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MALAWI PRIVATE HEALTH SECTOR MAPPING REPORT

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This publication was produced for review by the United States Agency for International Development. It was prepared by Andrew Carmona for the Strengthening Health Outcomes through the Private Sector (SHOPS) project.



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DISCLAIMER

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ACRONYMS

ACT	Artemisinin-combination Therapy
ART	Antiretroviral Therapy
ARV	Antiretroviral
CHAM	Christian Health Association of Malawi
FBO	Faith-Based Organization
FP	Family Planning
GIS	Geographic Information Systems
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IUD	Intrauterine Device
INGO	International Non-Governmental Organization
MAM	Medical Association of Malawi
MASM	Medical Aid Society of Malawi
MCH	Maternal and Child Health
NAPPAM	National Paramedical Practitioners of Malawi
NGO	Non-Governmental Organization
NONM	National Organization of Nurses and Midwives of Malawi
ORS	Oral Rehydration Salts
PPMB	Pharmacy, Poisons & Medicines Board
PSA	Private Sector Assessment
PSI	Population Services International
RH	Reproductive Health
SHOPS	Strengthening Health Outcomes through the Private Sector
SMD	Society of Medical Doctors in Malawi
SPSS	Statistical Product and Service Solutions
TA	Technical Assistance
TB	Tuberculosis
UNDP	United Nations Development Program
USAID	United States Agency for International Development

AT A GLANCE



All 28 districts canvassed

763 private facilities visited

2,492 private providers interviewed



47% of facilities are rural



40% of facilities are in either Blantyre or Lilongwe

88% of facilities offer at least one maternal/child health service



46% of facilities have access to 24-hour electricity



61% of facilities are affiliated with an NGO or other organization

25% of facilities are affiliated with the Christian Health Association of Malawi



40% of facilities accept medical insurance

5.2 providers, on average, work in a private facility



3,031 clients, on average, are seen per facility each year



10% of facilities stock antiretrovirals

76% of facilities offer oral contraceptives



56% of facilities cite a shortage of medical equipment/supplies as a barrier to growth

8.8 years is the average time a provider has worked in the private sector



52% of providers are Nurse-Midwives



20% of providers work both in the private and public sector

70% of providers offer child health services



60% of providers have not been trained in Zinc

34% of providers choose HIV/AIDS therapy as a top priority for clinical training



54% of providers choose quality assurance systems as a priority for supportive training

1. EXECUTIVE SUMMARY

The private sector's role in health services has been increasing recently in Malawi, and it currently provides approximately 40 percent of health services in the country. The Strengthening Health Outcomes through the Private Sector (SHOPS) project undertook a private provider mapping exercise to describe the size, scope, and geographic distribution of private health providers in the country. As part of the mapping, SHOPS collected data on provider characteristics and services offered, and asked providers to identify obstacles to expanding their businesses.

SHOPS worked with national health regulatory bodies and private provider associations to develop a comprehensive and current list of all private health care facilities in Malawi that was supplemented with snowball sampling during data collection. The goal of the exercise was to survey as many facility owners, private providers, and private pharmacists as possible in all 28 districts. Over a three month period, SHOPS interviewed a total of 763 facilities (including 94 pharmacies) and 2,492 providers.

Facility findings: While it is estimated that 80-85% of the population of Malawi is rural, just 47 percent of all private facilities are found in a rural setting, 13 percent in peri-urban areas, and 40 percent in urban areas; 64 percent of private pharmacies were in urban areas. Nearly half of all facilities are located in the South region, and only 14 percent are located in the North region. The number of private facilities per 10,000 people is highest in Likoma (1.92), Blantyre (1.51), and Lilongwe (0.8) districts, and lowest in Chiradzulu (0.17), Phalombe (0.16), and Ntchisis (0.1) districts.

Private facilities offer a range of services: 88 percent offer at least 1 maternal or child health (MCH) service; 87 percent offer at least 1 reproductive health (RH) service; 74 percent offer at least 1 family planning (FP) method; and 66 percent offer at least 1 HIV/AIDS service. Just 58 percent of all facilities offer a combination of MCH, RH, and HIV service. Among those facilities offering MCH services, 44 percent offered immunizations, 28 percent offered labor and delivery services, and 33 percent offered neonatal or postnatal services. The most commonly offered RH services are management of sexually transmitted infections (81%), family planning (74%), and breast exams (38%); only 5 percent offer Pap smears. Among the facilities that offer family planning methods, most offer injectables (77%), oral contraceptives (76%), and condoms (70%). Only 20 percent offer IUDs, 10 percent offer sterilizations, and 6 percent offer cycle beads. Finally, the most common HIV services offered are testing and counseling (63%), PMTCT (39%), and ART (36%). Only 35 percent of the private

facilities had offered any new services or products in the past twelve months, and only 30 percent report that they conduct outreach services.

Most (61%) private facilities are affiliated with an NGO, and the rest are non-affiliated commercial sector providers. Most affiliated facilities are affiliated with CHAM (25%), PSI (18%), and Bluestar (10%). Forty percent of private medical facilities accept medical insurance, compared to just 22 percent of pharmacies. Notably, 68 percent of community hospitals, 59 percent of health centers, 52 percent of hospitals, and 50 percent of rural hospitals offer all drugs on hand for free. One third (33%) of private clinics with outpatient services charge a price for all drugs at the facility.

The most commonly stocked drugs in health facilities were cotrimoxazole (85%), amoxicillin (84%), and artemisinin-combination therapy (ACT) (74%). Three quarters of facilities (75%) had oral rehydration solution (ORS) available at the time of the survey, but only 38 percent had zinc. Among pharmacies, 85 percent had ORS in stock, 84 percent had ACT, and 58 percent had zinc.

A majority of pharmacies did not have amoxicillin or cotrimoxazole (59% each). According to directors of private facilities, the most commonly cited barriers to expanding their businesses are shortage of equipment and other medical supplies (56% of facilities), shortage of staff (50%), and “other” (45%), primarily financial/economic constraints.

Provider findings: The majority of private providers in Malawi are nurse-midwives (52%), clinical officers (16%), and medical assistants (10%); just over half (53%) are female. Most (80%) work only in the private sector, and 48 percent work in facilities affiliated with an organization. Virtually all (98%) claim they are registered with a regulatory body, but a registration certificate was observed/provided in only 14 percent of interviews. Their top priorities for clinical training are HIV/AIDS ART (34%), child health (24%), and FP new technologies (23%). Their top priorities for supportive (non-clinical) training are quality assurance systems (53%), finance/business management (18%), and time management/patient flow (17%).

The SHOPS private sector mapping exercise was the first attempt to comprehensively characterize the size and geographic distribution of the private health sector in the entire country. The maps created by this exercise and the information obtained from private facility directors and providers can be used by several different stakeholders to inform key programmatic decisions. The visual representation of the geographic distribution of private facilities on maps resulting from this exercise provides a quick way for stakeholders to view where private facilities are located in relation to the population and identify potential gaps in private sector service provision or coverage. Private facilities are underrepresented in rural areas, where most of the population resides; this

was particularly true for pharmacies, which tend to be concentrated in urban areas. Most private facilities are located in the South region and very few in the North region. Additional district-level maps and analysis can pinpoint service delivery gaps and identify areas where private providers could potentially be contracted to fill these gaps.

Section 5 of this report, titled “Using the Data” goes into further detail about possible uses of the data presented in this report. Potential uses include: utilizing maps to visualize needs, gaps, and overlap; linking private providers to desired clinical trainings; giving targeted technical assistance to grow businesses; strengthening professional provider associations; affecting health policy and regulations; improving access to key health services and drugs; and disseminating knowledge to the public.

2. INTRODUCTION

Located in southern Africa, Malawi is home to just under 14 million people, 72.3 percent of whom live in poverty. In 2011, Malawi was ranked 171/187 in the Human Development Index (UNDP) and as of 2007 life expectancy at birth was 50 years. Although Malawi is well known as the “Warm Heart of Africa,” its people contend with poor health and economic instability. Despite the fact that Malawi has seen improvements in several key development indicators, much remains to be done.

While the public sector is the largest provider of health services in Malawi, approximately 40 percent of services are provided by private actors including the Christian Health Association of Malawi (CHAM), commercial providers, and other not-for-profit actors. These private actors are crucial for expanding access to essential health services in rural areas of Malawi.

In May 2011 the United States Agency for International Development (USAID)/Malawi commissioned the global Strengthening Health Outcomes through the Private Sector (SHOPS) project to conduct a private health sector assessment (PSA) in Malawi to determine the landscape of the private non-profit and for profit commercial health sector, assess the overall policy environment for private sector health care, and present a road map for greater public-private coordination. As a recommendation stemming from the report, SHOPS undertook a comprehensive provider mapping exercise in May 2012 in order to better understand the increasingly vital private health sector. The mapping exercise targeted all private sector facilities, including pharmacies, and providers in all 28 districts of Malawi.

Objectives

Initial objectives of the mapping exercise were:

- Provide stakeholders with a more accurate picture of the size, scope, and geographic distribution of the private health sector in Malawi
- Identify obstacles to improving quality and expanding reach of the private sector from the perspective of providers
- Provide valuable data to professional provider associations so that they can better address current members' needs and expand their membership base
- Disseminate key data and analysis via strategic communications

Stakeholders

Prior to beginning the mapping exercise, SHOPS staff reached a consensus about the purpose of the activity and to whom the gathered data would be most useful. SHOPS identified the following entities as the most important stakeholders of the mapping exercise: USAID/Malawi, SHOPS/Malawi and SHOPS/HQ, Malawi Ministry of Health and other government health-related entities, professional provider associations (both public and private), and bilateral USAID and other major multilateral and donor-funded health projects in Malawi.

Questions

In order to best tackle the objectives of this activity, the mapping exercise sought to find answers to the following broad questions:

- Where are the private providers concentrated? (e.g. rural or urban, zonal, district, etc.)
- What are the characteristics of providers? (e.g. years worked, type, affiliations, etc.)
- What services do they offer? (e.g. MCH, HIV, FP, RH, etc.)
- What trainings would help them improve the quality and extent of their services?
- What are some of the barriers to expanding private provider practices?

3. MAPPING METHODOLOGY

Instruments

The SHOPS project team developed three separate questionnaires: one for facilities, one for providers, and one for pharmacies. The facility questionnaire contained 37 questions and was administered to the owner of a facility or the provider most knowledgeable about the operations of that facility. The provider questionnaire, containing 18 questions, was administered to all providers at each facility. The pharmacy questionnaire, containing 18 questions, was administered to the provider most knowledgeable about the operations of that pharmacy.

Obtaining Lists of Providers

SHOPS contracted a local research firm in April 2012 to carry out the data collection. Prior to data collection, the research firm was tasked with aggregating lists of all current private health care facilities in Malawi. Research firm staff working with the SHOPS project team in Malawi approached district and national health authorities, professional provider associations, and other stakeholders in order to gain access to these lists and make sure that the appropriate authorities were aware of the SHOPS activity.

Data Collection

Data collection commenced in May 2012. The research firm organized three teams of five interviewers each – one team per region: South, Central, and North. Teams visited listed facilities as well as utilized a snowball sampling technique, inquiring about clinics in the surrounding areas in order to locate facilities not on the lists. The three teams completed their canvassing of the country in late August 2012, approximately 3 months after they had started. The teams interviewed a total of 763 facilities (including 94 pharmacies) and 2,492 providers.

Data analysis

Data was collected and compiled into an SPSS database by the research firm and submitted to the SHOPS team in early September 2012. Between mid-September and late-October 2012, the SHOPS team cleaned and analyzed the data of all three questionnaires in STATA. SHOPS also utilized the services of in-house GIS specialists to create maps for selected key analyses.

4. ANALYSIS RESULTS



4.1 Facilities

Part I of the results section concerns the facility and pharmacy questionnaires. In total, 669 facilities and 94 pharmacies were visited. The exercise produced a rich dataset that will be of interest to stakeholders. Section 4.1 is broken into eight parts: geography, services, infrastructure, affiliation and registration, clientele, personnel, drugs/stock, and barriers to expanding business. For purposes of this report, the use of the word “facility” denotes the 669 non-pharmacy facilities only, unless otherwise specified. The only exception to this is Section 4.1.1, where each analysis includes both the 669 facilities and 94 pharmacies visited.



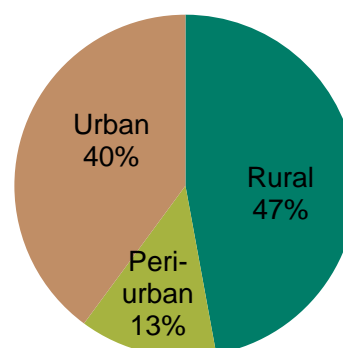
4.1.1 Geography

TABLE 1: NUMBER AND PERCENT OF FACILITIES, BY FACILITY TYPE

Facility type	Freq.	%
Private clinic with outpatient services only	429	56
Health center	111	15
Pharmacy	94	12
Private clinic with admission facilities	37	5
Other	30	4
Hospital	27	4
Community hospital	19	2
Nurse midwife facility	7	1
Rural hospital	6	1
Mobile clinic	3	0
Total (n)	763	100%

Fifty-six percent of facilities including pharmacies are private clinics with outpatient services only (Table 1). This is followed by health centers (15%), and pharmacies (12%), with the rest falling below 10 percent of the total facilities. Most notably, there were 37 private clinics with admission (inpatient) services (5%) and 27 private hospitals (4%).

FIGURE 1: PERCENT OF FACILITIES IN RURAL, PERI-URBAN, AND URBAN SETTINGS (N=763)



Forty-nine percent of facilities are found in the South, 37% in the Central, and 14% in the North region of the country (Figure 2). While it is estimated that 80-85% of the population of Malawi is rural, 47% of all facilities are found in a rural setting, 13% in peri-urban, and 40% in urban (Figure 1).

FIGURE 2: PERCENT OF FACILITIES IN NORTH, SOUTH, AND CENTRAL REGIONS (N=763)

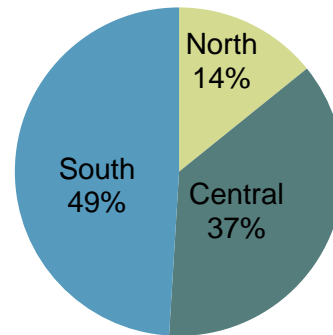
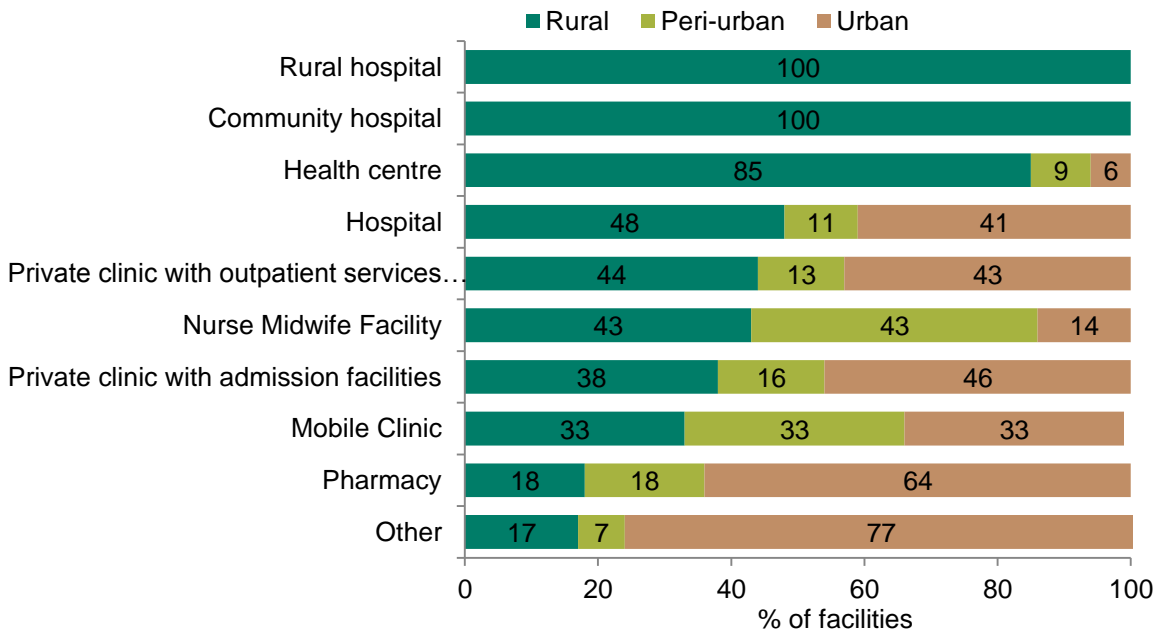
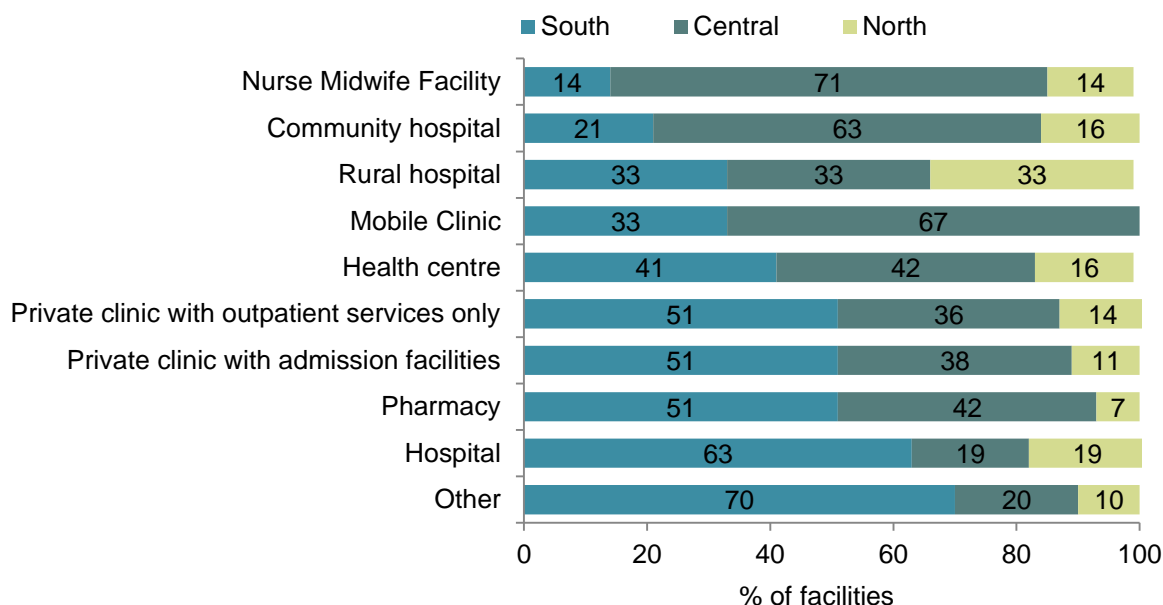


FIGURE 3: PERCENT OF FACILITIES FOUND IN RURAL, PERI-URBAN, AND URBAN SETTINGS, BY TYPE OF FACILITY (N=763)



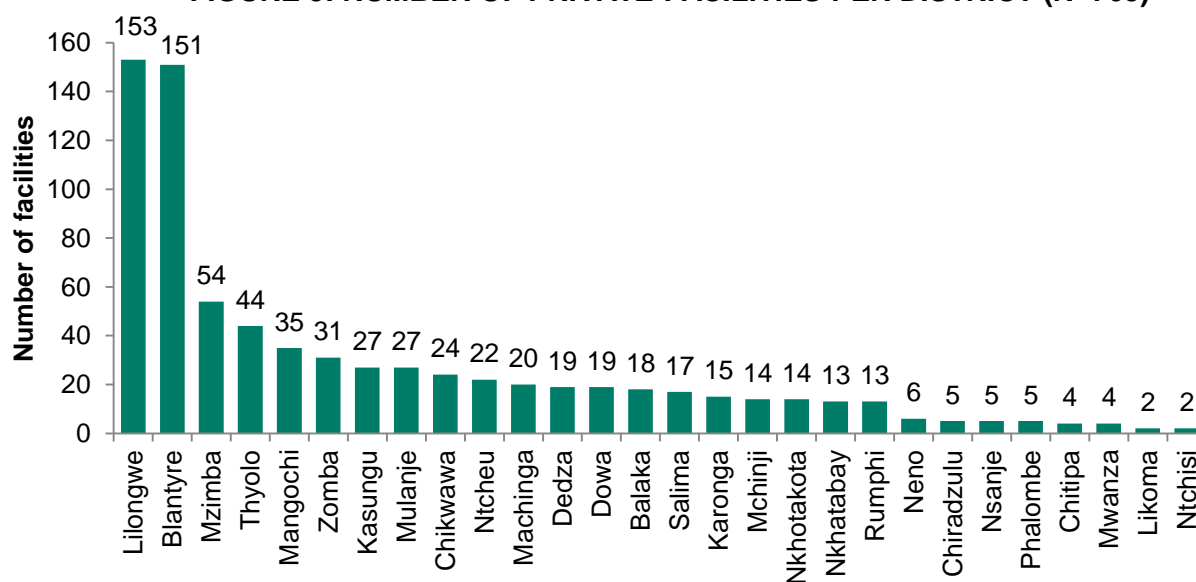
All community and rural hospitals, and the vast majority of health centers (85%), are located in rural areas (Figure 3). Facilities most commonly found in urban settings are “other” (77%) – dental clinics, laboratories, dispensaries, and eye clinics, private clinics with admission facilities (46%), and private clinics with outpatient services only (43%). Nurse-midwife facilities and mobile clinics are more or less balanced throughout the three geographic settings. Of the 94 pharmacies interviewed in the separate pharmacy questionnaire, 64 percent are in urban areas, and 18 percent are in both peri-urban and rural settings.

FIGURE 4: PERCENT OF FACILITIES FOUND IN THE NORTH, CENTRAL, AND SOUTH, BY FACILITY TYPE (N=763)



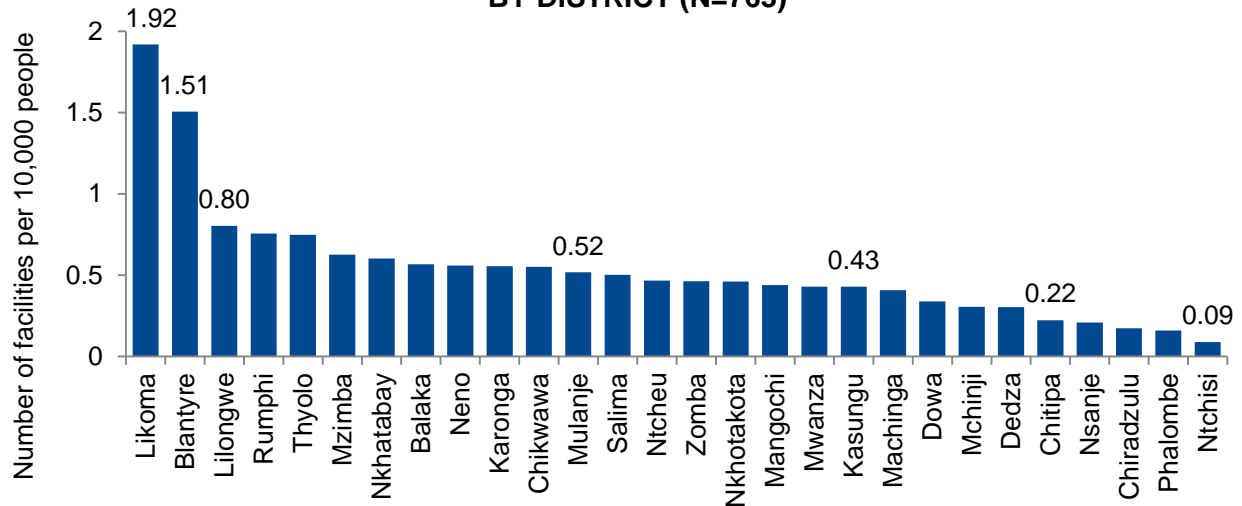
Nearly half of all facilities are located in the South region of Malawi, including 70 percent of all “other” facilities, 63 percent of hospitals, and half of both private clinics with outpatient services only and private clinics with admission services (Figure 4). Thirty-seven percent of facilities are found in the Central region, including 63 percent of community hospitals. Only 14 percent of the 669 facilities are located in the North region, with 33% of rural hospitals and 19% of hospitals locating there. For pharmacies, 51 percent are in the South, 42 percent in the Central, and 7 percent in the North.

FIGURE 5: NUMBER OF PRIVATE FACILITIES PER DISTRICT (N=763)

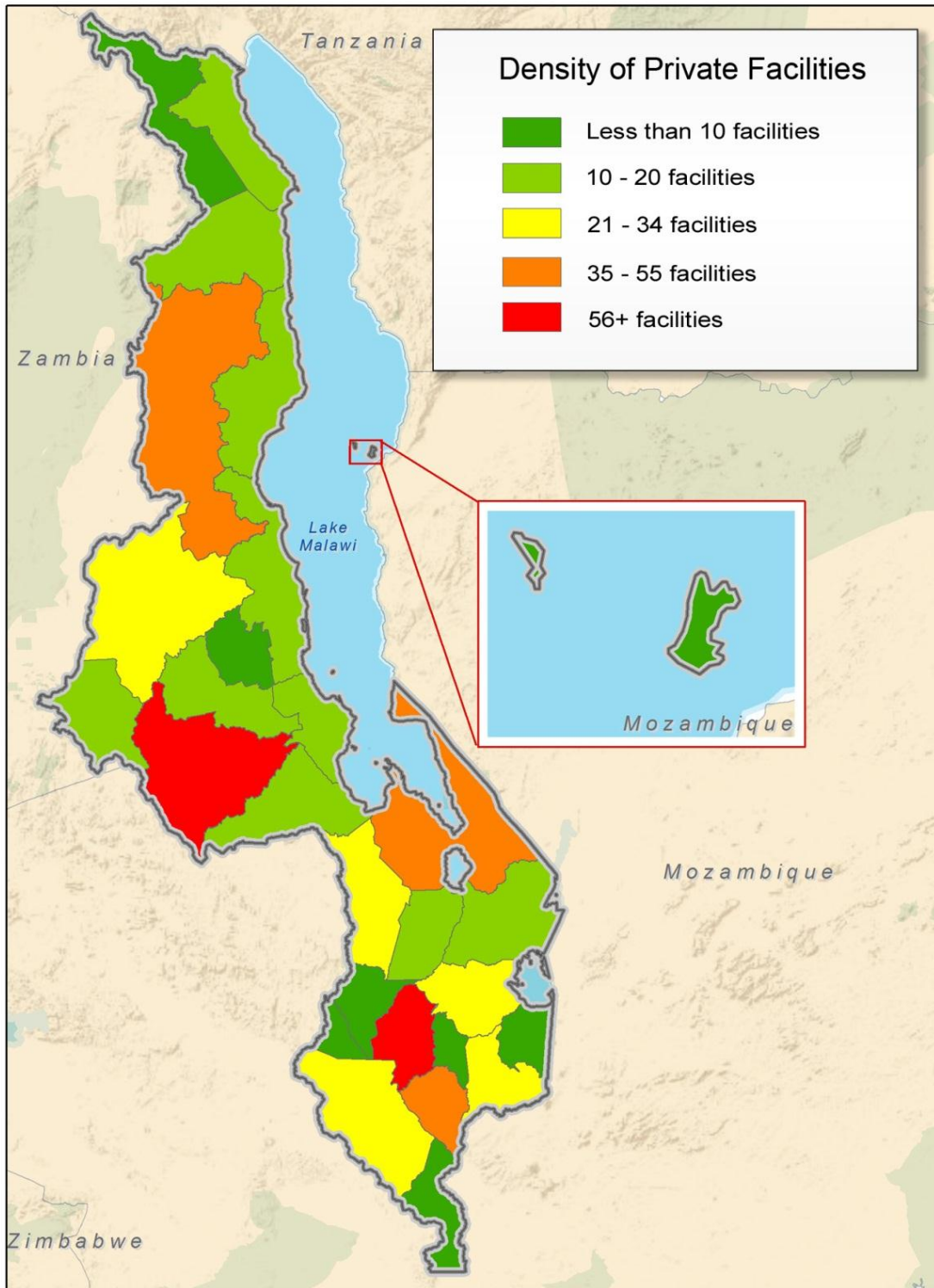


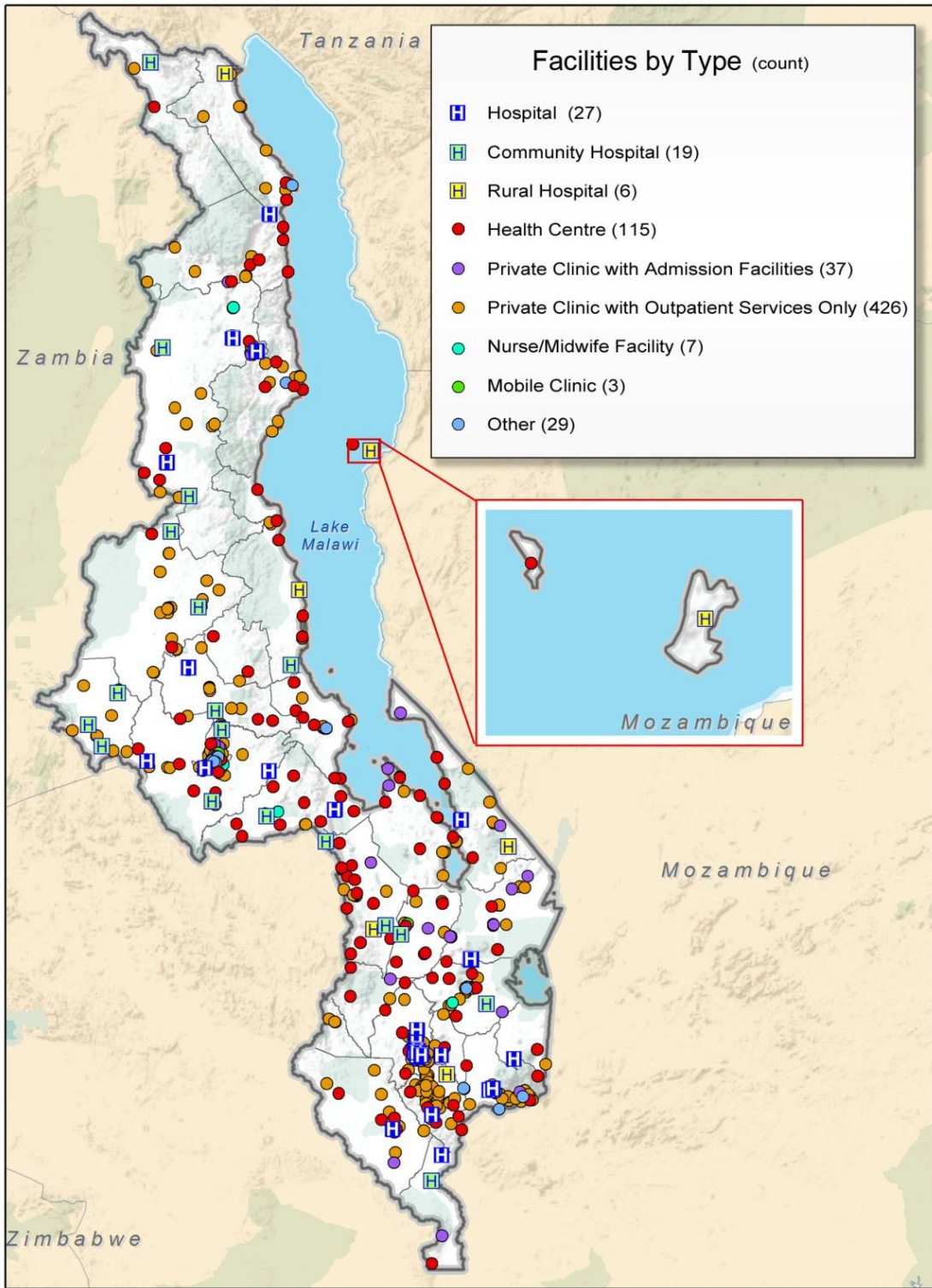
Of the 753 facilities interviewed, 40 percent are located in either Blantyre or Lilongwe districts (Figure 5). Seven percent of facilities are in Mzimba, 6 percent in Thyolo, and 5 percent in Mangochi. Less than 5 private facilities are found in each of Chitipa, Likoma, Mwanza, and Ntchisi districts.

FIGURE 6: NUMBER OF PRIVATE FACILITIES PER 10,000 PEOPLE, BY DISTRICT (N=763)



Using data from the 2008 Malawi census, calculating a ratio of number of private facilities per 10,000 people in a district provides a clearer picture of gaps in private sector access. Figure 6 above shows the largest gap is Ntchisi district whose 2 private facilities in the district divided by a population of approximately 225,000, approximates 0.1 facilities per 10,000 people. Other districts with low ratios of private facilities per 10,000 people are Phalombe (0.16) and Chiradzulu (0.17). Districts with the highest ratio are Likoma (1.92 private facilities per 10,000 people), Blantyre (1.51), Lilongwe (0.8), and Rumphi and Thyolo (0.75 each).







4.1.2 Services

Among the main services asked about in the facility questionnaire, 88 percent of facilities offer at least one maternal/child health (MCH) service, 87 percent offer at least one reproductive health (RH) service, 74 percent of facilities offer at least one family planning (FP) method, and 66 percent of facilities offer at least one HIV service (Table 2). The Venn diagram below (Figure 7) shows that 61 percent of facilities offer MCH and HIV but not RH services, 80 percent offer MCH and RH but not HIV, 62 percent offer RH and HIV but not MCH, and 58 percent of facilities offer all three services.

TABLE 2: PERCENT OF FACILITIES OFFERING CERTAIN HEALTH SERVICES

Services offered	Freq.	%
Offer at least 1 MCH service	590	88
Offer at least 1 RH service	580	87
Offer at least 1 FP method	498	74
Offer at least 1 HIV service	444	66
Total (n)	669	

FIGURE 7: PERCENT OF FACILITIES OFFERING MCH, RH, AND HIV SERVICES (N=669)

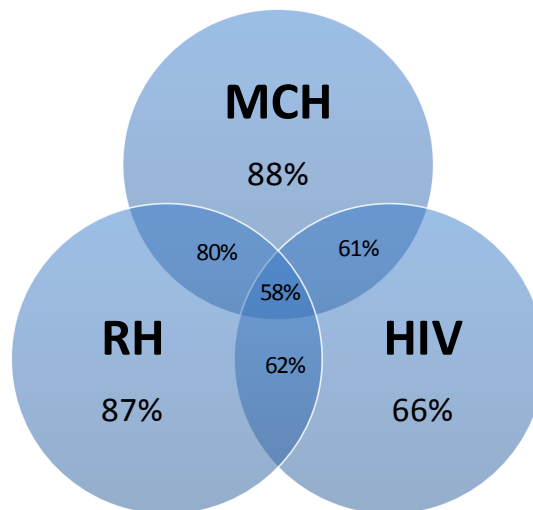


TABLE 3: PERCENT OF FACILITIES OFFERING SPECIFIC MCH SERVICES

MCH Service	Freq.	%
Sick child treatment	564	84
Growth monitoring	347	52
Immunizations	292	44
Antenatal care	245	37
Nutrition surveillance	242	37
PMTCT	246	37
Neonatal/postnatal	223	33
Labor & delivery	190	28
Other	41	6
Total (n)	669	

In facilities offering MCH services, excluding pharmacies, the most common services are sick child treatment (84%), growth monitoring (52%), and immunizations (44%) (Table 3). Only 28 percent offer labor and delivery services, and only 33 percent offer neonatal/postnatal services.

TABLE 4: PERCENT OF FACILITIES OFFERING SPECIFIC FP METHODS

FP method	Freq.	%
Injectables (Depo)	444	77
Oral contraceptives (pills)	442	76
Condoms	407	70
Emergency contraception	241	42
Implants (Jadelle)	206	36
IUDs	114	20
Sterilizations (vasectomy/BTL)	59	10
Cycle beads	34	6
Other	11	2
Total (n)	669	

Seventy-four percent of facilities interviewed offer at least one family planning (FP) method. Among these facilities, injectables is the most frequently offered family planning method at 77 percent followed by oral contraceptives (76%), condoms (70%), and emergency contraception (42%) (Table 4). Of methods found least frequently, 20 percent offered IUDs, 10 percent offer sterilizations, and only 6 percent of facilities offered cycle beads.

TABLE 5: PERCENT OF FACILITIES OFFERING SPECIFIC HIV SERVICES

HIV Service	Freq.	%
Testing and counseling	419	63
PMTCT	258	39
ART	243	36
Male circumcision	86	13
Other	32	5
Total (n)	669	

Sixty-six percent of facilities interviewed offer at least one HIV service. Sixty-three percent have testing and counseling services, 39 percent offer PMTCT, 36 percent provide ART, and 13 percent offer male circumcision (Table 5).

TABLE 6: PERCENT OF FACILITIES OFFERING SPECIFIC RH SERVICES

RH Service	Freq.	%
STI management	541	81
Family planning	498	74
Breast exam	251	38
Pap smear	34	5
Other	18	3
Total (n)	669	

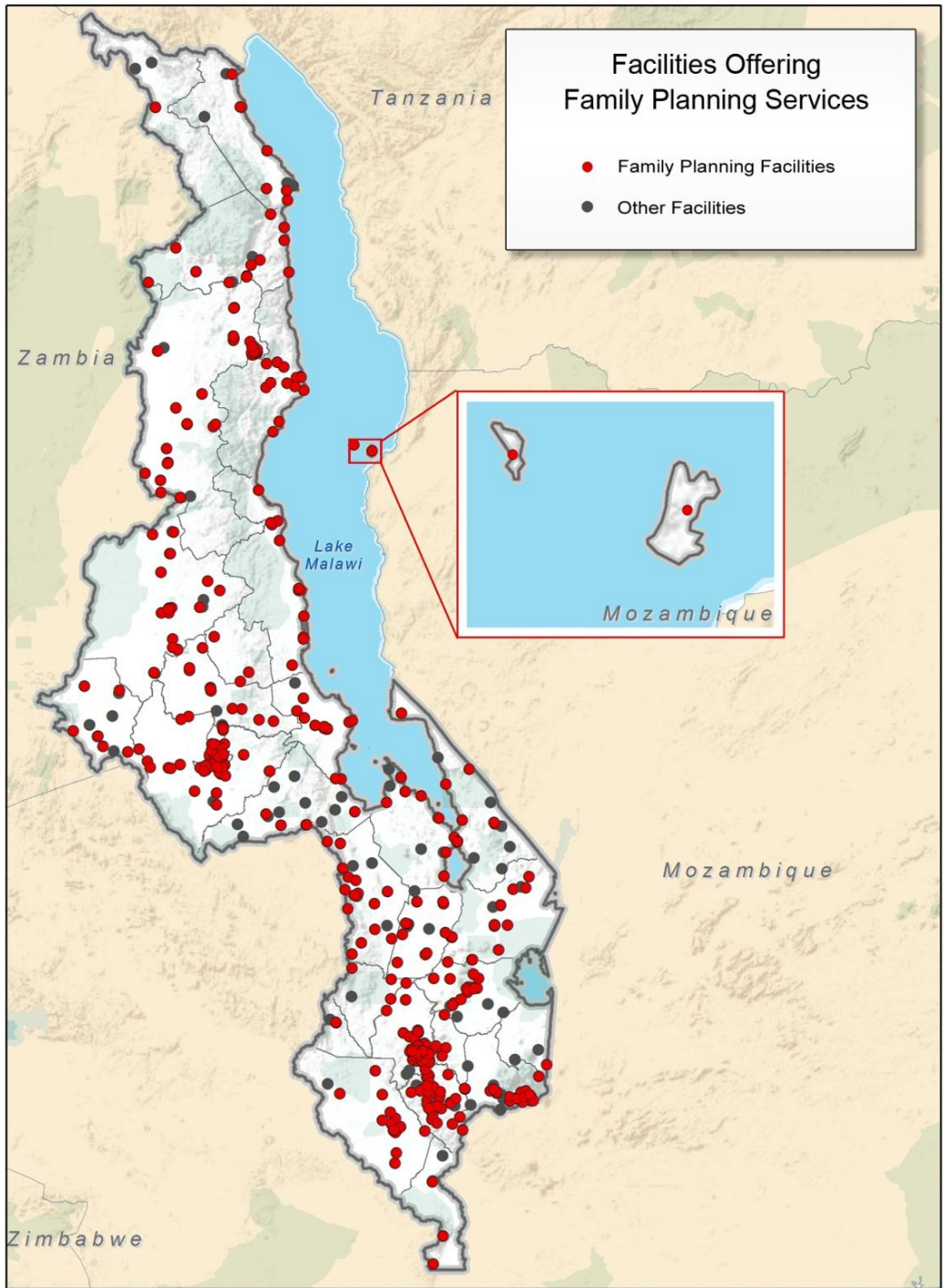
Concerning reproductive health services, 87 percent of all facilities interviewed offer at least one service. As far as specific RH services, 81 percent provide STI management, 74 percent offer family planning, 38 percent are able to give breast exams, and only 5% of facilities offer a pap smear (Table 6).

TABLE 7: PERCENTAGE OF FACILITIES OFFERING OTHER SERVICES

Other service	Freq.	%
Malaria testing	536	80
Laboratory	229	34
TB	148	22
Other	130	19
Dental	109	16
X-ray	44	7
Total (n)	669	

Among possible answer choices for “other” services offered at private clinics, 80 percent of facilities offer malaria testing, 34 percent offer laboratory services, 22 percent provide TB services, and 16 percent offer dental services (Table 7). Of the 130 facilities specifying “other” services, the most common responses are pregnancy testing, rapid diagnostic testing, and outpatient services. Even with high proportions of facilities offering MCH, FP, HIV, and RH services, the questionnaire revealed that only 35

percent of facilities had offered any new services or products in the past twelve months. Additionally, only 30 percent of facilities conduct outreach services into their surrounding areas.

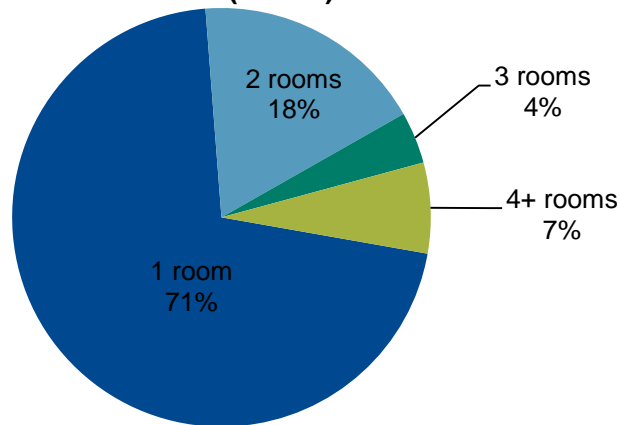




4.1.3 Infrastructure

The facility questionnaire contained questions on physical infrastructure from access to basic utilities to the number of rooms and beds in a facility. Seventy-seven percent of facilities interviewed have access to piped water, however only 46 percent report having reliable 24-hour electricity.

FIGURE 8: NUMBER OF OUTPATIENT CONSULTATION ROOMS IN FACILITIES (N=669)



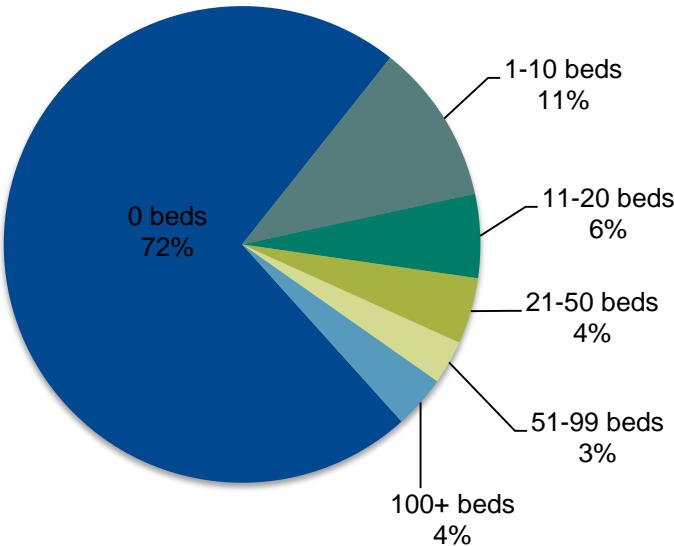
The average number of outpatient rooms per facility is 1.6. Seventy-one percent of facilities surveyed have one outpatient room, 18 percent have two, 4 percent have three, and 7 percent have four or more rooms (Figure 8).

TABLE 8: AVERAGE NUMBER OF OUTPATIENT ROOMS, BY FACILITY TYPE

Facility type	Freq.	Avg. number of outpatient rooms
Hospital	27	6.6
Community hospital	19	3.1
Rural hospital	6	3.0
Private clinic with admission facilities	37	1.9
Mobile Clinic	3	1.7
Health center	111	1.6
Other	30	1.5
Private clinic with outpatient services only	429	1.3
Nurse Midwife Facility	7	1.2
Total (n)	669	1.6

Facility types with the most outpatient rooms on average are hospitals (6.6 rooms), community hospitals (3.1), rural hospitals (3.0), and private clinics with admission facilities (1.9). All other facility types have, on average, 1.5 outpatient rooms or less (Table 8). An analysis of the number of counseling rooms in facilities offering HIV services yields identical statistics. Among the 444 facilities offering HIV services, the average amount of counseling rooms per facility is 1.4. Seventy-two percent of these facilities have one counseling room, 17 percent have two rooms, 6 percent have three rooms, and less than 5 percent have four or more counseling rooms. Hospitals have the highest average with 2.8 counseling rooms each, followed by Nurse-Midwife facilities (1.7 counseling rooms), and private clinics with admission facilities (1.6).

FIGURE 9: PERCENTAGE OF FACILITIES WITH INPATIENT BEDS (N=669)



Only 28% of facilities report having inpatient beds. Eleven percent of facilities have between 1 and 10 beds, 6% have between 11 and 20 beds, 4% have 21-50 beds, 3% have 51-99, and 4% have 100 beds or more (Figure 9).

TABLE 9: AVERAGE NUMBER OF BEDS PER FACILITY TYPE

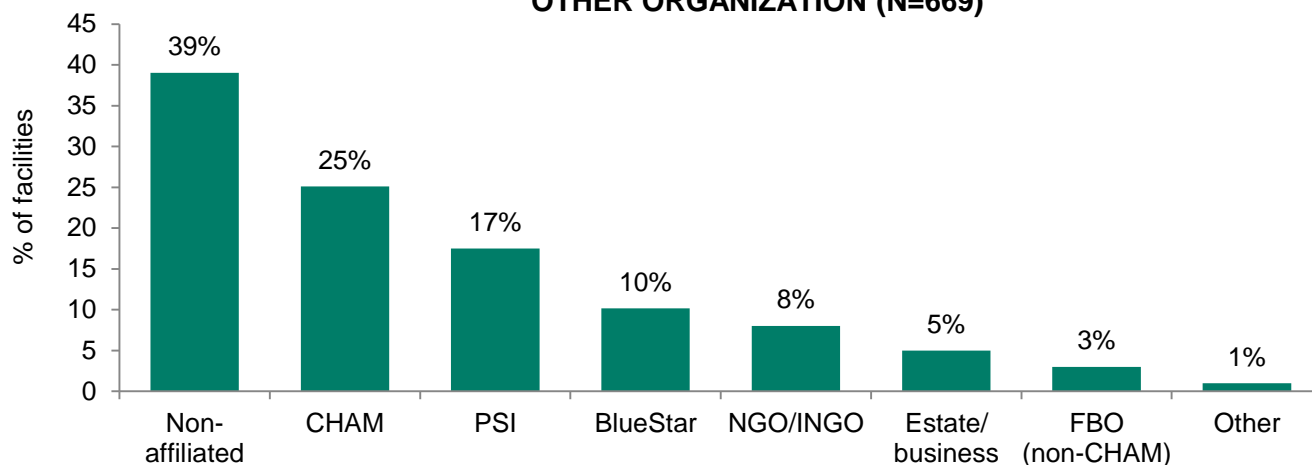
Facility type	Freq.	Avg. number of beds
Hospital	27	143
Community hospital	19	75
Rural hospital	6	67
Health centre	111	16
Private clinic with admission facilities	37	10
Nurse Midwife Facility	7	8
Mobile clinic	3	4
Other	30	1
Private clinic with outpatient services only	429	0
Pharmacy	94	0
Total (n)	763	

Table 9 breaks down Figure 9 further to show the average number of beds per type of facility. Hospitals have on average 143 beds each, followed by community hospitals (75 beds), rural hospitals (67), health centres (16), and private clinic with admission facilities (10). Both pharmacies and private clinics with outpatient services only tend to have no beds.



4.1.4 Affiliation and registration

FIGURE 10: PERCENTAGE OF FACILITIES AFFILIATED WITH AN NGO OR OTHER ORGANIZATION (N=669)

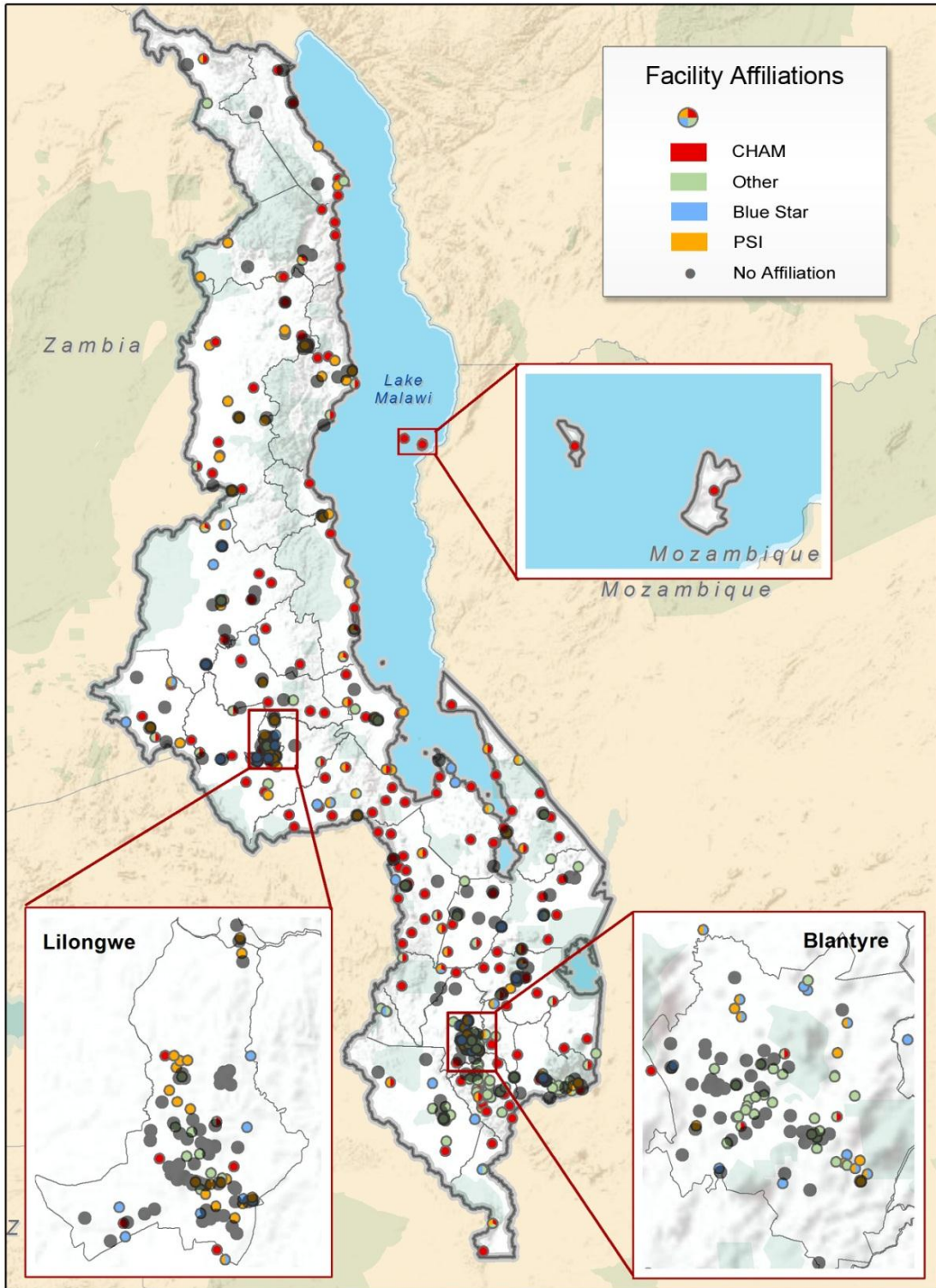


Facilities interviewed were asked a series of questions concerning affiliation with a provider association and/or network, acceptance of medical insurance, and registration status with a national regulatory body. In each of the three questions, facilities were

asked to specify the association/organization, insurance scheme, or regulatory body with which they were affiliated or registered.

Sixty-one percent of the 669 facilities interviewed are affiliated with some type of NGO organization, while 39 percent are non-affiliated commercial sector providers. Twenty-five percent of facilities are affiliated with CHAM, while 17 of facilities are affiliated with PSI, and BlueStar affiliation accounts for 10 percent of all facilities (Figure 10). NGO/INGO affiliations make up 8 percent of facilities, estates and other private businesses make up 5% of facilities, and non-CHAM faith based organizations (FBO) claim 3 percent of facilities. Additionally, 98 percent of facilities report being registered with a regulatory body such as the Medical Council of Malawi, Pharmacy, Poisons & Medicines Board (PPMB), or Malawi Nurses Council. Ninety-eight percent of pharmacies also report being registered with the PPMB.

Forty percent of all facilities accept medical insurance. Of facilities accepting medical insurance (n=267), 79 percent accept MASM insurance, 55 percent accept Momentum, and 46 percent accept Horizon insurance. Among pharmacies, which were tracked separately via the pharmacy questionnaire, the story is different: only 22 percent of pharmacies accept medical insurance. As expected, 95 percent of pharmacies accepting medical insurance (n=21) accept MASM insurance.





4.1.5 Clientele

TABLE 10: NUMBER OF PATIENTS SEEN IN THE PAST 12 MONTHS, BY FACILITY TYPE

Facility type	Avg./yr.	Avg./mo.	Avg./day
Hospital	9,446	787	26
Community hospital	6,881	573	19
Mobile clinic	6,695	558	19
Health centre	3,992	333	11
Private clinic with admission facilities	3,483	290	10
Rural hospital	3,276	273	9
Other	2,452	204	7
Private clinic with outpatient services only	2,224	185	6
Nurse midwife Facility	371	31	1
Total average	3,031	253	12
Total (n)	669		

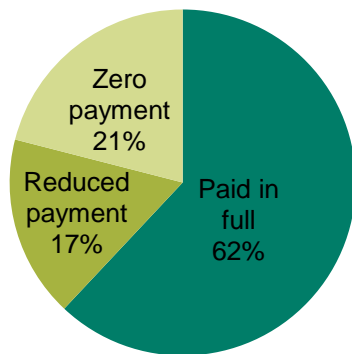
The average number of clients seen per facility in the past twelve months is 3,031 (Table 10). This translates to 253 patients per month, or about 12 patients per day, assuming a 5-day workweek. Average patient load varies across facility type; hospitals see the highest average patient flow at nearly 9,500 per year, followed by community hospitals (6,881), and mobile clinics (6,695). Private clinics with admission facilities average around 3,500 patient per year, or about 14 per day, and private clinics with outpatient services only average about 6 patients per day. Nurse-midwife facilities see the lowest numbers, reporting an average of only 371 clients per year, or one per day.

TABLE 11: NUMBER OF PATIENTS SEEN PER FACILITY IN THE PAST 12 MONTHS, BY FACILITY AFFILIATION TYPE

Affiliation	Avg./yr.	Avg./mo.	Avg./day
CHAM	4,820	402	19
Other	4,260	355	17
PSI	2,689	224	11
BlueStar	2,213	185	9
Non-affiliated	1,985	166	7
Total (n)	669		

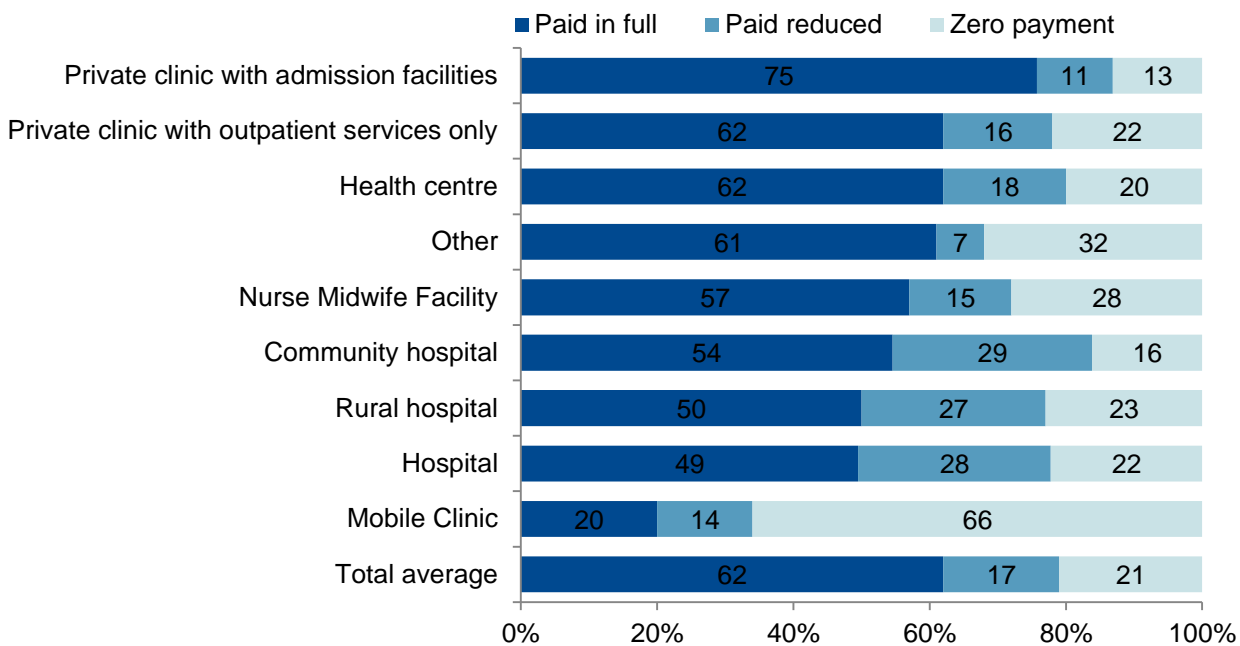
Table 11 shows the average yearly, monthly, and daily patient flow among affiliated and non-affiliated facilities. CHAM-affiliated facilities see the highest patient flow at approximately 19 per facility per day, followed by “other” (17), PSI (11), and BlueStar (9). Unaffiliated, commercial sector facilities see an average of 7 patients per day.

FIGURE 11: PERCENTAGE OF CLIENTS PAYING FULL PRICE, REDUCED PRICE, AND ZERO PRICE FOR SERVICES (N=669)



When asked what proportion of clients pay full, reduced, or zero price for services, facilities on average respond that 62 percent pay in full, 17 percent pay reduced prices, and 21 percent pay no price for services (Figure 11).

FIGURE 12: PERCENTAGE OF CLIENTS PAYING FULL PRICE, REDUCED PRICE, AND ZERO PRICE FOR SERVICES, BY FACILITY TYPE (N=669)



Among facility types with the highest rate of clients paying in full, private clinics with admission facilities top the list at 75 percent of clients, followed by health centre and private clinic with outpatient services only (62% each) (Figure 12). Forty-nine percent of clients pay in full at hospitals and only 20 percent of clients pay in full at mobile clinics. Community hospitals see the highest rate of clients paying reduced prices (29%), with “other” clinics having the lowest rate at 7 percent. Facilities that have the highest rate of clients paying no fee are mobile clinics (66%); private clinics with admission facilities have the lowest rate (13%) of free services.



4.1.6 Personnel

TABLE 12: AVERAGE NUMBER OF PROVIDERS IN FACILITIES

Facility Type	Clinical Officers	Dental Technician	Dentist	Doctors	Laboratory Technicians	Medical Assistants	Nurse	Nurse-Midwives	Other	Pharmacists	Pharmacy Assistants	Pharmacy Technicians	Radiography Technicians	Total avg. staff per facility	Total (n)
Community hospital	1.8	0.1	0	0.3	0.7	0.9	1.2	8.8	0.1	0	0.1	0.1	0.3	14.2	19
Health centre	0.4	0	0	0.1	0.2	0.6	0.2	3.2	0.1	0.1	0	0	0	4.8	111
Hospital	5.0	1.0	0.1	1.9	1.8	2	2.3	27.4	0.3	0.1	0.6	0.5	1.1	44.0	27
Mobile Clinic	0.7	0	0	0	0	0.3	0.7	2.3	1.0	0	0	0	0	5.3	3
Nurse midwife Facility	0	0	0	0	0	0	0	1.6	0	0	0	0	0	1.6	7
Private clinic with admission services	0.7	0.1	0.1	1.1	0.6	0.2	0.6	3.5	0.1	0	0.1	0.1	0.1	7.4	37
Private clinic with outpatient services only	0.6	0	0	0.2	0.1	0.4	0.1	0.8	0.1	0	0	0	0	2.3	429
Rural hospital	3.2	0	0	0.2	1.2	1.2	0	12.3	0.2	0	0.2	0	0.2	18.5	6
Other	0.4	0.3	0.1	0.2	0.5	0.4	0.1	0.8	0.2	0	0	0	0.1	3.0	30
Total avg. type per facility	0.8	0.1	0	0.3	0.3	0.5	0.3	2.8	0.1	0	0	0	0.1	5.2	
Total (n)	393	41	11	95	142	248	149	1,285	1	13	3	25	37		

The average number of providers per facility is 5.2. Table 12 above summarizes the average number of type of provider in type of facility, as well as the total average number of providers per facility type. The table shows that the facilities with the most average staff are hospitals (44 providers), rural hospitals (18.5), community hospitals (14.2), and private clinics with admission services (7.4). Facilities with the lowest average amount of staff are “other” facilities (3.0), private clinics with outpatient services only (2.3), and Nurse-midwife facilities (1.6).

Across all facility types, nurse-midwives are found most frequently at an average of 2.8 per facility. This is followed by clinical officers (average of 0.8 per facility), then medical assistants (0.5 per facility). There are approximately 0.3 doctors found per private facility, with hospitals having on average 1.9 doctors, followed by private clinics with admission services (1.1 doctors). Among pharmacies tracked separately via the pharmacy questionnaire, the average number of qualified staff per pharmacy is 1.4.



4.1.7 Drugs/stock

FIGURE 13: PERCENT OF FACILITIES THAT SELL AND DO NOT SELL DRUGS, AND FOR WHAT PRICE (N=669)

Four distinct groups exist among facilities with respect to the provision of drugs. The first group, 22 percent of all facilities, does not provide drugs at all. The second group, those facilities that do offer drugs and provide some of those drugs for free, make up 20 percent of all non-pharmacy facilities. The third group, facilities that sell drugs and do not provide any drugs for free, make up 24 percent. Thirty-four percent of facilities provide all drugs for free (Figure 13).

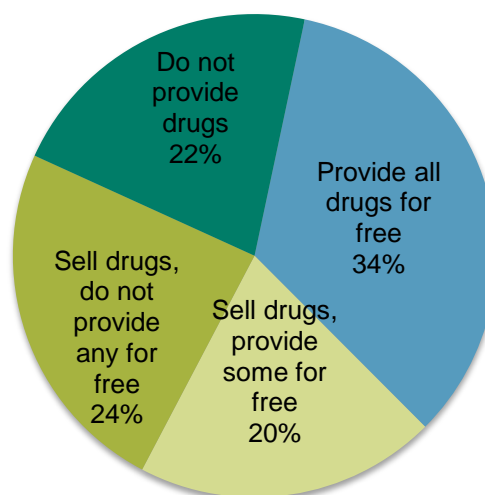


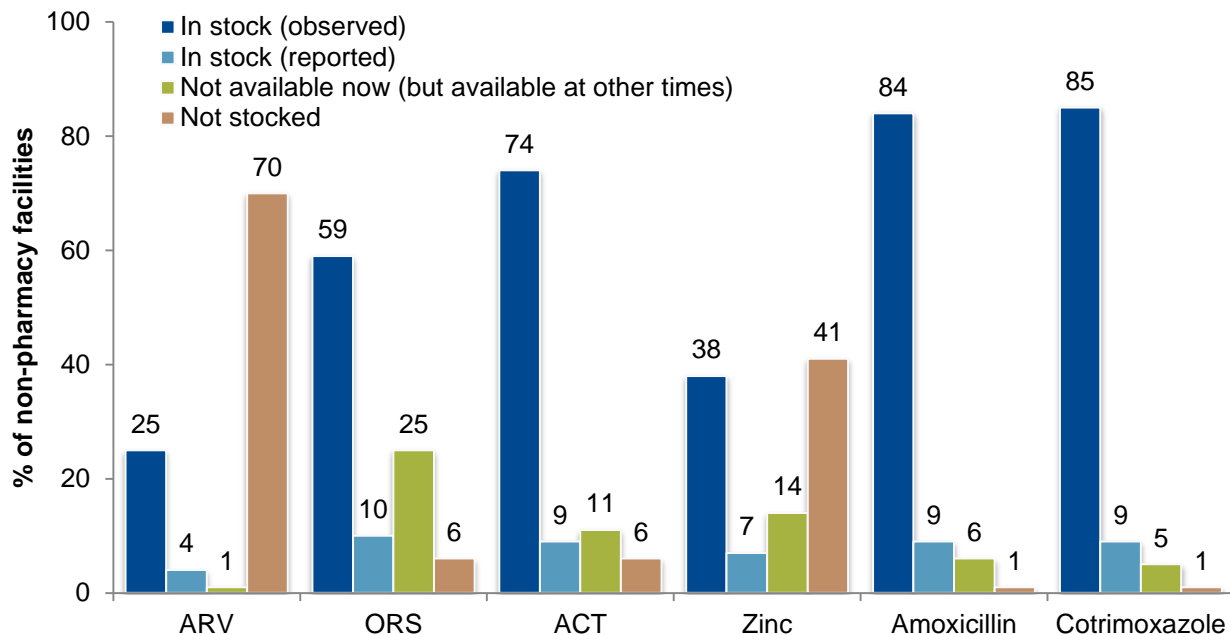
TABLE 13: PERCENT OF FACILITIES THAT SELL AND DO NOT SELL DRUGS, BY FACILITY TYPE

Facility type	Do not provide drugs (%)	Offer all drugs for free (%)	Sell drugs: provide some for free (%)	Sell drugs: do not provide drugs for free (%)
Community hospital	11	68	16	5
Health centre	6	59	32	3
Hospital	15	52	19	11
Mobile Clinic	0	100	0	0
Nurse-midwife Facility	33	33	33	0
Private clinic with admission services	27	16	27	30
Private clinic with outpatient services only	23	27	17	33
Rural hospital	17	50	33	0
Other	69	24	3	0
Average	21%	34%	20%	24%
Total (n)	141	227	134	161

Table 13 breaks down the information in Figure 13 by facility type. Twenty-one percent of all facilities do not provide drugs at all, 34 percent offer all drugs at the facility for free, 20 percent provide some drugs for free and some for a price, and 24 percent sell drugs and do not offer any for free. Notably, 68 percent of community hospitals, 59 percent of health centres, 52 percent of hospitals, and 50 percent of rural hospitals offer all drugs on hand for free. One third (33%) of private clinics with outpatient services charge a

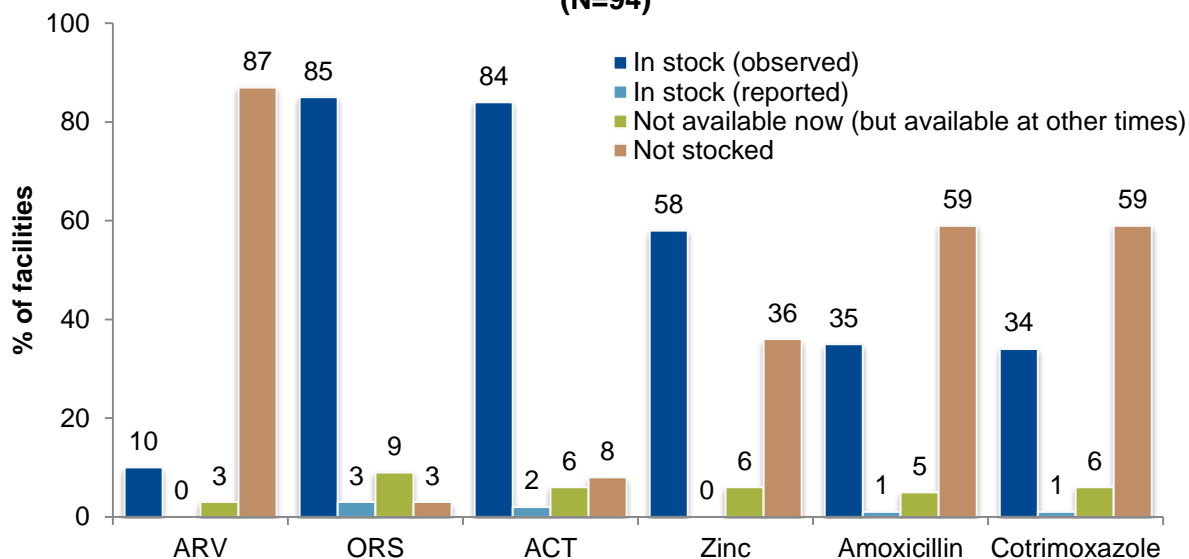
price for all drugs at the facility. Regarding facility types that offer a combination of some price and zero price drugs, this characterizes 33 percent of rural hospitals, 32 percent of health centres, and 27 percent of private clinics with admission services only.

FIGURE 14: PERCENT OF NON-PHARMACY FACILITIES STOCKING CERTAIN DRUGS (N=669)



Stock of six specific drugs was taken at each facility as part of the questionnaire. Figure 14 shows that drugs with the highest in-stock (observed) rates are cotrimoxazole (85% of facilities), amoxicillin (84%), and ACT (74%). One in four facilities has a current stock of ARVs, with 70 percent of facilities reporting that they do not stock ARVs. Stock of zinc is somewhat balanced: 38 percent of facilities were observed with zinc in-stock whereas 41 percent report that they do not stock zinc. Nearly three out of five facilities have an observed stock of ORS; however ORS has the highest “not available now” (stock-out) rate among facilities at 25 percent

FIGURE 15: PERCENT OF PHARMACIES WITH DRUGS IN STOCK (N=94)

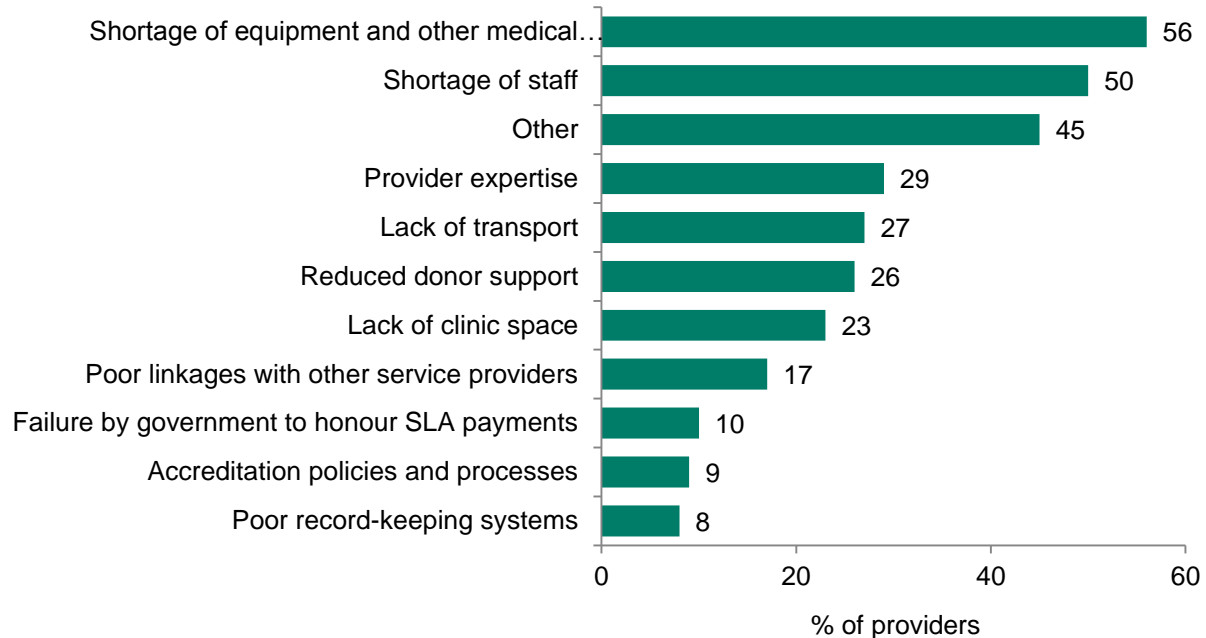


The same questions were asked on the pharmacy questionnaire (Figure 15). With 94 pharmacies reporting, 85 percent have ORS in stock, 84 percent have ACT in stock, and 58 percent stock zinc. ARVs are the most common drug not stocked (87%), followed by amoxicillin and cotrimoxazole (59% each). The most common drug to be stocked-out is ORS at 9 percent of pharmacies, followed by ACT (8%).



4.1.8 Barriers to expanding business

FIGURE 16: PROPORTION OF FACILITIES CITING EACH ISSUE AS A BARRIER TO EXANSION (N=669)



Facilities were asked to identify significant barriers to expanding their businesses (Figure 16). The most commonly cited barrier is a shortage of equipment and other medical supplies (56% of facilities), followed by shortage of staff (50%), and “other” (45%). The list is rounded out by provider expertise (29%), lack of transport (27%), and reduced donor support (26%). The most common answers to “other” are financial/economic constraints—which make up more than 50 percent of “other” responses, lack of electricity, shortage of staff housing, price of drugs, and competition. The total exceeds 100 percent since respondents can choose more than one barrier.

TABLE 14: PERCENT OF FACILITIES REPORTING BARRIERS TO EXPANDING THEIR BUSINESS, BY AFFILIATED FACILITY

Barrier to expanding business	CHAM (%)	PSI (%)	Bluestar (%)	Other (%)	Non-affiliated (%)
Shortage of equipment and other medical supplies	69	66	43	52	50
Shortage of staff	70	55	40	56	38
Other	45	45	57	41	47
Provider expertise	35	37	29	27	22
Lack of transport	52	36	19	22	18
Reduced donor support	55	31	10	29	12
Lack of clinic space	27	29	28	27	18
Poor linkages with other service providers	23	18	15	12	16
Failure by government to honor SLA payments	26	10	4	7	4
Accreditation policies and processes	7	12	22	5	9
Poor record-keeping systems	10	15	4	4	7
Total (n)	168	117	68	133	261

Table 14 breaks down Figure 16 further. For CHAM-affiliated facilities, 70 percent choose shortage of staff as a barrier to expanding business, followed by 69 percent citing shortage of equipment and other medical supplies, then reduced donor support (55%). Among PSI-affiliated facilities, the most common barrier to expanding business is shortage of equipment and other medical supplies (66%), followed by shortage of staff (55%), “other” (45%), and provider expertise (37%). For BlueStar it is “other” (57%), shortage of equipment (43%), and shortage of staff (40%). Among non-affiliated commercial facilities, shortage of equipment is cited by 50 percent of facilities, followed by “other” (47%), shortage of staff (38%), and provider expertise (22%). “Other” barriers cited were overwhelmingly financial/economic constraints, with additional answers specified in the paragraph above.



4.2 Providers

The research firm interviewed a total of 2,492 providers. These included 17 types of providers ranging from clinical officers, doctors, and nurses to pharmacy assistants, lab technicians, and physiotherapists. The following portion of the report covering providers is broken into four sections: demographics, sector work, affiliation and registration, and training.

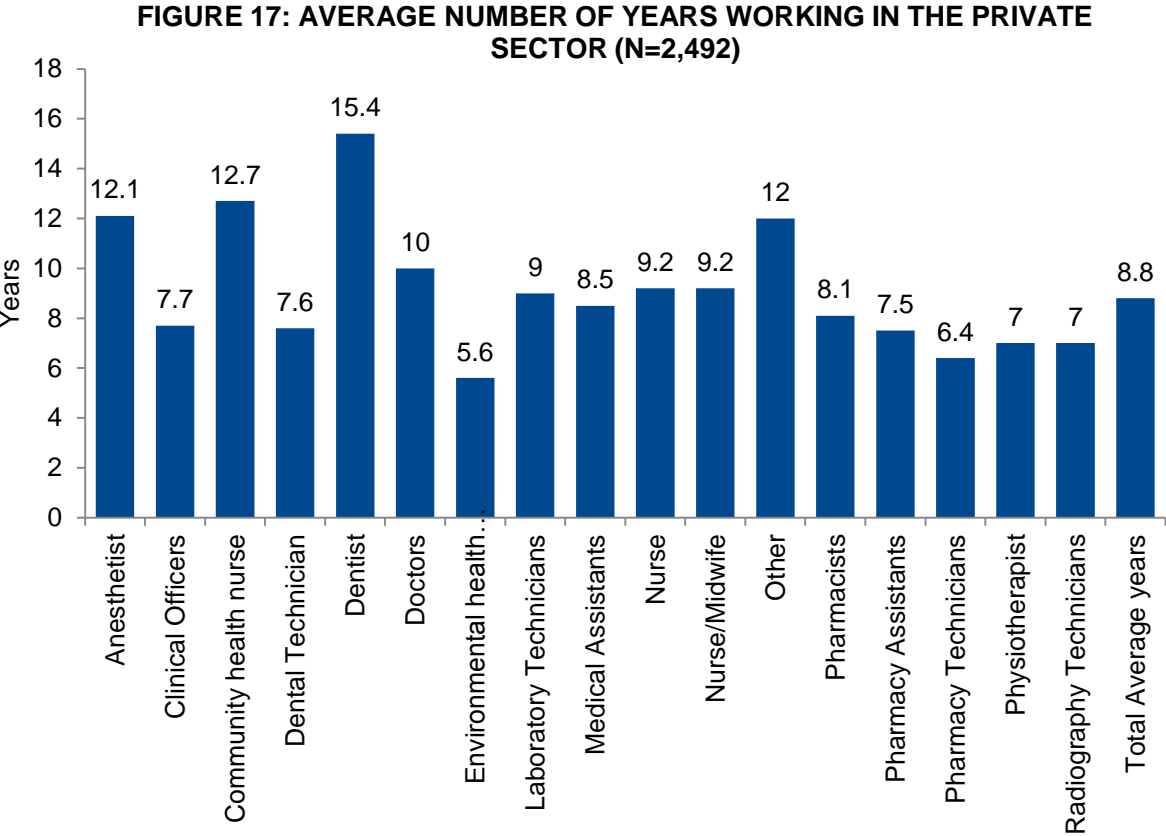


4.2.1 Demographics

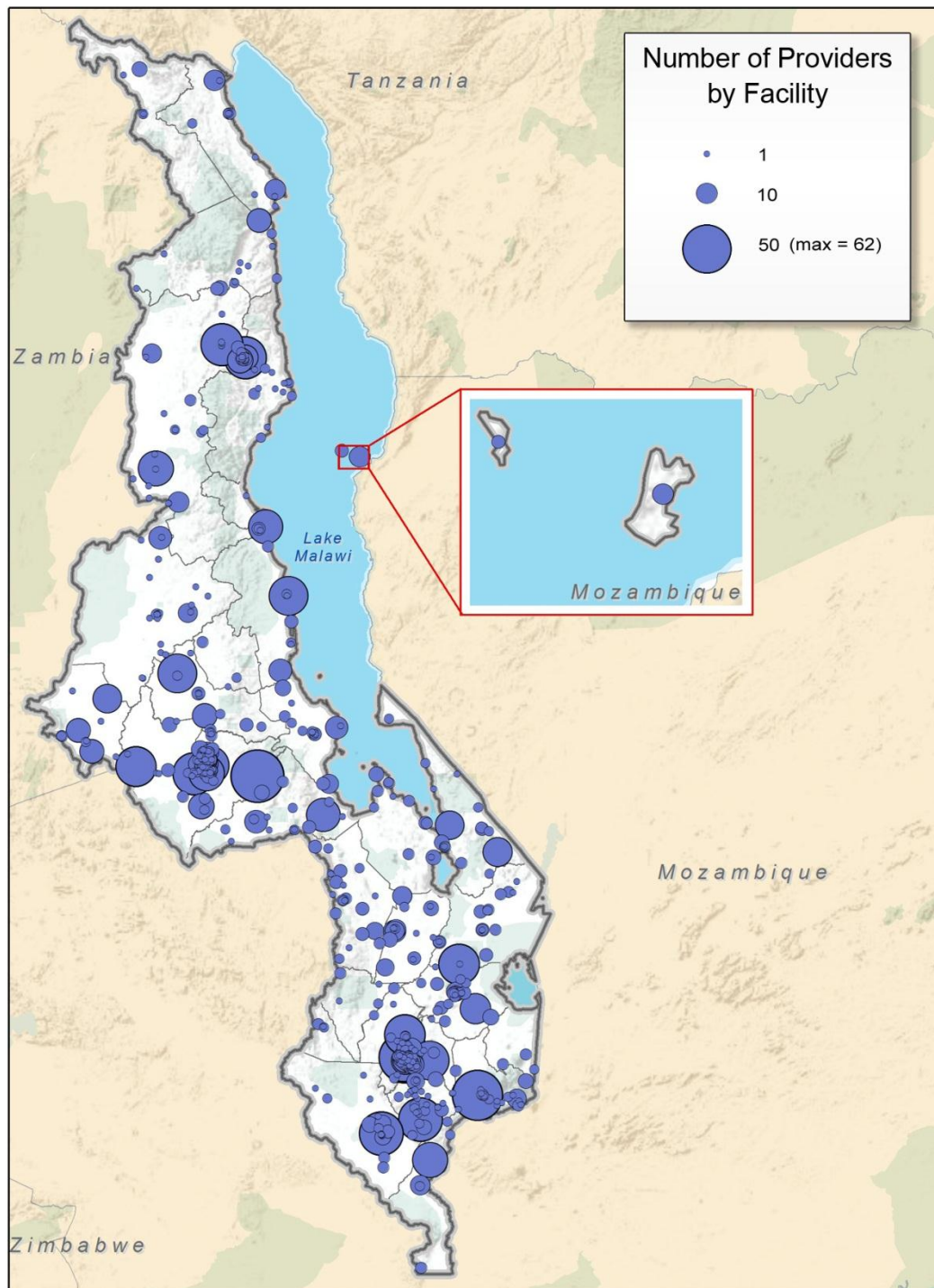
TABLE 15: FREQUENCIES OF PROVIDER TYPES

Provider Type	Freq.	Total (%)
Nurse-Midwives	1285	52
Clinical Officers	393	16
Medical Assistants	248	10
Nurse	149	6
Laboratory Technicians	142	6
Doctors	95	4
Dental Technician	41	2
Radiography Technicians	37	2
Physiotherapist	28	1
Pharmacy Technicians	25	1
Pharmacists	13	<1
Dentist	11	<1
Anesthetist	9	<1
Community health nurse	7	<1
Environmental health officer	5	<1
Pharmacy assistants	3	<1
Other	1	<1
Total (n)	2,492	100%

Of types of providers, the largest group by far is nurse-midwives at 52 percent of providers, followed by clinical officers (16%), and medical assistants (10%) (Table 15). There are 95 private doctors in Malawi, constituting 4% of the sample. The gender ratio of providers is close to even at 53 percent female, 47 percent male.



Among the seventeen types of providers, the average number of years worked in the private health sector is 8.8. Dentists have the highest average at 15.4 years, followed by community health nurses (12.7), anesthetists (12.1), and “other” (12). Physiotherapists (7 years), radiography technicians (7 years), pharmacy technicians (6.4 years), and environmental health officers (5.6 years) have the lowest averages. Doctors average 10 years, and nurses and nurse-midwives average 9.2 years each (Figure 17).

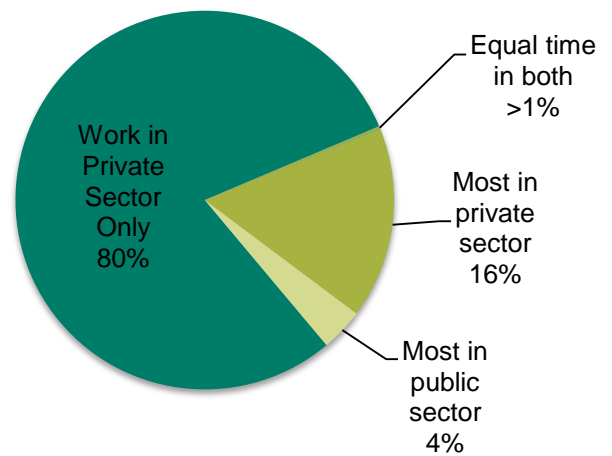




4.2.2 Dual Practice

Four out of five private providers interviewed respond that they work only in the private sector. Sixteen percent of providers work mostly in the private sector, 4 percent of all providers work mostly in public, and less than one percent of all providers work equal time in both sectors (Figure 18).

FIGURE 18: PRIVATE PROVIDERS WORKING IN PRIVATE AND PUBLIC SECTOR (N=2,492)



4.2.3 Affiliation and registration

Forty-eight percent of providers in Malawi work in facilities affiliated with an organization (Figure 19). CHAM is the largest with 35 percent of all providers working in CHAM-affiliated facilities, followed by “other” (6% of providers), BlueStar (4% of providers), and PSI (3% of providers).

FIGURE 19: PROPORTION OF PROVIDERS WORKING IN FACILITIES AFFILIATED WITH AN NGO OR OTHER ORGANIZATION (N=2,492)

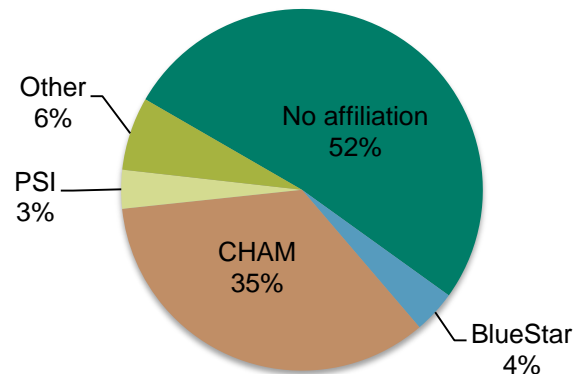


TABLE 16: PERCENT OF PROVIDERS WORKING IN AFFILIATED FACILITIES

Provider Type	Bluestar (%)	CHAM (%)	PSI (%)	Other (%)	Non-Affiliated (%)
Anesthetist	0	67	0	0	33
Clinical Officers	10	30	5	7	48
Community health nurse	0	57	0	14	29
Dental technician	0	20	3	3	75
Dentist	0	9	0	0	91
Doctors	0	23	0	6	71
Environmental health officer	0	40	0	20	40
Laboratory technicians	0	30	1	5	63
Medical assistants	8	27	10	6	48
Nurse	4	35	2	6	53
Nurse-midwives	2	40	3	6	49
Other	0	0	0	0	100
Pharmacists	0	0	8	15	77
Pharmacy assistants	0	0	0	0	100
Pharmacy technicians	0	20	0	8	72
Physiotherapist	0	4	0	32	64
Radiography technicians	0	43	0	0	57
Total/average	4%	35%	3%	6%	52%
Total (n)	100	872	75	150	1,296

When split out by facility affiliation, 52 percent of all providers work in non-affiliated facilities, 35 percent work in CHAM-affiliated, 6 percent in “other”, 4 percent in BlueStar, and 3 percent in PSI-affiliated facilities. Of the most common provider types, 49 percent of all Nurse-Midwives, clinical officers, and medical assistants work in non-affiliated facilities, while 40 percent 30 percent and 27 percent of the same provider types, respectively, work in CHAM facilities. Of doctors, 71 percent are in non-affiliated facilities and 23 percent are in CHAM (Table 16).

TABLE 17: PERCENT OF PROVIDERS REGISTERED TO PRACTICE IN MALAWI

Registration status	Freq.	%
Yes, registration certificate not seen	2,092	84
Yes, registration certificate seen	349	14
No	37	2
Total (n)	2,492	100%

Registration with regulatory bodies in Malawi is high (Table 17). Though 98 percent of providers indicate they are registered with a regulatory body, a registration certificate was observed in only 14 percent of interviews. An analysis of registered providers shows that nearly 90 percent are registered with the Medical Council of Malawi or the Nurses Council of Malawi.

TABLE 18: PERCENT OF PROVIDERS WHO ARE MEMBERS OF A PROFESSIONAL ORGANIZATION

Professional organization	Freq.	%
Member of a professional org.	2,371	96
Not a member of a professional org.	97	4
Total (n)	2,492	100%

Ninety-six percent of providers belong to a professional medical organization in Malawi (Table 18). Examples of professional organizations included the Medical Council of Malawi, Society of Medical Doctors in Malawi, National Paramedical Practitioners of Malawi, and Malawi Nurses Union.

TABLE 19: PERCENT OF PROVIDERS IN CERTAIN PROFESSIONAL ORGANIZATIONS

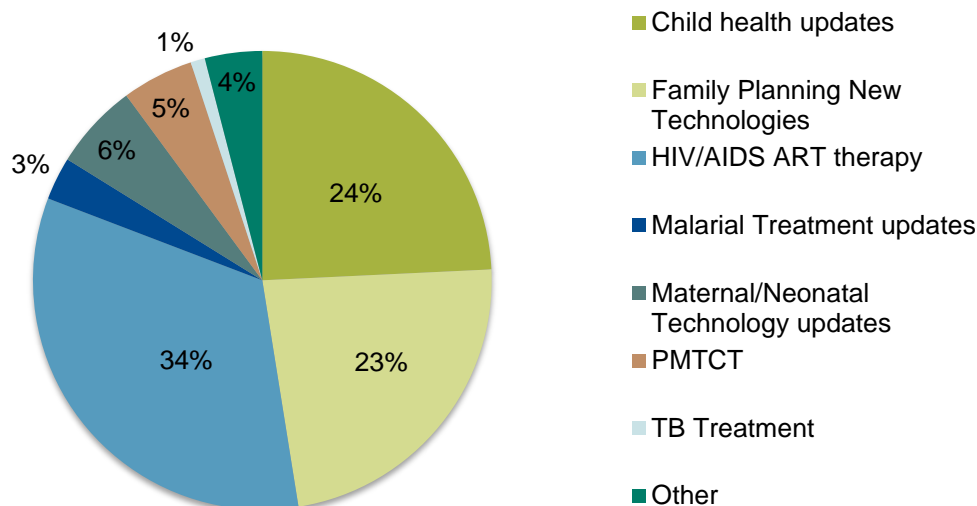
Professional organization	Freq.	%
Medical Association of Malawi (MAM)	930	37%
National Organization of Nurses and Midwives of Malawi (NONM)	735	29%
Other: Nurses Council of Malawi (regulatory board)	576	23%
Other: unspecified	96	4%
National Paramedical Practitioners of Malawi (NAPPAM)	105	4%
No affiliation	97	4%
Society of Medical Doctors in Malawi (SMD)	45	2%
Other: Pharmacists Association	24	1%
Other: Dental Association	4	<1%
Health Services Administrators Association (HSAA)	2	<1%
Association for Environmental Health Officers (AssEHO)	3	<1%
Total (n)	2,617	105%

Table 19 breaks down the percentages of providers belonging to certain professional organizations. Thirty-seven percent of providers belong to MAM, 29 percent are members of the NONM, and 23 percent responded “Other” and chose Nurses Council of Malawi. (It is believed that many providers were confused by the term “professional organization” as the Nurses Council of Malawi is a regulatory board.) Although it appears providers belong to only one professional association, some chose more than one which accounts for the above 100 percentage.



4.2.4 Demand for Training

FIGURE 20: TOP PRIORITY CLINICAL TRAINING DESIRED BY PROVIDERS (N=2,492)



When asked what their top priority for clinical training is, 34 percent of providers state HIV/AIDS ART therapy, 24 percent say child health updates, and 23 percent indicate family planning new technologies. At the bottom of the list, 6 percent request maternal/neonatal technology updates, 3 percent say malarial treatment updates, and 1 percent indicate TB treatment (Figure 20).

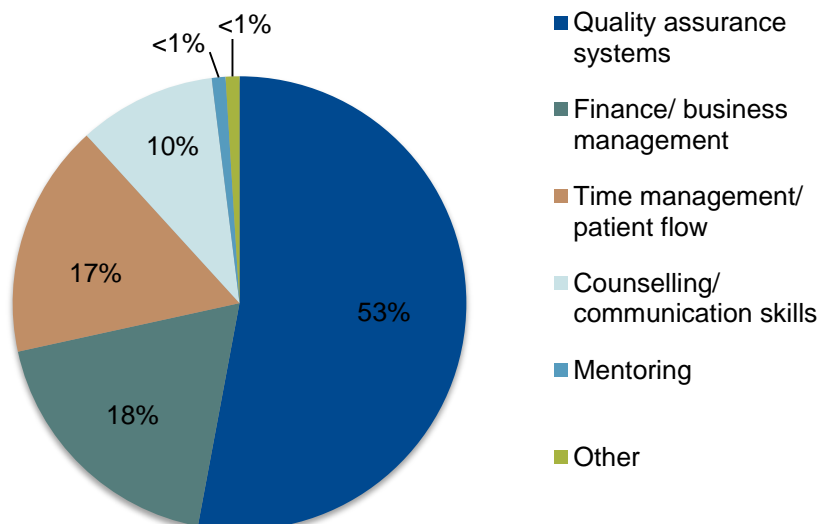
TABLE 20: PERCENT OF PROVIDERS CHOOSING TOP PRIORITY CLINICAL TRAININGS

Provider Type	Child health updates (%)	Family planning new technologies (%)	HIV/AIDS ART therapy (%)	Malarial treatment updates (%)	Maternal/ neonatal technology updates (%)	PMTCT (%)	TB treatment (%)	Other (%)
Anesthetist	33	11	33	0	11	0	0	11
Clinical officers	30	25	27	3	6	4	1	3
Community health nurse	57	14	14	0	0	14	0	0
Dental technician	21	0	28	3	0	3	8	38
Dentist	0	0	25	0	0	0	0	75

Doctors	31	10	26	3	10	5	2	11
Environmental health officer	60	0	40	0	0	0	0	0
Laboratory technicians	7	7	50	17	0	6	4	10
Medical assistants	32	25	32	2	4	2	0	2
Nurse	34	27	28	5	3	3	0	1
Nurse-midwives	22	27	34	2	7	7	0	0
Other	0	0	100	0	0	0	0	0
Pharmacists	8	25	50	0	17	0	0	0
Pharmacy assistants	33	33	33	0	0	0	0	0
Pharmacy technicians	16	8	44	4	0	4	8	16
Physiotherapist	25	0	25	4	0	0	0	46
Radiography technicians	3	8	32	3	5	3	14	32
Total average	24%	23%	34%	3%	6%	5%	1%	4%
Total (n)	598	573	847	75	150	125	23	100%

Broken out by provider type, 50 percent of lab technicians, 44 percent of pharmacy technicians, and 34 percent of nurse/midwives choose HIV/AIDS therapy as a top priority for clinical training. Thirty percent of clinical officers, 31 percent of doctors, and 34 percent of nurses choose child health updates, the second most popular clinical training selected. Family planning new technologies is indicated as a top priority clinical training equally by 27 percent of nurses and nurse/midwives, 25 percent of medical assistants, and 10 percent of doctors (Table 20).

FIGURE 21: TOP PRIORITY SUPPORTIVE SERVICE TRAINING DESIRED BY PROVIDERS (N=2,492)



The top priority for supportive training is quality assurance systems, requested by 53 percent of providers, followed by finance/business management (18%), time management/patient flow (17%), and counseling/communication skills (10%) (Figure 21).

TABLE 21: PERCENT OF PROVIDERS CHOOSING TOP PRIORITY SUPPORTIVE TRAININGS

Provider Type	Quality assurance systems (%)	Finance/ Business Management (%)	Time management/ Patient flow (%)	Counseling/ communication skills (%)	Mentoring (%)	Other (%)
Anesthetist	33	33	11	22	0	0
Clinical Officers	53	27	12	8	0	0
Community health nurse	71	14	14	0	0	0
Dental Technician	60	28	8	5	0	0
Dentist	70	10	10	10	0	0
Doctors	61	24	9	5	1	0
Environmental health officer	60	20	20	0	0	0
Laboratory Technicians	83	6	6	4	0	0
Medical Assistants	40	33	17	9	0	0
Nurse	52	16	21	10	1	1
Nurse/Midwives	53	15	20	12	0	0
Other	0	100	0	0	0	0
Pharmacists	27	55	18	0	0	0
Pharmacy Assistants	67	33	0	0	0	0
Pharmacy Technicians	80	4	8	4	0	4
Physiotherapist	33	26	22	11	0	7
Radiography Technicians	89	3	8	0	0	0
Total	54%	19%	17%	10%	<1%	<1%
Total (n)	1,346	473	424	249	5	5

Broken out by provider type, the most common supportive training selected (quality assurance systems) was chosen by 61 percent of doctors, 53 percent of nurse/midwives and clinical officers, 40 percent of medical assistants, and 83 percent of laboratory technicians. Finance/business management, the second most popular supportive training desired, was chosen by 33 percent of medical assistants, 27 percent of clinical officers, and 24 percent of doctors. Time management/patient flow was indicated as a top priority supportive training by 20 percent of nurse/midwives, 17 percent of medical assistants, and 9 percent of doctors (Table 21).

5. DISCUSSION

The private sector plays a considerable role in the delivery of health services in Malawi, yet until now its scope has been inadequately defined. The SHOPS private sector mapping exercise was the first attempt to comprehensively characterize the size and geographic distribution of the private health sector in the entire country. The maps created by this exercise and the information obtained from private facility directors and providers are available for use by several different stakeholders to inform key programmatic decisions.

It should be noted that the mapping exercise, although intended to be a full census, did not include every single private facility in the country. A small proportion of known facilities on the initial list did not complete facility interviews, and not all providers in each facility completed the provider interviews; it is possible that some small private facilities not included in the official lists were not identified even through snowball sampling during the exercise. However, though not completely exhaustive, we feel confident that this mapping includes the vast majority of private facilities in the country. Another limitation is that the surveys relied on self-reported information from facility managers and providers, who may have under- or over-reported certain items.

The visual representation of the geographic distribution of private facilities on maps resulting from this exercise is particularly useful because it provides a quick way for stakeholders to view where private facilities are located in relation to the population and identify potential gaps in private sector service provision or coverage. Private facilities are underrepresented in rural areas, where most of the population resides; this was particularly true for pharmacies, which tend to be concentrated in urban areas. There are also regional and district variations in the distribution of private facilities, with most located in the South region and very few in the North region. At the district level, there is a wide range in the density of private providers per 10,000 population.

Private providers report delivering a range of key services, with most providing at least one MCH, RH, or FP service/method. Two-thirds offered at least one HIV-related service as well. However, gaps remain within each service delivery area. For example, among those facilities offering MCH services, fewer than half offer immunizations, labor and delivery, or neonatal or postnatal services; IUDs are available from just 20% of the facilities that provide any family planning method. If the population's services are not adequately covered by the public sector, then these are areas in which to explore a potentially expanded role of the private sector. Additional district-level analysis will

pinpoint service delivery gaps and identify areas where private providers could potentially be contracted to fill these gaps.

There are a significant number of independent for-profit health service facilities in Malawi that not associated with either a faith-based organization (CHAM) or affiliated with an NGO franchise. Forty percent of facilities are independently managed. The remainder – 29 percent are faith-based facilities; 35 percent are affiliated with an NGO, primarily a Blue Star or PSI franchise; and five percent are associated with a business or estate—receive some financial, technical or managerial support from their affiliated organization.

The finding that only a third of private facilities noted they had offered any new services or products in the past twelve months suggests that private facilities may have the capacity to expand current offerings. Doing so may require interventions to update their knowledge and skills (particularly with respect to new services) or identifying barriers to providing new services and implementing strategies to remove those barriers. The majority of private providers also noted that they do not conduct any outreach services in their catchment areas. It may be appropriate to work with some portion of private facilities – particularly those that serve large numbers of patients or offer a range of services, especially in rural areas – to expand their capacity to offer outreach services and better meet communities' unmet needs.

Private facility directors noted several constraints to expanding their businesses. Lack of equipment and medical supplies was the primary cited barrier, followed closely by staff shortages and other financial or economic constraints. Tailored training and follow-up support related to finance/business management might assist facilities with addressing related issues such as budgeting and cash flow, as well as how to obtain financing to expand infrastructure and thus capacity to provide services. Private providers were most interested in technical training related to ART, child health, and new technologies in family planning; however, they also were interested in training on quality assurance systems and finance/business management.

The data from this mapping exercise will be used by variety of stakeholders in Malawi. In addition, the comprehensive list of private providers compiled by SHOPS can serve as the initial sampling frame for future interventional studies of private providers, and should be reviewed and edited annually so that it stays current. Analyses based on the maps produced by this activity can be used by decision makers to identify areas where private sector providers can potentially play a larger role, and subsequently to work towards enabling them to expand their role while maintaining their complementarity to the public sector facilities serving the same areas. Decision makers now also have a

better understanding of the types of technical and supportive trainings that would be most useful from the perspective of private providers in Malawi.

6. USING THE DATA

The data garnered through this activity has the potential to be used for a variety of programmatic and policy purposes by a range of health sector and non-health sector stakeholders. The following section details a few ways the data can be best used.

Use maps to visualize needs, gaps, and overlap

The inclusion of GPS points in questionnaires used in this exercise has allowed for the visualization of data through maps. Used in conjunction with already existing geographic public health sector, disease burden, and population statistics data, the potential for interesting and relevant visualizations of health data is significant. National and district level governments, NGOs, and other private sector health and-non health stakeholders can:

- Overlay geographic maps of private sector coverage with high priority health districts in Malawi, giving an immediate and clear picture of where health sector needs and the private sector intersect while simultaneously exposing critical gaps in coverage. This can be used for national and district level health policy planning, as well as strategic programmatic decisions for NGO and other private sector health actors.
- Create an online registry of private providers and facilities, easily sorted and filtered to accommodate needs and preferences.
- Aggregate all maps produced into a private health sector map book or atlas, pinpointing the location of each facility geographically, and making it available to national and district level health stakeholders. The atlas might also include public sector facilities and provider data so that the full extent of health coverage can be visualized.
- Get a better picture of the geographic spread of the commercial sector versus the NGO sector in order to best allocate funding and programmatic focus.

Link private providers to desired clinical trainings

Improving quality in the private sector might be achieved through continuing medical education of providers. This ensures that providers are being regularly exposed to medical updates and new technologies, and continue to give correct and high quality treatment. Health sector stakeholders can use data on trainings from this report to:

- Distinguish which clinical trainings (child health, HIV, malaria, etc.) are of the highest priority to providers, and which providers have not received certain trainings. Going one step further, distinguish which types of providers request which types of clinical training, and where these providers are geographically concentrated. Not only does this show what type of training is important to what type of provider (e.g. nurses might overwhelmingly choose malaria training), it also reveals geographic gaps in trained providers. This information can be used to better organize regional trainings, increasing the geographic concentration of qualified practitioners in a specified area. Details on training are not presented in the report but are available upon request.
- Separate out trainings between affiliated/NGO facilities and providers and non-affiliated commercial sector facilities and providers, in order to better target these sub-sectors.

Give targeted technical assistance to grow businesses

Examining the barriers to expanding businesses most frequently cited by facilities is important in determining how to take on the challenges of growing the private health sector in Malawi. Additionally, in order to create a more viable, sustainable private sector, supportive trainings for providers, such as communications, accounting, or mentoring, would be effective in building business capacity. Health and non-health sector actors can utilize data from this activity to:

- Identify the most common barriers to expanding businesses, among which types of facilities, and in what geographic area. Work to establish partnerships with local private sector industries, financial entities, and educational institutions to move towards breaking down these barriers.
- Distinguish which supportive trainings (counseling, finance, mentoring, etc.) are of the highest priority to providers, to which types of providers, and where these are geographically concentrated. Similar to the clinical trainings mentioned above, supportive trainings organized by provider type and placed strategically in regions where demand and need is highest will increase private business capacity most effectively.
- Provide targeted financial technical assistance to private health sub-sectors, such as NGO/affiliated sector and commercial, non-affiliated sector, depending on the focus of projects.

Strengthen professional provider associations

Professional provider associations in Malawi are strategically poised to be powerful actors in the improvement of the private health sector in Malawi. With the right data on their members, these associations can make strategic programmatic decisions, placing

their funds in activities that will achieve the highest impact at the lowest cost. With data from this exercise, associations can:

- Acquire registries of providers who have not been trained in certain clinical areas, and of those who desire specific clinical and supportive trainings, so that they may better cater to the needs and desires of their members.
- Advocate at the district and national level to members of the private health sector technical working group on behalf of their members' needs and wants regarding trainings, barriers, and other concerns.
- Build and strengthen their membership base by geographically visualizing its extent, allowing them to strategically allocate funds for outreach and support activities.

Affect health policy and regulations

Policy implications of this study are numerous. Coverage, or lack thereof, of the private sector in certain key health areas can inform government health strategies. With a clearer picture of where the private sector operates and its makeup, policy actors both within and outside of the government can ensure that private sector capacity is tapped when needed to fill coverage gaps. Stakeholders and actors involved at the policy level can use data from this activity to:

- Identify private providers to fill service coverage gaps.
- Include private sector representatives in national health sector strategy and health policy revision discussions.
- Ensure that the private sector is held to the same licensing and service delivery standards as the public sector and that the private sector participates in the review and acceptance of those standards.

Improve access to key health services and drugs

Data from this activity on services and drugs offered is crucial in understanding the role that the private sector plays in health care coverage. With this data, health sector donors and project implementers can make strategic decisions regarding what services to focus on, and which drugs to make available in the market. By visualizing service area coverage using maps, actors can better localize their activities to address the greatest need.

- Identify the geographic gaps in key services such as reproductive health, family planning, HIV/AIDS, and MCH. Identify the least offered services of each type and work with health sector donors, NGOs, and district health authorities to ensure that gaps in services are filled and health coverage is extended to the full population.
- Identify the geographic gaps in family planning products, ARV, ORS, zinc, and other essential products and drugs, and focus efforts to increase access in those

areas. Identify the least offered FP products as well as drugs with highest stock-out rates, and work with actors in the supply chain to ensure that these products and drugs are more frequently available.

Disseminate knowledge to the public

The data collected in this activity is useless unless health sector actors have access to the data and utilize it to effect key programmatic decisions in the health sector. Making the data available to the public is an important step in ensuring that it can be used by a variety of actors and viewed as a model for future studies. This data could best be disseminated to the public by:

- Hosting data on a public web-based platform showcasing district level static maps. Additionally, this platform could be interactive, allowing the user to make analyses based on any number of health indicators.
- Disseminating electronic copies of this report to private health sector stakeholders both within and outside of Malawi.
- Providing hard or electronic copies of this report in all major Malawi government national and district level health offices.