From 2005 to 2013, the MBCA-accredited facilities increased from 23 to 70. MBCA is credited with helping Malawi to increase its coverage of pregnant women receiving lifelong ART for PMTCT from 23% in 2010 to 68% in 2014. While these PMTCT and ART commodities are program drugs, the MBCA demonstrates the potential of a private coalition to harmonize private provider activities and to work closely with the government to insure quality and regulation.

Tanzania – Duka La Dawa Pharmacy Model

Duka la dawa baridi is the Tanzanian term for the local retail drug shop. Historically these were authorized by the Tanzania Food and Drugs Authority (TFDA) to provide non-prescription medicines in the private sector, but many also sold prescription drugs when not authorized to do so. To address this and other challenges to private sector provision of pharmaceuticals, a public-private initiative created a new class of provider, called the accredited drug dispensing outlet (ADDO), or duka la dawa muhimu in Swahili (Edmund Rutta et al. 2009). The authors describe the conditions that preceded their development:

- Limited access to pharmaceutical services due to the lack of registered pharmacies
- Ten times as many of retail drug outlets (duka la dawa baridi) as of licensed pharmacies
- The population's resultant heavy reliance on duka la dawa baridi for healthcare
- Gaps in drug availability in the public sector
- Issues related to quality and affordability in the private sector

Tanzania's Ministry of Health and Social Welfare along with the TDFA, conceptualized the concept of ADDOs, based in retail drug shops, and accredited the first ADDO in 2003. It was a multidimensional effort that targeted both the demand and supply side of the market. The government developed an accreditation mechanism for the retail drug shops and expanded their legal access to the medicines for dispensing. Rutta et al. described how the program leaders strove to change the behavior and expectations of people using the drug shops, as well as the owners and dispensing staff to meet the following goals:

- Increase client demand for and expectations for quality products and services
- Provide training, incentives and regulation to the drug shop owners and staff

This is regarded as a far broader and more comprehensive public-private strategy than other interventions targeting retail drug sellers which tended to focus on either capacity-building or singular disease states. In Rutta et al., pharmaceutical wholesalers are listed as one of the ADDO Program Stakeholders, along with banks, consumers alongside government, donor and NGO partners. The role of the wholesalers is described as to 'increase access to wholesale services by opening district subsidiaries to serve ADDOs'. This is consistent with wholesalers' market supply-side role, which is responding to demand generation.

Tanzania's ADDO model highlights the importance of: 1) the role of national, regional and local government with other partners, 2) meeting the consumers 'where they are' and 3) the need for behavior change on the part of consumers as well as providers. It also highlights the need for a long-

term development and investment process. From the start of the program to the first ADDO launch, three years were required to establish relationships, conduct market research, engage with shop owners on program design and other related activities.

Follow-on studies have documented the challenge of providing oversight for the growing number of ADDOs in Tanzania, and the ongoing challenge to maintain staff and quality. A study of malaria-related services at Tanzania ADDOs noted the limited and mixed data comparing ADDOs with non-ADDO drug stores, and the need for robust evaluations of performance across a wide range of indicators, in order to facilitate evidence-based decisions on drug shop policy (Thomson et al. 2018).

Distribution Models Using Private Sector Providers: Marie Stopes Ladies

Market models such as the Marie Stopes Ladies utilize an entrepreneurial approach which increase access and choice for FP services and products in underserved communities, while also creating business and income opportunities for the trained nurses, midwives and community health workers. Marie Stopes International piloted the Marie Stopes Ladies program in Madagascar in 2009, and has subsequently expanded the program to at least nine other countries (Marie Stopes International 2017).

The Marie Stopes Ladies reside in rural or peri-urban areas where access to FP services are limited. They follow local laws relative to the selection of short and long-term contraceptives they are allowed to provide. While Marie Stopes Ladies buy their contraceptives supplies directly from MSI, this type of model could be structured in such a way that private sector wholesalers might be given a role, which could incentivize their involvement in more remote areas of the country.

As described by MSI, strengths of the Marie Stopes Ladies include trust from the women and girls they serve, understanding the local culture, and in-depth knowledge of the social factors informing reproductive health decision-making. Also, of note, they describe aiming for 45% of their Marie Stopes Lady clients to be under age 25 by 2020, focusing on the need to better reach young people. This type of strategy would be very useful in a country such as Malawi, where 51% of the population is under age 18.

DKT: DKT Bees, DKT Brazil, and Cross-Subsidization

The DKT Bees are just one component of the DKT International's highly business-oriented strategy for expanding access to key healthcare services and commodities. DKT is a social enterprise which utilizes innovative financing and has three distinctly different components, as described by Phil Harvey, DKT founder (Harvey 2016):

- A. Contraceptive marketing programs in middle-income countries like Brazil, Egypt, Indonesia, Mexico and the Philippines which produce true operating profits that are in turn used to support DKT's subsidized programs in low-income countries
- B. Subsidized social marketing and other FP programs in low-income countries that are funded by donors, as well as DKT's cross-subsidization
- C. Programs in the 'middle' – countries where progress towards the middle-income country model may well be possible as economic growth continues

The DKT Bees is a similar concept to the Marie Stopes Ladies. DKT Bees is the brand name for DKT's effort in Nigeria for community-based distribution, which takes the form of a team of Community Health Extension Workers ("DKT Bees"). The concept is to take the FP products to 'where the women are' – so going to women's homes, businesses and markets. Their target groups and areas are where there are distinct lack of pharmacies and clinics. The DKT Bees get a basket of contraceptive products that are designed to be financially self-sustainable.

DKT has a strong market position in several countries, and participates in countries receiving donor funding as well as several which do not. Strategically, DKT uses a two-pronged cross-subsidization model, both product and country-based. They sell both low-cost and higher-cost contraceptives, using revenue from the more expensive brands to subsidize the cost of the lower-priced options. They also reinvest revenue from profitable programs into countries requiring subsidization. DKT reports that the Brazil, Indonesia, Mexico, and Philippines programs are fully sustainable.

In his 2016 case study, Harvey describes DKT's Brazil project, starting in 1990; with a focus on importing their condom brands in order to introduce a lower cost condom to the oligopolistic condom market (Harvey 2016). In 1991, the sales and import taxes on condoms were very high in Brazil. DKT Brazil worked with the MOH and the Ministry of Industrial Affairs to reduce taxes and secure tax exemptions. Import duties on male condoms were lowered from 40% in 1993 to ~ 10% by 2000; and sales taxes were reduced from 36% to less than 4% (DKT International 2011b). Availability and competition both increased, and the market grew considerably. Growth in condom use was also attributed to significant government investment in advertising and giving away free condoms to stimulate product interest. A period of donor investment shifted the nature of the effort from 1997-2003, including several activities more typical of NGO communications on HIV/AIDs and administrative requirements. After the program ended, DKT shifted back to a highly business-oriented model, and they began introducing new condom brands at higher prices, while still maintaining at least one lower-cost brand. This was the start of the cross-subsidization model. Over time, DKT tested and built a pricing structure that met the needs of Brazil's various market segments, and that also shifted the model from social marketing to commercial orientation. DKT has used this staged approach to cost recovery and nurturing consumers' willingness and ability to pay in a number of countries, including Ethiopia and the Philippines, as described in their white paper on innovative financing (DKT International 2011a).

Inclusion of FP in Health Insurance Essential Benefits: Tanzania & Indonesia

Malawi's challenge of health insurance not covering family planning is shared by many countries. Studies have been conducted to assess the extent to which inclusion of family planning services in health insurance benefits packages ensured equitable improvement in mCPR across population groups. The Health Policy Plus (HP+) project examined the association between health insurance coverage and key FP indicators in seven developing countries (Ross, Fagan, and Dutta 2018). All selected countries have included some FP methods and counseling in their health insurance schemes. One aim was to determine if a greater percent of the population was utilizing private sector sources for family planning with the inclusion of family planning on insure schemes (for Ghana, Kenya, Kyrgyzstan, Nigeria, and the Philippines). Note that all of the health insurance schemes contracted

with both public and private facilities. The results showed that only in Nigeria and the Philippines did more users report private facilities as their last source of contraception.

Advocacy for inclusion of family planning in medical insurance requires evidence-based discussions. Johns Hopkins Center for Communications Program (CCP) announced in November 2018 that they had successfully convinced Tanzania's leading private health insurer, AAR to begin covering the costs of modern contraception for their beneficiaries (Desmon 2018). Like many other countries, Tanzania's private medical insurance historically has not covered family planning because the services are offered free in the public sector. Beginning in 2013, CCP utilized statistics surrounding the insurer's spending on pregnancies to make the case for contraception's coverage:

- In 2013, \$10 out of every \$100 in claim costs incurred by AAR were maternal health. By 2015, those costs rose to \$13.
- Comparatively, the costs to provide contraception and counseling ranged from less than \$1 to \$9 per woman.

This evidence convinced AAR in 2016 to include family planning in its health benefit package. CCP reported that in 2016, 35 corporations in Tanzania registered for AAR's family planning package, and by March 2018, this had grown to 119 corporations. Not only does this increase access for women, but notably, it increases funded demand, and therefore development of the private sector opportunity for wholesalers and private providers.

Inclusion of family planning in insurance schemes is a necessary but not sufficient condition for health insurance to serve as a source of demand funding. The extent to which health insurance is effective in facilitating the opportunity for accessing family planning products and services will depend on the contracting between the insurance entities, both public and private sector. This includes the extent to which private providers are contracted with the insurance providers, what the payment mechanisms consist of, and the level of user awareness about their insurance benefits. While Indonesia was previously profiled for the country's comprehensive approach to building the private sector provision of family planning, the insurance systems remain a source of challenge. A case study by Avenir Health in 2016 reported a lack of involvement of private midwives with the NHI schemes which limited FP coverage for rural poor, as well as the need for awareness and demand generation of the insurance schemes (Nyoman and Ni Wayan 2016). The authors also emphasized the issue of low capitation rates which discouraged participation by the private sector midwives.

TMA Strategies for Male Condoms in Myanmar and Vietnam

PSI provides two case studies through their TMA approaches to strengthening the commercial sector for male condoms in Myanmar and Vietnam, as described in a 2014 paper (Longfield et al. 2014). In the case of Myanmar, PSI Myanmar (PSI/M) recognized around 2009 that subsidized condoms were crowding out the commercial market and concluded that the donor subsidy could be used more efficiently. In 2010, they started a TMA strategy intended to minimize the resale of subsidized condoms and to strengthen the commercial market. First, PSI/M worked with UNFPA on tactics to reduce the leakage of free condoms into the commercial market. Secondly, they looked for commercial manufacturers to partner with, and formed a condom coordination group. Through this

partnership and the coordination group, they collaborated to expand brand choice and close the price gaps, in order to include a larger commercial sector and provide condoms at more varied price points.

For Vietnam, PSI Vietnam (PSI/V) initiated a program to increase condom coverage in hotels and guest houses (H/G) that served the commercial sex trade and was a key target for HIV/AIDS prevention. Through subsidized condoms, they increased protection for this group from 34% to 88%. PSI/V also partnered with the government on information campaigns promoting consistent condom use among key populations. Next, PSI/V recognized that the H/G market channel was overly reliant on subsidized condoms and there was a need to reduce and better target distribution of fully-subsidized condom brands. From this, PSI/V coordinated with the Provincial AIDS Committees and like in Myanmar, established a condom coordination group. This group worked together and reached an agreement to focus fully-subsidized brands on key populations with the lowest ability to pay, such as street-based sex workers, including utilization of a manufacturer's model to supply the H/G channel. Between 2010 and 2012, the proportion of guesthouses stocking a commercial brand increased from 14% to 21.5%.

These case studies illustrate that successful intervention is dependent upon a full market understanding and exploration of how subsidized and free product impacts the market, strong coordination between all relevant stakeholders across sectors, and targeted information campaigns to generate demand.

Guatemala: Engaging the Private Sector in Making FP a National Priority

Guatemala provides a unique comparison country for Malawi, given its similarity in geographic size, population, and cultural factors in acceptance of contraception. Guatemala provides an example of how advocacy for family planning and contraceptive security laws, with the support of USAID, as part of the graduation transition strategy can assist in expansion of the private sector.

As described by HP+ in Guatemala's Family Planning Transition, Guatemala took a number of steps starting around 2001 to put laws in place in support of reproductive health and access to contraceptive methods (Gribble 2018). The National Commission for Contraceptive Security was established by law in 2009 and consisted of three private and six public organizations. They conducted strategic planning and forecasting, including a market segmentation strategy in 2013 with projections of resource requirements from public and private sources. Additionally, they established the network of Reproductive Health Watchdogs in 2008, comprised of 11 private and 1 public organizations. This study highlighted lessons from Guatemala's experience that emphasized that transition planning must begin well before graduation, legal framework is necessary but not sufficient, and that implementation and compliance requires accountability mechanisms, monitoring, and transparency.

Rural Pharmacy Investment Models: UK, Greece, Denmark, Norway, Sweden

Several developed European countries provide models for investing in rural pharmacies, in order to assure that residents of more sparsely populated areas have reasonable equity in access to health care services. In a paper on rurality and resource allocation in the UK, the authors outline several factors that often contribute to the higher cost of providing services in rural areas (Watt and Sheldon 1993):

- Additional travel costs
- Lack of economies of scale
- Higher levels of unproductive time
- Extra costs of providing mobile and outreach services
- Extra costs of accessing staff training and other business support

The UK along with Greece and three Scandinavian countries have all used a range of business measures to incentivize the location and servicing or otherwise support retail pharmacies serving low population rural areas (Yadav and Walter 2013). These have included financial assistance, public-private partnerships to sustain rural pharmacies, and profit equalization schemes. For example, Norway's MOH had an agreement with the country's three major private pharmacy chains that if a rural pharmacy was about to close, one of the pharmacy chains would either take over that store or establish a new pharmacy in the same area. In Denmark's national yet decentralized health care system, while pharmacies were independent businesses, they were heavily regulated by the central government with profit ceilings and redistribution of profits among pharmacies to subsidize small pharmacies in rural areas (Pedersen, Christiansen, and Bech 2005).

These types of mechanisms could be considered for directing the growth of new pharmacy businesses in Malawi or other countries with under-developed rural private sectors. The country government and partners could consider this type of strategy to incentivize investment to the geographies with greatest need. This could be used in combination with policy limiting the density of pharmacies in urban and peri-urban areas.

Common Success Factors Across Examples

Through the literature search and telephone discussions, several examples of private sector development efforts were identified, but none specific to the wholesaler engagement. This can be attributed to the fact that the wholesaler segment has remained historically unexplored across literature and research. Despite the lack of concrete wholesaler examples, a few common success factors emerged across the identified examples. These factors may be generalizable across numerous actors in the system and may serve as foundational characteristics necessary to achieve private sector growth:

- Strong interest and commitment from the country government including clear and concrete cross-sector collaboration with delineated roles and responsibilities.
- Formal forum for private sector representation, participation, and inclusion surrounding critical market matters.
- Growing the commercial market in family planning needs to be approached from both the demand and supply sides, and several related interventions will most likely be necessary to address both.
 - Information campaigns have been shown to be highly effective in increasing demand.
 - Supply side interventions should accompany these efforts.
- Channel-based models that recognize where and how women wish to obtain their family planning information, services, and products are a key strategies for success.

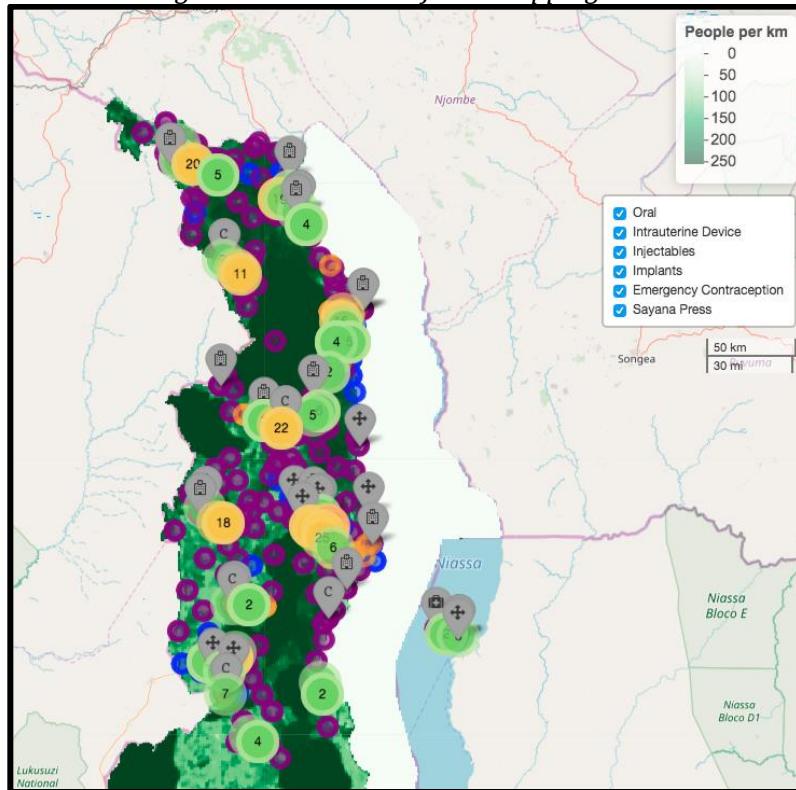
- Efforts generally achieve success over the medium to long term time horizons, often requiring in-depth market studies, evidence development, and stakeholder engagement. Due to this, it is important to consider private sector strategies early in the market's development – even if the market is currently powered mainly by donor resources.

Geo-Mapping of Malawi Contraceptive Availability in Northern Malawi

Activity Description

This activity sought to map all health facilities in Northern Malawi with available geo-coordinates or location information alongside their potential availability of contraceptive method types. This data was then overlaid on population density data to approximate gaps in coverage. For the purposes of this exercise, availability at a facility type for any given method is defined as the legal ability to provide said method. We also consider information provided by key stakeholders on general method availability at each facility type to further tailor our definitions. Due to this, contraceptive method availability is likely much lower than what is displayed on the map. This is especially true for the public sector which has been historically plagued with frequent stockouts. The facility types included in the mapping are Health Centers, Health Clinics, Dispensaries, Hospitals, Pharmacies, and Medicines Stores. Facility types are further segmented by their ownership type: Public, Private, or NGO/FBO. Contraceptive outreach, performed by organizations like PSI and BLM, is not included in this mapping. The contraceptive method types included in the mapping are Oral Pills, Injectables, Intrauterine Devices, Hormonal Implants, and Emergency Contraception. See Figure 4 for a high-level screenshot of the geo-mapping tool that was produced.

Figure 4: Screenshot of Geo-Mapping Tool



Data and Software

All data and software used in this geo-mapping activity are open-source or publicly available. The mapping was only performed for the Northern Region of Malawi due to the availability of geo-coordinate data. Other regions in Malawi had higher percentages of missing data. The Northern Region is also one the most rural regions of Malawi and thus more applicable for this type of mapping which seeks to identify gaps potential in coverage. Approximately 20% of all facilities did not have geo-coordinate or location information available. The highest percentage of missing data occurred for private facilities, particularly for the Medicines Stores. See *Table 11* for the proportion of facilities with available location information.

Table 11: Total Facilities with Available Geo-Coordinate or Location Information

	Total Facilities	Facilities w/ Coordinates	% of Facilities Mapped
Private	117	63	54%
Public	166	160	96%
NGO/FBO	43	38	88%
TOTAL	326	261	80%

Public registers with names and locations of Pharmacies and Medicines Stores in Malawi were obtained from the Pharmacy, Medicines, and Poisons Board (PMPB)'s website. All other facilities were gathered from a publicly available Master Facilities List for Malawi. World Pop (<http://maps.worldpop.org.uk>) was utilized as a public source of population density data. All outputs for this mapping activity were generated through the use of R (<https://cran.r-project.org/>), using the `leaflet` package (<https://CRAN.R-project.org/package=leaflet>). R is not required to use the html-based map output. The html map can be shared with anyone, on any computer, as long as they have the ability to open html files (most computers with a web browser will have this capability).

Mapping Use

Each facility is represented by a gray marker, with a symbol that corresponds to the facility type. The colored circle surrounding the point corresponds to the facility's ownership. The underlying green coloration corresponds with population density (people per km). There are six data layers on the map, each representing a contraceptive method type. Users can toggle on and off specific contraceptive method types on the upper right-hand side of the map. Toggling 'on' a method type will display all facility types that WDI has defined as being able to provide that method. A circle displaying a 5-kilometer catchment area will appear around each applicable facility. The catchment depicts the immediate area served by each facility. The circles scale as you zoom in and out, and always represent the same radius regardless of zoom. The user can then see areas with potential gaps in coverage for the selected method types based on the 5-kilometer catchment areas. As you zoom out, points will start to cluster together, into aggregated points. To examine that area, click on the cluster with the number and it will zoom in to the area it aggregated over.

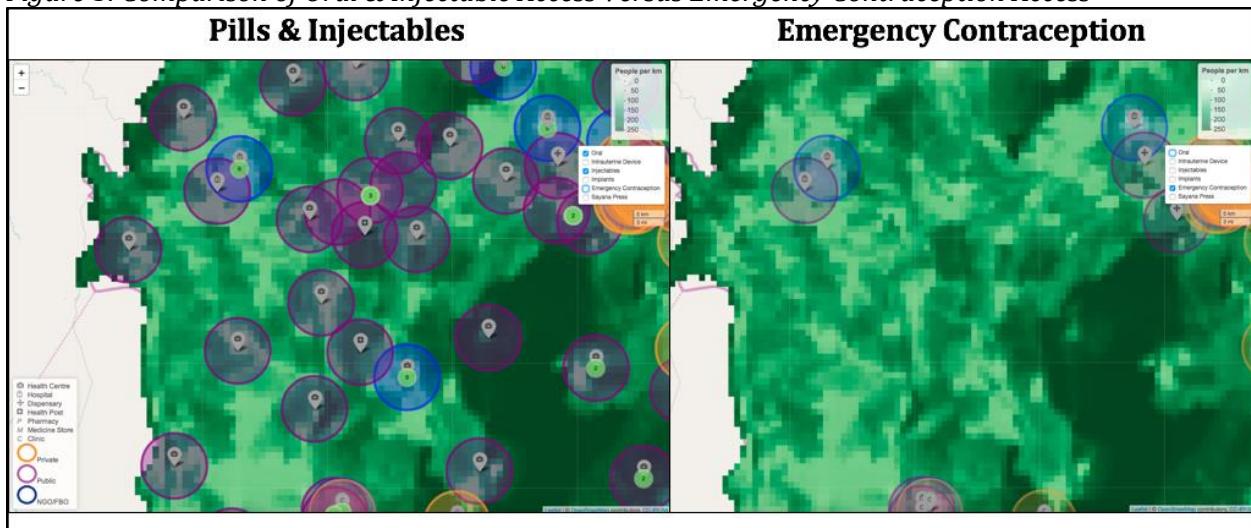
Findings and Implications

This mapping displays that a large percentage of all facilities offering contraceptive methods are heavily concentrated in a few major areas. For instance, the area surrounding the major city of Mzuzu contains greater than 30% of all facilities in the Northern Region and an even greater percentage of all private facilities in the Northern Region. Additionally, the Northern Region is dominated by public sector facilities. From interviews, it is clear that contraceptive services at public sector facilities in Malawi are plagued with stockouts, misinformation, and stigma (especially towards adolescents). Due to this, the gaps in coverage illustrated on this map may be severely underestimated, particularly when considering underserved groups like adolescents.

There are many people who lack access to one or more contraceptive method types within 5 kilometers of where they live. There also exists a smaller group who still lack access to ANY contraceptive method within 5 kilometers of where they live. Even though there are 117 private facilities in the Northern Region, only nine of these are retail pharmacies. Retail pharmacies are an important access point for contraceptive methods like oral pills and emergency contraceptives due to privacy, convenience, and price. There may be a large opportunity for expansion of these facilities in the Northern Region.

Emergency contraception is difficult to access in the Northern Region due to the scarcity of private facilities. The mapping illustrates that many women in the Northern Region lack close access to this method due to its common unavailability in public sector facilities. See *Figure 5* for a comparison of select geography's access to pills and injectables versus emergency contraception. Both qualitative and quantitative data show there is a growing market for emergency contraception in Malawi and that women tend to prefer this method because it is self-managed and discrete. IUDs also appear to be extremely hard to access in the Northern Region due to their primary provision in public hospitals, NGO/FBO clinics, and private clinics.

Figure 5: Comparison of Oral & Injectable Access Versus Emergency Contraception Access



There still needs to be an exploration of the interplay between the static facilities represented on this mapping and community outreach activities conducted by the NGO/FBO and public sectors.

Questions still exist on how much of the gap presented in the mapping is covered through these outreach services. Because outreach is not a constant available service, we can assume that 100% of the gap is not covered. There also exists the opportunity to explore how mapping activities like this could be used to prioritize areas for outreach or prioritize the location of new facilities aimed at improving contraceptive access.

Discussion

Discussion of Methodology

While landscaping assessments generally involve field research and in-country discussions with market actors, this project was unique in utilizing a stakeholder-centric methodology to generate and score ideas for market building. Participants were generally highly receptive and engaged, particularly during the field-based visits. The follow-up interviews for intervention review and scoring were challenging given the breadth of information to discuss and communication challenges with phone and internet.

This methodology was viable for a country and market the size of Malawi, but we still faced limitations in the depth of data which could be collected. Most of the market actors we needed to interview were located in either Lilongwe or Blantyre, and the short time in-country prohibited the research team's ability to visit the rural, remote areas for direct observation of private sector outlets. Data availability and insufficiencies limited the development of a costing analysis, but the pricing and margin data collected provides evidence of the need for further study. This type of stakeholder input and review process would be recommended for additional refinement and use.

Discussion of Key Findings

The research question for this project centered on how to facilitate the engagement of wholesalers in the development of the private sector to reach rural, remote and underserved communities with quality family planning products in highly donor-dependent countries like Malawi. The question rapidly broadens to the wider market landscape, given that wholesalers are just one link in the total market for FP. Due to this, we examined this issue through the lens of a Total Market Approach, incorporating the views and perceptions across all actors involved in the reproductive health landscape. Additionally, challenges discussed during the interviews were not limited to the wholesaler segment and spanned across all levels of the health system. These ranged from structural regulatory challenges to retailer-level challenges.

At the retail level a key barrier is the inability of pharmacists to administer injectables. This is a critical gap when one-third of women on contraceptives utilize this method in Malawi. Regulatory and training changes such that pharmacists could administer injectable DMPA were proposed during interviews as a mechanism for increasing access and volume in retail pharmacies. Malawi began allowing HSAs to administer injectable contraceptives in 2008 and injectable use surged (Devlin, Pandit-Rajani, and Farnham Egan 2017). Learning from this public-sector success and extending this to pharmacists in the private sector at minimum, particularly in combination with an intervention to increase retail pharmacy reach in rural areas, is a reasonable approach to increasing use of the private sector.

PMPB registration data suggests an excess of registered pharmaceutical wholesalers. The landscaping research revealed a relatively small set of active wholesalers for Malawi – over 65

wholesalers are registered while numerous stakeholders report less than 15 are primarily active across the pharmaceutical market. WDI estimates that the predominant wholesalers number around eight, at least six of which have the capability and interest to develop their role in family planning, and to serve the country more broadly. These organizations are led by business-oriented pharmacists and managers with experience in a range of sub-Saharan African and Asian wholesaler markets. While six wholesalers may be too many for a mature pharmaceutical market, this may naturally resolve as the private markets develop and competition accelerates. From a regulatory capacity standpoint, consolidation of wholesalers may be beneficial in the more near-term, but not necessarily for purposes of effective market functioning.

Wholesalers currently face several constraints that impact their ability and incentive to service the rural and remote areas of Malawi with family planning products, including the balance of demand versus operating costs and capital constraints. The most critical issue for wholesalers is that of private sector demand generation for family planning products, given the current limited retailer and clinical customer base in rural and remote Malawi. As passive actors, generally upstream from the retail and dispensing setting, wholesalers respond to demand rather than generate it. The current delivery environment is a mixed model, with many private sector retailers and clinics picking up their product orders from wholesaler warehouses. This generally reflects order sizes. Retailers need to source from multiple wholesalers and delivery agreements vary across the retailer/wholesaler landscape.

Emergency contraception provides evidence that wholesalers will engage if they see market opportunity and room for their participation. Currently, wholesalers do not see a business reason to register, import and stock additional FP products, based on the predominance of the public sector and subsidized products. Improved payment timing from the government would improve the financial wherewithal of wholesalers and facilitate their financing of expansion, such as into rural regions. The emergency contraception case also gives evidence of demand for private sector family planning even in rural areas. With more information campaigns, this segment of women with an ability to willingness-to-pay may be found to be even greater.

In-country stakeholders and implementers had generally consistent views of the family planning market landscape in Malawi. Major themes and concerns across interviewees included (1) the information needs of both the consumers and market players, (2) regulatory constraints, (3) consumer expectations of free and subsidized products and services, (4) misalignment of new pharmacy business locations with the population's needs, (5) the difficulty of incentivizing business placement in highly rural areas, (6) questions about appropriate product pricing, and (7) a need for shared efforts across the sectors. These factors variously contribute to the under-development of the private sector, resulting in the persistent difficulty of creating a vibrant and sustainable private model in the most rural areas.

The intervention ideation and scoring process with stakeholders was instructive. Stakeholders shared pros and cons, proposed key conditions and raised questions. Testing 15 ideas was a lengthy process and resulted in breadth rather than depth. This also reflected respondents' expertise and familiarity with given topics. Pricing data and discussions suggested a need for a follow-on retail pricing audit in combination with a consumer willingness-to-pay study, to assess the extent to which

current retail pricing might be dissuading private sector purchases and whether margin regulation could be beneficial.

Top-rated ideas centered around information generation, for consumers as well as market participants to generate demand and inform supply, making Sayana Press available for sale in pharmacies, adding private sector representation to the government and SMO working groups, exploring financial and human capital investment in rural private sector delivery models, and increasing PMPB regulatory capacity through a partnership approach. Taken together, these address market gaps and opportunities in order to accelerate access to FP products and related services, focusing on the rural and remote areas.

Two core issues for Malawi were the predominance of free and subsidized FP products in the country generally, and the lack of private providers other than medicines/drug shops in the most rural areas of Malawi. Preparing a population to accept less subsidy and expect some cost recovery must be a well-planned strategy that involves clear and value-based messaging, along with mechanisms for means-based discernment in fee collection. Indonesia provides a strong example of how that country methodically shifted citizen views and expectations around payment for FP services. For service delivery models, Indonesia's midwife program, Tanzania's ADDOs, the Marie Stopes Ladies, and the DKT Nigeria Bees all serve as examples of engaging entrepreneurs to serve women at the last mile. For the challenge of catalyzing and maintaining the establishment of a retail pharmacies in highly rural regions, the examples from the United Kingdom, Greece, Denmark, Norway and Sweden all provide assurance even highly developed countries need to step in and provide support to pharmacies (or their suppliers) that may struggle with economic viability based on low population and market conditions.

Conclusions and Recommendations

For donor-dependent countries such as Malawi, a long-term vision is essential to developing the private sector family planning market throughout the country and specifically in the rural and remote regions. This landscaping process revealed market participants' recognition of the need to develop these private channels for family planning product demand as well as supply, while suggesting that there is currently no overarching view on how to do so. Although this project pre-supposed efforts focused on the wholesalers, our conclusions are that multiple market actors must be involved through a cross-sectional, staged set of market building steps. Facilitating the development of a private sector in donor-dependent countries requires a long-term view and utilization of multiple strategies on the part of governments, donors and sector partners, as well as a convener, which could be the Reproductive Health Supplies Coalition.

The stakeholder consultation process yielded a set of preferred interventions, based on perceived feasibility and impact, along with top choices of the stakeholders who were involved. As a pilot effort for Sayana Press has been initiated, we will exclude this option from our general recommendations. With this set of stakeholder recommendations, we have further refined the ultimate set of recommendations based on additional analyses and information gathered throughout the process.

While we will recommend four 'next-step' ideas specifically for Malawi, WDI's first recommendation is to formally engage the private sector in joint efforts with the public sector. This will be foundational in nurturing private actor involvement in opportunities to co-build the market. Formal inclusion and participation of private sector representatives in the Family Planning Technical Working Group will generate common understanding and make the development of shared goals possible. It should be communicated to country leadership, particularly MOH representatives, that private sector representation should come from commercial entities and not only SMOs. It became apparent during in-country interviews that MOH representatives may believe that SMO participation is sufficient for private sector representation.

The list of ideas put forth from this project is a starting point, reflecting 30 in-country discussions. Certainly, there are additional invested individuals to engage and deeper-dive discussions to be conducted. We suggest that this preliminary set of recommendations be discussed within the Family Planning Technical Working Group in Malawi, including potential private sector representation from the wholesaler, retailer, provider, and professional societies. For Malawi specifically, WDI proposes that the following ideas be considered for follow-on investment, potentially through a partnership between RHSC and Malawi stakeholders, including the PMPB, the MOH, private sector representatives and donors:

1. Conduct a two-pronged, market level study of a nationally-representative sample that includes a) a retail price audit for contraceptives and b) a willingness-to-pay survey in order to better characterize the market in both urban and rural areas, measure potential demand, and facilitate market information.
 - Partner with the PMPB and Medical Council of Malawi to implement the pricing audit and with the Director of Reproductive Health in the Reproductive Health Unit of the

MOH for development of the willingness-to-pay research. This will ensure engagement and transparency at the government level surrounding the potential for expansion of the private sector's role in family planning.

- The results of these efforts can inform policy creation as well as provide market information to private sector actors regarding market potential and product demand. Stakeholders expressed a high potential for impact from the results of these projects, especially in regards to convincing private sector actors of the market for FP.
 - As many stakeholders mentioned the lack of retailer margins as a possible barrier to demand for family planning products, this activity could help determine the need for future pricing interventions. Stakeholders also note that this intervention has the potential to elucidate additional bottlenecks that are preventing demand at the retail level.
2. Further develop the concept of a mobile pharmacy solution or additional alternative investment in expanding access to retail pharmacies in rural areas of the country. Next, pilot test the developed concept.
 - Conduct field research in the Northern Region to characterize current offerings as well as market research to inform the product offerings. Perform focus-group discussions with rural women to understand user preferences and demand for potential complementary products to help boost traffic to the designed solution. User-centered design approaches may be utilized here.
 - Investigate various business and funding models for the solution to develop a sustainable option. This may include options such as co-location with a physical medicine store or full ownership by a sponsoring pharmacist.
 - Stakeholders note that there may be potential to pair a nurse with a pharmacist. Nurses often need to wait for positions after school and this may present an attractive offer. Some interviewees even reported that this may be critical for buy-in because nurses will be able to offer clinical care to these areas. Stakeholders also encourage that the model include other basic health services in order to increase traffic and increase access to a greater set of needed services. Suggested additional services include HIV testing, malaria drugs, pregnancy tests, and basic cough medicines.
 3. Initiate a joint public and private sector communications strategy to build family planning awareness and demand generation in specifically rural, remote areas of the country.
 - Establish a cross-sector task force including representatives from the MOH, relevant SMOs and the private sector. This group should work to define the roles and responsibilities of each group and potential funding mechanisms.
 - A key goal of this intervention is the delivery of coordinated information across all sectors. Women should be aware of all facility types that dispense contraceptives in order to make an informed choice around where they can access them.
 - Included in this idea would be a sub-campaign focused specifically on emergency contraception aimed at providing women with accurate information surrounding its use. Pharmacists would be trained on how to encourage transition to longer-term and consistent contraceptives in women who may be inappropriately utilizing emergency contraception.

- This will be subject to the constraints imposed by individual manufacturers who prohibit all written promotion of their products. To combat this challenge, information may be disseminated around method categories rather than individual products.
4. Initiate discussions with the Malawi MOH's Reproductive Health Unit and PSI on the potential to prioritize Sayana Press for rural and remote areas with a focus on ways to leverage private sector approaches.
- This would need to reflect the current in-country situation and government policy, with the pilot introduction of Sayana Press now on-hold, pending the DMPA shortage.
 - The reasoning is to leverage the results from the Mangochi District study on self-injection and continuation rates, and to prioritize rural areas with significantly less existing access to FP than urban and peri-urban Malawi.
 - This intervention would utilize an integrated approach to pursue three objectives: 1) to launch and scale Sayana Press, 2) target underserved rural women and 3) to provide opportunities for development of the rural private sector. This could be modeled similarly to the ART private sector provision, in this case utilizing the subsidized pricing for the product.
 - Rural districts with existing private sector outlets that are better prepared to provide patient management and follow-up could be selected for the pilot, and in the medium term, this concept would have a good fit with a mobile pharmacy concept, potentially co-locating on a regular schedule at designated drug shops.

These four recommendations, along with adding private sector representation to the cross-sector stakeholder FP working group, were all in the most highly rated or selected ideas from the in-country stakeholders. An additional idea that stakeholders prioritized was the that of a public private partnership to increase the PMPB's regulatory capacity. In further discussions, it seemed that this idea has perhaps been tried historically and was not successful. More broadly, for other donor-dependent countries, WDI recommends the following:

5. **Donors, SMOs, and country leadership should establish joint efforts to develop phased plans for the funding and roles of SMOs in donor-dependent countries and regions.**

In part, this would be facilitated through the inclusion of private sector representation in the RHFP working groups within a country. Phased planning could facilitate a strategic approach, with an intentional and shared orientation towards goals for the short, medium and long term. Through this, all parties would know that funding and market roles would shift over time.

- Short term can include subsidized product distribution to urban areas, along with all the user and provider education, demand generation and advocacy activities.
- In the medium term, start to prioritize the funding and direct subsidies to the populations with greatest need, both in urban and rural settings. Have the SMOs take a leadership role in messaging around individual self-sufficiency and the reasons for cost recovery, to shift consumer expectations.

- Build towards a long-term view where SMOs are using their expertise to generate demand in support of non-subsidized private market development, including in the rural areas.

Bibliography

- Agha, S., and M. Do. 2008. "Does an Expansion in Private Sector Contraceptive Supply Increase Inequality in Modern Contraceptive Use?" *Health Policy and Planning* 23 (6): 465–75. <https://doi.org/10.1093/heapol/czn035>.
- Chandani, Taara, Barbara O'Hanlon, and Sara Zeliner. 2006. "Unraveling the Factors Behind the Growth of the Indonesian Family Planning Private Sector." *Private Sector Partnerships-One Project*.
- Chipeta, Ek, W Chimwaza, and L Kalilani-Phiri. 2010. "Contraceptive Knowledge, Beliefs and Attitudes in Rural Malawi: Misinformation, Misbeliefs and Misperceptions." *Malawi Medical Journal* 22 (2). <https://doi.org/10.4314/mmj.v22i2.58790>.
- Dasgupta, Zaba, and Crampin. 2015. "Contraceptive Dynamics in Rural Northern Malawi: A Prospective Longitudinal Study." *International Perspectives on Sexual and Reproductive Health* 41 (3): 145. <https://doi.org/10.1363/4114515>.
- Desmon, Stephanie. 2018. "At Urging of CCP, Tanzania's Largest Private Health Insurer Covering Family Planning." Johns Hopkins Center for Communication Programs. 2018. <https://ccp.jhu.edu/2018/11/05/tanzanias-largest-private-health-insurer-family-planning-ccp/>.
- Devlin, Kristen, Tanvi Pandit-Rajani, and Kimberly Farnham Egan. 2017. "Malawi's Community-Based Health System Model: Structure, Strategies, and Learning." *Advancing Partners & Communities*.
- "DKT Bees." n.d. DKT Nigeria. <http://dktnigeria.org/dkt-bees/>.
- DKT International. 2011a. "Innovative Financing: DKT Approach Leads to Greater Financial Sustainability."
- . 2011b. "Shaping Policy Climate to Increase Family Planning Use."
- Edmund Rutta, Katie Senauer, Keith Johnson, Grace Adeya, Romuald Mbwasi, Jafary Liana, Suleiman Kimatta, Margareth Sigonda, and Emmanuel Alphonse. 2009. "Creating a New Class of Pharmaceutical Services Provider for Underserved Areas: The Tanzania Accredited Drug Dispensing Outlet Experience." *Progress in Community Health Partnerships: Research, Education, and Action* 3 (2): 145–53. <https://doi.org/10.1353/cpr.0.0063>.
- Government of Malawi. 2015. "Malawi Costed Implementation Plan for Family Planning, 2016–2020." Lilongwe: Government of Malawi.
- Gribble, Jay. 2018. "Guatemala's Family Planning Transition: Successes, Challenges, and Lessons Learned for Transitioning Countries." Accra, Ghana.
- Harvey, Phil. 2016. "Social Entrepreneurship: A Case Study From Brazil." *Global Health: Science and Practice* 4 (1): 6–12. <https://doi.org/10.9745/GHSP-D-15-00182>.

- Hotchkiss, David R, Deepali Godha, and Mai Do. 2011. "Effect of an Expansion in Private Sector Provision of Contraceptive Supplies on Horizontal Inequity in Modern Contraceptive Use: Evidence from Africa and Asia." *International Journal for Equity in Health* 10 (1): 33. <https://doi.org/10.1186/1475-9276-10-33>.
- Longfield, Kim, James Ayers, Han Win Htat, Ko Htat, Josselyn Neukom, Oana Lupu, and David Walker. 2014. "The Role of Social Marketing Organizations in Strengthening the Commercial Sector: Case Studies for Male Condoms in Myanmar and Viet Nam." *Cases in Public Health Communication and Marketing* 8.
- Marie Stopes International. 2017. "Marie Stopes Ladies: Female Entrepreneurs Increasing Contraceptive Access."
- McCabe, Ariane, Andreas Seiter, Aissatou Diack, Christopher H. Herbst, Sheila Dutta, and Karima Saleh. 2011. "Private Sector Pharmaceutical Supply and Distribution Channels in Africa: A Focus on Ghana, Malawi, and Mali." Health, Nutrition, and Population (HNP) Discussion Paper. Washington, DC: The International Bank for Reconstruction and Development / The World Bank.
- "Medical Council of Malawi: About Us." n.d. Medical Council of Malawi. <http://www.medicalcouncilmw.org/mcm/about.php>.
- Miller, Nina, Michelle Weinberger, and John Skibiak. 2019. "Global Contraceptive Commodity Gap Analysis." Reproductive Health Supplies Coalition.
- MOF Malawi. 2007. "Malawi Public Expenditure Review 2006." Ministry of Finance Malawi.
- National Statistical Office Malawi. 2018. "2018 Population and Housing Census Preliminary Report," 55.
- National Statistical Office (NSO) [Malawi], and ICF. 2017. "Malawi Demographic and Health Survey 2015-16." Zomba, Malawi and Rockville, Maryland, USA.: NSO and ICF.
- Ntata, Pierson, Peter Mvula, and Adamson S. Muula. 2013. "'Condoms Make You Lose Both the Child and Pleasure': Perceptions on Family Planning and Contraceptives in Malawi." *Tanzania Journal of Health Research* 15 (1). <https://doi.org/10.4314/thrb.v15i1.1>.
- Nyoman, Sutarsa, and Septarini Ni Wayan. 2016. "Supporting Family Planning within National Health Financing Schemes: Indonesia Case Study." Avenir Health.
- Pedersen, Kjeld Møller, Terkel Christiansen, and Mickael Bech. 2005. "The Danish Health Care System: Evolution - Not Revolution - in a Decentralized System." *Health Economics* 14 (S1): S41–57. <https://doi.org/10.1002/hec.1028>.
- PMPB Malawi. 2017. "Malawi Wholesale Business Register." Pharmacy Medicines and Poisons Board of Malawi.
- . 2018. "Malawi Pharmacy Register." Pharmacy Medicines and Poisons Board of Malawi.
- Ross, Rebecca, Thomas Fagan, and Arin Dutta. 2018. "IS HEALTH INSURANCE COVERAGE ASSOCIATED WITH IMPROVED FAMILY PLANNING ACCESS? A Review of Household Survey Data from Seven FP2020 Countries." Washington, DC: Palladium, Health Policy Plus.

- Self, Andrew, Samuel Chipokosa, Amos Misomali, Tricia Aung, Steven A. Harvey, Mercy Chimchere, James Chilembwe, et al. 2018. "Youth Accessing Reproductive Health Services in Malawi: Drivers, Barriers, and Suggestions from the Perspectives of Youth and Parents." *Reproductive Health* 15 (1). <https://doi.org/10.1186/s12978-018-0549-9>.
- Thomson, Rebecca, Boniface Johanes, Charles Festo, Admirabilis Kalolella, Mark Taylor, Sarah Tougher, Yazoume Ye, et al. 2018. "An Assessment of the Malaria-Related Knowledge and Practices of Tanzania's Drug Retailers: Exploring the Impact of Drug Store Accreditation." *BMC Health Services Research* 18 (1). <https://doi.org/10.1186/s12913-018-2966-4>.
- Watt, Ian S., and Trevor A. Sheldon. 1993. "Rurality and Resource Allocation in the UK." *Health Policy* 26 (1): 19–27.
- White, James J., Sean Callahan, Samantha Lint, Helen Li, and Aida Yemaneberhan. 2016. "Engaging Private Health Providers to Extend the Global Availability of PMTCT Services." AIDSFree Technical Brief. Arlington, VA: Strengthening High Impact Interventions for an AIDSfree Generation Project.
- "World Bank Indicators." 2014. The World Bank.
- Yadav, Prashant, and George Walter. 2013. "CASE STUDY: MAKING THE PHARMACEUTICAL MARKET WORK FOR THE POOR: A CASE STUDY FROM TANZANIA." *Global Financing Facility: Managing Markets for Health*.

Appendices

- Interviewee Table
- Private Sector FP Product Lists and Pricing
- Private Clinic Providers, Service Fees and Product Pricing

In-Country Stakeholders Interviewed

Organization	Individual	Position
Action Medeor	Susan Held	Director
	Rajab Lawe	Responsible Pharmacist
	Chimwemwe Kateka	Customer Care/Clinical Officer
Banja La Mtosgo (MSI)	Moses Kamuhangire	Corporate Services Director
	Davie Zolowere	Clinical Quality Director
Artemis	Ajeesh Thomas	Business Head - Malawi
CHAM	Dr. Titha Dzowela	Head of Health Programmes
	Benitta Fernandez	Pharmacist & Supply Chain
CMST	Joe Khaldin	Pharmacist & Warehouse Manager
Family Planning Association of Malawi (FPAM)	Florence Mshari	Outreach & Social Franchise Coordinator
Imperial Logistics	Geoffrey Ngwira	Responsible Pharmacist, Managed Solutions
InterMed	Mohsin Patu	Managing Pharmacist
Mitch Pharmacies	Mercy Chamwalira	Managing Director
	Isaiah Zimbiri	Pharmacist
Ministry of Health Reproductive Health Division	Fannie Kachale	Director of Reproductive Health
Pharmaceutical Society of Malawi (MSAM)	Enoch Foster	Director PSAM, and Pharmacist in Charge, CMST
PharmaCare Pharmacies Ltd	Jafali Chisalika	Managing Director
PharmaChemie Limited	C.Thavaraj	General Manager & Pharmacist
PharmaVet	Lissy Joice C. J.	Pharmacist Manager
PMPB	Wilford Mathiya	Chief Drug Inspector
	Mphatso Kawaye	Acting Registrar
PSI	Philip Mkandawie	Head of Market Development
Ritechem	Mtisunge Samiti	Pharmacist
SADM	Anup Patel	General Manager & Pharmacist
Sunrise Pharmaceuticals	Lester Nyamithambo	Medical Sales & Marketing Man.
	Sekani Ziba	Pharmacist Manager
Village Reach	Matthew Ziba	Senior Program Officer
	Clement Ngwira	Pharmacist
Worldwide Pharmaceuticals	Siva Kumar	Technical Director

Selected Telephone Interviews

Organization	Individual	Position
BLM	Maarten VanDeReep	Malawi Country Director
FHI360	Holly Burke	Scientist
	Leigh Wynne	Technical Advisor
GHSC-PSM	Anita Deshpande	Manager, Market Dynamics
IQVIA	Peter Stephens	Director
Mission Pharma	Adrian Guilbaud	Key Account Manager, Malawi
PSI	Rebecca Husband	Technical Advisor
	Ashley Jackson	Deputy Director, EECO
PT Tunggal Idaman Abdi	Gibran Abidin	Head of Operations & Global Sales
University of Malawi	Felix Khuluza	Pharmacy Faculty, and Board Member of PMPB
Village Reach	Jessica Crawford	Director & Group Lead, Health Systems

Private Sector FP Product Lists and Pricing²

Product Category	Product	Retail Price 1	Retail Price 2	Retail Price 3	Retail Price 4	Wholesale Price 1	Wholesale Price 2	Wholesale Price 3	Wholesale Price 4	Wholesale Price 5
Orals	Microgynon (one month)	1350	1350	1200						750
Orals	SafePlan PSI (one month)	600	600	600	700	350			300	
Orals	Yasmin		16000							
Orals	Diane	NA	8200							
Injectables	SafePlan PSI (three months)	800	800			400				
Emergency Contraception	Pregnex	NA	2000							1000
Emergency Contraception	SafePlan PSI	NA	1500							400
Emergency Contraception	Unosure 72	2000	2000			280				
Emergency Contraception	Today Pill	1500	1500	1440	1200				650	
Emergency Contraception	Backup (MSI)	NA	2000	1440	1200					
Emergency Contraception	Option 2	NA	NA	1440						

² Data collected in-country, September 2018, A. Bare and E. Beidelman

Private Clinic Providers, Service Fees and Product Pricing³

Services Fees, in Kwacha

Service	Resp #1	Resp #2	Resp #3	Resp #4	Resp #5	Resp #6	Resp #7	Resp #8	Resp #9	Resp #10	Average
Inserting Jadelle	2500	2000	2000	2000	2000	1500	2000	1900	2500	2000	2040
Removing Jadelle	3000	3000	2000	2500	2000	1500	2000	1700	3000	2500	2320
Inserting Implanon	2000	2500	2000	2000	1500	2500	2000	2500	2500	3000	2250
Removing Implanon	2500	3000	2000	2500	1500	3000	2000	2000	2000	2500	2300
Inserting Loop Method	2000	2000	1500	1500	2000	2000	1500	2500	2000	3000	2000
Removing Loop	2500	2500	1500	1000	2000	2000	1500	2000	2500	2500	2000

Product Charges, in Kwacha

	Resp #1	Resp #2	Resp #3	Resp #4	Resp #5	Resp #6	Resp #7	Resp #8	Resp #9	Resp #10	Average
Microlette	600	600	600	600	700	700	700	700	600	800	660
Injectoratte	1000	1000	700	500	1000	1000	600	800	1000	1000	860
Microgynon	800	800	600	500	700	600	700	800	800	800	710
Safe Plan	600	600	600	500	NA	800	600	700	600	800	644
Emergency Pill	1500	1800	1000	1000	2500	2000	1600	2000	2000	1500	1690
Depo Injection	NA	NA	NA	500	NA	NA	NA	NA	NA	NA	
Chishango (Condoms)	100	100	100	100	100	100	100	100	100	100	100
Care Condoms	100	100	100	100	100	100	100	100	100	100	100

³ Data collected in-country, December 2018, Clement Ngwira