FINAL REPORT FOR

A study on Opportunities for Private Sector Participation in TB Control

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ACRONYMS AND ABBREVIATIONS

CDC	Centre for Diseases Control
CHAI	Clinton Health Access Initiative
CHAM	Christian Health Association of Malawi
CHAL	Christian Health Association of Lesotho
CHAZ	Christian Health Association of Zambia
CHW	Community Health Worker
CIDRZ	Centre for Infectious Disease Research of Zambia
CME	Continuous Medical Education
CPD	Continuous Professional Development
DHIS	District Health Information System
DS-TB	Drug Sensitive-TB
DST	Drug Sensitivity Testing
DOTS	Directly Observed Treatment Short Course
EQA	External Quality Assurance
FBO	Faith Based Organisation
HCW	Healthcare Workers
HPCZ	Health Professionals Council of Zambia
HSAs	health surveillance assistants
IEC	Information, Education and Communication
IPC	Infection Prevention and Control
IPT	Isoniazid Preventive Therapy
LTBI	Latent TB Infection
MBCA	Malawi Business Coalition for HIV and AIDS
MCM	Medical Council of Malawi
MDR	Multi-Drug Resistance
MOH	Ministry of Health
MTHUO	Malawi Traditional Healers Umbrella Organisations
MSD	Mine Safety Department
NGO	Non-Governmental Organisation
NHI	National Health Insurance
NTP	National TB Programme

NTRL	National TB Reference Laboratory
OHSI	Occupational Health and Safety Institute
PMPB	Pharmacy, Medicines and Poisons Board
PPM	Public Private Mix
PPP	Public Private partnership
QA	Quality Assurance
SADC	Southern Africa Development Community
SATBHSS	Southern Africa TB and Health Systems Strengthening Project
THPAZ	Traditional Health Practitioners of Zambia
WRDs	WHO Recommended Rapid TB Diagnostics
ZAMRA	Zambia Medicines Regulatory Authority

EXECUTIVE SUMMARY

BACKGROUND, OBJECTIVES AND METHODOLOGY

The global response to TB has evolved over time since the development of the first DOTS strategy in 1994. Overtime, all care providers, including private health sector, have been recognised as key in addressing the TB burden given that patients seek services from all providers. The current End TB Strategy lays emphasis on finding missing TB cases (among other strategies) in order to end TB as a public health threat by 2030. Engagement of private healthcare providers has gained importance as some of the missing cases are likely to be outside the public health system. Private healthcare providers are diverse. They include not-for profit healthcare providers (faith-based and non-governmental organisations); for-profit health care providers ranging from large hospitals, clinics, individual doctor practices (solo practices), pharmacies and stand-alone laboratories; and traditional healers as informal private healthcare providers.

The objectives of this study were two-fold:

1. To conduct an assessment of the level of engagement of private sector, NGO's, Faith Based clinics and hospitals, and public-private collaboration in SADC countries on TB control and identify opportunities, risks, challenges and key strategic priorities to further expand private sector support to TB prevention and care.
2. To provide recommendations on the development of a regional strategy for private sector engagement in TB control based on identified opportunities and lessons learnt.

The study was carried out in Zambia, Mozambique, Malawi and Lesotho. Thematic areas covered by this study were regulatory environment, models of private healthcare providers' engagement, incentives and enablers, financing, capacity building, TB services provided by private healthcare providers, coordination, communication and advocacy, monitoring and evaluation and risks.

The study methodology involved (i) review of relevant documents that provided insights into lessons in engaging private healthcare providers globally and country specific documents on engagement of private health sector in TB control; (ii) key informant interviews, (iii) quantitative data collected through administering a questionnaire to a sample of private healthcare providers, and (iv) focus group discussions with traditional healers. Data was analysed using qualitative and quantitative techniques.

This report details the findings and recommendations of the study for each country and the overarching conclusions and strategic recommendations.

Conclusions

Regulatory environment

1. Legislation and regulations

a) Although the regulatory environment for healthcare providers in the four study countries varies, weak capacity to enforce or monitor compliance with regulations is common to all study countries. Regulatory bodies, whether autonomous or MOH directorates have inadequate funding from government and inadequate number of staff.

b) Regulation for mine health and safety: The regulatory environment for mine health and safety, more specifically occupational health, is inadequate in all study countries except for Zambia. Zambia has in place legal frameworks to support mine health and safety and the management of occupational health including TB and silicosis; and institutions are in place to operationalise the regulations. In Malawi, Mozambique and Lesotho, there are also initiative to strengthen mine health and safety regulations and capacity of inspectorate departments to improve compliance to regulations.

c) Regulation of traditional healers: In all the countries, there is no formal legislation regulating traditional healers or traditional medicine. However, there are coordinating bodies in place focusing on holding meetings for members to discuss issues of their interest and interacts with MoH in various health matters. These associations vary in capacity with the associations in Malawi and Zambia having secretariats, which are poorly staffed and funded; the association in Lesotho is not functioning at national level and district level association work on their own; while coordination of traditional healers in Mozambique is done by the MoH directorate of traditional medicine, however the associations of traditional healers themselves are fragmented.

2. Self-regulation

a) Professional bodies for medical practitioners and for industry (such as chambers of mines) are expected to promote self-regulation. However, these bodies prioritise the interest of their members and provision of continuous professional development rather than strengthening compliance to regulations through instruments like the code of conduct.

3. TB related regulations

a) In all countries, TB related regulations are clearly set out in the TB guidelines. However, NTPs prioritise monitoring of use of the guidelines in public and FBO/NGO facilities than in for-profit private healthcare providers. Dissemination of TB guidelines to for-profit private healthcare providers is not as coordinated as it is for public healthcare providers.

Models of engagement

Models of engagement of private healthcare providers vary by type of private sector provider and country. Of note is that some models are well established in all countries and some are emerging. There are lessons to be learnt from each country and for the region. Understanding the private health care provider need is important to keep the relationship with TB patients beyond TB care.

1. Models of engagement for faith-based organisations healthcare providers

a) The model of engagement with faith-based healthcare providers (managed by Christian health associations) is well established. This model is based on agreements signed between Government and the national Christian health associations. Government funds human resources and operational costs of faith-based health facilities and secretariats of these associations in return provide free healthcare services according to government policies.

2. Engagement of for-profit healthcare providers

a) Evidence of good practice models of engagement of for-profit healthcare providers have emerged in the study countries: the fee for service model in Lesotho; Memorandum of Understanding (MoU)/ accreditation based engagement in Malawi; agreements with large hospitals in Maputo, Mozambique; and engagement and registration of selected hospitals and large clinics as TB notifying centres in Zambia. Key features of these models include government providing free drugs, diagnostic equipment, or paying for TB services offered by private healthcare providers. The overriding purpose is to reduce cost of providing TB services, improve quality and reporting.

b) For profit healthcare providers engagement in TB services is determined by their capacity: Models of engagement based on capacity include screening and referral of patients; screening and referral of sputum for testing then treatment of patients at private healthcare facilities; diagnosis and treatment; diagnosis and referral.

3. Mode of engagement for pharmacies

a) Engagement of private pharmacies in TB control is in its infancy. In Malawi and Zambia, donor funded pilot projects are in place training pharmacies on TB screening and providing them with presumptive TB registers and referral tools. In Mozambique and Lesotho, pharmacies are not yet engaged on TB control.

b) Only Zambia has pharmaceutical manufacturers. The other countries do not have such capacity in country. However, all countries, including Zambia, import TB drugs because the local manufacturers are not certified to manufacture TB drugs.

4. Traditional healers

a) There is consensus among policy makers and NTPs in the four countries on the need to engage traditional healers in TB control given that a large number of patients seek services from them. Traditional healers are also at risk of contracting TB, as was the case in Zambia and Lesotho. Engagement of traditional healers in TB control varies from a well-established model in Mozambique to almost no engagement in Lesotho.

Incentives and enablers

a) Not for not-for-profit healthcare providers: Incentives and enablers for FBO healthcare facilities in Zambia, Malawi and Lesotho are well defined and comprehensive. Government provides financial incentives (human resources, operational and capital costs) and non-financial incentives which include involvement of FBO association in NTP (and overall health) policy, planning and programming processes.

b) For-profit healthcare providers: Comprehensive incentive and enabler schemes for for-profit healthcare providers implemented at scale (as is the case with FBOs) is not yet in place. However, incentives are provided in targeted approach. Common incentives are inputs of free TB drugs to private healthcare providers in exchange for free services. In Malawi, government, through donor funding, has begun providing laboratory equipment to selected facilities and planned to scale up this support in the near future.

c) Incentives for pharmacies to engage in TB control have not been established. Engagement of pharmacies in Malawi and Zambia has recently started.

d) Incentives for traditional healers, where they are being engaged in Mozambique and Zambia, are non-financial – training on TB and other health issues, recognition by government which increases their credibility in the community and hence they receive more patients.

e) Private healthcare providers observed that non-financial incentives could motivate them to collaborate with government. These include the fact that participating in a government programmes improves their image and reputation and leads to increased number of patients hence increased revenue.

Financing

a) Financing for patient seeking services from private healthcare providers is from two main sources – out of pocket or private insurance. However, patients in low income urban areas and some rural areas visit private healthcare facilities charging low fees but also providing quality un-assured services. These facilities are the first point of call due to distances to public health facilities among other reasons.

b) Government and donors subsidised services: This is the most common model for government (and donors) financing of TB services in private healthcare facilities. Government provides free drugs and other inputs in return for free TB services, except for charges for consultation and other auxiliary services. In this case, patients do not pay or pay a minimal fee.

c) National insurance scheme: Two countries – Zambia and Mozambique have a plan to introduce a social insurance scheme to finance healthcare including TB. This scheme offers an opportunity to expand TB services in the private sector. Lesotho and Malawi have no plans to introduce social insurance.

Capacity building

a) Capacity building for not-for-profit healthcare providers (FBOs and NGOs) is integrated into the capacity building initiatives for public healthcare providers. FBO/NGO healthcare staff attend similar trainings with those from government.

b) Capacity development for for-profit healthcare providers on the other hand is not based on a comprehensive capacity building programme. For-profit healthcare providers collaborating with NTP in TB are often trained while those not engaged have limited training opportunities. TB guidelines are also disseminated to those engaged with NTP and to a limited extent those not engaged also receive the guidelines.

c) Pharmacies have a role to play in screening and referral of patients and in ensuring good dispensing practices for cough syrups and antibiotics. Malawi and Zambia have pilot projects training pharmacies on how to engage in TB control; while Mozambique and Lesotho have not started training private pharmacies.

d) Traditional healers training is comprehensively implemented in Mozambique while Zambia and Malawi have instituted pilot project for training them. Lesotho is yet to start any training programme for traditional healers on TB control.

e) Limited human resource and sustainable financial capacity of NTRLs and allies is a challenge in expanding coverage and ensuring quality of TB diagnosis in private facilities. Enhancing diagnostic capacity of NTRLs in DST, notably in second line DST (for example in Lesotho and Malawi) should be given attention.

Coordination, collaboration and advocacy

a) Mechanisms for coordination of private healthcare providers varies from country to country. Malawi has in place a PPM secretariat and regional focal persons coordinating engagement with private healthcare providers (hospitals and clinics, pharmacies and traditional healers). Zambia has a focal person for PPM but limited support from regions and other NTP units in engaging with private healthcare providers. Mozambique and Lesotho have no focal person for PPM and it is not clear where the responsibility for coordinating private healthcare providers resides.

b) NTPs capacity to engage private healthcare providers effectively is weak. NTP staff have not been oriented adequately on how to engage private health sector. NTPs have inadequate staff hence engaging private health sector stretches already limited staff capacity and financial resources.

c) The willingness for private healthcare providers to collaborate with NTP/MOH on TB control exists. Almost all for profit healthcare providers interviewed indicated willingness to collaborate with MoH for a variety of reasons – serving the community, recognition and image building.

Monitoring and evaluation

a) NTPs have M&E plans and systems in place. The system is mainly implemented in public and FBO health facilities and to a less extent in for-profit facilities. In Malawi, selected TB notifying for-profit facilities have been provided with TB registers and reporting tools; those referring patients have

presumptive case registers and referral forms. In Zambia, notifying facilities are provided with TB registers and reporting tools. The same in Mozambique although this is limited to few large hospitals in Maputo. In Lesotho private healthcare facilities engaged in TB service delivery indicated that they report but data was not available in the MOH.

b) There is limited progress applying digital health tools to facilitate case management, reporting/ notification and TB specimen referral system in both private and public sectors. Digital health tools will help to monitor progress and build accountability for public and private providers. Countries are on early stage of using online systems to register and do the follow up of patients.

Risks

a) No major risks in engaging private healthcare providers were identified in the four countries. A few low risks identified include the potential of private healthcare providers receiving free TB drugs and charging patients and non-reporting.

Strategic recommendations

Recommendations specific to each country have been provided in respective sections. This section provides overarching strategic recommendations that cut across all countries. In the process of engaging and scaling up Private Sector Participation in TB Control, the performance of the TB Program in each country need to be strengthened, and keep building the path for financial sustainability.

(i) Regulatory environment

a) Strengthen the capacity of NTPs to monitor compliance with TB related regulations in for-profit healthcare settings including pharmacies. There is need for developing detailed guidelines for infection prevention and control (IPC) in some countries such as Lesotho, Zambia and Mozambique.

b) Given the huge financial resources required to strengthen regulatory agencies, prioritise the establishing or strengthening alternative mechanisms for ensuring compliance with regulations such as use of professional bodies, accreditation systems and social franchising

c) Support countries to improve legislation/regulations for private healthcare providers – mainly Lesotho and Mozambique

d) Support countries to develop legislation/ regulations for traditional medicine to enhance regulation of traditional healers

(ii) Modes of engagement

a) Support a regional conference on good practices in engagement of for-profit healthcare providers, private pharmacies, traditional healers and stand-alone laboratories to serve as a knowledge exchange forum and for countries to prioritise one or two models of engagement that can be implemented in their context. A post conference action plan can be developed for each country. Existing other modes of engagement should continue alongside the best practice.

b) Support exposure visits to other high burden countries to facilitate experience sharing and adapt models of engagement to the Southern African context.

(iii) Incentives and enablers

a) Establish cost-efficient financial and non-financial incentives relevant to different private sector healthcare providers – for-profit facilities, pharmacies, stand-alone laboratories and traditional healers. The incentive and enablers scheme will also depend on the type of mode of engagement a country chooses to pursue.

(iv) Financing

a) Prioritise the provision of free input (paid for by government/ donors) to for-profit healthcare providers to reduce cost for patients especially for for-profit clinics in low income urban areas and rural areas.

b) Provide countries developing social insurance schemes with technical support given that social insurance is likely to benefit all disease programmes including TB.

(v) Capacity building

a) Support countries to develop a comprehensive need based capacity development programme for all types of private healthcare providers and use approaches appropriate to private sector to deliver capacity building. Technical aspects that require capacity building have been identified in the analysis of private healthcare providers TB services delivery in this study.

b) Strengthening the human resource and financial capacity of NTRL and its allies is critical in improving the coverage and quality of TB diagnosis in private facilities.

(vi) Coordination, collaboration and advocacy

a) Develop or update PPM action plan for each country taking into account findings of this study and prioritising actions for engaging private healthcare providers

b) Build the capacity of NTPs to engage private healthcare providers effectively, based on the PPM action plan referred to above. This includes additional financial and human resources and training of NTP staff.

(vii) Monitoring and evaluation

a) Review national M&E systems in place and develop a system tailored to the private sector. This will ensure the system, which is designed for public health facilities, is not transposed to private healthcare providers as is.

b) The use of digital technologies to facilitate case management, reporting/notifications and TB specimen referral system should be further explored, accelerated, improved and scaled up nationwide in an integrated manner across the health system (public and private)

(viii) Design private sector recognition/ award for excellence in supporting TB control

An excellence award for private healthcare providers engagement in TB service delivery should be based on factors that do not discriminate size or type of health facility. It should also be based on measurable factors and should have a clear purpose. It should also be based on factors within the control of the healthcare provider. In settings where the excellence award scheme is being piloted or implemented in public or private sector, exploring the lessons learned could be of benefit in the design. It is also important to explore further if the award should include public sector. The following factors are recommended for the design of excellence award.

a) Purpose: the purpose should be to motivate private healthcare providers to provide the highest quality of TB services. The aim is to take facilities to highest level of standards in terms of quality of service irrespective of size of the facility.

b) Criteria for award: Excellence should be determined based on four aspects:

- Human resources/ personnel managing the facility: adequate skill mix and capacity, depending on the required standard set by regulators/MOH/NTP based on type and size of facility
- Environment or infrastructure at the facility, including availability of infection control plan, depending on the required standard set by regulators/MOH/NTP based on type and size of facility

- Methodology of providing services that meets the highest standards of TB care
- Reporting (timely, complete, and accurate)

b) A tool and procedures for assessing these four criteria can be developed. Assessment should be periodic and not one-off. Human resource, financial and technical capacities of NTP and other bodies involved need to be strengthened to ensure effective evaluation of the award.

c) Private healthcare providers can be requested to enrol on the excellence award scheme (opt-in) to generate buy-in or commitment to the award. The type of incentive for facilities to opt in shall be determined based on evidence and local context.

d) The private sector (thought private sector associations) could contribute to the design and administration/management of the award.

Section 1: Introduction and Context

1.1 Global TB strategy

First Global TB Strategy, covering the period 1994 to 2006, was developed following the declaration of TB as a public health emergency in 1993. This strategy introduced the directly observed treatment short course (DOTS) which has remained the foundation of the TB response to date. The strategy did not include the Public-Private Mix (PPM) approach. This approach was adopted in the course of implementation of the first TB strategy to "expand DOTS coverage". WHO developed normative guidance and tools to guide implementation of the PPM approaches and established a coordination focal point to support countries adopt PPM approaches [1].

The Stop TB Strategy covering the period 2006 – 2015 which succeeded the first strategy embraced PPM approach under the component – "engaging all care givers". The strategy encouraged the expansion of DOTS across all health systems and the engagement of private healthcare providers in TB care and control. The second strategy contributed to the Millennium Development Goal of halting and reversing the TB epidemic by 2015 [1].

In 2014, World Health Assembly adopted the End TB Strategy, a 20-year strategy aimed at achieving 95% reduction in TB deaths, 50% reduction in TB incidence rate and no families facing catastrophic costs due to TB by 2035. The strategy shifts focus from controlling and reversing the TB epidemic to ending TB as a public health threat. This strategy promotes engagement of communities, civil society and public and private care providers to achieve universal access to TB care [2].

1.2 Global and Southern Africa regional TB Burden

In 2017, TB caused 1.6 million deaths globally, 1.3 million among HIV-negative people and 300,000 among HIV-positive people. An estimated 10 million cases of TB occurred. 90% of the TB cases were adults 15 years and above, with 64% of these being male and 9% were people living with HIV (7% of them in Africa). The severity of the TB epidemic varies widely among countries. In 2017, under 10 new cases per 100,000 population were reported in most high income countries, 150 to 400 new cases in 30 high TB burden countries and above 500 cases in a few countries including Mozambique and South Africa. About 3.5% of new TB cases and 18% of previous treated cases had MDR/RR-TB [4]. Countries in southern Africa carry high burden of TB, including TB/HIV and MDR TB. 11 countries from southern Africa (table 1) are among the high TB burden countries globally.

TABLE 1: HIGH TB BURDEN COUNTRIES IN SOUTHERN AFRICA

TB high burden countries	TB/HIV high burden countries	MDR TB high burden countries
Angola	Angola	Angola
Democratic Republic of Congo	Democratic Republic of Congo	Democratic Republic of Congo
Mozambique	Mozambique	Mozambique
South Africa	South Africa	South Africa
Zimbabwe	Zimbabwe	Zimbabwe
Lesotho	Lesotho	
Zambia	Zambia	
Namibia	Namibia	
	Botswana	
	Malawi	
	Swaziland	
Source: Global TB Report, 2018		

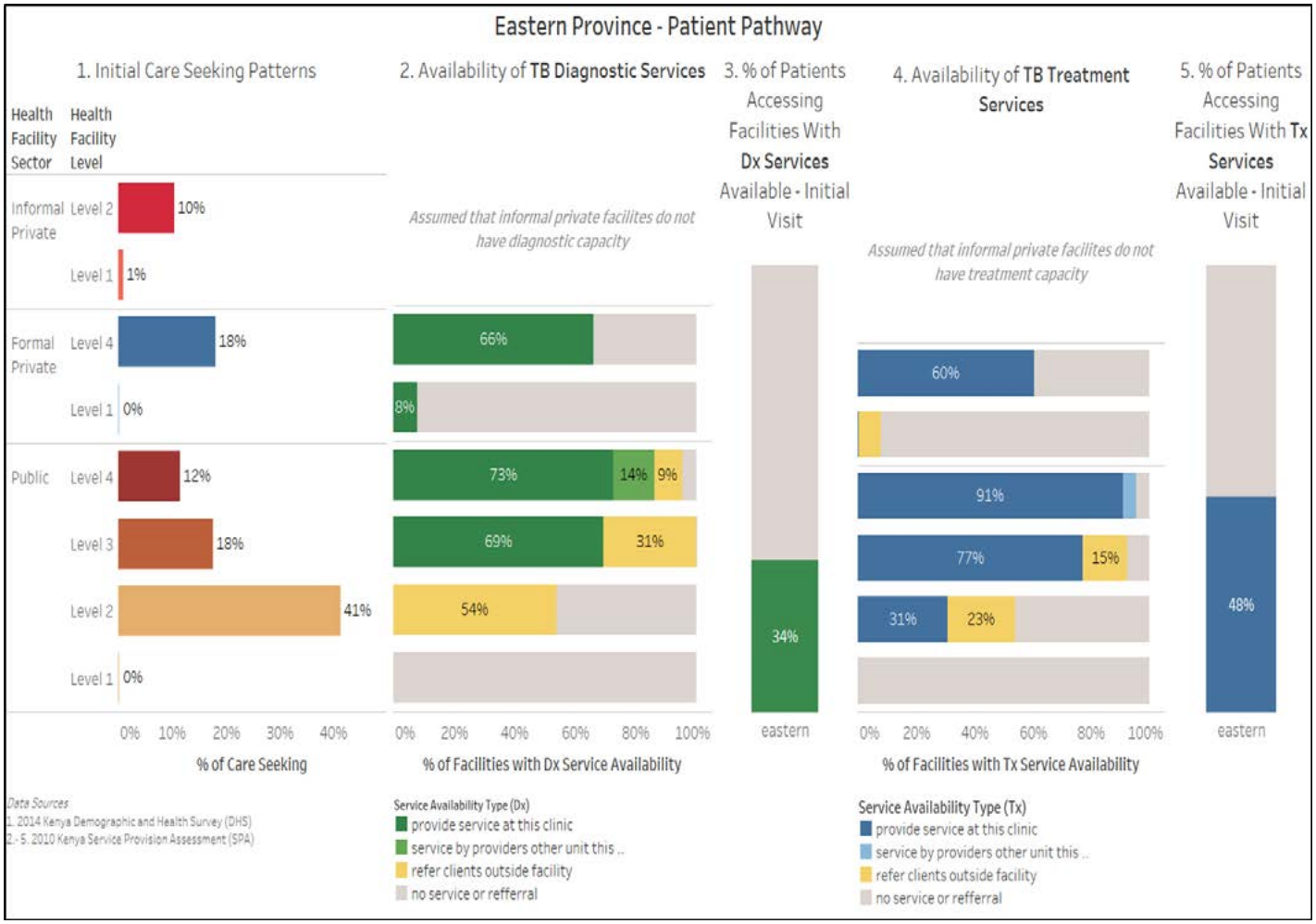
1.3 A case for engagement of private health providers in TB control

Although countries have committed themselves to ending TB by 2030 under the Sustainable Development Goals and End TB Strategy, investments in the TB response and efforts to find, treat and cure everyone who gets ill with TB falls short [1]. As a result, the End TB response faces a challenge in ensuring universal access to quality TB services. All health care providers, including private health sector, have a role to play in assuring universal access to TB services but they are not well coordinated and supported to ensure quality service.

For instance, 6.4 million of the 10 million who fell ill with TB in 2017 were officially notified to national authorities and reported to WHO and 3.6 million cases of TB were missed. Two thirds of these are thought to accessed TB treatment of questionable quality from public and private providers who are not engaged with National TB Programmes (NTPs). To close this treatment gap, quality and affordable TB services should be available wherever people choose to seek care [1].

A patient pathway analysis conducted in Kenya in 2017 illustrates that the first contact of a significant proportion of TB patients is with private health care providers who, in most cases, delay TB diagnosis leading to poor treatment outcomes [8].

FIGURE 1: PATIENT PATHWAY ANALYSIS, KENYA, 2017[1]



[1]Kenya National TB Programme, TB Patient Pathway Analysis Report, 2017

Failure for national TB programmes to engage all care providers including private healthcare providers is likely to lead to delayed diagnosis and treatment, excess mortality and morbidity due to inappropriate treatment, risk of drug resistance as a result of incompetent treatment; catastrophic costs to patients and their families resulting from out-of-pocket expenditure and loss of income, and incomplete monitoring and evaluation of TB services [7].

1.4 Engaging private health care providers in TB control

Private healthcare providers operate outside the direct control of the state [9]. They fall into for-profit and not-for profit categories and they include private hospitals and clinics, corporate health services, Faith Based/NGO hospitals and clinics, individual private physicians, nurses, midwives and clinical officers, laboratories, pharmacies and drug shops, traditional healers and informal non-qualified practitioners [5].

The providers are diverse ranging from untrained or partially trained practitioners (popularly called quacks) to renowned chest specialists; and from individual practitioners to large private hospitals. The vary in size from large hospitals and clinics to solo practices. They range of services they offer also varies from comprehensive clinical services to single products such as drugs and ambulance services. The providers also vary in terms of the fee they charge with some providing services free of charge (such as NGOs) while others are highly priced and accessible only to a fraction of the population. Private healthcare providers also operate in formal (registered by relevant authorities and following regulations) and non-formal (un-registered and poorly regulated) settings [9] [6].

Successful engagement of private healthcare provides, therefore, requires recognition of this diversity and tailoring of strategies to different types of healthcare providers. A number of factors determine the effective engagement of private healthcare providers in health service delivery including TB. These include the regulatory framework in place, models of engagement with government, incentives for private healthcare providers, capacity building, financing of patients, coordination and monitoring mechanisms in place and risk for engaging in TB control.

These factors explored further below.

1.4.1 Regulatory environment

Countries employ different regulatory strategies to achieve health policy objectives which include provision of quality healthcare, patient (consumer) protection and increasing access to healthcare to all populations. Different strategies

can be used in tandem to achieve these national health goals [10]. Common regulatory strategies include:

(i) Command and control: This is the use of state-centred legal instruments to enforce behaviour through bureaucratic processes. Typical examples include health and safety legislation and licensing and registration of doctors, hospitals, pharmacies, laboratories and other health facilities required to meet specified standards [10]. Command and control regulatory strategy is the most common among low and middle-income countries.

(ii) Market-harnessing controls: These are market-based strategies utilising competition laws, franchising and price controls to manage market failures in healthcare from a supplier perspective. In most low and middle income countries, contracting healthcare providers using franchising or accreditation approaches is used as a way of improving quality of services and increasing coverage thereby contributing to the national health sector goals [11].

(iii) Self-regulation: Self regulations allows peer groups within the health industry to regulate behaviour of health care organisations and individual practitioners. Associations of medical professionals such as doctors, pharmacists, laboratory technologists, nurses; and institutional associations for private hospitals, pharmaceutical companies and insurance companies fall under this strategy. The associations are themselves expected to ensure members meet standards of education, professional development, quality control and professional conduct [12]. Professional and institutional associations are common in low and middle-income countries.

(iv) Incentive based strategy: Financial incentives such as tax and non-financial incentives are used to influence behaviour of healthcare providers and consumers. Incentives system may be used to encourage a healthcare provider to serve specific types of patients or work in underserved areas. Pay for performance, pay for service or service level agreements are examples of financial incentives. On the patient side, financial incentives include conditional cash transfers and vouchers. Financial incentives require complex systems and capacity to manage. They also tend to achieve short term objectives but long-term objectives and gains are difficult to sustain [10].

(v) Disclosure regulation: This approach requires healthcare providers to provide open and transparent information to consumers and competitors on price, quality and quantity. The constraint is the ability of consumers to understand and use the information to make decisions. Low and middle income countries have regulations requiring healthcare providers to display patient charter and list of services offered among other information [13].

The above strategies do have an impact in the equity and quality of services across all programmes including TB. However, there are also TB specific regulations which focus on the quality of TB services offered by all healthcare providers including private sector. Countries define these regulations in TB guidelines. Key aspects of such regulations include:

Mandatory TB case notification: TB is a notifiable disease under the International Health Regulations and countries are expected to establish a notification system from community level. All TB service providers are expected to notify TB cases as a requirement. In addition, an effectively enforced infectious disease law or equivalent that requires compulsory notification of TB by all health care providers is also essential.

TB Drugs: Regulations address how TB drugs are prescribed and the type of health professionals authorized to prescribe or dispense TB medicines. These efforts should be supported by information to prescribers and users as well as monitoring of use of TB medicines. Data collected on drug quality, resistance and drug utilisation and diagnostic practices can be used to advocate for and improve regulations on anti-TB drugs [8].

Infection control: TB regulations also focus on infection control in all health facilities and laboratories. Appropriate regulations are also required for effective infection control in health-care services and other settings where risk of disease transmission is high. Managerial, administrative, environmental and personal precautions should be part of infections regulations or law. The regulations should be complemented with systems strengthening to ensure implementation [8].

Most low and middle-income countries have policies and regulations in place. It is a mechanism for reinforcing that is weak. For instance a review of mandatory TB case notification policies in 2018 found that these policies were in place in 11 out of 15 high incidence countries surveyed but lack of time, confidentiality concerns, fear of offending patients, lack of knowledge about notification, lack of a single notification mechanism and lack of trust and coordination with government hinders notification. Countries with successful engagement have focused more on helping private health care providers through public funded support services and less on punitive measures. Regulatory enforcement should be understood as an additional support rather than an essential prerequisite or primary driver for engaging private health care providers [7].

1.4.2 Ethical challenges

Ethical issues related to engagement of private health care providers in TB control revolves around the extent to which public-private partnerships should go in checking whether private practitioners are truly qualified. In Asia – Pakistan, India and Bangladesh, there are limited mechanisms or resources to monitor and regulate the private healthcare providers, thus untrained providers actively run clinics. The less qualified providers often charge the lowest fees and therefore see a higher number of patients potentially receiving incorrect diagnosis and treatment. An opportunity to improve their knowledge and practices could be lost if they are not engaged. On the other hand, engaging with untrained or unqualified providers gives them legitimacy and is particularly challenging when projects are led by government agencies. Unqualified providers are often reluctant to participate in projects with governments or public health groups for fear of being exposed yet they are providing services that are not quality assured [6]. This presents an ethical dilemma for NTPs in engaging all care providers.

1.4.3 Models of engaging private health care providers

Two critical actors have remained at the centre of PPM approach since its inception – the NTP acting as a steward for diagnostic and treatment standards; and an intermediary organisation translating the standards to a diverse set of private providers. These two actors central in most models for engaging private healthcare providers in TB service delivery as demonstrated in the following common models of NTPs engagement with private providers [1]:

(i) Direct NTP engagement of private providers by asking them to detect, treat/refer and report on TB cases

(ii) Use of intermediary organisations often engaged by NTPs to handle many private providers in contexts where NTPs have no capacity to manage a large number of providers spread across the country. The intermediaries preferred by NTPs are medical associations who can convene qualified providers (qualified doctors and large hospitals); however their performance is usually not optimal as most associations lack capacity to effectively supervise and monitor the private practitioners. Performance has been typically better when a suitable NGO takes up this task but the work of intermediary NGOs is almost always funded by donors.

(iii) A variant of the intermediary model emerging in India where specialised units develop contracting mechanisms, and contract and manage the performance of intermediary organisations on behalf of NTPs because government has limited ability to commission intermediary organisations.

(iv) A return to the original model where governance of private sector by public sector has been entrenched and government staff take the role of reaching out to private providers. This is assisted with the establishment of social health insurance which allows money to flow to private providers to compensate for care. Model (iii) and (iv) has the potential to engage private sector at scale.

In addition to the above variations of NTP-Intermediary-Private Provider engagement, other potential models of engagement have emerged.

Private Provider Interface Agency (PPIA) model: This model implemented in Mumbai, India, introduced innovative financing mechanism for TB services. PPIA had a technology-based registration and management for reimbursing service providers such as laboratories, pharmacies and private doctors through electronic voucher system. Launched in 2014, PPIA had a network of 3,670 private practitioners and had undertaken 30,500 free chest x-rays and 22,779 GeneXpert tests by September 2016 . This model was implemented in an urban slum setting where private practitioners, diagnostic services and specialist chest physicians are all in close proximity making it easy for field officers to support referrals and patient follow up. The model may face challenges operating in other settings. In addition, it requires significant initial investment in technology, training and registration of private practitioners.

Social franchising: Social franchising works by clearly defining the product and its delivery mode, strict quality criteria, quality assurance and a brand that can be accessed by service providers if they are able to adhere to quality standards to which the brand is associated. The end goal of a franchise is a social gain such as health [8]. Through training and on-going monitoring, social franchising ensures that these standards are upheld and services reach targeted populations. The franchisee is given incentives that include low-priced or free commodities, training and branding in return for the services provided. For instance, Populations Services International established a Sun Quality Health (SQH) franchise in Myanmar in 2001 that offered family planning, malaria, STI and TB service and in return provided training, branding materials, high quality products and free or subsidized prices. On the other hand, private providers had to keep clinical records, respect the standards and agree to a price structure with small profit margins while ensuring services are affordable to low income populations. The SQH General Practitioners contributed 15% of the total TB cases notified. Notification rate of all TB cases increased from 405/100,000 pre-SQH launch to 606/100,000 in seven quarters after the launch. 68% of the TB patients were from lower social economic status. The challenge of social franchising is that it is labour intensive and requires substantial support to franchisees. Private providers may be reluctant to join the franchise because it offers little or no income.

[2]Improving tuberculosis services in Mumbai, un update by PATH

Social business or enterprise model: This is a model that provides high-quality low-cost services at a fee in order to finance social objectives. The model has potential to be self-sustaining because it generates its own revenue while contributing to social gain. An example of a social business model is the projects of the Interactive Research and Development (IRD) in Pakistan, Indonesia and Bangladesh which are funded in part by fee-based diagnosis and treatment services for diabetes, anaemia and lung health including TB. The project uses performance-based incentives to stimulate business while assuring the quality of TB diagnosis and treatment. In Bangladesh, under the IRD project, a network of more than 1,800 private physicians were linked to and referred presumptive TB cases to TB screening centres established under the social business model. Of the total presumptive cases attending the screening centres, those referred to the centres from private physicians increased from 64% in July 2014 to 82% in May 2016 [9]. Among the various challenges, the social business model requires substantial capital investment. Although integrating multi-disease case has been shows to generate additional revenue and expand programme reach, IRD required significant investment from TB Reach and UNITAID to support this programme. Secondly, perhaps the steepest challenge in using a social business model is its reliance on a fee-for-service care given that most people with symptomatic are poor and may not have the ability to pay even a nominal fee [10].

1.4.4 Financing of private sector engagement

Financing for patients seeking services in private healthcare facilities typically comes or could come from one or more of the following sources:

Government budget paying for inputs: This includes the government financing of inputs such as anti-TB drugs and laboratory consumables and providing these inputs free or charge to private healthcare providers in order to reduce cost for the patient. Government funding can be predictable and reliable and brings with it local ownership and authority to regulate and enforce programme requirements and quality assurance. However, government financing can lead to delays in funding and reimbursement making it less suitable for timely availability of inputs. This may translate into the private providers' reluctance to engage with government.

Donor financing of inputs: Donor financing has been instrumental in establishing the PPM concept and demonstrating its viability. This financing has greater flexibility than government financing. However, the likelihood of a shift in donor landscape and reduction of donor funding makes it less suitable source of long-term engagement of private sector.

Government or donor financing of outputs: This model involves structuring government or donor funding as results-based financing (RBF), which rewards organisations, providers and clients after predefined results have been achieved. The focus of RBF is on results and flexibility. The private sector could also have to adhere to defined quality and treatment standards. This model however relies on verification of the results which is a key challenges given the weak monitoring and reporting systems in the private sector.

National health insurance: This model has the potential to cover the greatest number of people and services. NHI both cover TB diagnosis and treatment and also remove out-of-pocket payments for clients. Complete coverage of NHI schemes is, however, several years away in most countries.

Social protection schemes: These schemes address social risks to TB such as poverty and unemployment and target the lowest quintile population where TB is more prevalent. The End TB Strategy prioritises social protection as a means to addressing the root causes of TB. Social protection could potentially be leveraged to support expanded outreach for case finding and influencing behaviour change. For instance, TB screening can be done when clients come to collect monthly subsidies or TB patients can be linked to nutritional support and cash transfer schemes to address catastrophic costs of TB. It should be noted that NTPs and private providers have limited experience in linking with social protection schemes.

1.4.5 Incentives and enablers

Private sector makes decisions typically based on benefits and costs associated with an action. Therefore, the greatest impact on private healthcare providers can be realized through interventions that incentivize their behaviour. Interventions that increased benefits or reduce costs or level of effort of a private provider is more likely to elicit the desired action. Incentives vary according to context and type of private provider. The following are some of the incentives applied in different settings:

(i) **Performance-based incentives for patients:** In India, an evaluation of a private provider performance-based incentive scheme (for referral of presumptive cases to microscopy centres and subsequent DOTS provision) revealed that case detection increased overall and the default rate was almost zero. These findings were due to a number of factors including financial incentives [10].

(ii) Cash incentives: A comparative cross sectional study of all private health care providers enrolled in PPM-General Practitioners model in Pakistan and provided with cash incentives found that twice as many cases were notified to the NTP by 2016. A total of 618 private healthcare providers were enrolled in the incentive scheme and maintained for the duration January 2014 to December 2016. After introduction of cash incentives, TB case notification increased by 71% by 2016. The incentives provided ensured that the programme rather than the patient paid consultations costs of the private provider [11].

(iii) Non-financial incentives: Studies in India and Philippines have shown that a package of incentives including free drugs and materials such as free microscopes may motivate private providers' participation and contribution to increase in case detection, appropriate referral and treatment of patients.

(iv) Intrinsic incentives: Private providers, especially those less qualified private practitioners and not-for profit private providers can be motivated through recognition, access to training and generally being associated with a programme that improves their credibility [7].

(v) Removal of dis-incentives: Systems that promote convenience, simplicity and efficiency can motivate private providers to participate in TB control. Therefore, the cumbersome data collection tools, reporting tools and systems and long training programmes can act as dis-incentives. Conversely, improvement of data collection and reporting tools to reduce the reporting burden on private providers using technology has been found to improve TB case notification.

1.4.6 Capacity building for private healthcare providers

The need for capacity building of private health care provides cannot be over-emphasized. There is a gross lack of knowledge among private practitioners about the best protocols for diagnosis and treatment of TB. In a study by Datta et.al 2017, of the total 260 randomly selected private practitioners in West Bengal, India, only 11% of private practitioners were following national TB guidelines. Majority (68%) were prescribing chest X-ray against standard diagnostic test-sputum examination for TB diagnosis. Further, a systematic review of 22 studies evaluating provider knowledge about sputum smear for diagnosis, 10 studies found less than half the providers had correct knowledge with public sector providers having more knowledge than private providers [12].

Provider or health systems delays for TB diagnosis are more associated if the patient visits private health facilities for the first consultations. This has serious implications as delay of TB diagnosis and treatment result in prolonged transmission. This delay may also lead to advanced disease state and mortality.

Treatment practices are also varied among private practitioners. In a study conducted in Chennai, India, 160 private doctors out of 228 (70%) prescribed 27 different regimens. A recent systematic review by Satyanarayana et al. also reveals that quality of care being provided by health-care providers in private sector is suboptimal.

TB being a notifiable disease, both public and private providers have an obligation to report. However, private practitioners cite lack of time and concerns regarding patients' confidentiality as impediments to reporting. These concerns step partly from the limited human resources capacity with a significant proportion of practitioners operating as individuals.

Thus, building the capacity of private health care providers is imperative for improving the effective engagement of private healthcare providers in TB control and should be an integral part of the PPM approaches.

1.4.7 Engagement of all care providers in TB care and prevention

The PPM approach cuts across all components of the End TB Strategy. Early diagnosis of TB requires engaging relevant informal and formal providers first visited by people with TB symptoms; expansion of collaborative TB/HIV activities and programmatic management and prevention of MDR-TB requires collaboration with all care providers; and rapid and rational uptake of new diagnostics and drugs for patients in private clinics requires allowing qualified private providers to access new TB drugs for their eligible TB patients.

All care providers, including private sector, have a role to play in the continuum of TB prevention, care and treatment as outlined below:

Early detection and diagnosis of TB, including drug sensitivity testing (DST)

According to the 2018 Global tuberculosis report, an estimated 54 million deaths of people with TB was averted over the period 2000–2017 due to diagnosis and successful treatment, but there are still large and persistent gaps in detection and treatment. Only two thirds of global incident tuberculosis cases (64% of the estimated 10.0 million new cases that occurred in 2017) are notified to national tuberculosis control programmes (NTP) and reported to WHO.

This number has been increasing since 2013, mainly due to increased reporting of detected cases by the private sector in India and, in 2017, an upturn in notifications in Indonesia. Gaps between the estimated number of new cases and the number actually reported are due to a mixture of underreporting of detected cases, and under diagnosis (either because people do not access health care, or because they are not diagnosed when they do) [4].

WHO's global strategy for TB prevention, care and control for 2015–2035 (3) (known as the End TB Strategy) calls for the early diagnosis of TB and universal drug sensitivity testing (DST). WHO recommends rapid TB diagnostics (WRDs) should be available to all persons with signs or symptoms of TB, all bacteriologically confirmed TB patients should receive DST at least for rifampicin, and all patients with rifampicin-resistant TB should receive DST at least for fluoroquinolones (FQs) and second-line injectable drugs (SLIDs).

Therefore, all national TB control programmes need to prioritize the development of a network of TB laboratories with engagement of all care providers that use WHO recommended diagnostics, have efficient referral systems, use standard operating procedures (SOPs) and appropriate quality assurance (QA) processes, and have adequate biosafety and sufficient human resources for laboratories across public and private sectors. These priorities should be comprehensively addressed in national strategic plans and adequately funded. Moreover, ensuring universal access to early and accurate diagnosis of tuberculosis will require information and education to prompt people with symptoms of tuberculosis to seek care, the abolition of barriers that people encounter in seeking care, and systematic screening in selected high-risk groups.

Advances in the diagnosis of TB both in phenotypic and genotypic methods are rapidly evolving. As a result guidance will change from time to time. Based on advances in lab technology and treatment and available evidences, WHO updates its recommended tests for detecting TB and drug resistance. Depending on resources available and context, countries need to adapt these recommendations for use by all care providers.

Recently (2018) WHO, in collaboration with the Stop TB Partnership and the Global Fund to Fight AIDS, Tuberculosis and Malaria, launched an initiative called "Find. Treat. All" to support countries to close gaps in TB detection and treatment. The initiative includes a target of detecting and treating 40 million people with TB in the period 2018–2022. All care givers, including the private sector have a role in implementing this initiative.

Private sector laboratories play an important role in many countries. People with signs and symptoms of TB often first access diagnostic services in the private sector. Private laboratories could be better or under resourced and may have

testing capacity that exceeds or inferior than that of the public sector laboratory network. It is therefore critical that private sector TB laboratory services be linked to the NTP and the National TB reference laboratory (NRL) at several points in the diagnostic and treatment pathway. The nature of such collaborations will be agreed on between the NTP and private laboratories, but may include the following areas:

(i) TB diagnostic reporting and treatment follow-up: private-sector laboratories should be required to report results to the TB control programme that identifies new TB patients and DST results. NTPs should make national laboratory request forms and registries available to private laboratories and be part of the referral and feedback mechanisms to ensure that all TB cases are promptly registered with the NTP and linked to appropriate treatment.

(ii) TB laboratory testing: private-sector laboratories should be advised to follow WHO laboratory policies and recommended tests and algorithms. For example, private laboratories should be encouraged NOT to use serological methods or interferongamma release assays to diagnose TB. Private laboratories should also adhere to WHO and internationally recommended biosafety policies and procedures. When available, private laboratories should also have access to established specimen transportation and referral mechanisms used by the NTP. Private laboratories should adhere to a standard specimen collection, transportation and registration. Establishing and maintaining a safe working environment with best practices in a TB laboratory is essential. Administrative, environmental, and personal protective controls must be in place to ensure the safety of workers and guarantee quality performance.

(iii) Training and supervision: Private sector laboratories have to be staffed with adequate number and skill mix required. Private sector laboratories should be included in national training and provided with SOPs and other guidelines developed by the NRL. Private laboratories should also be included in national and subnational supervision schedules and have mechanisms for performance monitoring and feedback in place.

(iv) Supply management and equipment validation and maintenance: where needed and possible, private laboratories should have access to quality-assured reagents and supplies, either free from NTP or through access to approved procurement agents and distributors. Private laboratories should also benefit from NTP or NRL recommended equipment validation and maintenance agreements for TB diagnostic instruments. How procurement and supply chain management is carried out in private sector, how it is regulated need to be investigated to avoid the above mentioned problems.

(v) Quality assurance (QA) and management – private laboratories should be required to participate in an external quality assurance (EQA) programme, which may include site visits, panel proficiency testing (PT), and blinded rechecking of their results. Ideally, the following QA activities need to be implemented to ensure comprehensive QA for TB diagnostic tests: training and competence assessment; instrument verification; equipment maintenance; method validation; quality control (QC); external quality assurance (EQA); quality indicator monitoring; and continuous quality improvement (QI).

Systematic screening of contacts and high-risk groups

The burden of undetected tuberculosis is large in many settings, especially in high-risk groups. There can be long delays in diagnosing tuberculosis and initiating the appropriate treatment among people with poor access to health services. Many people with active tuberculosis do not experience typical symptoms in the early stages of the disease. These individuals may not seek care early enough and, if they seek care, they may not be identified for testing for tuberculosis. Mapping of high-risk groups and carefully planned systematic screening for active disease by all care providers improves early case detection.

The WHO 2015 guidelines provides strong recommendations for the following contacts and high risk groups:

(i) Household contacts and other close contacts

(ii) People living with HIV

(iii) Current and former workers in workplaces with silica exposure

Other risk-groups should be identified and prioritized for possible screening based on national and local tuberculosis epidemiology, health system capacity, resource availability, and the feasibility of reaching the identified risk-groups. In principle, the presence of high quality TB diagnosis, treatment and patient support services is essential to implement a screening program. A screening strategy should be monitored to inform a re-prioritization of risk groups and re-adaptation of screening approaches. Screening strategies should follow established ethical principles and be designed to minimize the risk of discomfort, pain, stigma and discrimination.

Treatment of all people with TB including drug resistance tuberculosis (DR-TB), and patient support

Closing gaps in detection and treatment requires much higher coverage of drug susceptibility testing among people diagnosed with TB, reducing under diagnosis of TB, models of care that make it easier to access and continue treatment, new diagnostics, and new medicines and treatment regimens with higher efficacy and better safety. The 2018 Global TB report of treatment outcome data for new cases show a global treatment success rate of 82% in

2016. This is a reduction from 86% in 2013 and 83% in 2015. In countries where notifications have increased, reporting of treatment outcomes has not kept pace.

Encouraging progress has been made in engaging private providers in basic TB care and control activities; however, there has been limited progress in engaging such providers in the care and management of drug resistance TB (DR-TB). Globally, 160,684 cases of MDR/RR-TB were detected and notified in 2017. Of these, 87% were enrolled on treatment with a second-line regimen but still only 25% of the estimated 558,000 people who developed MDR/RR-TB in 2017. Treatment success of MDR/RR-TB remains low, at 55% globally (4).

The gap between diagnosis and treatment is growing in many countries, due to a recent rapid expansion in diagnostic capacity that has not been accompanied by an increase in management capacity. Hence, an increasing number of patients diagnosed with MDR-TB or RR-TB are being placed on "waiting lists" for treatment with second line drugs (SLDs) [4].

Effective scale-up of engagement of all care providers in the management of both drug-susceptible TB (DS-TB) and DR-TB patients requires countries to pursue an appropriate mix of strategic work-streams, depending on the local context:

- enhancing investments to ensure that they are commensurate with the magnitude of the problem of engaging all care providers, and to ensure that NTPs and ministries of health (MOHs) have the capacity to support scale-up of PPM interventions, with a goal of achieving universal access to quality care for TB and DR-TB, based on national and international standards;
- sharing the burden of engaging numerous solo private practitioners with intermediary organizations such as social franchising and social enterprise institutions, NGOs, professional societies and associations with the capacity and skills to work with private practitioners;
- mobilizing and supporting the corporate sector to initiate and expand workplace TB programmes;
- implementing regulatory approaches (e.g. mandatory case notification, rational use of TB medicines, and certification and accreditation systems) to identify and support collaborating providers;
- policies and guidance to apply digital health tools to facilitate PPM expansion, such as payment of incentives, adherence monitoring, distance learning, voucher payment for drugs and diagnosis, case notification and facilitating TB specimen referral system (TSRS).
- integrating supportive supervision and monitoring of PPM programmes into overall TB programme surveillance and monitoring;

- giving priority attention to key affected populations and risk groups with suboptimal treatment uptake or treatment success in order to accelerate the decline in case fatality required in order to reach the ambitious targets for reductions in tuberculosis mortality;
- patient-centred care and support, sensitive and responsive to patients' educational, emotional and material needs, which includes but not limited to providing treatment partners trained by health services and acceptable to the patient, access to social protection, use of information and communication technology for providing information, education and incentives to patients, and the setting up of mechanisms for patient and peer groups to exchange information and experiences; and
- engaging communities and civil society to create demand for quality TB care from all public and private care providers.

A range of guidance documents and tools have been developed to guide implementation of tuberculosis treatment and care by all care providers. In July 2018, the latest evidence on treatment of drug resistant TB was reviewed by an independent panel of experts convened by WHO. A rapid communication on key changes to recommendations for the treatment of drug-resistant TB has been issued by WHO, to be followed by the release of updated and consolidated WHO policy guidelines later in the year.

In adapting guidelines, care must be exercised to avoid undermining current treatment programmes, to protect access for the populations most in need, to achieve the greatest impact for the greatest number of people, and to ensure sustainability. The latest available recommendations on TB treatment and care are communicated in the following guidelines:

- WHO Guidelines for treatment of drug-susceptible tuberculosis and patient care, 2017 update
- WHO treatment guidelines for drug resistant tuberculosis 2016 update. October 2016 revision
- WHO Framework for the engagement of all health care providers in the management of drug resistant tuberculosis, 2015
- TB CARE I. International Standards for Tuberculosis Care, Third Edition, 2014. It may need revision in accordance with the revisions in diagnosis, treatment and patient care made by WHO in 2015 and 2016.
- WHO framework for implementation of active tuberculosis drug-safety monitoring and management (aDSM), 2015
- WHO updated and consolidated guidelines for programmatic management of latent tuberculosis infection, 2018

The adaptation process and implementation of the WHO guidelines should involve all care providers. Capacity building activities of all care providers to implement the new recommendations should be systematically approached taking into account of contextual issues and available resources. Putting in place monitoring mechanisms of application of recommendations is essential.

TB in children

In 2017 about 1 million children (aged <15 years) globally had TB. Children accounted for 15% and 10% of total deaths among HIV negative and HIV positive people respectively, higher than their share of estimated cases, suggesting poorer access to diagnosis and treatment [4].

Infants and young children are at increased risk of developing severe disseminated disease associated with high mortality, such as TB meningitis or miliary TB. TB illness in children is often missed or overlooked due to non-specific symptoms and lack of a sensitive and child-friendly diagnostic test that is not based on sputum. Health care workers, both in public and private often lack sufficient knowledge and capacity for prevention and management of childhood TB. Systematic screening for TB and TB preventive therapy (TPT) for children under 5 years of age and children living with HIV are rarely implemented or reported. In countries with a high prevalence of tuberculosis, women of childbearing age also carry a heavy burden of the disease. Maternal tuberculosis associated with HIV is a risk factor for transmission of tuberculosis to the infant and is associated with premature delivery, low birthweight of neonates, and higher maternal and infant mortality. National tuberculosis programmes need to address systematically the challenges of caring for children with tuberculosis, and child contacts of adult tuberculosis patients by engaging all care providers.

More efforts are needed to develop affordable and sensitive diagnostic tests that are not based on sputum specimen, child-friendly shorter regimens as well as formulations of second-line drugs, and better vaccines. Tuberculosis care should be integrated within maternal and child health services to enable provision of comprehensive care at the community level. An integrated family-based approach to tuberculosis care would help to remove access barriers, reduce delays in diagnosis and improve management of tuberculosis in women and children. Therefore, MNCH services in the private sector should also be adopted to address TB among children.

Preventive Care

The main health-care interventions to prevent new infections of Mycobacterium tuberculosis and their progression to TB disease are treatment of latent TB infection (LTBI) and vaccination of children with the BCG vaccine. TB preventive treatment for a latent TB infection is expanding, but most of those for whom it is strongly recommended are not yet accessing care, whereas coverage of BCG vaccination is high.

The 2018 Global TB report show that the number of people living with HIV reported to have been started on preventive treatment was 958,559 in 2017. Of the 15 high TB/HIV burden countries that reported data, coverage ranged from 1% in Eswatini to 53% in South Africa. About 292,182 under five children were reached in 2017, a threefold increase from 2015, but still only around 23% of the 1.3 million estimated to be eligible.

The current (2018) consolidated guidelines [14] provide a comprehensive set of WHO recommendations for programmatic management of LTBI and the basis and rationale for national guidelines. These guidelines supersede previous WHO policy documents on the management of LTBI in people living with HIV and household contacts of people with TB and other at-risk groups.

In countries with a high incidence of TB, WHO guidance issued in 2018 includes a new recommendation to consider testing and treatment for people aged 5 years or more who are household contacts of bacteriologically confirmed pulmonary TB cases. This substantially increases the potential number of people eligible for treatment. WHO estimates that at least 30 million people will be eligible for TB preventive treatment between 2018 and 2022 BCG vaccination should be provided as part of national childhood immunization programmes according to a country's TB epidemiology. In 2017, 158 countries reported providing BCG vaccination, of which 120 reported coverage of at least 90% [14]. TB preventive care should be extended to private sector given the significant proportion of clients who seek services from private providers.

Collaborative TB/HIV activities

There were 464,633 reported cases of TB among people living with HIV in 2017 (51% of the estimated 920,000 new cases in the same year), of whom 84% were on antiretroviral therapy. Most of the gaps in detection and treatment were in the WHO African Region, where the burden of HIV associated TB is highest [4]. HIV associated tuberculosis accounts for about one quarter of all tuberculosis deaths and a quarter of all deaths due to AIDS. The vast majority of these cases and deaths are in the African and South-East Asia regions.

The overall goal of collaborative tuberculosis/HIV activities is to decrease the burden of tuberculosis and HIV infection in people at risk of or affected by both diseases. Integrated tuberculosis and HIV service delivery has been shown to increase the likelihood that a tuberculosis patient will receive antiretroviral treatment, shorten the time to treatment initiation, and reduce mortality by almost 40% [2].

Although there has been an encouraging global scale up of collaborative tuberculosis/HIV activities, the overall coverage of services remains low. Further, the level and rate of progress vary substantially among countries. There remains a mismatch between the coverage of HIV testing for tuberculosis patients and that of antiretroviral treatment, cotrimoxazole preventive treatment, and HIV prevention.

Reducing delays in diagnosis, using new diagnostic tools and instituting prompt treatment can improve health outcomes among people living with HIV. Tuberculosis and HIV care should be further integrated with services for maternal and child health and prevention of mother-to-child transmission of HIV in high-burden settings.
The WHO (2012) updated policy on collaborative TB/HIV activities [15], in contrast to the 2004 policy, recommends offering routine HIV testing to patients with presumptive or diagnosed TB as well as to their partners and family members as a means of reducing the burden of HIV. TB patients who are found to be HIV-positive should be provided with co-trimoxazole preventive therapy (CPT).

Antiretroviral treatment should be given to all HIV-positive TB patients as soon as possible within the first 8 weeks of commencing anti-tuberculosis treatment, regardless of their CD4 cell-counts. Those HIV-positive TB patients with profound immunosuppression (e.g. CD4 counts less than 50 cells cells/mm3) should receive ART immediately within the first 2 weeks of initiating TB treatment. TB patients, their family and community members should be provided with HIV prevention services.

HIV and TB-control programmes should collaborate with other programmes to ensure access to integrated and quality-assured services for women, children, prisoners and for people who use drugs across both public and private health care settings.

Co-management of tuberculosis comorbidities

Several non-communicable diseases and other health conditions including diabetes mellitus, under nutrition, silicosis, smoking, harmful alcohol and drug use, and a range of immune-compromising disorders and treatments are risk factors for tuberculosis. Presence of comorbidities may complicate tuberculosis management and result in poor treatment outcomes. Conversely, tuberculosis may worsen or complicate management of other diseases. Therefore, as a part of basic and coordinated clinical management, people diagnosed with tuberculosis should be routinely assessed for relevant comorbidities in both public and private health systems.

Normative guidance and frameworks for TB and many of the comorbidities exist but there has been limited uptake by countries, particularly for the non-communicable comorbidities. The local situation should determine which comorbidities should be systematically screened for among people with active tuberculosis. The process of developing a framework for TB and comorbidities by WHO has just been kicked off. The development of this framework and its adoption by national MOH can help integrated management of non-communicable diseases and communicable diseases including tuberculosis by all care providers.

Section 2: Methodology

2.1 Study objectives

The objectives of this study were two-fold:

3. To conduct an assessment of the level of engagement of private sector (including corporate facilities), NGO's, Faith Based clinics and hospitals, and public-private collaboration in SADC countries on TB control and identify opportunities, risks, challenges and key strategic priorities to further expand private sector support to TB prevention and care.
4. To provide recommendations on the development of a regional strategy for private sector engagement in TB control based on identified opportunities and lessons learnt.

2.2 Study questions

Critical elements constituting effective engagement of private healthcare providers in TB control were identified through the literature review informed the design of this study. The study sought to address the following questions:

Thematic area	Study question
Private health sector profile	1. What is the mix of private healthcare providers engaged or could potentially be engaged in TB diagnosis and treatment?
Regulatory environment	1. What are the regulations covering private sector involvement in TB diagnosis and treatment? 2. What are the challenges with enforcement of regulations? 3. How have these regulations facilitated or hindered NTPs engagement with private health care providers?
Models of engagement	1. What are the models of private sector engagement in provision of TB services? 2. What are the opportunities for initiating or scaling up the models in the country or other countries in southern Africa?
Incentives and enablers	1. What type of incentives and enablers are provided to private health care providers? 2. To what extent have the incentives and enablers facilitated or motivated private health care providers involvement in TB diagnosis and treatment?
Financing	1. What are the finding sources for the coordination and management of private sector engagement in TB control by NTPs? 2. What are the strategies for financing private sector engagement in TB control? 3. What opportunities exist in utilising financing strategies to scale up private sector engagement?
Capacity building	1. What are the strategies for building the capacity key actors in private sector engagement in TB control? 2. To what extent has the capacity building led to improved quality of TB services offered by private healthcare providers?
TB Services provided	1. What TB services are provided by different types of private health care providers? 2. Are the services provided in accordance with national and international standards, protocols and standard operating procedures? 3. What service quality assurance mechanisms are in place?

Coordination, communication and advocacy	1. How efficient are structures for coordination of NTP engagement with private sector? 2. What are the achievements of the strategies for communication and advocacy with the private sector?
Risks of engaging private health sector in TB diagnosis and treatment	1. What are the risks in engaging private sector in TB control? 2. How can the risks be mitigated?
Monitoring and evaluation	1. What steps has the NTP taken to integrate private health care providers into the national TB M&E system? 2. To what extent do private health care providers have knowledge of and report to the national TB programme?

2.3 Geographical scope of the study

This study was carried out in four countries: Malawi, Zambia, Mozambique and Lesotho.

2.4 Data collection and analysis

Data was collected from May-August, 2019 through three methods

(i) Documents review

Documents review constituted a key source of data for this study. A preliminary documents review was undertaken at design phase of this study to identify strategies, guidelines, approaches, challenges and lessons learnt in engaging private healthcare providers in TB control. The documents review focused on the thematic areas of this study. During implementation of the study, country specific documents were reviewed to collect information models for private healthcare providers engagement in TB control. These documents included

- National TB guidelines and tools
- TB monitoring and evaluation plans
- TB tools (including data tools) used in private health facilities
- Legislation and regulations for healthcare providers
- Data on private healthcare providers, pharmacies and traditional healers
- Service agreement and memorandum of understanding signed with private healthcare providers
- Innovative tools provided to private healthcare providers

(ii) Key informant interviews

Key informants were interviewed to collect qualitative data on how the government is engaging private healthcare providers in TB control. A semi-structured interview guide was used for these interviews to allow for further probing of issues. The interviewed covered all thematic areas of the study: regulations, models of engagement, incentives and enablers, financing, TB service provided by private health sector, coordination and communication, monitoring and evaluation and risks.

Key informants interviewed included:

- Ministry of Health policy makers
- National TB programme staff and PPM focal persons
- HIV programme managers
- TB programme partners
- Regulatory agencies
- Professional bodies
- Mining and other corporate companies
- Private healthcare providers
- Pharmaceutical manufactures

(iii) Focus Group Discussions

Focus Group Discussions were held with traditional healers to collect data on their understanding and perceptions of TB, how they treat suspected TB patients, any engagement models in place, incentives that could enable them to engage in TB and the challenges they face in collaborating with government and healthcare workers among other issues.

(iv) Quantitative data collection

Quantitative data was collected from representative sample of private healthcare providers in two districts in each country. A semi structured questionnaire was administered to private healthcare providers selected in two districts in each country. District selection was based on the TB burden (TB cases reported annually) and number of private healthcare providers. Those with both a high TB burden and high number of private healthcare providers were selected.

Stratified sampling technique was used to ensure representation of all types of private providers in the country, based on lists of sampling frames provided by countries. These include not-for profit (FBO/NGO) health facilities, for-profit hospitals and clinics, pharmacies, standalone laboratories and corporate facilities.

Sample size was calculated using EpiInfo7.2 statistical software appropriate for cross sectional study/survey design. The following parameters were inputted to estimate the required sample size for each country: total number of private facilities in two districts, based on the sampling frame provided by countries; expected frequency of reporting from private facilities, based on recent reports and/or previous studies; using acceptable margin of error of 5%; and 95% confidence level.

The sample size is shown below

Type of Facility	Malawi	Zambia	Lesotho	Mozambique
For-profit hospital	8	7	6	1
For-profit clinic	22	28	14	18
Standalone/retail pharmacy	6	48	15	27
For-profit laboratory	-	4	1	1
NGO/FBO hospital	3	3	2	-
NGO/FBO heath centre	1	4	14	-
Corporate hospital	-	2	1	-
Corporate clinic	-	7	1	6
Total	40	103	54	53

Data analysis:

Data was analyzed using qualitative and quantitative methods. Qualitative methods included content analysis and triangulation. Data from each key informant was matched to each relevant study question. Data relevant to each study question from each data source – documents and key informants was analyzed separately to identify emerging issues. This was followed with triangulation to identify key findings for each thematic area of the study.

Quantitative data was entered and analyzed using EpiData and Stata 12 statistical software respectively. During entry and analysis, data was checked for consistency, outliers, and missing values.

Ethical clearance: As it is a descriptive, cross sectional study targeting project implementers, ethical issues related to dignity of research subjects (confidentiality and consent) was addressed by developing informed consent and confidentiality forms and keeping data confidentiality during collection, data entry and analysis. The MOH in each country took the lead in coordinating the data collection process, including contacting stakeholders for interviews.

2.5 Limitations of the study

Limitation	Mitigation measures
Unavailability of a few key informants for interviews	The information gaps resulting from unavailable key informants was addressed through data triangulation from other key informants, documents review and structured questionnaire
A few sampled clinics and pharmacies were no longer operating	This was mitigated by replacing the closed facilities using the same sampling methodology or re-estimation of sample size where necessary based on the revised sampling frame.

Section 3: Malawi study findings and recommendations

3.1 Private health sector profile

The private health sector in Malawi is diverse and growing. It comprises of not-for-profit healthcare providers and constitutes, mainly faith-based health facilities run under the Christian Health Association of Malawi (CHAM) and other Non-Governmental Organisations (NGOs); for-profit providers including hospitals, clinics and pharmacies and informal healthcare providers. Each category of private healthcare providers has different capacities and opportunities to engage in TB control.

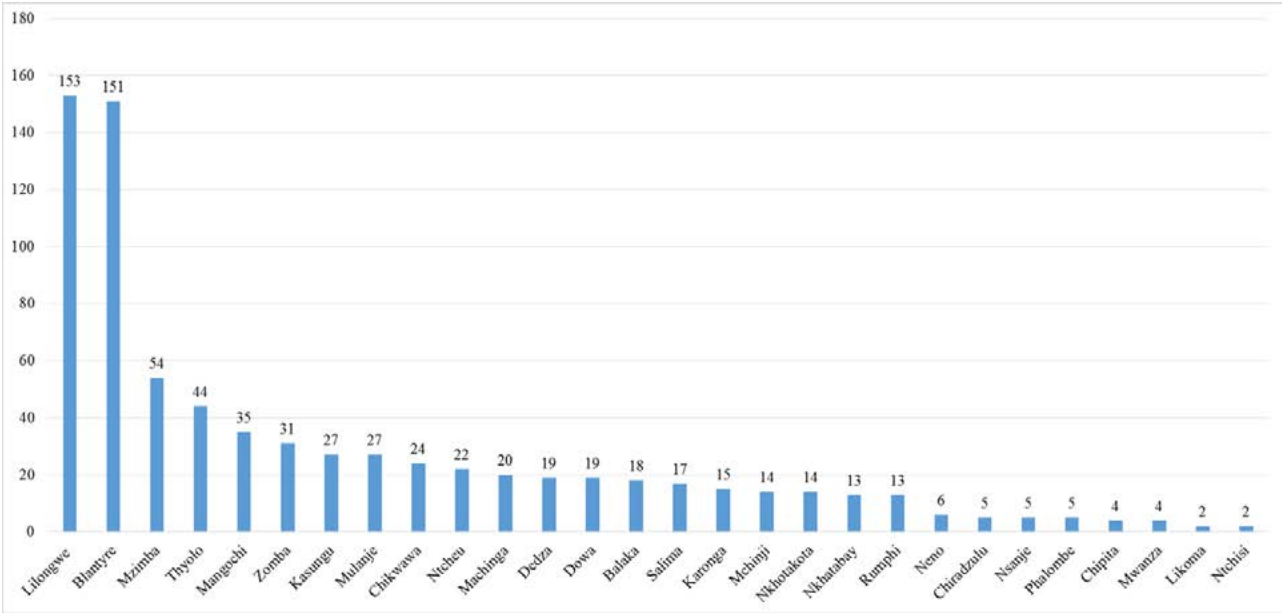
A comprehensive mapping of private health facilities (excluding informal healthcare providers) conducted in 2012 found a total of 763 facilities. 56% were private clinics providing outpatient services, 37% provided inpatient services, 15% were health centres, pharmacies constitute 12% while 7% were hospitals [8].

TABLE 2: PRIVATE HEALTH FACILITIES IN MALAWI

Facility type	Number	%
Private clinic with outpatient services only	429	56%
Health centres	111	15%
Pharmacy	94	12%
Private clinics with admission facilities	37	5%
Hospitals	52	7%
Nursing midwife facility	7	1%
Mobile clinic	3	0%
Others	30	4%
Total	763	100%

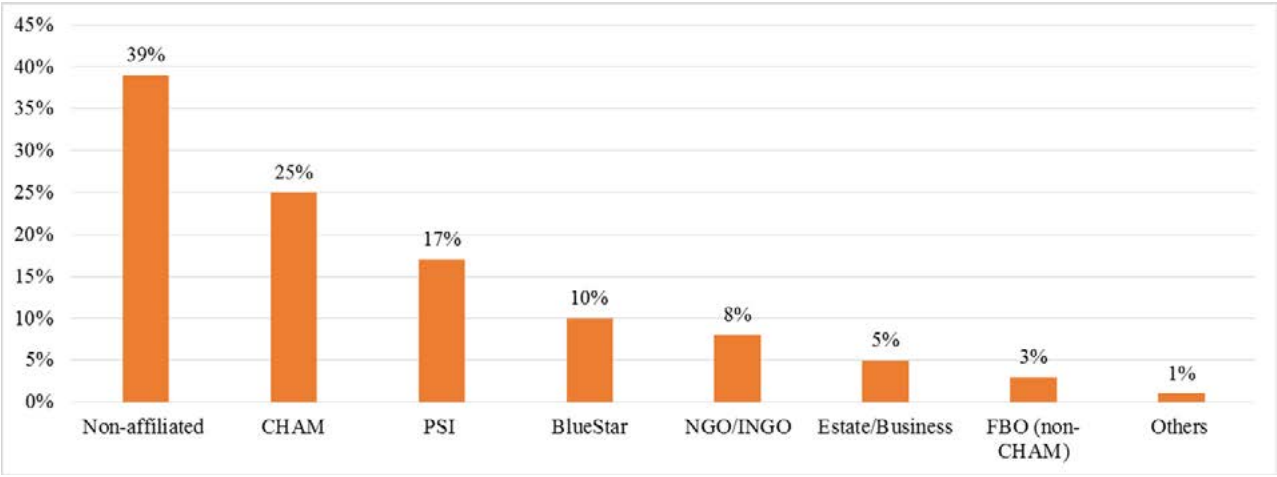
Private healthcare facilities vary across districts. 49% of the private health facilities are in the South, 37% in the Central and 14% in the North region. 77% percent of the facilities denoted as "other" include dental clinics, laboratories, dispensaries, and eye clinics; 46% of private clinics with outpatient services are located in the urban areas. Facilities most commonly found in rural areas include community and rural hospitals and vast majority of health centres (85%). Lilongwe and Blantyre have the largest share (40%) of all the private health facilities. The figure below shows the distribution of all private health facilities by district [8].

FIGURE 2 NUMBER OF PRIVATE FACILITIES BY DISTRICT



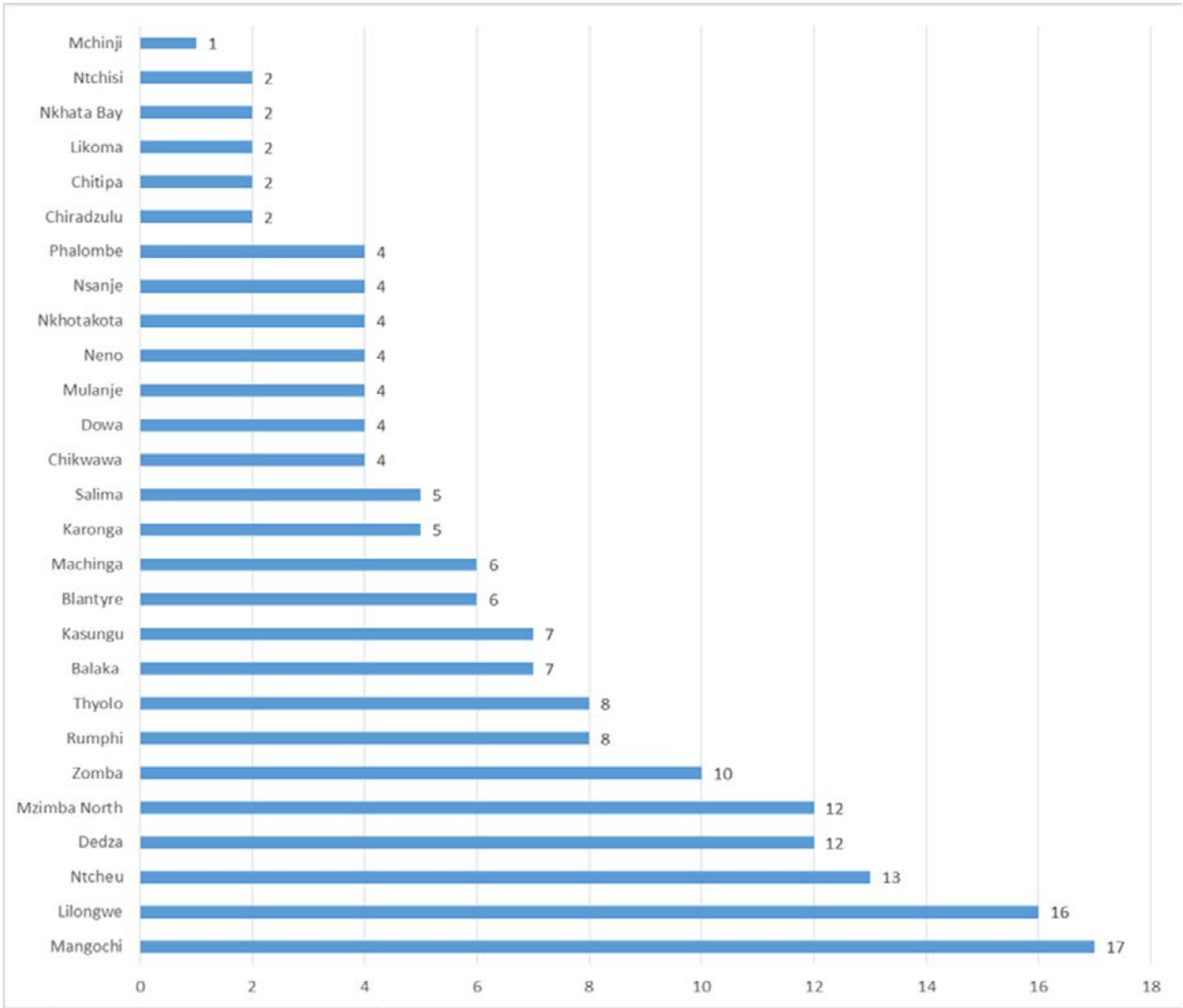
The for-profit private health facilities constitute 39% of the private health facilities followed by Christian Health Association of Malawi affiliated facilities which constitute 25%. The remaining 36% are NGO and corporate facilities. The figure below shows the affiliation of private health facilities. The non-affiliated facilities are the not-profit private facilities [8].

FIGURE 3: PERCENTAGE OF FACILITIES BY AFFILIATION



Christian Health Association of Malawi (CHAM): CHAM has a total of 171 health facilities spread across several districts in the country[4]. As the figure below shows, CHAM facilities provide healthcare services mainly in rural areas.

FIGURE 4: PERCENTAGE OF FACILITIES BY AFFILIATION

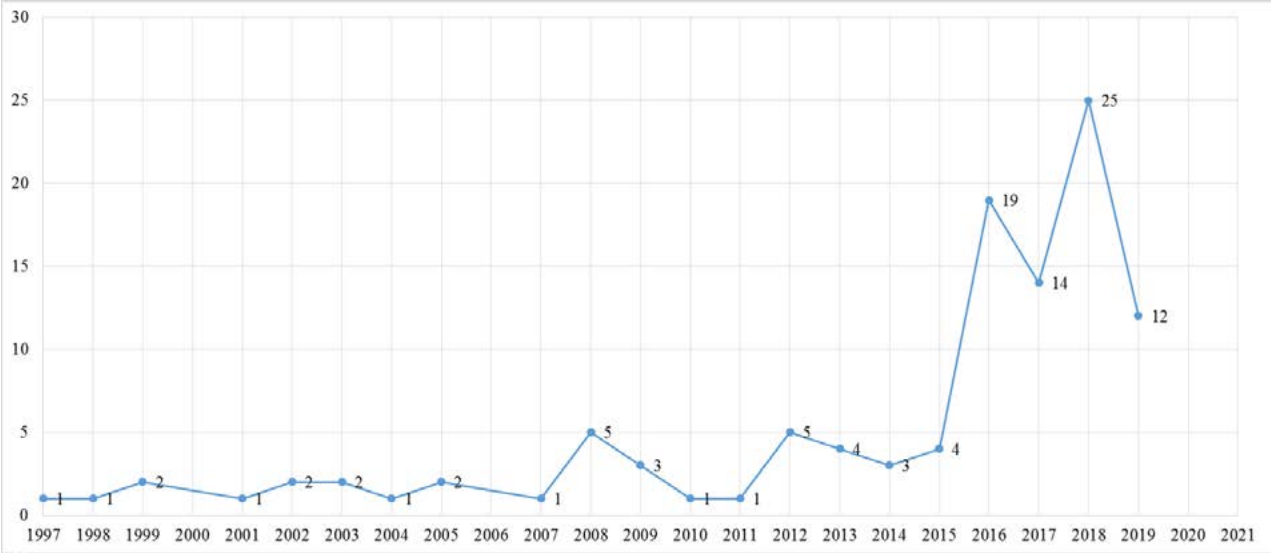


Data source: Malawi Pharmacy, Medicines and Poisons Board

Pharmacies: There are 109 registered retail pharmacies and 88 registered as wholesale pharmacies[5]. The trend in registration of retail pharmacies shown below reflects the growth of the private health sector over the years with accelerated growth registered from 2015.

[4]This number is based on the list of health facilities obtained during the survey. Other documents such as the PPM Action Plan indicates total CHAM facilities are 191.
[5]List of pharmacies registered by the Malawi Pharmacy, Medicines and Poisons Board as at April 2019

FIGURE 5: TREND IN REGISTRATION OF RETAIL PHARMACIES



Data source: Malawi Pharmacy, Medicines and Poisons Board

Traditional healers: The number of traditional healers in the country is not known. However, traditional healers are found throughout the country – in rural and urban areas, given that fact that they have associations in all districts. A mapping of traditional healers is planned to establish the number and nature of their practices. The traditional healers are not homogeneous – different healers use different treatment practices such as herbal medicine and spiritual healing.

3.2 Regulatory environment

3.2.1 Overall regulations for healthcare providers

There is a clear regulatory framework for healthcare providers in Malawi covering registration and licensing, enforcement or monitoring of compliance and licence renewal. The Medical Council of Malawi is mandated to regulate all healthcare providers in the country.

Registration: Healthcare providers have to meet set criteria or requirements in order to be registered and licenced to operate a health facility. Different categories of health practitioners must have a minimum required number of

years of experience to set up a health facility. Medical doctors require a minimum of 2 years of experience, clinicians 6 years, nurses and medical assistants 8 years and radiographers 2 years. In addition, the Council has in place minimum infrastructure requirements for various types of facilities ranging from individual consultation services to hospitals. The licensing requirements are designed to ensure only qualified health professionals are registered and facilities providing healthcare meet standards required to provide quality healthcare.

Inspections: Healthcare providers are expected to continuous meet the set standards in the period of their operations. MCM is mandated to carry out inspections to ensure compliance with regulations. Each healthcare provider should be inspected at least once in 24 months. However, inspection is a huge task requiring substantial financial and human resources requirements to cover all healthcare providers in the country. Therefore, some of the healthcare providers are not inspected as stipulated in the law.

Licence renewal: This aspect of regulations focuses on ensuring registered health providers are still existing and meeting standards. A key component of licence renewal is the requirement for health professionals to accumulate a set number of Continuous Professional Development (CDP) points to have the licence renewed. This is a key requirement for improving the quality of healthcare provided.

Other interventions the MCM is involved in that contributes to improvement and expansion of quality of healthcare in the private sector include:

- Certification: MCM leads a team comprising National AIDS Council, Malawi Business Coalition for HIV and AIDS and Pharmacy, Medicines and Poisons Board that assesses private healthcare providers whishing to delivery of Anti-Retroviral Therapy (ART) services. The team conducts assessments of applicants and certifies those meeting the criteria while others are advised on the improvement they need to make to qualify. This certification process is another layer of programme level regulation to ensure private healthcare providers meet additional standards for provision of HIV services. This offers an opportunity for expansion of TB services in the private health sector.
- Public Private Mix approaches PPM): MCM is a member of the Public Private Mix (PPM) Steering Committee where it ensures private healthcare providers engaged in TB control comply with regulations as a minimum requirement. It offers advice to the Steering Committee on regulatory issues.

The enforcement of regulations for healthcare providers faces the following challenges:

- Weak capacity of the MCM to inspect effectively all healthcare providers and to follow up on recommended actions for those inspected. The council has human resources and financial limitations.
- Findings from inspections carried show weak compliance among healthcare providers. Inspections identified cases of individuals registered to offer services not being present in the clinics all the time, and some may have other businesses they attend to, leaving non-medical staff to offer services.
- The CPD requirement for license renewal is not always applied

(i) Regulations for pharmacies and medicine stores

Pharmacies and medicine stores are regulated by the Pharmacy, Medicines and Poisons Board (PMPB). The Board registers and licences all premises stocking and dispensing medicines. Two types of premises are licenced - pharmacies and medicine/drug stores. Pharmacies must have a pharmacist or pharmaceutical technologist on site to operate while drug stores can be owned and managed by nurses, a paramedic, or pharmacy technician. Drug shops are only permitted to stock over-the-counter medicines and do not stock drugs that require a prescription including antibiotics. However, it is highly likely that they are engaged in selling prescription drugs, including antibiotics. Groceries are also known to sell drugs, even antibiotics and should also be targeted along with drug shops. They are widely distributed, especially in rural areas operating illegally under the shield of groceries. The NTP has not engaged them so far but has considered them in its long term plan. No mapping was done for drug shops and groceries by NTP.

The PMPB conducts two types of inspections: (i) Pre-establishment inspection which takes place before registration and involves inspection of the premises and verifying the pharmacy personnel qualifications to ensure all requirements for registration are met. (ii) Routine inspection of pharmacies and medicine/drug stores annually to ensure compliance with regulations. Sanctions for those not complying with regulations include closure of the premises as well as advising on remedial action.

Pharmacies and medicine/drug stores renew their licences annually. Unlike the case of private healthcare providers, continuous professional development is not a requirement for licence renewal. The Board also monitors illegal drug vendors and such vendors are charged in court. However, the vendors are in most cases given minimal fines which cannot deter them from continuing illegal drug vending.

The anti-TB drugs in Malawi are controlled and are procured and supplied only by government. Private healthcare providers who wish to offer TB treatment are required to access the drugs through government.

Key issues

- Some pharmacies dispense prescription only medicines without patients having a prescription; and also misuse their mandate by giving patients alternative prescriptions if they don't stock the prescribed drug
- Pharmacists are not always present in the pharmacy premises and employ unqualified staff to dispense perception only drugs
- Although clinics are expected to keep emergency medicines, some are using this policy to operate as pharmacies and are dispensing medicines
- Some medicine/drug stores keep prescription only drugs contrary to regulations in order to compete with pharmacies and, also, to keep their clients. Patients tend to lose trust in medicine/drug stores if they don't find prescription only drugs.

Although pharmacies and medicine/drug stores are not allowed to stock anti-TB drugs, the way they manage coughs impacts on early TB detection. Some pharmacies contribute to delayed diagnosis by "treating" coughs with different medications for prolonged period before referring the patient to a health facility. Effective dispensing practices are therefore needed to improve referral of presumptive TB cases from pharmacies and drug stores to health facilities. The PMPB has capacity constraints in effectively inspecting all pharmacies in the country and in ensuring they meet license renewal requirements. Therefore, although the regulations are well laid out, monitoring is weak.

(ii) Regulation of traditional healers

There is no law regulating traditional healers in Malawi. However, the government has established two institutions coordinating traditional healers and traditional medicine.

a) Malawi Traditional Healers Umbrella Organisations (MTHUO): This organisation was established by Government, with a secretariat located within the Ministry of Health, to coordinate traditional healers. MTHUO is a membership organisation of the traditional healers associations established in each district. Individual traditional healers register with the respective district association. MTHUO, in collaboration with the TB Public-Private Mix (PPM) secretariat, is in the process of mapping traditional healers in order to train them on how to refer presumptive TB cases. The challenge with MTHUO is that it has limited capacity to effectively coordinate its members. Its secretariat is staffed with two professional staff, lacks transport and has limited

funding. The organisation cannot reach out, mobilise and sensitise members countrywide.

b) The National Steering Committee for Traditional and Complementary Medicines established by the MoH champions the agenda of traditional medicine in Malawi and provides policy guidance for traditional medicine. Currently, the committee is developing the traditional medicine policy to be followed with guidelines and a registration system for traditional healers.

3.2.2 TB related regulations

The National TB Programme Manual of 2017 details the TB management guidelines all TB service providers (public and private) are required to follow in delivering TB services. The Manual covers all aspects of TB case detection, treatment and care for all forms of TB. The current guidelines were updated in 2017.

The National TB Programme (NTP) disseminated the guidelines to public and not-for-profit (mainly CHAM) healthcare providers. The PPM Unit leads the dissemination of the guidelines to for-profit healthcare providers and this process is on-going. Some of the private healthcare providers have been trained on guidelines. The PPM unit also conducts supervisory visits to the for-profit private healthcare providers who are engaged by PPM to provide TB treatment services, to assess the application of the guidelines and quality of care.

Regulation of anti-TB drugs

The MoH lays emphasis in the regulation of antibiotics especially in the private sector as part of the strategies to address anti-microbial resistance. Private healthcare providers do not have access to anti-TB drugs through the market. They access the drugs through the government supply chain or refer patients to public health facilities. This system, so far, is working well and private healthcare providers providing TB services do access anti-TB drugs from government. This regulation offers an opportunity for reducing cost of TB service delivery and as an entry point for improving TB case notification and reporting and overall supervision of quality of TB services among for-profit private healthcare providers.

TB case notification

TB case notification is a national and international requirement. The bottom-up TB notification and reporting system in Malawi does not provide complete data and data is not reported on time. In addition, for-profit private healthcare providers have inadequate staff and time to notify TB cases. To remedy notification and reporting challenges, NTP conducts a joint HIV/TB data collection mission every quarter covering all public and private registered ART and TB

notification sites. During these missions, the NTP collects data from the primary source in public and private facilities to ensure accuracy, completeness and timeliness. This approach has improved TB case notification among all TB care providers but it is donor funded and may not be sustainable.

Infection control

This is a key area of TB regulations. All TB service providers, especially the registered notifying centres are expected to have in place TB infection control measures. The NTP has a TB Infection Control Officer and the assessment of infection control is incorporated into supportive supervision visits. However, this supervision is not regularly extended to the for-profit private healthcare providers and infections control in private healthcare providers is not effectively monitored. This is an area into which the PPM secretariat is working on with the TB Infection Control Officer.

Certification and accreditation

Certification and accreditation are mechanisms used to ensure quality standards in health service provision. A mechanism for certification and accreditation of private healthcare providers for TB service delivery has not been established and there are no clear standards for for-profit private healthcare providers in providing TB services. However, steps are being taken towards accreditation. The NTP, through the PPM secretariat, has completed a mapping of for-profit healthcare providers in the country and assessed those with capacity or potential to provide TB services. Through this process, 35 for-profit healthcare providers have been earmarked to be provided with microscopes and 10 will be provided with Gene-Xpert machines to enable them service as TB notification sites. The PPM unit is also in the process of finalising an MoU to define the relationship between government and these providers. Although this process is not explicitly referred to as accreditation, it has all the features of accrediting facilities to provide TB services.

3.2.3 Enforcing existing regulations

A regulatory framework for the provision of healthcare including TB services is in place. However, the major challenge is ensuring compliance with the regulations among private healthcare providers.

- Regulatory bodies delegate authority to districts health officers due to lack of resources to monitor private health care providers countrywide. On the other hand, the capacity of DHO to implement regulations is also weak.

- Regulatory bodies are not effectively monitoring illegal practitioners. Most TB patients are poor hence they go to the unregulated private health care providers. This category of health providers do not want to engage with government thus causing delays in proper management of TB, contributing to anti-microbial resistance. These providers are untrained and difficult to register.
- There are no proper monitoring or regulations for traditional and faith healers

3.3 Models of engagement of private healthcare providers

This study found several variants of models of private health sector engagement in TB control, outlined in this section.

3.3.1 Role of National TB Programme

The NTP in Malawi has taken steps to engage private health providers in TB control; this engagement is in its initial stages and a concrete model of engagement, particularly for the for-profit health sector, is evolving. The NTP is playing a strategic and technical role in promoting private health sector engagement in TB control as follows:

(i) The NTP provides leadership and strategic guidance for TB control for all TB service providers, including for profit and not-for profit private health sector. In this respect, the NTP has in place the national TB strategic plan that outlines the key strategies for delivering all forms of TB services and the National TB Guidelines which all health providers have to follow. The NTP updates the TB guidelines from time to time to ensure they are in conformity with WHO guidelines and disseminates the guidelines to CHAM and NGOs; and to for-profit private health providers through the PPM initiative.

(ii) NTP carries out support supervision to public and not-for-profit health providers. The programme has deployed Zonal and district TB coordinators to coordinate TB activities including conducting support supervision. Through the PPM initiative, support supervision is being extended to for-profit health providers. The national and regional PPM focal persons conduct quarterly supervision and reviews of TB service delivery in the for-profit private healthcare facilities.

(iii) NTP conducts monitoring and evaluation of TB service delivery. National and district health teams visit all TB diagnostic and treatment sites every quarter to collect data. These visits cover diagnostic and treatment sites in the private health sector.

It should be noted that the enhanced engagement of private healthcare providers by the NTP started in 2018 and it is in its initial stages. This engagement is funded by Global Fund under the current funding cycle which ends in 2020; reliance on donor funding is threat to its sustainability.

3.3.2 Intermediary organisations: Public-Private Mix (PPM) Unit

A model of NTP engagement with private healthcare providers (for-profit private health sector) which involves an intermediary organisation is not yet in place. The PPM unit established to coordinate private health sector is integrated in the structure of the NTP Programme, with the oversight of its operations carried out by the PPM Steering Committee. The vision of the PPM Steering Committee is to have the PPM evolve into an intermediary organisation that bridges private health providers and government in the long run.

3.3.3 Service Level Agreement

The Government of Malawi has utilised service level agreements as a model for engaging not-for-profit private healthcare providers. It has an agreement with Christian Health Association of Malawi (CHAM to provide a wide range of healthcare services; and Population Services International (PSI) to provide family planning outreach and Voluntary Medical Male Circumcision services.

The Government views CHAM as a strategic partner for providing health services in hard to reach areas and, in this regard, Government has a policy of not putting up health facilities in areas where CHAM facilities exist. As a result, it is estimated that CHAM provides about 40% of health services and 50% of the middle level healthcare workers training (nurses, clinical officers, laboratory technologists and assistants and medical assistants).

Under the MoU with CHAM, government deploys staff in CHAM facilities, pays their salaries as well as operational costs. In return, CHAM provides health services free of charge or at reduced fee. With regard to TB, the government supplies diagnostic equipment and laboratory reagents and other commodities, and anti-TB drugs in return for the provision of free services. The government (National TB Programme) also trains healthcare staff in CHAM facilities. CHAM facilities have TB focal persons coordinating the provision of TB services. These facilities are integrated into and use the systems set up by the National TB Programme including, screening, referral, diagnosis, support supervision, quality assurance, case notification and reporting. They also adhere to the standards and guidelines set up by the NTP.

The public health aspects of TB management (DOTS activities involving contact tracing, adherence to treatment, defaulter training among others) are done using the Health Surveillance Assistants (HSA) deployed by government.

Both CHAM and Government have a strong relationship. CHAM is involved in the development of TB management policies, guidelines and tools; it participates in national Technical Working Group meetings and other technical meetings such as commodities quantification and forecasting.

Although this model has been in place for several years, it still faces several challenges:

- CHAM does not have its own programme for training staff and relies on Government. Whereas Government covers CHAM staff for training, in practice, priority is given to staff in government health facilities. Few staff from CHAM get trained.
- Data from CHAM facilities is not always included in the consolidated report of the month in which it is submitted although CHAM does report to district level on time. This is partly due to the records officers prioritising public health facilities data.
- Space for diagnostics (laboratories) in CHAM health centres is limited. A few facilities have been supported to expand the space.
- Very few have diagnostic capacity; and few are earmarked to be provided with Gene-Xpert machines
- CHAM facilities do not have the capacity to provide MDR TB, childhood TB and TB in pregnancy treatment. These cases are referred to public health facilities.

3.3.4 NGO Model of Engagement

NGOs are involved in TB control especially in conducting community level activities and linking patients to health facilities. A unique low-cost model exemplifying NGO involvement has been developed by Paradiso TB Patients Trust (Paradiso). This local NGO was founded in 2000 by women volunteers providing home-based care to people living with HIV. The volunteers realised that PLHIV had a high co-infection with TB but had limited information on TB prevention and management. This prompted the NGO to start a TB programme focusing on dissemination of information on TB to the community. Over time, Paradiso has established a unique model of supporting TB patients, involving setting up clubs comprising past TB patients who raise awareness on TB prevention and management, conduct TB screening at community level and referral of presumptive cases for diagnosis. The clubs also link presumptive cases with the community sputum collection centres. For patients referred to health facilities, the organisation has developed a CARD

System to track whether a referred patient reaches the health facility. The organisation provides transport for patients and also repatriates the patients (from urban areas mainly Lilongwe) who prefer to take their TB treatment from their rural homes. Further, the NGO provides nutritional support to MDR TB patients. The TB clubs are affiliated to specific health facilities where they serve as role models for other patients to adhere to treatment and provide treatment literacy education. Currently, Paradiso has 45 clubs across 7 districts and members pay a fee determined by the club itself to support club activities.

The unique aspect of this model is the use of past TB patients to sensitise communities, screen TB presumptive cases, refer or link them to diagnostic sites and to promote adherence to treatment through education and ferrying patients to their rural homes where they can be cared for by their families. A key success factors for this model is the volunteerism among past TB patients to provide a service with limited or no incentive and donor funding for activities such as Screening, referral, transport and repatriation and nutrition support. The infrastructure of patient clubs, mobile services and community linkages established by Paradiso presents an opportunity for scaling up early TB case detection (finding missing cases) through targeting high risk groups at community level for screening.

3.3.5 Private sector models for provision of TB services

The involvement of for-profit private sector in TB control varies according to the capacity and type of private healthcare service provider. Various emerging modes of for-profit healthcare providers involvement in TB management were identified.

This model was identified in one for-profit health facility where patients are screened for TB. When a presumptive case is identified, a healthcare worker from the facility collects sputum and transports it to a neighbouring public or CHAM facility for testing. Results are communicated to the health worker through an SMS system and in turn the health worker contacts the patient through telephone or SMS. Those with negative results are informed of their results and those with positive results are requested to come to the health facility where they receive the results and are referred to a public or CHAM facility for treatment. This is followed with tracing of contacts of the index case through telephone calls. If the contacts do not come to the facility, the health worker follows them to the household. The facility keeps a register for presumptive NTB cases and the NTP collects this data during their periodic visits.

Challenges facing this facility in implementing this model include the lack of training of the healthcare worker on screening and sputum collection; and inadequate resources for contact tracing. This case underscores the fact that patients seeking services in the for-profit private health facilities want to be treated there but often get disappointed when they are referred to government/FBO health facilities. It also shows the opportunity for involvement of private healthcare providers in TB control.

(ii) Accreditation or use of memorandum of understanding

The NTP, through the PPM initiative, is developing a model for engaging for-profit private healthcare providers to provide TB services ranging from referral, diagnosis and treatment and care depending on their capacity. This model will be anchored in a Memorandum of Understanding to be signed between Government and a for-profit healthcare provider; a variant of an accreditation system. The aim is to identify people with TB as soon as possible, no matter where in the health system they first present, and to establish mechanisms that allow for efficient and high quality diagnosis and treatment of TB at a designated private health care facility.

The PPM unit carried out an assessment of 73 for-profit healthcare providers in the country to identify those that can provide TB microscopy services. The assessment focused on the capability and readiness of private health facilities in the provision of TB microscopy services and TB treatment services. Out of those assessed, 35 (44%) private clinics were identified to start TB microscopy in phase one of the pilot. Other private healthcare providers will be provided with microscopes after addressing weaknesses identified during the assessment as shown in the table below. In addition, the PPM secretariat has identified 5 private health clinics to be supplied with Gene-Xpert machines [9].

TABLE 3: PHASED IMPLEMENTATION OF TB MICROSCOPY DIAGNOSIS IN PRIVATE HEALTH SECTOR BY ZONE [9]

Zone	Phase 1	Phase 2	Phase 3	Phase 4
Central East Zone	4	3	2	0
Central West Zone	6	6	4	2
South East Zone	8	8	0	0
South West Zone	12	6	0	0
North	5	6	1	1
TOTAL	35	29	7	3

The provision of TB treatment is for free in Malawi. However, the private health care providers to be provided TB diagnostic equipment contemplate to provide TB diagnostic services at reduced fee of K1000 to cover overhead costs as is the case with those providing Anti-retroviral therapy. Patients will, however, pay for any other services not related to TB treatment. This model is based on lessons learnt from the accreditation model implemented by the HIV programmes described in the text box below.

ACCREDITATION: A CASE OF ART SERVICE DELIVERY IN THE PRIVATE HEALTH SECTOR AND OPPORTUNITY FOR REPLICATION BY THE TB PROGRAMME

The MoH, working collaboratively with the Malawi Business Coalition for HIV and AIDS (MBCA), has in place a system for accrediting private healthcare providers to provide Anti-Retroviral Therapy (ART). A private healthcare provider intending to provide ART services applies to MBCA using an application form readily available on-line. The application is a reviewed by an accreditation committee comprising the Medical Council of Malawi, National TB Programme, Pharmacy and Medicines and Poison Board and the MBCA. The committee undertakes an assessment of the service provider based on predetermined criteria to find out the suitability of the service provider to deliver ART services. The criteria cover key areas of service delivery – infrastructure, human resources and service delivery capacity. Service providers meeting the requirements are accredited as ART sites by signing a Memorandum of Understanding spelling out their responsibilities and those of government and the conditions attached to the accreditation. So far, 77 private healthcare providers have been accredited. Service providers who do not meet the criteria are advised on areas of improvement.

Upon accreditation, the private healthcare provider provides ART services using national standards and protocols applicable in the public health sector. The NTP provides the provider with free HIV testing kits, ARVs and other drugs, data tools and reporting tools; and conducts support supervision as well as data quality assessment. Private healthcare providers are also linked to viral load testing platforms. The private healthcare providers are expected to provide free services to people on ART but are allowed to charge K500 to cover overhead costs. Of this fee, K300 is remitted to MBCA to meet coordination and technical support costs.

MBCA plays an intermediary role in this accreditation arrangement on behalf of MoH. MBCA was a suitable intermediary organisation because it was set up by the private sector, it speaks the private sector language and has easy access to the private sector healthcare providers.

Challenges facing private healthcare providers in providing ART services include:

- Not all staff in the accredited private healthcare facilities have been trained on ART, STI, TB and HTS among other relevant areas. Secondly, it is difficult to have staff from private health facilities to attend training running several days because this means closing some of the facilities.
- Limited human resources in private health facilities affecting data quality. The staff do not consistently collect data though they provide ART services. Either they have heavy workload or the data does not serve their purpose.

- Inadequate infrastructure: some of the private healthcare providers have limited physical space and may be unable to add other services required by PLHIV on ART.

Some of the private healthcare providers have declined to provide ART services because they do not want to be monitored by government; the programme has huge data demand; they want their independence and the programme is an interruption to their business, especially given that there is no monetary incentive.

Traditionally, public and private providers do not work together. However, the ART accreditation programme has succeeded in making private healthcare providers to accept a public health programme. Private providers usually provide services in isolation but in this programme, they are adhering to standardised service delivery.

Success factors include (i) good collaboration between the MoH, MBCA and private healthcare providers; (ii) the role played by MBCA as an intermediary organisation linking government with private healthcare providers and vice-versa; (iii) biannual meetings held with private healthcare providers at regional level to review programme implementation; and (iv) continuous support to the private healthcare facilities.

The model provides lessons for the TB programme on how to engage private healthcare providers to delivery TB services at a large scale.

(iii) Patient preference driven model in for-profit healthcare providers

Patients who choose to seek services in private health sector have a negative perception of the public health facilities due to the congestion, long waiting time and negative health workers' attitudes and poor customer care. They are more concerned with their privacy and prefer the personalised attention offered in the private sector. Consequently, a model is evolving where the patient's sputum is collected, taken to a diagnostic site for testing (in case of for-profit healthcare providers with no diagnostic capacity) and the patient is provided results at the private health facility. If the results are positive, the patient is then managed at the private health facility. Contact tracing for such index cases is done through telephone calls to family members who also prefer to be screened at the private health facility rather than at the household. This model is driven by patient preference and, in such cases, the patient meets the TB treatment cost.

(iv) Private pharmacies TB screening and referral

Since the beginning of 2019 some pharmacies and drug stores were approached by CHAI/MOH to participate in screening and referral of TB cases to MOH facilities in two districts, such as Lilongwe (urban) and Mangochi district (rural). The project was conceived and implemented by CHAI with the leadership of MOH. The project has developed curriculum for screening and referral, trained selected pharmacy and drug store staff, and distributed recording and referral forms. The majority of pharmacies and drug stores in Lilongwe are engaged in the CHAI/MOH project. So far, a total of 110 pharmacies and drug stores were selected and engaged.

The collaboration with CHAI/MOH is based on a mutual agreement with no MoU/accreditation or any condition attached to it. As this was the initial stage of collaboration the project focused on screening and referral of coughing patients to MOH facilities without any interference on the customary practice of pharmacies and drug stores.

Perceived benefits or incentives to participate in TB control by retail pharmacies:

- Most see that the collaboration with MOH could significantly contribute to the control of TB and prevention of drug resistance due to excess/unnecessary use of antibiotics and counterfeit TB drugs.
- There is high level of interest in the private pharmacies to work with Government, in light of the opportunity it brings enhancing the recognition of the pharmacy by community, and hence opening up doors for getting more clients
- The opportunity of retaining clients for future business, especially if the patient is found to be negative, he/she can come back and get treatment for cough
- Better knowledge on TB and its management

Constraints or challenges working with MOH/NTP

- There is no mechanism put in place for the referring pharmacy to know whether the patient reached and get the required testing at the government facility.
- The health care workers in public facility are reluctant to attend to the patient referred by retail pharmacies. The long waiting and attitude of providers in public facilities are considered challenges to accessing services to the patients referred by pharmacies
- Profit oriented behaviour of private pharmacies is a potential challenge in managing a patient with cough. This will include, but not limited to, repeated use of cough syrup and antibiotics even in cases suspected of TB, and resulting in some delays for referral to MOH facilities.

- The screening and referral process, including filling out recording and referral forms are considered time consuming and competing the priority business of the pharmacy. Some requested the assignment of a staff by MOH to do the screening, referral and recording.

Key issues

- Few pharmacies consider the government's provision of free drugs as a loss to the pharmacy
- Some are concerned about missing cases because only one person is trained and capable of doing the screening and referral.
- The need for IEC/BCC activities to increase visibility of service availability in the private pharmacies and drug stores, including sensitising the community what to expect.
- Some patients may not want to go to public health facility and could resort to short cut solutions, including finding counterfeit drugs or visiting other private providers.
- Sustainability: as it is an initiative by CHAI, government should be prepared for the required resources to continue with the project.
- Lay people work in some pharmacies and get trained. This creates an issue of legality in one hand and disincentive for professional graduates to work in the system on the other end.

(v) Pharmaceutical manufacturers

There is limited number of pharmaceutical manufacturers in Malawi and all TB drugs are imported.

(vi) NTP engagement of traditional healers

Traditional healers are among the first points of contact for people seeking healthcare. Although the proportion of people seeking services from these healers is not quantified, the large number of traditional healers operating in Malawi points to a significant number of clientele. Some of the traditional healers operate rudimentary in-patient facilities, poorly ventilated and exposing patients including the traditional healers themselves to TB infection.
The NTP Public Private Mix (PPM) secretariat, CHAI and MTHUO have established a partnership to increase the involvement of Traditional Healers in the control of TB. This is a model for engaging traditional healers in TB control implemented in 10 number of districts.

CHAI/NTP in collaboration with MTHUO has designed a system for traditional healers to screen and refer TB presumptive cases to health facilities. Traditional healers in the targeted districts were mobilised for training through the umbrella association. The training sensitised them on TB symptoms and transmission and what they need to do in cases of a suspected TB case. They have been provided with a screening tool, a referral form, daily tally sheet and a presumptive case register. Traditional healers participating in this pilot initiative are required to screen patients for TB and refer those determined to be presumptive cases to health facilities. The referral forms are designed to include a unique code that identifies the referring traditional healer.

The traditional healers have been provided with Information, Education and Communication materials including branded T-shirts and bags for easy identification by community members and the tools (forms and registers) for data capture. The initiative is rolling out a monitoring system which will involve CHAI/NTP and MTHUO secretariat conducting support supervision visits to the traditional healers, collecting data on presumptive TB cases, and following up to health facilities to ascertain whether referred patients did each there.

Traditional healers place value in being associated with this initiative and working with the NTP. They value the branded T-Shirts which identify them as having been trained on TB and to refer TB cases for diagnosis and treatment. The major incentive for traditional healers' participation in this project is the recognition by government and credibility gained from the community due to being perceived as having been training and therefore knowledgeable and providing better services. The recognition and credibility assures them of an increase in number of patients seeking services from them.

Challenges facing this model include (i) low literacy levels among traditional healers which affects their ability to keep data, (ii) weak harmonisation of the work of traditional healers as most of them work in isolation, and (iii) mistrust and negative attitude towards traditional healers among healthcare workers.

The involvement of the traditional healers in TB control has been recognised by NTP. Their involvement can be improved through having a comprehensive and long-term training programme; strengthening follow up and support supervision; providing a cost-efficient incentive to sustain screening and referrals such as bicycles, bags and T-shirts; establishing a recognition and award scheme to motivate them. The secretariat for MTHUO which is key for linking NTP to the traditional healers as well as mobilisation of the traditional healers for training, has inadequate number of staff (currently one programme officer) and lacks transport for supervision.

3.4 Incentives and enablers

Incentives and enablers vary by type of private healthcare provider. There is a comprehensive incentive and enablers scheme in place for not-for-profit private sector, particularly the Faith Based health provider (CHAM) compared to the for-profit private healthcare providers.

(i) Incentives and enablers for not-for-profit private healthcare providers (CHAM)

The Government of Malawi provides a mix of financial and non-financial incentives to CHAM facilities. These include the provision of free anti-TB drugs and laboratory commodities; recognition and involvement of CHAM in NTP processes such as policy development, planning, development of TB management guidelines; involvement of CHAM in the technical working groups where TB programme implementation is reviewed, and inclusion of CHAM in government programme activities including assessments, surveys, reviews and support supervision .

The government also provides enablers to CHAM to support provision healthcare services including TB. The enablers are in the form of payment for staff salaries for healthcare workers in the CHAM facilities; payment operational costs for the facilities; inclusion of healthcare workers in the CHAM facilities in training offered to public healthcare workers; and inclusion of CHAM facilities in quality assurance. In return, CHAM facilities operate in the same way as government facilities providing free healthcare services or charging a minimal fee to cover limited operational costs.

(ii) Incentives and enablers for for-profit private healthcare providers

The incentive and enablers scheme for not-for-profit healthcare providers is not as comprehensive as that of CHAM. The government is in the process of developing an incentive and enablers scheme. The type of incentives currently in place are non-financial and include the following:

Provision of essential inputs to private healthcare providers: The government is currently developing a scheme to provide microscopes and Gene-Xpert machines to selected private healthcare providers. These inputs are both an incentive and also serve as enabler on the provision of TB services. In turn, private healthcare providers will provide TB services free while charging a minimal fee of K1000 for overhead costs. The Government also provides anti-TB drugs to private healthcare to enable them provide TB treatment services at no direct cost to the patient.

Some of the incentives proposed for consideration to enhance private health providers involvement in TB control include: (i) including private healthcare providers in TB programme committee to be involved in decision making, (ii) covering private health facilities during support supervision to provide them mentorship and updated information and as a form of recognition; (iii) branding those providing TB services to improve their image, (iv) placing trainees in private health facilities for internship. Private healthcare providers will benefit from the services of the trainees while also being motivated to engage in TB control; (v) Involving private healthcare providers in community programmes (such as providing health information and education during community meetings) by working in collaboration with the NTP. This can build their credibility among the local community. (vi) Accreditation of private health facilities as PPM sites making them to be recognised. (vii) Being part of a government programme and being recognised by government. (ix) Supplying of Education, Information and Communication materials including job aids to the private health facilities. The For-Profit Private Healthcare providers are also incentivised by the benefits resulting from the provision of TB services. TB patients tend to have several co-morbidities and the resulting income from the management of the co-morbidities is a key incentive for private healthcare providers. The credibility and improved image through working with government has the potential to increase number of patients visiting the private provider. The provision of TB services also enables the providers to satisfy their patients because most of whom want to be treated in the private facility. For-profit healthcare providers are not always driven by profit. Those interviewed observed that they also provide TB services as duty to the community.

(iii) Incentives and enablers for pharmacies

As mentioned earlier, the NTP in collaboration with CHAI, has started involving private pharmacies in screening and referring presumptive TB cases to health facilities. The incentive for pharmacies involvement in TB control is mainly the recognition and credibility that comes with being involved in a government programme.

(iv) Incentives and enablers for traditional healers

Tradition healers value the training offered on TB management which is a major incentive; they anticipate the trainings to continue and those who have not been trained are awaiting their turn. Secondly, a major incentive for traditional healers is the recognition by government which increases their credibility in the community and results in increased business. The T-Shirts given to the trained traditional healers with a label: ***"I am a traditional healer trained on TB management and I refer TB patients to health facilities"*** serves as brand for them, differentiating them from other traditional healers.

The incentives and enablers in place have played a key role in the provision of healthcare services by CHAM facilities including TB. Although private healthcare providers have not been provided with microscopes and Gene-Xpert, those identified to receive the equipment are motivated to engage in TB service delivery. Pharmacies interviewed also noted that recognition as referral centres for TB presumptive cases have increased their credibility and brought more business. This has incentivised the pharmacies to engage in TB screening and referral. Perhaps the most visible benefits are among few traditional healers who have been trained on TB screening and referral. They are actively screening and referring presumptive TB cases.

(v) Data management for improved patient care

A key de-incentive for all types of for-profit private healthcare providers is the use of manual tools to record data and to report. The study explored opportunities for the use of information technology to improve data management and reporting among private health providers. The NTP is currently piloting a TB patient tracking system in the public sector which has potential to be extended to private sector. The system was designed to solve the following challenges in the patient pathway:

(i) Community volunteers and healthcare workers use of paper-based information system (registers and reports). Some of the registers and reports have incomplete data.

(ii) There is no system to track and ensure samples reach the diagnostic centres and patients receive results. Samples easily gets mixed up due to poor labelling system, laboratories do not always test all samples, there is long turnaround time for results and in some instances, patients are not being provided results.

(iii) Patients initiated on treatment are provided the first batch of medication and expected to make follow up visits to the health facility. Following up on defaulters is, therefore, key. NTP has in a place a defaulter tracing team but there is no system to efficiently identify defaulters to be tracked.

(iv) With regard to management of medication, a patient card system is in place but there are instances where the cards could be lost or healthcare workers may not fill in the cards due to a variety of reasons including heavy workload. Health workers rely on the patient passport to manage medication and there are times a health worker may not identify the patient defaulting treatment from the manual system.

The NTP has developed an IT system to track the patient at all stages using barcodes linked to patient data. At the sputum collection stage, community volunteers register the sample which is assigned a barcode and transported to the laboratory. The laboratories receive information on the sample on transit in advance of the sample arriving. The use of a barcode ensures no mix-up of samples occurs. The system tracks the sample through all stages – receipt in the lab, diagnosis and results. Once results are available, the system tracks the turnaround time of results to community volunteers and to the patient. Those found to be TB positive are contacted by a community volunteer and moved to the stage of TB treatment and care. The system tracks the provision of medication to the patient and follow up visits and identifies defaulters. This system allows for identification of bottlenecks along the screening, diagnostic and treatment cascade and enables managers to address them promptly.

This system is being piloted in 5 districts in Malawi covering 20 facilities. So far, the system has improved patient care across all stages and provides real time data that enables managers to make in-time decisions. Given that the system is at the initial stage, it is facing challenges such as healthcare workers not updating the system (forgetting to enter data into the system and continuing with the paper-based tools) and delay in payment for the VPN connection to ensure smooth running of the system. The NTP is continuously training and mentoring the healthcare workers and volunteers to internalise the use of the system.

Although this system is at pilot stage, it offers an opportunity to improve tracking of patients refereed from the private to public sector and for timely reporting of private sector healthcare providers.

3.5 Financing

Financing of TB services in not-for-private facilities (CHAM and NGOs): Patients visiting not-for-profit private facilities (mainly CHAM facilities) receive free TB services largely because the cost is paid for by government through providing anti-TB drugs, diagnostic commodities among other costs. The costs are covered under the MoU signed with the CHAM facilities. However, the national TB programme is funded by both government and donors, with main donors being The Global Fund and US Government as well as the World Bank. The donor funds are, therefore, partly meeting the cost of TB services for patients in the not-for-profit private facilities.

Financing of TB services in for-profit-private facilities: Patients seeking TB services in for-profit health facilities pay for the services either out-of-pocket or through private insurance schemes. Some of the patients have insurance schemes paid for by their employers, especially those working in private companies and parastatals. There is no social health

insurance scheme in Malawi and the government has no plans to establish one. Patients seek the individualised attention, no congestion, short waiting time and privacy among other advantages in the private health sector but they have to pay for these services themselves. Through the PPM programme, the plan to provide for-profit private health providers with microscopes and Gene-Xpert and access to free anti-TB drugs will improve the TB services. This initiative will increase access to TB services for people who prefer private healthcare.

3.6 Capacity building

The overall strategy for building the capacity of private healthcare providers varies between not-for-profit and for-profit private healthcare providers.

(i) Capacity building for not-for-profit health providers

The support provided by government to CHAM facilities in meeting the human resources and operational costs can be viewed as part of capacity building. In addition, healthcare workers in CHAM and NGO facilities are also included in the training organised by government. Further, government extends support supervision and mentorship to these facilities. This support plays a key role in ensuring CHAM and NGO facilities have the capacity to provide quality TB services in accordance with the national guidelines. However, as noted earlier, not all healthcare staff in CHAM and NGO facilities have been trained on the TB guidelines.

(ii) For profit health providers

The overall approach to capacity building for for-profit private healthcare providers is through training. However, healthcare workers in private health facilities are not regularly trained on TB service delivery. In the past, these HCWs were not invited to training offered by NTP. However, this situation is changing with the establishment of the PPM unit. The PPM unit started sensitising HCWs in private health facilities on TB management since 2018 and this training programme is continuing. The challenge is private healthcare providers do not attend training due to the loss of income as some health providers have to close their facilities to attend training. Some of the trainings take one or two weeks. Due to the long period of training, some providers send new or junior staff, who may not be the targeted cadre for the training.

Private healthcare providers are expected to accumulate a certain number of Continuous Professional Development (CPD) credits annually. This offers an opportunity to update their knowledge in TB management. This requirement is, nevertheless, not adhered to nor enforced. Due to limited capacity building among private health providers, stakeholders observed that the quality of TB and other health services offered in the private sector is compromised. The PPM initiative offers an opportunity to improve the quality of TB services in the private sector but the approach to training needs to be tailored to the needs of private providers.

In addition, the Global Fund supported PPM initiative is building the capacity of private healthcare providers through providing them with microscopes and GeneXpert machines; training, conducting periodic review meetings at regional and national levels and conducting support supervision and mentorship. However, this initiative is in its early stages, having started in 2018.

Private pharmacies have also been sensitised on screening and referral of TB patients to health facilities. This training took place as a pilot initiative and a large number of pharmacies across the country is yet to be trained.

(iii) Capacity building for traditional healers

The training of traditional healers on TB management, particularly how to screen and refer TB cases, has only recently started. About 100 traditional healers have been trained. There is a large number of traditional healers yet to be trained.

The overall challenge in capacity building is the lack of a comprehensive need-based capacity development plan.

3.7 TB service provision by private healthcare providers

3.7.1 Private healthcare providers sample

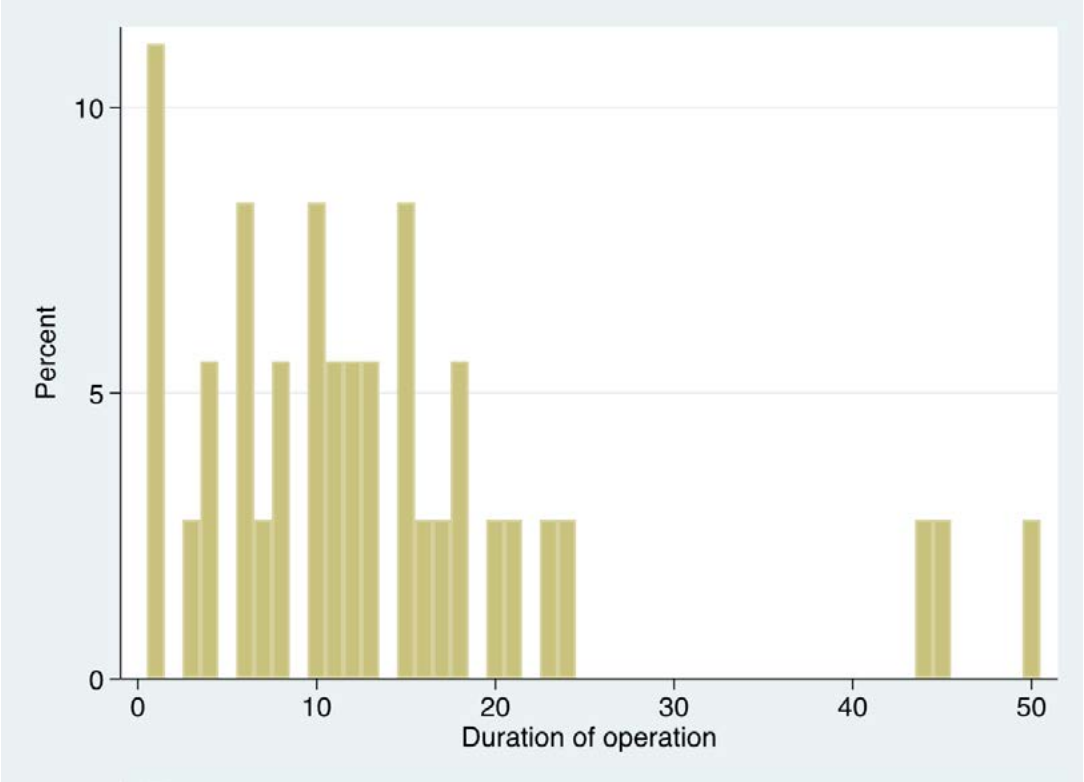
This section details the type of TB services offered by private healthcare providers and the quality of the services. The services were assessed using a quantitative questionnaire administered to not-for-profit and for-profit healthcare providers. A total of 40 representative sample of private facilities were selected in two high TB burden districts (Lilongwe and Blantyre) of Malawi. Majority of private facilities (62.5%) were found in Lilongwe. For-profit clinics/ hospitals constitute 60% of the sample private facilities. Corporate clinic/hospital and standalone laboratory are not available in the two districts.

TABLE 4: TYPE OF FACILITY BY LOCATION

Facility Type	Blantyre n (%)	Lilongwe n (%)	Total Number
For-profit hospital	4 (50.0)	4 (50.0)	8
For-profit clinic	9 (40.9)	13 (59.1)	22
For-profit standalone pharmacy	0 (0.0)	6 (100.0)	6
NGO/FBO hospital	1 (33.3)	2 (66.7)	3
NGO/FBO heath centre	1 (100.0)	0 (0.0)	1
Total	15 (37.5)	25 (62.5)	40

Private for-profit facilities are showing rapid expansion in the last 10 years. About 50% of facilities were registered in the last 12 years. The duration of their operation ranges from 1 to 50 years with median duration of 11.5 years. The private hospitals have a median inpatient bed capacity of 28 beds, ranging from 0 to 64 beds. Very few private clinics provide inpatient care. The two FBO hospitals have an average of 233 inpatient beds.

FIGURE 6: DURATION OF OPERATION (YEAR) OF PRIVATE FOR-PROFIT HEALTH FACILITIES



3.7.2 Early diagnosis of TB, including drug sensitivity testing (DST)

Laboratory service availability and capacity

General laboratory services are widely available in private facilities. All the FBO/CHAM hospitals and health centres and 70% of for-profit clinics/hospitals have laboratories. However, TB diagnostic facilities, notably Gene-Xpert, are not commonly available in private facilities. Among facilities with general laboratory, about 63% and 7% of for-profit hospitals and clinics respectively have TB microscopy. All the CHAM health centres and hospitals visited have TB microscopy. Gene-Xpert is available in only 25% of for-profit hospitals, and not at all in for-profit clinics. Gene-Xpert is available in 33% of CHAM hospitals only. All facilities with TB laboratory services have adequate infrastructure and technical capacity to do the available tests.

TABLE 5: AVAILABILITY OF TB LABORATORY SERVICES BY TYPE OF PRIVATE FACILITY

Facility Type	Microscopy	Gene-Xpert	Total facilities with general lab services
Private hospital	5 (63%)	2 (25%)	8
Private clinic	1 (7%)	0 (0%)	14
NGO/CHAM hospital	3 (100%)	1 (33%)	3
NGO/CHAM health centre	1 (100%)	0 (0%)	1
Total	10 (39%)	3 (12%)	26

All the facilities with TB diagnostics (microscopy and/or Gene-Xpert) received commodities, including consumables (reagents, cartridges, slides, gloves and personal protective equipment- N-95 respirators, sputum containers, etc.) from MOH, except one private for-profit hospital. The MOH provides these TB laboratory commodities under the condition that facilities should provide free services and notify results. Among those who have TB laboratory services almost all use national guidelines and algorithms, except one for profit facility that uses supplier guidelines. This facility is not using national guidelines because it is not engaged by NTP. This demonstrates the contribution of engaging private facilities to follow national guidelines.

In Malawi, Gene-Xpert is recommended to diagnose TB in HIV positive, paediatric and extra pulmonary patients. This assay is indicated for the diagnosis of mycobacterium tuberculosis (MTB) and to screen for rifampicin resistance (RR) in sputum samples.

A total of 799 new and relapse patients with suspected TB were tested using Gene-Xpert in the 10 facilities in 2018, with only one facility providing no data. Out of this 150 (19%) cases were tested in for-profit facilities. Whereas, a total of 1905 patients with suspected TB were tested in 2018 using sputum microscopy in 9 facilities that have TB microscopy. Out of this 489 (26%) tests were carried out in for profit facilities. These figures indicate the high volume of people using for-profit facilities and active participation of these facilities in TB diagnosis. In Malawi, private facilities cannot provide TB testing services and TB medicines without MOH engagement. All TB supplies are provided from government through districts health offices and private facilities access them from their respective district health office According to NTRL/NTP, tuberculosis specimen transport services are well established in the country. Riders for Hope and Axer (local transport company) has been engaged by MOH to facilitate the sample transport. This arrangement

has greatly improved the result turnaround time (TAT), including culture and DST results. On average TAT for Gene-Xpert and microscopy is estimated at 2 days. According to NTRL, the average turnaround time for negative solid culture (LJ) is 38 weeks; for negative liquid culture (MGIT) 6 weeks, and 2-3 weeks for negative DST.

Because of its limited specificity for the diagnosis of pulmonary TB, chest X-ray is recommended for screening and triaging in the national guidelines. However, chest X-ray is the commonest other test ordered by private for-profit facilities as TB diagnostic test, in addition to commonly used haematological tests like full blood count and ESR. Among private for-profit facilities 50% of hospitals have an X-ray facility, however none of the clinics have any. Among CHAM facilities only the hospitals have chest X-ray machine.

National TB reference Laboratory (NTRL) Capacity

The NTRL is the only reference laboratory covering the whole country in terms of technical support, external quality assurance (EQA) for microscopy, and drug sensitivity testing (DST) using culture (LJ and MGIT) and Gene-Xpert. The NTRL covers central, district and peripheral laboratories in government, NGOs/CHAM and private for-profit facilities recently engaged in TB diagnosis.

Due to human resource and laboratory facility capacity limitation, EQA for Gene-Xpert and second line DST is done through external support. For Gene-Xpert EQA is provided by Uganda Supranational Laboratory (SRL Uganda), National Health Institute of South Africa (NHLS) and CDC. The reference laboratory can only administer first line DST, second line confirmation being done with the help of SRL Uganda. Genotypic test for DST using line probe assay (LPA) is in the pipeline; the equipment is in place and a new infrastructure structure is almost completed.

The NTRL is hugely dependent on the financial and technical support of donors/development partners, including Global Fund, SATBHSS project of World Bank, KNCV, University Research Group, etc. Only five technical laboratory staff are available at the NTRL including the laboratory manager. The NTRL does not have its own strategic plan to guide its operation and mobilise resources. The national TB diagnostic coverage, in for-profit facilities in particular is very low ***(Table 5).***

TABLE 6: NATIONAL TB DIAGNOSTIC COVERAGE

	CHAM health facilities	For-profit and corporate health facilities	MOH/non-MOH Government facilities
The number of facilities with microscopy	83 (51%)	20 (3%)	389 (82%)
The number of facilities with Gene-Xpert	11 (7%)	1 (0.1%)	3 (1 Mistry of defence, 3 in prison facilities)

Other key issues:

- One of the private for-profit facility without a TB diagnostic service is a TB treatment facility. Hence suspected/ presumptive cases are referred to nearby government health facility for diagnosis. Patients generally feel inconvenient to go to public facility for reasons like long queue, 'mistreatment' by public providers and privacy.
- In facilities with Gene-Xpert not all laboratory staff are trained to conduct the test
- There is limited availability of Gene-Xpert in all facilities in the country in general and in private for-profit facilities in particular. This has compromised testing of people with suspected TB using WHO recommended rapid diagnostics (Gene-Xpert). As a result, Gene-Xpert is catered as first line test for under five children, HIV positive patients, and other high risk groups (health care workers, prisoners, miners, and hospitalised patients). Drug sensitivity testing (DST) is provided only for those who are not converting; exceptional cases being MDR suspects, prisoners, HIV positive patients, and miners.
- Due to limited diagnostic capacity in for-profit facilities, most depend on referral of sputum or patients to either government or CHAM facilities.
- According to the national guidelines, spot – spot sputum collection strategy is used for smear microscopy and culture specimens in all the private facilities that are engaged in TB treatment and screening/referral so as to reduce diagnostic and treatment initiation delays, to reduce loss to follow up and continuing transmission in the community, and to minimise the transfer of costs to the patient. However, some practitioners doubt the quality of on the spot sputum collection and the possibility of false negative results.
- There is an instance of TB laboratory tests being provided not for free if samples are sent to the private for-profit facility even though the Gene-Xpert/microscopy was provided by MOH

Quality of TB laboratory services

Since all the TB microscopes and Gene-Xpert in private facilities are provided by MOH/NTP, they are all covered in the national EQA. To that effect, the quality assurance performance of most of the facilities supported by the NTP/NTRL is satisfactory. The proficiency test results of all private facilities in the sample that received EQA was greater than 85% both for Gene-Xpert and microscopy in 2018.

Internal quality assurance is done by each laboratory by including negatives and positive smears. Gene-Xpert EQA is provided by SRL-Uganda, National Health institute of South Africa (NHLS), and CDC. SRL-Uganda provides the EQA biannually, whereas CDC does this on quarterly basis. The EQA for microscopy is done at least biannually by NTRL. No facility encountered service interruption and stock out in the past one year, except one for-profit facility.

Key issues:

- Staff inadequacy at NTRL is a challenge for implementing EQA for microscopy in all facilities on quarterly basis, hence some facilities could be missed out. For example, two of for-profit facilities were missed out in the EQA for 2018.
- EQA is not available for LED and TB-LAMP

Laboratory Human Resource and capacity building

The human resource in 15 facilities showed that there is an adequate number of staff in the private facility laboratories. In some facilities' there are more laboratory technologist than that are available in the NTRL. For example, one private hospital have 9 laboratory technologist compared to 5 in NTRL.

The training and capacity building activities for laboratory staff provided by NTP/NTRL also covers private facilities that receive TB diagnostic support from MOH/NTP.

TABLE 7: MEDIAN NUMBER OF PERMANENT LABORATORY STAFF BY FACILITY TYPE

	Lab technologist Med (range)	Lab technician Med (range)	Number of facilities
Private hospital	1 (0,9)	3 (1,7)	6
Private clinic	0	1 (1,2)	5
NGO/CHAM hospital	1 (1,1)	3 (2,7)	3
NGO/CHAM health centre	3	3	1

Key issues:

- The training for Gene-Xpert was not able to cover all laboratory technical staff in the notifying facilities.
- Non-notifying facilities with TB laboratory services have inadequate updates on current national guidelines and algorithms.
- Delays in communication of changes in protocols and algorithms and distribution of guidelines is the main concern, especially in CHAM facilities.

Tuberculosis diagnostic costs in for-profit facilities

Few facilities provide TB diagnosis services by charging patients. The average cost of sputum microscopy in two for-profit facilities was K1500 per test. The cost of Gene-Xpert, according to one for-profit facility was K7000. The average cost of chest X-ray as in two for-profit facilities was K8300. These costs are considered one of the main hindrances for access to care by patients intending to use private services. According to key informants, most of the users who have the capacity to pay for the services have health insurance coverage.

3.7.3 TB Treatment Services

Availability of TB treatment services

Tuberculosis treatment is not widely available in private facilities in the two districts; only 10 (29%) of them treat TB cases. Among the for-profit facilities, majority of the hospital (63%) provide TB treatment services, whereas the service is limited to 5% of the clinics. All CHAM hospitals and clinic provide TB treatment. All of the treatment facilities

obtain free anti TB drugs from MOH to provide free treatment services and report cases regularly. However, as the accreditation process has not been completed yet, the for-profit facilities that are already engaged charges for consultation and follow ups.

TABLE 8: TUBERCULOSIS TREATMENT SERVICE AVAILABILITY BY FACILITY TYPE

Type of facility	Availability of treatment n (%)	Total number of facilities
For-profit hospital	5(62.5)	8
For-profit clinic	1 (4.6)	22
NGO/CHAM hospital	3(100.0)	3
NGO/CHAM health centre	1 (100.0)	1
Total	10 (29.4)	34

The NTP has an expansion plan for engagement of for-profit facilities in the early diagnosis and treatment of TB. As per the plan, 35 sites have been identified and will be provided with microscopy, about 5 of them to be equipped with Gene-Xpert. Currently, at national level, there are 83 CHAM and 20 for-profit facilities providing TB treatment services engaged by MOH and considered TB notifying/registration sites.

The for-profit facilities are encouraged to collaborate with MOH to provide free services for reasons such as increased recognition or visibility resulting in increased client number and generating additional revenues by treating co-morbidities in TB patients. Getting services in one place is also considered as a benefit to patients, notably in their facility of choice. Moreover, the engagement with MOH as treatment facility opens opportunity for private providers to retain patients and their families in the practice.

All treatment facilities both in for-profit and CHAM claim to provide directly observed treatment (DOT) for all TB patients. In all cases trained guardians from close families are used to assist in DOT using treatment monitoring card. The guardians' treatment support activity is complemented by monthly check-ups in the health facility.

All of the 10 treatment facilities in the private sector manage only drug sensitive TB, if patient is low risk of being presumptive DR-TB, both in adults and children using fixed dose combinations and regimens as recommended in the national guidelines. Presumptive DR-TB cases are referred to central government hospitals. Private facilities also provide treatment of extra pulmonary TB, such as TB meningitis using the national guidelines.

According to the national guidelines, new smear-positive cases submit sputum samples at 2, 5 and 6 months to follow progress of treatment outcomes. For cases who are smear positive at 3, 5, or 6 months culture and DST will be requested. Since all the treatment facilities have TB microscopy they were able to follow their patients accordingly. The availability of a well-established sample transport system in NTRL/NTP facilitates follow up for culture and DST from the notifying private facilities.

In CHAM facilities' patients only pay for medicines other than anti TB drugs and for bed during inpatient care. For-profit facilities indicated that they generate revenues from treating co-morbidities in TB cases, charging for consultation fees for index cases and their contacts. They also claim to generate more revenues due to increase in patient load as a result of the increased recognition by community as TB treatment facility.

Treatment adherence and defaulter tracing

A number of approaches are used to ensure adherence, such as use of DOT through guardians, through monthly follow up and refill and using treatment monitoring card.

According to the national guidelines, if a TB patient miss a scheduled appointment, action must be taken within three days of the date the patient was due for the appointment or drug collection. Defaulters are traced through phone calls, and when tracing through phone calls are unsuccessful the district TB officer (DTO) calls up on health surveillance assistants (HSAs), community volunteers and/or other community health workers to locate the patient. It is the responsibility of the DTO to ensure default tracking plan is in place and implemented at district level. All the private treatment facilities engaged by MOH claim to follow the guidelines.

According to some key informants, in for-profit facilities many of the defaulters are people from neighbouring Mozambique. About 5 defaulters were registered in 5 for-profit facilities in 2018 compared to 1 in 3 CHAM facilities. This may need cross border intervention to track defaulters crossing border.

Use of national guidelines and capacity building

All notifying CHAM and for-profit facilities use national guidelines for management of drug sensitive TB in adult and paediatric patients and relevant staff/TB focal persons were trained by MOH in collaboration with partners. Most of the trainings were provided in 2018 and 2019 as the implementation of PPM gathered momentum in the last one year.

Key issues:

- For CHAM staff a refresher training is necessary as it has been a while since some core staff were trained in TB case management.
- Issue of registration of paediatric patients, as they are not included in the treatment card hence difficult to follow on adherence.
- Relevant individual may not be recruited to attend training. Instances of some for-profit facilities sending participant for training just for the sake of fulfilling obligation have been reported.

Referral, Reporting and Case Notifications

Among non-TB treatment facilities/non-notifying facilities, about 47% of clinics and all hospitals from for-profit are considered TB screening and referral sites. Staff from these facilities were trained in screening and referral and were provided with presumptive registers. All the screening and referral sites refer patients to the nearby government facilities or to CHAMs, in most instances with sputum samples.

Majority of facilities that are neither treatment nor referral sites claim that they refer patients to the nearby government facilities using patients' health passport book. It was a common practice in these facilities to hold patients for longer time to do multiple investigations and treatment using different cough medicines and antibiotic before deciding to make referrals.

The proportions of private facilities notifying TB cases in the sample districts and at national level is very low. Only the 10 private facilities (6 for-profit, 4 CHAM) notify TB cases to MOH using paper-based reporting. Based on the sample estimate the proportion of private facilities case notification in the two districts is 28%. If for-profit facilities are considered separately the proportion goes down to 17%. According to data obtained from NTP, the proportion of notifications at national level from CHAM and for- profit facilities was estimated at 18.2% and 1.8% respectively.

TABLE 9: TOTAL NUMBER OF CASES REGISTERED IN 2018 BY TYPE OF FACILITY

	CHAM (n*)	For-profit (n*)	Total (n*)
Total presumptive TB patients seen/screened in the year#	1673 (3)	1745 (18)	3418
Total diagnosed as TB	215 (6)	38 (3)	253
Total sputum smear positive (SS+)	24 (6)	24 (3)	48
Total patients tested using Gene-Xpert	27 (5)	55 (3)	82
Total RR-TB	3 (5)	0 (3)	3
Treatment success (total number who completes treatment and cures or become smear negative) @	49 (5)	20 (3)	49
Number of relapse cases (cured TB patients who are re-diagnosed as smear-positive case) @	3 (5)	4 (3)	7
Number of deaths	15	7 (5)	22 (3)
Number of patients with treatment failure @	0 (5)	0 (3)	0
Number of patients lost to follow-up/default @	1 (5)	5 (3)	6

** Number of reporting facilities*

 # includes facilities providing TB screening and referral, in addition to TB treatment/notifying facilities

@total numbers are based on cohort of cases, hence denominator is unknown

Key issues:

- Due to the business model, in private facilities there is a push on the patient to come back even after referral is provided. To that end, the main issues raised by the private for-profit facilities is the lack of feedback on the patients referred to government facilities.
- Most private for-profit sites indicated that clients are reluctant to be referred to government facilities for a number of reasons, such as long queue, lack of privacy and stigma attached to TB, 'mistreatment' by health care workers, etc.

"Most TB patients are poor....their usual first contact of health care is private facilities, such as pharmacies, traditional healers or clinics. When they come to government clinic it is already late, their money is finished, and had serious complications."

A TB focal person in Government

Human Resource

Most of the private clinics are small and run by diploma graduates and nurses. The for-profit hospitals have larger number of doctors (6 on average) than CHAM hospitals, which have a maximum of 2 doctors per individual hospitals. Inadequate staffing, especially doctors, and resulting workload is the main concern in CHAM facilities. It was estimated that in one of the CHAM hospital a doctor may see on average 100 patients per day. Due to staff workload, data capturing is a challenge for these facilities and they requested at least 2 health surveillance assistants (HSAs).

TABLE 10: MEDIAN NUMBER OF PERMANENT CLINICAL STAFF BY TYPE OF PRIVATE FACILITY

	Doctors Med (range)	Degree graduate Med (range)	Diploma graduates Med (range)	Nurse Med (range)	Number of facilities
Private hospital	3 (0,18)	0 (0,3)	3 (0,6)	12 (3,70)	8
Private clinic	0 (0, 3)	0 (0,2)	1 (0,6)	1 (0,6)	20
NGO/CHAM hospital	1.5 (1, 2)	2 (0,4)	8.5 (8,9)	41 (32,50)	2
NGO/CHAM health centre	3	0	2	7	1

3.7.4 Systematic Screening of Contacts and High Risk Groups

Systematic screening of contacts of TB cases

There is limited engagement of for-profit facilities in systematic screening of contacts. All the CHAM and 33% of for-profit facilities provide systematic screening of contacts of index TB patients. This includes all the TB treatment facilities and 4 additional facilities from for- profit that are involved in TB/HIV collaborative activities. All of the facilities providing contact tracing services both in CHAM and for-profit use national guidelines and have been trained. Majority of trainings were provided in the last two years.

TABLE 11: AVAILABILITY OF CONTACT TRACING SERVICES

	Facilities providing services n (%)	Total number of facilities
For-profit hospital	5 (63%)	8
For-profit clinic	5 (23%)	22
NGO/CHAM hospital	3 (100%)	3
NGO/CHAM health centre	1 (100%)	1
Total	14 (41%)	34

Contact tracing has been implemented using index cases to invite household contacts or other close contacts. If contacts do not show up they will be traced by phone and household visits. The community level tracing is usually done by CHAM facilities by mobilising HSAs or other community health workers/volunteers.

According to the report of 10 private facilities (6 for-profit & 4 FBOs), in 2018 a total of 1059 contacts were screened both in for-profit and CHAM facilities, about 6% of them (66 clients) being screened in for-profit facilities. This shows the advantages of engaging private health care providers in enhancing early case detection.

Systematic screening of high risk groups

According to the national guidelines the high risk groups targeted for active case finding and systematic screening are: silica exposed workers; prisoners, including warders and other relevant prison staff; people living with HIV; and health care workers. The quantitative analysis showed that majority of private clinics/hospitals engaged in systematic screening followed the guidelines.

The engagement of for-profit facilities in systematic screening of high risk groups is very low. All the CHAM and 30% of for-profit facilities provide systematic screening of high risk group. This includes all the TB treatment facilities and 3 additional facilities from for-profit that are involved in TB/HIV collaborative activities. All of the facilities providing contact tracing services both in CHAM and for-profit use national guidelines and have been trained. Majority of trainings were provided in the last two years.

TABLE 12: AVAILABILITY OF SCREENING SERVICES FOR TB IN HIGH RISK GROUPS

	Facilities providing services n (%)	Total number of facilities
For-profit hospital	5 (63%)	8
For-profit clinic	4 (18%)	22
NGO/CHAM hospital	3 (100%)	3
NGO/CHAM health centre	1 (100%)	1
Total	13 (38%)	34

In 2018 a total of 6172 high risk groups were screened both in for profit and CHAM facilities, about 97% of them (5962 clients) being screened in for-profit facilities. The number in for-profit was high due to high volume of HIV patients in one of the hospitals that implement TB/HIV collaborative activities, and this number includes cohorts of cases of HIV from previous years. This number also indicates the high volume of patients seeking care in private facilities, and involving them would significantly help in early case detection and prevention.

Key issues in systematic screening of contacts and high risk groups

- Contact tracing is facing challenges due to charges related to screening procedures
- Resistance by some contacts to be screened
- In for-profit facilities where TB diagnostic is unavailable, limited supply of sputum sample collection container is a constraint to refer patients for test to public laboratory
- Logistical difficulties in CHAM for community level contact tracing activities by district TB officer because of limited budget for maintenance of motor cycles.

3.7.5 TB/HIV Collaborative Activities

In Malawi about 53% of TB patients are HIV-positive . Controlling TB/HIV requires collaboration and coordination between the TB and HIV programmes at all levels, starting from National level to health facility where services are rendered. Service integration can include referral of patients between TB and HIV services, partial provision of joint TB/HIV services, or full integration of the TB and HIV/AIDS services under one roof.

[6]Annual TB report, 2015. National Tuberculosis Control Programme, MOH. Malawi

The coverage for TB/HIV collaborative activities in private facilities is relatively bigger due to decades of TB/HIV collaborative efforts by engaging private facilities from HIV program side. The presence of accreditation/certification system which was put in place by the HIV program could be considered another factor for success.

Screening of TB cases for HIV (provider initiated HIV testing and counselling of TB patients: PITC)

All the CHAM and 53% of for-profit facilities provide PICT of TB patients. This includes all the TB treatment facilities and 7 additional facilities from for-profit that are involved in TB/HIV collaborative activities. All of the facilities providing counselling and testing of TB patients for HIV, both in CHAM and for profit, use national guidelines and have been trained. Majority of trainings were provided in the last two years.

TABLE 13: AVAILABILITY OF HIV TESTING SERVICES IN PRESUMPTIVE AND CONFIRMED CASES OF TB BY FACILITY TYPE, 2018

	Facilities providing services n (%)	Total number of facilities
For-profit hospital	7 (88%)	8
For-profit clinic	9 (41%)	22
NGO/CHAM hospital	3 (100%)	3
NGO/CHAM health centre	1 (100%)	1
Total	20 (59%)	34

Despite relatively good coverage of PICT only 19% of presumptive/confirmed TB cases were screened for HIV in 2018 in for-profit facilities. This could be due to underreporting or unavailability of testing kits in these facilities.

TABLE 14: TOTAL PRESUMPTIVE AND CONFIRMED TB PATIENTS SCREENED FOR HIV IN 2018 BY FACILITY TYPE

	CHAM (n*)	For- profit (n*)	Total
Total number of presumptive and confirmed TB cases	1524	2025	3549
Number of cases screened for HIV	1494 (98%)	39 (20%)	1893 (53%)

** Based on 3 CHAM and 11 for-profit facilities report*

Screening of HIV patients for TB

All the CHAM and 50% of private for-profit facilities provide TB screening for HIV patients. This includes all the TB treatment facilities and 9 additional facilities from for-profit that are involved in TB/HIV collaborative activities. All of the facilities providing screening, both in CHAM and for profit, use national guidelines and have been trained. Majority of trainings were provided in the last two years.

TABLE 15: SCREENING OF HIV PATIENTS FOR TB, 2018.

	Facilities providing services n(%)	Total number of facilities
For-profit hospital	7 (88%)	8
For-profit clinic	8 (36%)	22
NGO/CHAM hospital	3 (100%)	3
NGO/CHAM health centre	1 (100%)	1
	19 (56%)	34

The coverage of TB screening in HIV patients was very low in both for-profit (25%) and CHAM facilities (3%). This low coverage might due to the fact that most of the patients are cohorts of HIV cases and get tested for TB in the previous years.

TABLE 16:. NUMBER OF HIV PATIENTS SCREENED FOR TB IN 2018 BY FACILITY TYPE*

	CHAM	For-profit	Total
Total number of HIV cases	13,745	1253	14,998
HIV patients tested for TB	448 (3%)	315 (25%)	763 (5%)

** Based on 3 CHAM and 11 for-profit facilities report*

Key issues:

- The HIV/ART side of TB/HIV collaborative activity includes provider-initiated testing and counselling of TB patients for HIV, but data is not captured or shared with TB program. The staff is trained by HIV/ART program.
- There is no register for TB cases, including presumptive register on the TB program side of TB/HIV collaborative activity to register the number of HIV patients tested for TB. As the TB and HV programs are managed under different departments and as this is also replicated in the facilities, notably in large hospitals, TB and HIV patients are being managed in different rooms with different focal persons. This creates a challenge in terms of data registry and reporting for the collaborative activities. There is a demand by some of the facilities that one focal person should be responsible for both TB and HIV.
- The need for training of more staff and refresher trainings for those who attended training long time ago.
- Limited supply of sputum collection container and transportation of sample to the testing facility

3.7.6 Preventive Treatment of Persons at High Risk of TB

According to the national guidelines, under-five children who are household contact of pulmonary TB cases and people living with HIV (PLHIV) are targeted for latent TB treatment using isoniazid or 3HP (a three month Rifapentine/Isoniazid weekly therapy). Lifelong isoniazid therapy is given for at least 36 months in under five children who are HIV positive and living prioritized high burden districts.

Preventive treatment of TB is not widely available in for-profit facilities, in for-profit clinics in particular. All the CHAM hospitals and 43% of private for-profit facilities provide preventive treatment of persons at high risk of TB. This includes all the TB treatment facilities and 8 additional facilities from for-profit that are involved in TB/HIV collaborative activities.

All of the facilities providing counselling and testing of TB patients for HIV, both in CHAM and for profit, use national guidelines and have been trained. Majority of trainings were provided in the last two years.

TABLE 17:AVAILABILITY OF SERVICES FOR PREVENTIVE TREATMENT OF TB FOR HIGH RISK GROUPS BY TYPE OF FACILITY

	Facilities providing services (n/%)	Total number of facilities
For-profit hospital	6 (75%)	8
For-profit clinic	7 (32%)	22
NGO/CHAM hospital	3 (100%)	3
NGO/CHAM health centre	0	1
Total	16 (47%)	34

Key issues:

- Some HIV patients opt out from preventive treatment
- The need for training of more staff and refresher trainings for those who attended training long time ago

3.7.7 TB Infection Prevention and Control

There is limited activity in TB infection prevention and control in private for-profit facilities. Only 20% of for-profit facilities that are involved in TB related activities have plan for TB infection prevention and implemented administrative, environmental and personal protection activities. The performance in CHAM facilities is relatively better than for-profit facilities; 75% of them had infection prevention plan and have been implementing with guidance form MOH.
The MOH developed a comprehensive TB infection control and prevention guidelines, job aids and training materials. However, the implementation of the guidelines has been focused on the TB registration sites in government and CHAM.

TABLE 18: AVAILABILITY OF INFECTION PREVENTION PLAN BY TYPE OF FACILITY

	Availability of plan n (%)	Total number of facilities
For-profit hospital	3 (38%)	8
For-profit clinic	3 (14%)	22
NGO/CHAM hospital	2 (67%)	3
NGO/CHAM health centre	1 (100%)	1
Total	9 (26%)	34

Key issues:

- Limited guidance on infection prevention and control from MOH, including availability of guidelines and training in private for-profit facilities
- Infection prevention in private for-profit facilities is considered expensive, especially to implement the environmental and engineering controls and procuring personal protective equipment.

3.7.8 Tuberculosis Drug Supplies and Management

All CHAM and 60% of for-profit facilities have pharmacies, including all TB treatment facilities. All the TB treatment facilities both at CHAM and for-profit stock and dispense anti TB drugs provided by MOH. All of these facilities dispense first line drugs. No other facility, including standalone pharmacies other than the TB treatment facilities in for-profit stock or dispense anti TB drugs because it is regulated to be availed only in public institutions.

Only one out of the 10 treatment facilities in the sample has encountered drug stock out in the past two years and no major drug quality issues was reported in any of the facilities.

Private hospital pharmacies are well staffed. On average they have 5 pharmacy technicians and 1 pharmacy assistant. The CHAM facility pharmacies are mainly run by nurses. Retail pharmacies are owned and run by pharmacists. It is also common to find other lay persons dispensing in these facilities.

Most of standalone pharmacies in the sample (84%) screen and report suspected TB cases to nearby MOH facilities. All of the standalone pharmacies see patients with cough and treat them with cough syrup, flue medicines and antibiotics without prescription .

3.8 Coordination, communication and advocacy

3.8.1 Coordination/ collaboration

Coordination structures

Malawi has established a structure to coordinate the for-profit private health sector engagement in TB control. This structure includes:

The PPM Steering Committee: A PPM Steering Committee has been established to oversee the implementation of PPM approaches. The PPM steering committee is a board comprising members from private health sector and government with a chair from the private sector. The committee reaches out to for-profit health providers including traditional healers and pharmacists. The steering committee has met regularly since it was established in 2018 and has made strides setting up a PPM secretariat, developing a PPM plan and initiative interventions to improve private healthcare providers capacity to provide TB services.

The PPM Secretariat: The NTP has established a PPM secretariat, which is a government run model that supports the private facilities free of charge working along with Malawi Business Coalition for HIV and AIDS (MBCA) to implement PPM activities. The MBCA is a private model where facilities remit/pay as members. The secretariat is staffed with a PPM Coordinator assisted by two other staff and regional PPM focal persons. The secretariat being under government is viewed as a risk given that private health sector is yet to develop trust in government. The NTP plans to have the PPM secretariat evolve to be independent of government, with its own offices outside of government (currently it is housed by the NTP). This will enable the secretariat to work with less bureaucracy and evolve a mindset and work ethic responsive to private health sector expectations and needs. The secretariat will also evolve to coordinate other services in the private health sector including family planning, malaria and EPI.

PPM Action Plan 2017-2020: A PPM action plan has been developed to guide the engagement of private health sector in TB control. This action plan lays out the strategies and priority interventions for a 3-year period. This is a key tool for facilitating coordination and advocacy for PPM. Implementation of PPM interventions commenced in 2018 and activities carried out to date include establishment of the steering committee set up; meeting of the steering committee twice a year; assessment of laboratory capacity in private health facilities; training of traditional healers; training of pharmacists; and conducting of national and zonal quarterly review and consultative meetings for private

healthcare providers. The NTP is in the process of developing an MoU to be signed with private healthcare providers to expand their involvement in TB service delivery.

Collaboration with MOH

In the two districts of sample facilities, all private for-profit hospitals and 50% of clinics have been collaborating with MOH in treatment and referral of suspected TB cases as shown below.

TABLE 19:COLLABORATION WITH MOH BY TYPE OF FACILITY

Type of facility	Collaborating facilities n(%)	Total facilities
For-profit hospital	8 (100%)	8
For-profit clinic	11(50%)	22
Standalone pharmacy	5 (83%)	6
NGO/CHAM hospital	3 (100%)	3
NGO/FBO CHAM centre	1 (100%)	1
Total	28 (70%)	40

The collaboration with for-profit facilities related to TB treatment includes 6 facilities (5 hospitals and 1 clinic). The MOH provides training, guidelines, quality assurance including EQA, free drug and lab equipment supply depending on the type of facility and its need for diagnosis and treatment of TB and infection control. The facilities in return provide free services, notify cases and expected to comply with agreed quality standards.

The other 11 clinics and hospitals that are not treatment facilities are involved by MOH in screening and referral of presumptive cases with sputum samples. The MOH provides registers for data capturing. Most of the retail pharmacies (83%) collaborate with MOH in screening and referral of suspected TB cases.

Biannual steering committee meeting and quarterly supportive supervision are the main activities to follow through the activities of the PPM implementation. Data is collected through quarterly supportive supervision by the team from MOH and using DHIS, however the two data sources do not tally in most instances due to incomplete recording and other data quality issues. As the presumptive registers are not usually complete, the data collection team rely on the laboratory registers both for the registration and non-registration sites. In the last couple of years significant increase in presumptive cases have been noticed due to increased focus on case finding.

Challenges:

- Compliance to the national standards in service delivery by for-profit facilities
- High tendency to use of chest X-ray rather than microscopy and Gene-Xpert in diagnosis of TB
- The data collection through the quarterly supervision is resource intensive and difficult to sustain
- Retail pharmacy owners/pharmacists may engage in other business and place other unqualified person in the facility
- Limited attention/time for recording and reporting in for-profit facilities

Following are summaries of opinions and suggestions of health care workers in sample private facilities. As a rule of thumb, the following general parameter was applied to analyse the qualitative responses: few means less than 25% of the response; some means between 25-50% of the response; most means above 50% of the response.

Challenges of working with MOH:

Few	• Two of the registered for-profit facilities are not yet getting EQA support from NTRL. • Limited supervision/mentoring by MOH • Communication breakdown with MOH and not taking part in review meetings • Delay in turnaround time for the result of Gene-Xpert because of problems related to transportation of samples to DHO
Some	• Lack of guidelines and the need for more people to be trained, because in most instances only one person gets the training in the facility. • Some CHAM facilities complain on preferential access to training to government health care workers
Most	• Lack of infection control guidelines and training • Scarcity of sputum containers • Blame games and elements of mistrust/suspicion existing between government and private sector
All/almost all	• There is no formal collaboration between MOH and for-profit facilities. Facilities are providing treatment and referral services while the MoU being drafted. • A strong concern on the negative attitudes towards patients referred from private f or-profit facilities. On the other hand patients in private facilities are reluctant to go to public facilities for a test or treatment for a number of reasons, including stigma, privacy, providers' attitude, inconvenience, long queue, etc.

Key incentives or advantages to work with MOH/NTP:

Few	• A clinic owner mentioned that collaboration with MOH is an opportunity for the facility and his business as it pushes staff to work hard since they know they are working with MOH
Some	• Some consider the collaboration as a means to open up the door for networking with officials at MOH • Expectation to generate revenues from consultation fee
Most	• Most of the facilities, notably small clinics, mentioned that the collaboration with MOH improves their visibility/image and recognition in the community which could lead to increase in patient load and revenue. They attest that availability of diagnostic facilities and treatment services attracts customers. • Additional incomes being generated from diagnosis and treatment of co-morbidities of TB patients and their contacts • The collaboration is seen as an opportunity to retain patients who does not want to go to public health facilities. It is thought to improve patients' convenience when getting service where they want and in one place. • Most mention that reducing overcrowding in government facilities, especially hospitals, as an added value of the collaboration • Improved access to services and ease of follow up as private facilities are widely spread and close to communities
All/almost all	• Almost all facilities consider access to capacity building/training in current developments in TB diagnosis and treatment, including access to current protocols and guidelines as key incentive and as critical means for improving quality of service.

Reasons of non-collaboration with MOH/NTP

Currently about 30% of private for-profit facilities are not collaborating with MOH/NTP. The reasons behind as described by the sample facilities is as follows:

Few	• Few claims that they approached the MOH for collaboration but received no response. • Few also claim that their facility is left out from many TB activities since the DHO never minds about private clinics.
Most	• Most claim that NTP is not coming forth on issues of TB to engage private facilities. The NTP has never visited or approached the facility and have not been aware of the government TB strategy

"We do not have any collaboration with MOH..... We are on our own..... We are glad to collaborate to provide TB services"

Private health care worker

Concern for future collaboration

"The MOH strategies are basically free health care and this contradicts with the profit oriented model of the private sector."

Private facility owner

Few	• "Untrainable health care workers released to work from pre-service training institutes without attaining proper levels of qualification"
Some	• Some are concerned about the mistrust and attitudes of the officials in MOH and health care workers towards private sector in health which can breakdown the communication
Most	• Many of the facilities are excited about the idea of collaboration with MOH, but concerned about the commitment of government if it can be translated into action and its sustainability.

The needs of private facilities for collaboration with MOH

Private facilities that are collaborating with the MOH and those that are interested to collaborate have expressed what they need form MOH as follows:

Few	• Performance based incentives • Health surveillance assistant (HAS) to support in data capturing and reporting • CHAM facilities: maintenance of motor bike; incentives especially when dealing with MDR cases; stationary
Some	• Support for sample transport • Adequate supply of recording and reporting tools • Close monitoring and mentoring • Trainings for untrained staff and refresher trainings • Memorandum of understanding to formalize the collaboration and to have a clear understanding on the expected roles and responsibilities on both sides to ensure quality of care and improve relationship.
Most	• Diagnostic and infection prevention equipment and supplies, including free anti TB drugs • Change of attitude of staff at government facilities
All/almost all	• Capacity building, such as training, access to current guidelines, protocols and algorithms

Contribution of the private sector

The following are the suggestions by private providers on what can they contribute for the collaborative efforts between government and private facilities:

Few	• Sharing experiences to other private practitioners, if forums are available
Some	• Provide data that would enable the country to track TB cases and treatment outcomes. • Service availability in the private sector is an opportunity to minimise delays in diagnosis and treatment of TB patients
Most	• Provide free and quality services in return for free drug access and diagnostic equipment and supplies • Most suggested that the availability of services in private facility is an opportunity to decongest the public facilities
All/almost all	• Qualified health staff to provide services • Space for consultation and/or laboratory services depending on the need • Time for case management, referral, recording and reporting

Comments and recommendations:

Some	• Private sector engagement should be part of the MOH policy/ program for all diseases not only for TB, considering the reality that the first point of contact for most patients is private health care providers.
Most	• Community awareness creation activities (IEC) about the availability of free services in private facilities, including what to expect • Most of the respondents are willing to collaborate with government and glad to provide TB prevention and care services in a sustainable manner. • Most has expressed their concern on the government's commitment and the sustainability of the collaboration • The need for update on new guidelines and protocols in good time. Information on current advances on TB diagnosis and treatment should be made readily available to every practitioner. • Most expressed the need for support in data recording and reporting due to workload in the private practice

"Government should be serious. If government starts something it has to be on the forefront to implement it and do the necessary follow ups and support needed. "

3.9 Communication and advocacy

Communication between NTP and private healthcare providers is improving. The PPM Steering Committee includes membership from private health sector; the support supervision visits as well as regional and national review meetings offer a platform for information sharing. In addition, bi-annual media consultative meetings are undertaken to make the public aware of TB services in the private health facilities. The NTP through the PPM secretariat has an agreement with radio and TV stations to disseminate the spot messages. However, a comprehensive assessment of the information and communication needs of private healthcare providers has not been conducted.

3.10 Risks

There are no major risks in the engagement of private healthcare providers in TB control. The minor risks identified include (i) the possibility of a few private health care providers charging patients while receiving free anti-TB services; (ii) private healthcare providers not taking time to keep quality data. This risks can be mitigated through the recommendation to extending effective monitoring and support supervision to the private sector and embedding a code of conduct within any agreement that is reached between government and private healthcare providers.

3.11 Monitoring and evaluation

Overall NTP has in place a national M&E system. The systems is largely used in the public sector and not-for profit private sector but the NTP has recently (from 2018) started taking steps to have the system extended to the for profit private healthcare providers.

For the For-Profit Healthcare Providers, the application of the national M&E system is being introduced under the PPM initiative. Private health providers have been provided with presumptive TB registered and those providing diagnostic and treatment services have been provided with government patient registers and reporting tools. The health team from national and district level collects data from both public and private facilities every quarter. However, TB data from private health facilities is consolidated with the data from government and CHAM/NGOs. It is not disaggregated to show the number of TB cases reported by private health sector. There is a need to have an innovative system that reduces the burden of data collection among private health providers.

NTP, in collaboration with CHAI, has provided TB screening tools and referral tool pharmacies and traditional healers. These tools form a basis for data collection and reporting on referral of TB patients. The system has recently been rolled out and NTP/CHAI are yet to collect data from pharmacies and traditional healers. The PPM secretariat is undertaking quarterly support supervision visits to private health providers to assess TB services delivery, collect information and data on case-finding and treatment outcomes from PPM sites already engaged in TB Control and assess HR, infrastructure Capacity and equipment availability for PPM DOTS.

However, the roll out of the national M&E system in the private healthcare facilities is in its initial stages and there is a need for sustained capacity building to enable private sector collect data and report using national tools in a timely manner.

3.12 Recommendations/ opportunities for engaging private sector in TB control

(i) Regulatory environment

- Support by regulatory agencies to expand TB services in private health sector: The regulatory bodies in Malawi have demonstrated that they can play a key role in strengthening the quality of services and expanding service delivery for specific disease programmes especially through certifications and accreditation. This is illustrated by the role the MCM and PMPB played in certification of private healthcare providers to provide HIV and family planning services. Similar support can be provided to the national TB programme.
- Strengthening quality of services through inspection: regulatory bodies have standards in place but face capacity constraints (human and financial resources). Therefore, they are unable to conduct physical inspection in all private health facilities annually as required by law. There is an opportunity to develop innovative mechanisms for ensuring compliance through e-based tools and during license renewal.
- Strengthen regulation of traditional healers: An institutional framework is in place to coordinate and regulate traditional healers but it lacks backing of legislation and policy. The traditional healers associations at district level and the national umbrella organisations have weak capacity to effectively regulate and coordinate their members.
- Promotion of self-regulation: there is an opportunity for professional bodies to promote the code of conduct for the members and integrate TB into continuous professional development programmes.

(ii) Models of engagement

- Accreditation/MoU as a tool for extending TB services to private healthcare providers: Lessons from the HIV programme that has successfully engaged private healthcare providers using an accreditation model can be replicated by the TB programme. The private providers are supplied with drugs and other commodities from the national programme and they provide HIV services at a small fee of K1000 (this may have been reduced to K500). The NTP in Malawi has been also been supplying TB commodities including drugs and the NTP PPM model does not ask for a fees from private healthcare providers.
- To avoid losing patients by referring them and also due to the fact that patients seeking services in private sector do not want to be referred to public sector, there is a need to strengthen private-public facilities networks to enable private facilities access diagnostic services. In addition, the initiative expand TB diagnostic capacity in private sector should be sustained and expanded to better service such patients.

- The involvement of pharmacies and traditional healers in TB screening and referral of presumptive cases contributes to finding missing cases and early diagnosis. The pilot projects engaging these two actors offer an opportunity to learn lessons and scale up.
- Using NGO structures (volunteers) has the potential to increase TB case detection and treatment completion. Lessons learnt from the low-cost model of the NGO using former TB patient clubs to support TB patients should be applied to scale up the involvement of NGOs in various stages of the patient pathway.

(iii) Incentives and enablers

Appropriate and/or preferred incentives and enablers differ by among different categories of private healthcare providers:

- Government incentives and enablers for CHAM facilities are well established and have been sustained over the years given that government recognises the role of CHAM in delivering healthcare in the country.
- Incentives and enablers for for-profit private healthcare providers are not comprehensive and, in some cases, provided on a case by case basis. A few private healthcare providers are provided with anti-TB drugs and expected to report. Steps are being taken to scale up provision of diagnostic equipment in exchange for reporting. There is a need to build on these fragmented initiatives to develop a comprehensive incentive and enablers strategy for for-profit healthcare providers. Such as strategy should recognise the differences in attitude and preference for different (financial, commodities and non-financial incentives and enablers) by among different types of private healthcare providers.
- Use of incentives to promote pharmacies and traditional healers involvement in TB control: Pharmacies and traditional healers view the credibility and recognition that comes with being involvement in a government programme as an incentive. This involvement also brings them more business. This provides an opportunity to scale up engagement of pharmacies and traditional healers in TB control.

(iv) Financing

- There are limited opportunities to scale up financing of TB services provided in the private sector. Malawi has no plan to introduce social insurance; and patients seeking services in private sector pay through out-of-pocket or private insurance schemes. Thus, the option of providing private healthcare providers with drugs and other commodities to enable them provide free TB services is the most viable option (and this has been happening for years) of expanding TB services in the private sector.

(v) Capacity building

- The government involvement of not-for-profit healthcare providers (CHAM and NGOs) in training should be improved. CHAM and NGOs should engage with the NTP to ensure an increased number of their staff are included in government sponsored training.
- Training of for-profit healthcare providers in TB management can be scaled up through two approaches: (i) scaling up the on-going training organised by the NTP through the PPM initiative, and (ii) integrating TB in continuous professional development programmes. A comprehensive need-based capacity development programme should be developed. Approaches appropriate for training private healthcare providers (short and well targeted trainings) and provision of health education pamphlets would be adopted.
- Overall, there is a need to train CHAM, NGO and for-profit private sector providers on new TB management guidelines to be at par with the public sector.
- Strengthen MoH capacity to coordinate and engage the private healthcare providers effectively. This will encompass human and financial resources and technical capacity in engaging with private sector.

(vi) TB service delivery by private healthcare providers

- Laboratory service availability and capacity
    - o Train more laboratory personnel in for-profit facilities with Gene-Xpert to conduct the test
    - o Increase TB diagnostic capacity in for-profit healthcare providers to minimise reliance on sputum referral and improve service delivery. The NTP has a plan to provide microscopes and Gene-Xpert to for-profit facilities.
    - o Strengthen capacity of NTRL to provide EQA and technical support to private healthcare providers as engagement of these providers is scaled up
    - o Orient health care workers in referring facilities in sputum smear collection and handling to improve quality of on the spot sputum collection
- TB treatment services
    - o Scale up availability of TB treatment services in for-profit facilities through building on on-going efforts to accredit for-profit facilities to provide TB services
    - o Conduct training for all CHAM health workers on TB given that some have not been trained and some were trained over three years ago
- Systematic screening of contacts and high risk groups

- Scale up availability of systematic screening of contacts and high risk groups in for-profit facilities coupled with on-going efforts to accredit for-profit facilities to provide TB services
- Establish linkage between community health workers and for-profit facilities to scale up contact tracing. Sputum sample collection containers should also be supplied to for-profit facilities where TB diagnostic is unavailable. Logistical support for CHAM, such as maintenance of motorcycles, could strengthen the community level contact
- Sensitise and provide guidelines for screening of high-risk groups to for-profit facilities

- TB/HIV collaborative activities
  - Improve data collection for TB/HIV collaborative activities through, for instance, providing TB registers to HIV sites and improved coordination between HIV and TB programs at MOH and facility levels.
  - Provide refresher trainings and HIV test kits to for-profit facilities to scale up HIV testing among TB positive patients
  - Provide training for more staff and refresher trainings for those who attended training more than three years ago.
  - Improve the supply of sputum collection container and transportation of sample to the testing facility
- Preventive treatment of persons at high risk of TB
  - Scale up services on preventive treatment for TB in for-profit facilities, notably in for-profit clinics.
  - Train for-profit facilities staff on preventive TB treatment and provide drugs to these facilities
- TB Infection control
  - Provide technical support to for-profit facilities to develop and implement TB infection control measures. This should include providing these facilities with personal protective equipment as an incentive.
- TB drug supplies and management
  - Scale up TB screening and referral in private pharmacies building on the on-going pilot project

(vii) Coordination, communication and advocacy

- There is a need for strengthening coordination of the private healthcare providers through building on and sustaining the PPM structure. The PPM unit can be transformed into an intermediary organisation over time.
- Improve private sector involvement in NTP TWG meetings where information is shared and technical decision are made

(viii) Monitoring and evaluation

- The interface between MoH and private health sector should be strengthened to enable MoH collect data from the private healthcare providers
- Establish a user-friendly electronic tool for data collection and reporting by the private sector to mitigate the challenges they face in data management. For instance, the patient tracing system being piloted in public sector can also be extended to private sector.
- Scale up support supervision and monitoring of quality of services in the private sector and develop quality improvement plans to address any weaknesses identified

(ix) Risk management

- Extend effective monitoring and support supervision to the private sector
- Include a code of conduct within any agreement that is reached between government and private healthcare providers

Section 4: Zambia study findings and recommendations

4.1 Private health sector profile

Private healthcare providers in Zambia, as is the case in other countries, comprise of Not for Profit private healthcare providers, mainly the faith-based facilities affiliated to Churches Health Association of Zambia (CHAZ) and non-governmental organisations; For-Profit healthcare providers consisting of hospitals and clinics as well as pharmacies; and traditional health practitioners.

Not for profit (faith based) private health providers are the largest health service provider outside of government. Most of the faith-based healthcare providers are affiliated to the Churches Health Association of Zambia (CHAZ), which represents health facilities run by denominations of both protestants and catholic churches. CHAZ has 157 health facilities - 36 hospitals, 89 health centres, 32 community- based organisations and 11 training schools. CHAZ health facilities are spread countrywide with more prominence in rural and hard to reach areas. Most (18%) of the facilities

are in Lusaka province followed by Copperbelt (17%) while Northern province has the least (6%). It is estimated that CHAZ facilities provide about 30% of healthcare countrywide and serve about 5 million people [1].

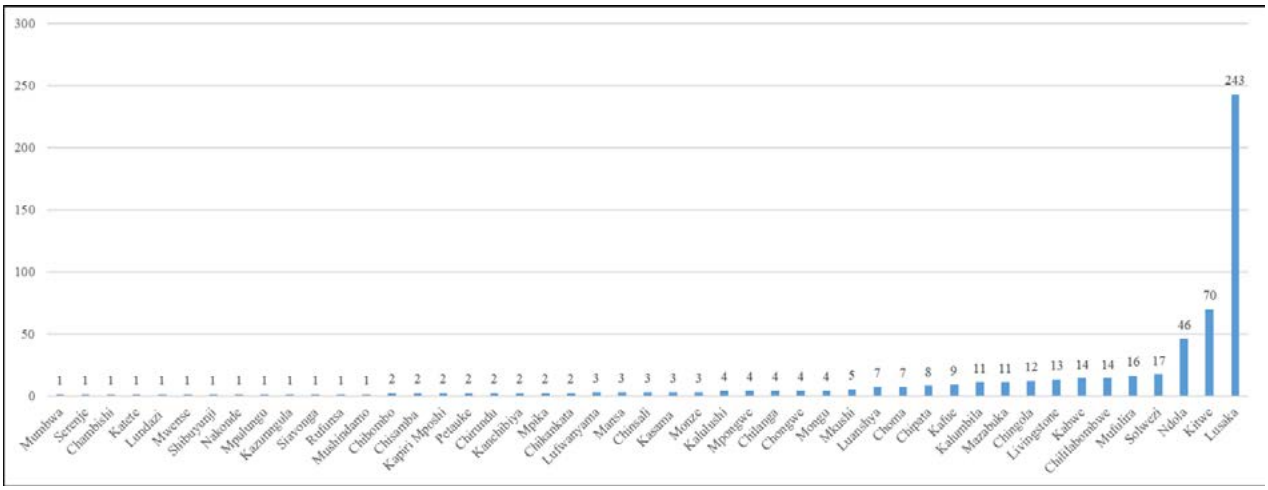
Table 20: CHAZ health facilities by province, 2019

Province	No. of CHAZ Health Facilities	Percentage of total facilities
Central	10	6%
Copperbelt	26	17%
Eastern	17	11%
Lusaka	28	18%
Luapula	9	6%
Muchinga	8	5%
Northern	8	5%
North Western	16	10%
Southern	25	16%
Western	10	6%
Total	157	100%

A total of 566 for-profit private health facilities are registered and licensed in Zambia. 43% of the for-profit private health facilities are in the Capital City, Lusaka followed by 12% in Kitwe and 8% in Ndola. 10 districts account for 82% of private facilities while there is only one facility in each of the 13 districts. The table below shows the distribution of for-profit health facilities by district . This shows districts where the National TB Programme could prioritise in strengthening its engagement with for-profit healthcare providers in TB control.

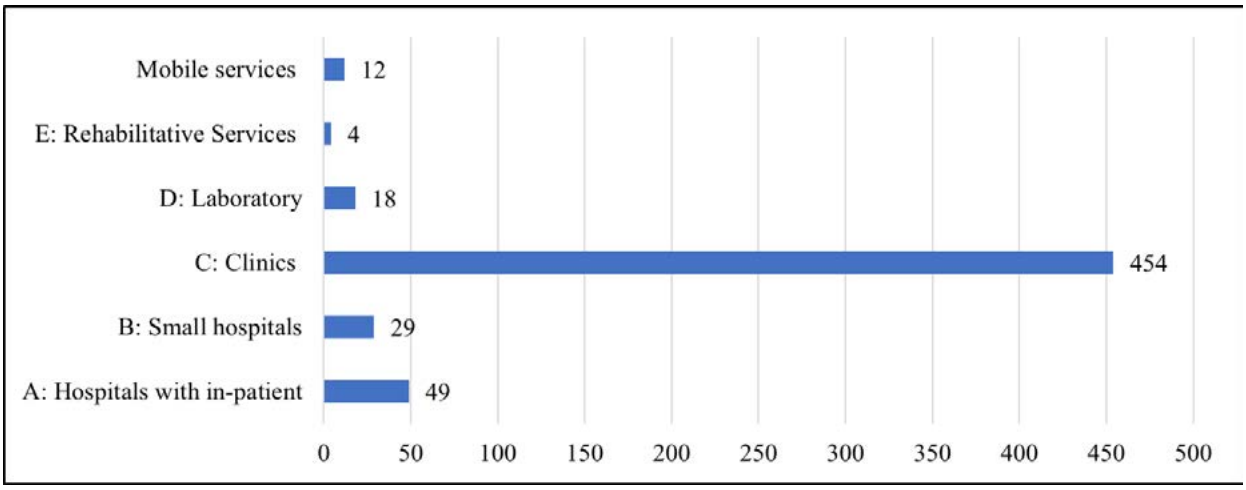
[7]Registered private health facilities in Zambia as at 30th April 2019, Heath Professional Council of Zambia

Figure 7: Distribution of for-profit private health facilities by district, 2019



For-profit health facilities are categorised into four classes: Class A being hospitals with in-patient facilities, Class B small hospitals which may or may not have in-patient services, Class C are clinics offering general consultations, Class D are stand-alone laboratories and Class E consists of rehabilitative services including physiotherapy. Private mobile health services are also registered and licensed separately. Private clinics constitute 80% of the for-profit health facilities. All the "classes" of private health facilities have the potential to be engaged in TB except class E.

Figure 8: Number of for-profit private health facilities by category in Zambia



[8]Ibid
[9]Pharmacies renew licenses annually. This data shows those who renewed their licenses in 2018.

The private healthcare market in Zambia has become attractive to foreign investors or practitioners. Of the 566 private health facilities, 63% (357) are Zambian owned while 37% (210) are owned by non-Zambians. 52% of the non-Zambian facilities are located in Lusaka district and 20% in Kitwe district.

For-profit private pharmacies: Private pharmacies are an important part of the for-profit healthcare sector. In Zambia, 278 private pharmacies were registered and licensed in 2018 . As shown on the table below, 70% of the pharmacies are in Lusaka province, 44% are in the Copperbelt and 11% in Southern Province. Other provinces have less than 10% of the total pharmacies. This underscores the high presence of private healthcare providers in Lusaka and the Copperbelt compared to other regions in the country.

Table 21:Distribution of private pharmacies by province, 2019

Province	Number of Pharmacies	Percentage
Lusaka	194	70%
Eastern	8	3%
Muchinga	2	1%
Central	9	3%
Southern	11	4%
Copperbelt	44	16%
Western	5	2%
Northern	1	0%
North-western	4	1%
Total	278	100%

Traditional healers: A mapping done by WHO in 1990 found about 40,000 traditional healers operating in Zambia. About 80% of the population seek services from traditional healers. About 17,000 are paid up members of the Traditional Health Practitioners of Zambia (THPAZ) in 2019. Traditional healers are a diverse group comprising herbalists, faith spiritualists, TBAs focusing on maternal health, and diviners using spiritual diagnosis.

4.2 Regulatory environment

4.2.1 Government regulations

Zambia has a well-structured legal framework regulating healthcare in various settings. The regulatory environment is diverse, comprising of both government regulatory bodies, and self-regulating professional bodies and industry associations.

(i) Regulation of healthcare facilities

Both public and private healthcare providers are regulated by the Health Professionals Council of Zambia (HPCZ), a body set up by an Act of Parliament. HPCZ regulates doctors, pharmacists and laboratory technologists; registers health facilities and monitors compliance with regulations. Healthcare providers have to obtain a license from HPCZ to set up a health facility (after meeting set requirements) and have to renew the license annually. Facilities are registered according to the type services they provide – from class A to E. for each class, the Council has set requirements the applicant should meet.

Compliance with regulations: HPCZ conducts three forms of inspection to ensure compliance with regulations. (i) the pre-registration inspection, (ii) inspection which occurs when there is a complaint, media reports or based on MoH reports, and (iii) routine inspection which the Council is required to undertake covering all facilities once in 24 months. After inspection, anomalies are addressed through taking remedial action, or closing the facility.

Reporting: From 2018, the HPCZ made it mandatory for facilities to report to the District Health Office. This requirement aims at solving the problem of unavailability of data from private sector. However, the challenge is unavailability of registers and reporting tools and capacity of the private sector to report.

Accreditation: HPCZ collaborates with the national HIV programme, accredits facilities to provide specific services such as ART and VMMC. For accreditation, a separate assessment based on criteria established by the programme. Accreditation serves as a second layer of ensuring compliance to regulations. Accredited facilities have to meet the primary regulatory requirements and also the disease programme requirements and the programme monitors compliance with accreditation standards which indirectly ensures compliance to primary regulations.

Infection control: Facilities are expected to develop a general infection control plan aligned to MoH guidelines. Infections control is one of the issues HPCZ looks at during its assessment and inspection. The Council does not focus on programme specific IC such as for TB. Individual programmes such as NTP are expected to assess infection control related to the respective disease.

TB specific regulations

Certification/accreditation: There is no certification and/or accreditation of private healthcare providers to provide TB services and NTP is not considering accreditation. For-profit healthcare providers are expected to comply with national TB guidelines. However, the guidelines have not been disseminated to all for-profit healthcare providers. Monitoring of compliance with these guidelines by the National TB Programme (NTP) is also insufficient, the focus of NTP is in public and not-for-profit facilities.

Anti-TB drugs: Anti-TB drugs are not restricted and can be available in the market. However, few for-profit providers stock these drugs and most prefer to access drugs from the government when they have TB patient.

TB notification: TB notification sites, both public and private are registered and, therefore, expected to report. The NTP prefers using the approach of dialogue and enforcement to have for-profit providers report. Going forward, TB notification can be included as part of criteria for licence renewal by HPCZ.

Key issues:

- HPCZ lacks capacity to effectively implement regulations. The Council has only 9 inspectors and three offices (headquarters in Lusaka and one office in Ndola and Kasama each) which cannot cover the entire country.
- The council relies on district health officers to monitor compliance with regulations, but these officers have huge workload and also lack resources
- The mandatory requirement for for-profit health providers to report is not always followed. Most of the for-profit providers have limited capacity to report.
- Some for-profit health providers have the perception that Government bars them from providing TB services; making them reluctant to report in TB services they offer
- The law to regulate alternative/ traditional medicine is not yet in place. MoH is in the process of developing this law.
- Although accreditation provides an opportunity to improve quality of services, NTP is not considering this option.

(ii) Regulation of pharmacies

Zambia Medicines Regulatory Authority (ZAMRA), set up under the Medicines and Substances Act no. 3 of 2013, regulates hospital pharmacies, retail pharmacies, wholesale pharmacies, Agro-vet shops and Health shops. According to regulations, pharmacies are operated by qualified personnel registered by HPCZ and stock all medicines while health shops stock a prescribed list of medicines mainly for primary healthcare and are designed to operate in rural areas. Currently, ZAMRA has no registered health shop. Drug stores are considered illegal. HPCZ regulates the personnel working in the pharmacy while ZAMRA regulates the premises and products. Therefore, ZAMRA cannot discipline the personnel working in the pharmacies in case of non-compliance but can take action on the operation of the premise itself.

Compliance with regulations: ZAMRA conducts pre-licensing inspection before a licence is issued; risk driven post licensing inspection; and investigation of complaints. Inspection reports identify weaknesses which the pharmacies are expected to address while those with serious non-compliance issues are closed. ZAMRA also provides information to stakeholders on regulations and holds stakeholder meetings to address any issues arising from regulations.

Issues

- ZAMRA lacks human resources and financial capacity to ensure compliance with regulations. It has 29 inspectors expected to cover all pharmacies countrywide,
- Pharmacists are not always present in the premises as required by law and tend to employ unqualified staff to dispense drugs
- Due to lack of capacity, there is limited monitoring or even enforcement of good dispensing practices in pharmacies

4.2.2 Self-regulation: Role of professional associations

Two professional bodies for health professional are operating in Zambia: the Faculty of General Practitioners of Zambia (FGPZ) and the Zambia Medical Council (ZMC).

(i) Faculty of General Practitioners of Zambia

This is membership association of private health practitioners or doctors who have their own clinics or practices. The association has a management committee running its affairs and finances its activities from membership fees. Its major activity is the provision of Continuous Professional Development (CPD). It holds monthly CPD activities for members and links doctors to other CPD events including those organised by national programmes.

The involvement of members in TB control is not uniform: some provide TB treatment services; some identify presumptive cases and refer them to government or other private health facilities; others diagnose in liaison with private laboratories and offer TB treatment while others buy TB drugs from the market or receive them from the government in exchange for data. Referral of TB patients is an individual initiative given that government has not taken steps to facilitate the referral.

Private practitioners are willing to collaborate with government in TB control and other programmes but they find government red tape as a barrier. Government processes take too long and the training offered by government also takes several days which is not appropriate for private doctors. This notwithstanding, the association would collaborate with government in TB control because they are serving the same clients as those in public sector. Collaboration is possible if training offered by government takes a short period and doctors are provided advance notice; and other systems such as referral are put in place.

Key issues

- The priority of the association is on continuous professional development. There is limited focus on self-regulation either through a code of conduct or ensuring members comply with government regulations
- NTP engagement with this association is limited hence TB has not been effectively integrated in the CPD programme
- The association has no established secretariat and officials conduct association affairs from practice premises as cost cutting measure

(ii) Zambia Medical Association

Zambia Medical Association (ZMA) is also an association of doctors but its members are mainly doctors working in the public sector, although membership is open to all doctors. The major roles of the association is to advance the

interests of the doctors in the development of health policies and provide Continuous Medical Education (CME). The association conducts CME countywide to reach its members. Topics covered in recent 2019 CME events include emerging issues in medicine, case referral, Health Sector Strategic Plan (HSSP) priority areas. The association has started reaching out to doctors in private practice by incorporating them in CME meetings and sharing information with the Faculty of General Practitioners of Zambia. With regard to TB control, the association represented doctors in the last World TB Day events; held three meetings for doctors from private sector in the Copperbelt on TB focusing in early TB case detection.

Key issues

- ZMA prioritises CME and advocacy for doctor's welfare and has less attention on self-regulation
- The association has limited financial resources and a weak secretariat with limited staff
- ZMA has a limited role in TB control in the private sector given that most of its members work in public sector

Both ZMA and GGPZ are more focused on providing their members opportunities for CPD/CME and less on self-regulation of their members. The associations also have limited financial resources and weak secretariats with limited staff.

4.2.3 Mine health and safety regulations and TB control

(i) Mine Health and Safety regulations

Mineworkers, their families and communities in mining areas are some of the TB high risk groups. Zambia has well established legislation and regulations on mine health and safety which covers TB and silicosis. The Mines and Mineral Act (of 1969) forms the basis for mine health and safety regulation. Based on this Act, Mining Regulations of 1971 and Mining Regulations of 1973 were developed. Further, the two regulations have been amalgamated to form the Guide to Mining Regulations booklet. Other legislations that have an effect on TB control in the mines include the Medical Examination of Young Persons (Underground Work), Chapter 216 of Laws of Zambia, Pneumoconiosis Act, Chapter 217 of Laws of Zambia, Occupational Health and Safety Act, Act 36 of 2010 and the Workers Compensation Act no. 10 of 1999. The Guide to Mining Regulations has established the obligations of owners, employers, managers and employees regarding health and safety. The responsibility for ensuring health and safety regulations are followed lies with the Chief Inspector of Mines, under the Mines Safety Department.

The Guide to Mining Regulations Booklet is applicable in scheduled mines only. Some of the specific aspects of mine health and safety covered by this guide, relevant to TB control, include provision of Personal Protective Equipment (PPE), conduct of medical examination of mineworkers, liability of care by mining companies, dust management and provision of ventilation reports.

The Mine Safety Department (MSD) is tasked with enforcing the regulations through mine inspections and audits. Inspections focus on how the mine is supervised, compliance with previous recommendations of the department, reporting structure for occupational accidents and accident statistics, compliance with legislation, provision of medical care and pollution among other areas.

The perception of mining companies to inspection (enforcement of regulations) was negative in the past. Mines viewed inspections as policing because inspection was done when there was an issue and could lead to mine closure. With the support provided by the Southern Africa TB and Health Systems Strengthening Project (SATBHSS), the interface between industry and inspectorate has improved due to increased frequency of visits and the department using a consultative approach in inspection. As a result of improved relations, mines do invite MSD to provide advice, clarify issues on regulations and offer lectures on mine health and safety. MSD is planning to introduce a 3-dimensional toll-free system for reporting accidents or incidents for timely response (i) Toll Free USSD, (ii whatsup platform where all levels of management and supervision can post any incident or accident for transparency and (iii) Toll free landline for reporting cases.

(ii) Occupational health regulations

TB and silicosis in the mines are regulated as occupational health hazards. Occupational Health and Safety Institute (OHSI) is the institution set up to play a regulatory role for TB and silicosis in the mining sector. It conducts pre-employment medical examinations which include TB to set a baseline of the mineworker's health and identify those "fit for work"; annual medical examinations for occupational lung diseases including TB and silicosis; and post-employment examinations till death of the mineworker. In addition, OHSI confirms TB cases identified and reported during the working period. For such cases, OHSI confirms the TB case and also confirm treatment completion and success.

Mineworkers successfully treated are expected to work only in unscheduled areas of the mine. With the support of the SATBHSS project, OHSI has intensified TB case finding among mineworkers through improving diagnostic facilities (GeneXpert machines, microscopy etc) as a centre of excellence.

(iii) Industry self-regulation: Chamber of Mines of Zambia

The Chamber of Mines is an association of mining and allied companies; allied companies being contractors providing goods and services to mining companies. The chamber is supported by private sector and is not established by law. Its role is to advocate on policy issues such as taxation, mine safety, health and environment and also to serve as a bridge between the industry and the government. The Chamber is governed by a board which has several committees including the Health and Safety Committee. This committee meets monthly to review health and safety issues including TB and silicosis cases, organises conferences annually where industry players exchange knowledge on health including TB; and also ensures members are reporting on TB cases periodically.

Key issues

- MSD has capacity limitations to conduct inspections in all mines. It has 48 inspectors covering the whole country while there are 1700 active mines (large, medium and small). It is inadequately funded. Most of its activities are currently funded by SATBHSS. It also lacks adequate dust monitoring instruments and personal protective equipment.
- Mineworkers are often reluctant to seek TB treatment from mine health facilities for fear of being reported to OHSI and ending up losing their job after treatment because they are not allowed back to scheduled areas
- Illegal mining which is not covered by OHSI is also exposing mineworkers to TB
- Mines (especially small and medium mines) with no health facilities rely on government facilities or facilities of other mining companies. This requires an effective referral system.
- OHSI is a centralised organisation covering the whole country from its office in Kitwe which makes it difficult to cover all mines. Although they recently opened another branch in Lusaka, wider outreach and more outlets are still required in order to effectively cover the country.
- The Chamber of Mines does not have an industry wide TB control programme; it only encourages members to address TB and receives TB data from individual mines.
- Mining companies are divesting from social programmes due to increased tax requirements and operational costs and TB is one of the social programmes likely to be impacted

4.2.4 Regulation of traditional healers

There is no legislation regulating traditional healers. The Traditional Health Practitioners of Zambia (TPHAZ) serves a self-regulatory body whose major role is the coordination of traditional healers activities. This association was

established by government in 1978 with the purpose of uniting traditional healers. The association has a national secretariat with office premises. Members pay members fee annually to support its activities. Some of its activities include provision of information to members, capacity building, linking traditional healers with health facilities, implementing and monitoring programmes targeting traditional healers. In the past, the association received funding from GF, MS Zambia, Norwegian Embassy, EU to support HIV prevention, malaria, HIV and TB. Currently, the association receives sporadic funding from CHAZ (under the Global Fund programme).

Key issues

- There is no legislation regulating traditional healers or traditional medicine
- TPHAZ does not prioritise self-regulation. For instance, it has no code of conduct for members. Its major priority is seeking funding for programmes.
- The capacity of TPHAZ has diminished with the end of most donor funding
- Traditional healers are not recognised by healthcare workers; they are stigmatised
- Most of them have not been trained on TB
- No infection assessment has been done in traditional healers practice premises but the association has shared infection guidelines with members

4.3 Models of engagement

4.3.1 Public-private partnership policy framework

The Public-Private Partnership Act of 2009 sets the policy and legal framework for government engagement with private sector across all sectors. "This Act promotes and facilitates implementation of privately financed infrastructure projects and effective delivery of social services by enhancing transparency, fairness and long-term sustainability and removing undesirable restrictions on private sector participation in the provision for social services..." All government ministries, including MoH engage with private sector within the legal framework laid out by this Act and therefore do not need to establish sector specific public private partnership policy.

The PPP policy has integrated in the health sector strategic plan 2017-2021. The MoH involves private sector at highest level of policy and planning processes. For instance, private sector is involved in the health financing technical working group; bilateral and multilateral cooperation engagements; policy dialogue meetings. They are also invited to Sector-wide Approach (SWAP) mechanisms which include: (i) Annual Consultative Meeting (Minister's Meeting)

where government share the annual budget with development partners (DPs) and the DPs identify gaps to support; (ii) Sector Advisory Group held twice in a year to share information with DPs on how funds are spent to trigger further disbursement; (iii) Quarterly policy meetings with development partners and heads of health units/directorates; and (iv) Monthly TWG meetings of technical officers. Private sector officials are invited to these meetings but sometimes they do not have time to attend. However, this demonstrated government willingness to engage private sector.

4.3.2 Formal engagement of not-for-profit private healthcare providers: CHAZ

MoH engagement with CHAZ is based on an MoU signed by the two parties. This MoU focuses on the following areas:

- Planning and budgeting: sharing financial reports with government to know how much funds are received and how they are spent
- Human Resources for Health: Government employs and seconds health workers to CHAZ facilities, salaries for administration staff are paid by government although they are recruited by the church
- Government pays for operational costs and funds capital investments
- Joint technical support and monitoring and evaluation visits in collaboration with the MoH HQ and district health officers. For instance, for the malaria programmes, CHAZ leads support supervision in 3 provinces.
- Complements government in procurement and supply management for certain commodities and drugs (but not including TB).
- Information Management: CHAZ uses the national HMIS and DHIS systems and tools to report
- Policy: CHAZ is a member of all national steering committees and TWGs on programmatic and financing issues
- Service delivery: CHAZ follows the government policy of healthcare financing. In this case, primary healthcare is free

CHAZ also receives donor funding for TB, HIV, malaria elimination, MNCH, immunization. The major donors include Global Fund, GAVI, USAID. For Global Fund, CHAZ serves as a principal recipient for FBO facilities and community level interventions.

The TB services provided by CHAZ are as follows:

- CHAZ has 73 TB diagnostic sites of the 157 CHAZ health facilities; other CHAZ facilities refer TB presumptive cases to government or other CHAZ facilities.
- CHAZ relies on Government for anti-TB drugs
- The facilities undertake DOTS using three approaches: (i) by HCW at the facility, (ii) volunteers at community

level, (iii) patient's relatives. CHAZ also supports 2 mine hospitals (Konkola and Mchinga) in doing DOTS to community members.

- Nutritional support no longer provided to TB patients because the programmes was unsustainable. Instead CHAZ provides health education on locally available foods and links patients to support at community level.
- CHAZ facilities do not provide MDR TB treatment
- For TB in children, the big CHAZ facilities are able of diagnosing and providing treatment services while small facilities lack diagnostic equipment and, therefore, refer.
- TB/HIV collaboration: Staff have been oriented on TB/HIV service integration
- Quality assurance: Provincial teams visit the facilities to assess service delivery and provide feedback. Onsite evaluation at the beginning of the year forms the baseline. In the case of laboratories, EQA is done through blinding testing done every quarter. Panel testing is currently not being done.

Key issues

- Funding from government is erratic
- Transfers of trained staff even out of the CHAZ facilities affecting service delivery and requiring frequent training of new staff
- Policy documents take long to be updated and disseminated. Hence, long wait for completion of documents before adopting new guidelines.
- Turnover of HCWs trained is affecting TB service delivery
- Inadequate funding for the TB programme
- Weak referral system for TB patients

4.3.3 Modes of engagement for-profit health care providers

The NTP has not established a well-defined mode of engagement for for-profit healthcare providers. Various approaches are emerging dependent on the capacity and willingness of the for-profit healthcare provider to provide TB services:

Sputum referral: For-profit facilities refer sputum to an external laboratory, receives results and refer a patient with positive results to a public facility for treatment.

Patient referral: A for-profit facility screens patients and refers presumptive cases to a public health facility for diagnosis and treatment. This approach is applied by small clinics with no linkages to laboratories.

Referral and treatment: for-profit facilities refer sputum to private or public laboratories, receives results and provides treatment, if the patient has TB. This approach is applied by hospitals and clinics with no TB laboratory but where the patient prefers to be treated in the private sector.

Diagnosis and treatment: for-profit facilities provide a whole range of TB services – screening, testing and treatment of TB cases and reporting. These facilities are registered as notifying centres for TB. However, such facilities are few, approximately four in the capital city, Lusaka and none was found outside Lusaka.

For profit facilities providing TB treatment receive free drugs from government and are expected to provide TB services free of charge and report on the treatment outcomes. However, there are some for-profit facilities purchasing anti-TB drugs in the market and charging patients for treatment at cost.

Key issues

- TB patient referral varies among for-profit facilities: Some facilities have developed their own referral forms (do not have the MoH referral form) and have no system for following up whether referred cases reach the facility to which they are referred. The facilities also do not keep data on presumptive TB cases referred.
- For-profit healthcare providers face challenges in referral of samples: Turnaround time for referrals is long, no reliable diagnosis of TB in children and extra-pulmonary TB and hence the facilities rely on x-ray.
- Referral of sputum (instead of the patient) is largely due to patients preferring to be treated at the for-profit facility and private health providers seeking ways of holding on to patients
- Transportation of samples out of the country for testing especially for DST prolongs delay in diagnosis
- Lack of clarity on government policy on provision of TB services by for-profit providers: Some for profit providers believe a policy exists prohibiting them from handling TB while others are not aware of the policy. Within the NTP, the view is that government may have pronounced this directive in the past but it is not a policy. This lack of clarity hinders for-profit facilities from engaging with the NTP.
- No survey has been done to find out how many for-profit facilities purchase drugs from the market and the source of the drugs to ensure quality
- Weak monitoring of the for-profit facilities to ensure those provided free drugs by government are not charging patients
- Weak provision of DOTS, for-profit facilities have no clear linkage to the national DOTS system

4.3.4 Mode of engagement with private pharmacies

The engagement of pharmacies in TB control is in its initial stages. PATH, with funding from USAID, has started training pharmacies on TB management through TB screening (recognising TB presumptive cases) and referring presumptive cases to public health facilities; and how to minimise indiscriminate dispensing of cough syrups and antibiotics. In 2019, the project plans to train 60 pharmacies. Referral forms have been given to those trained and the programme will collect data on referrals from the pharmacies and follow up made to the facility where patients are referred to ascertain whether the patients reached there and find out results of the tests. The programme is planning to introduce incentives for pharmacies, though the incentives have not been defined.

Key issues

- Engagement of pharmacies in TB management is in its infancy and will take time to cover most of the pharmacies
- In some cases, pharmacies have people working part time who were not trained
- No mechanism for monitoring pharmacies
- A few pharmacies are stocking TB drugs purchased from manufacturers

4.3.5 Pharmaceutical manufacturers

There are two pharmaceutical manufacturers in Zambia. One manufacturer has the capacity and capability to manufacture TB drugs but currently this is not being done due to limited market given Zambia is importing TB drugs and other countries in the region are doing the same. The process of certification of the TB drugs by WHO also take long. The other manufacturer is not producing TB drugs but is registered as a distributer for manufacturers who are WHO pre-qualified. Interviews with the two manufacturers show that local capacity and expertise to manufacture TB drugs exists but the manufactures are not WHO pre-qualified to do so.

4.3.6 Mode of engagement with traditional healers

There is no defined mode of engagement for traditional healers. A pilot model engagement of traditional healers in TB is in its infancy. The NTP, through SATBHSS and the PATH project with USAID funding, has commenced training of traditional healers to recognise TB symptoms and refer presumptive cases to health facilities. The project has also given them referral forms and does follow up to collect data and find out whether referred patients reached the health

facility and what their test results were. There are plans to introduce incentives for traditional healers through Result Based Financing mechanism where healers shall be incentivised based on number of presumptive TB cases they will have referred over a defined period.

A few selected traditional healers from each district have been sensitised on TB to enable them refer patients to health facilities. They practice a three-way referral (i) healer to healer, (ii) healer to facility (iii) facility to healer. In 2018, a Chiefs Indaba was held for 250 traditional leaders to discuss health issues including TB with emphasis on the role of the traditional leaders in encouraging positive health seeking behaviour and positive lifestyle.

Key issues:

- The engagement of traditional healers on TB control as recently started and it will take time to reach a substantial number across the country
- The coordination structure for traditional healers is weak; and cannot scale up traditional healers' involvement in TB sufficiently
- The three-way referral preferred by traditional healers is not working; healthcare workers have a negative attitude to traditional healers and tend to ignore their referrals, and patients are not being referred from facilities to traditional healers.
- There is no appropriate means of tracking traditional healers to monitor those screening and referring presumptive TB cases

4.3.7 Mode of engagement of the mining companies in TB control

Mines are expected by law to provide medical care, including TB for their employees. However, extent to which mining companies provide TB services depends on their capacity.

Large mining companies: These companies have health facilities providing TB diagnosis and treatment services. They provide TB services to company mineworkers, family members of mineworkers and contract employees. Health facilities of large companies are also open other mining and non-mining companies who pay for their employees and families to access services. The facilities are also open to the wider community, who also pay for the services. Health facilities for large companies have a TB focal point person, and a TB section which collects data and feeds into the public health system at the district level. TB services provided include screening and diagnosis, TB treatment, contact tracing extended to the worker's family members. The facilities receive free TB drugs from government. NTP

is also expected to provide DST and DR-TB treatment. A worker on TB treatment is offered full pay in the first three month. If the worker is not able to return to work, he is offered another three months off (while on treatment) with half pay and after that, the company seeks medical advice whether to discharge or retain the worker. As per the law, workers who have had TB are required to be removed from schedule areas.

Large mining companies also carry out TB preventive measures which include:

(v) Inductions for new workers on safety, health, conditions of service etc. Workers are inducted on Safety and environment including hazards including TB, use of PPEs to protect themselves against dust and HIV prevention.

(vi) Counselling of TB patients within the TB/HIV context. Counselling is also done when mine risk assessment is carried out. Workers are educated or counselled how to identify TB symptom.

(vii) Dust control including wearing of the right PPE including masks, dust suppression, adequate ventilation and observing re-entry timings after blasting

(viii) Monitoring of dust according to regulations. This involves taking of samples once every 90 days, recording dust levels and submitting quarterly dust reports to MSD.

Small and medium mines rely on public health facilities for the management of TB. They refer mineworkers to public sector where they are managed according to national guidelines. However, they pay for costs of accessing services such as transport.

Key issues

- Mining companies are not providing DOTS
- Current regulations hinder workers from seeking TB treatment at the mine facility because any worker who has undergone TB treatment is removed from the scheduled areas
- NTP/DHO supervision of mining health facilities is not carried out regularly. There has been no visit from NTP to some of mine health facilities.
- Staff in mine health facility have not been oriented on TB treatment guidelines
- The management staff in the mines are not oriented on TB management
- There is no mechanism for tracking ex-mineworkers; Ex-mineworkers seek services in public health facilities where they are not identified as ex-mineworkers.
- Data from mining companies is not disaggregated in the national TB data to identify cases reported from the mines

- Nutritional support is not provided by mine health facilities
- Too much attention is given to HIV, neglecting or overshadowing TB

4.3.8 Centre of Excellence on TB control in the mining sector

A centre of excellence in the provision of occupational health services including TB is being established supported by the SATBHSS project. This is an integrated system of managing occupation health involving OHSI, MSD, Worker's Compensation Board and Ministry of Labour. The aim of the centre of excellence is to ensure that all workers for mining are screened before employment (pre-employment screening). Those with suspected TB or silicosis are referred to facilities for treatment. This forms a baseline for mineworkers entering mining labour force. If a mineworker subsequently develops TB or silicosis, the Workers Compensation Board, Department of Mine safety and OHSI get involved according to their mandates. The integrated system will enable all the three institutions to have access to data to provide an integrated service to the mineworkers.

MSD is in the process of setting up a of the art laboratory for dust analysis to ensure timely results. Currently all dust is exported for analysis. OSHI is equipping its laboratory with advanced diagnostic equipment to improve screening of workers for TB and silicosis and other lung diseases. The Ministry of Labour is strengthening the employment act including repealing the act to allow re-employment of workers after TB treatment and reviewing contracts provided to workers. The Workers' Compensation Board is improving systems to ensure workers are compensated on time. The centre of excellence will also provide technical support to mining companies. Indicators and targets will be set to monitor the performance of this centre.

This centre of excellence offers an opportunity for providing technical capacity to mining companies in the region. However, it faces a challenge of sustainability beyond the project.

4.3.9 Use of technology to improve data management in private sector

One of the challenges facing for-profit healthcare providers is recording patient data and reporting. For profit providers do not have adequate staff and time to manage data. Currently, the NTP is piloting the electronic patient records systems – Smartcare – in public facilities in 19 districts. Smartcare application keeps patient level data. The pilot project is installing a computer and scanner in the TB site in each health facility. Currently, the system is used by ART and MCH and is being extended to TB. The system allows data to be disaggregated at district, provincial and national levels.

There is an opportunity to extend this system to for-profit health facilities, there is a need to demonstrate that the system does not increase workload and, indeed, it improves data management and reporting. For profit healthcare providers will need IT equipment and training and continuous support.

4.4 Incentives and enablers

Not-for-profit healthcare providers: A comprehensive incentives and enablers scheme is in place for the not-for-profit healthcare provider – CHAZ. This is based on the MoU sighed with government where Government pays for the human resources, operational and capital investment costs, involves CHAZ in all health policy and planning processes; providing CHAZ with TB drugs and other commodities, staff training and involving the organisation in support supervision. In return, CHAZ provides TB services free of charge according to national guidelines. These incentives and enablers have worked well over the years and CHAZ has 73 sites providing ART/TB services.

For-profit healthcare providers: There is no comprehensive incentives and enablers scheme in place for for-profit healthcare providers. There is also no plan for developing an incentive scheme but the NTP has realised the need for incentives. Internal discussions are on-going within NTP on the model of incentives appropriate for for-profit healthcare providers. However, there are some incentives provided on an ad hoc basis – free TB drugs and equipment for facilities offering TB treatment.

Stakeholders interviewed noted that possible incentives and enablers for for-profit healthcare providers include: free drugs so that patients only pay for extra services such as consultation fee and training, accreditation of TB sites to improve their credibility and quality of services.

4.5 Financing

Patients seeking services from for-profit health facilities either pay out-of-pocket or through private insurance schemes. It is estimated that 4% of the population have some form of health insurance. In the mining sector, large mining companies meet the cost of TB services provided to mineworkers and their families while small and medium companies reply on the public sector facilities where mineworkers receive services free of charge while the companies pay for their transport.

A National Health Insurance is planned. In 2018, National Health Insurance Act was passed to establish a national health insurance scheme for all. A commencement order has been signed. Mechanisms are being finalised to implement the insurance scheme. The management team to lead implementation has been set up. Deductions will be made from employees while those unemployed will pay premiums from private sources. This insurance will pay for health services including TB patients in private sector. Health service providers, both public and private, willing to participate in the scheme will be accredited and will be required to comply with criteria in order to be reimbursed. This is an opportunity to expand TB services in the private sector.

4.6 Capacity building

No comprehensive capacity building of for-profit healthcare providers has been provided; the providers have not been trained on TB diagnosis and treatment. Laboratory capacity in the for-profit private sector is also low. Some hospitals and most clinics do not perform TB diagnosis. NTP is planning to train for-profit healthcare providers on the new TB guidelines in 2020.

Capacity building of private pharmacies and traditional healers has commenced under the PATH/USAID project and under the SATBHSS Project in 19 supported districts. Traditional healers are being sensitised on TB screening and referral to enable them understand how to handle suspected cases of TB. Pharmacists are also being trained on TB control and referral of patients and how to manage patients with coughs. 60 pharmacists have so far been trained.

Key issues

- Limited capacity development for for-profit private healthcare providers reflects the overall limited engagement of NTP
- No comprehensive capacity development plan for for-profit private healthcare providers
- Non-availability of pharmacists and clinicians for training because training take a long time
- Mining companies also indicated that not all healthcare workers have been trained on TB

4.7 TB services provided

4.7.1 Private healthcare providers sample

TB services offered by private healthcare providers were assessed using a quantitative questionnaire administered to not for profit and for profit healthcare providers. A total of 103 representative sample of private facilities were included

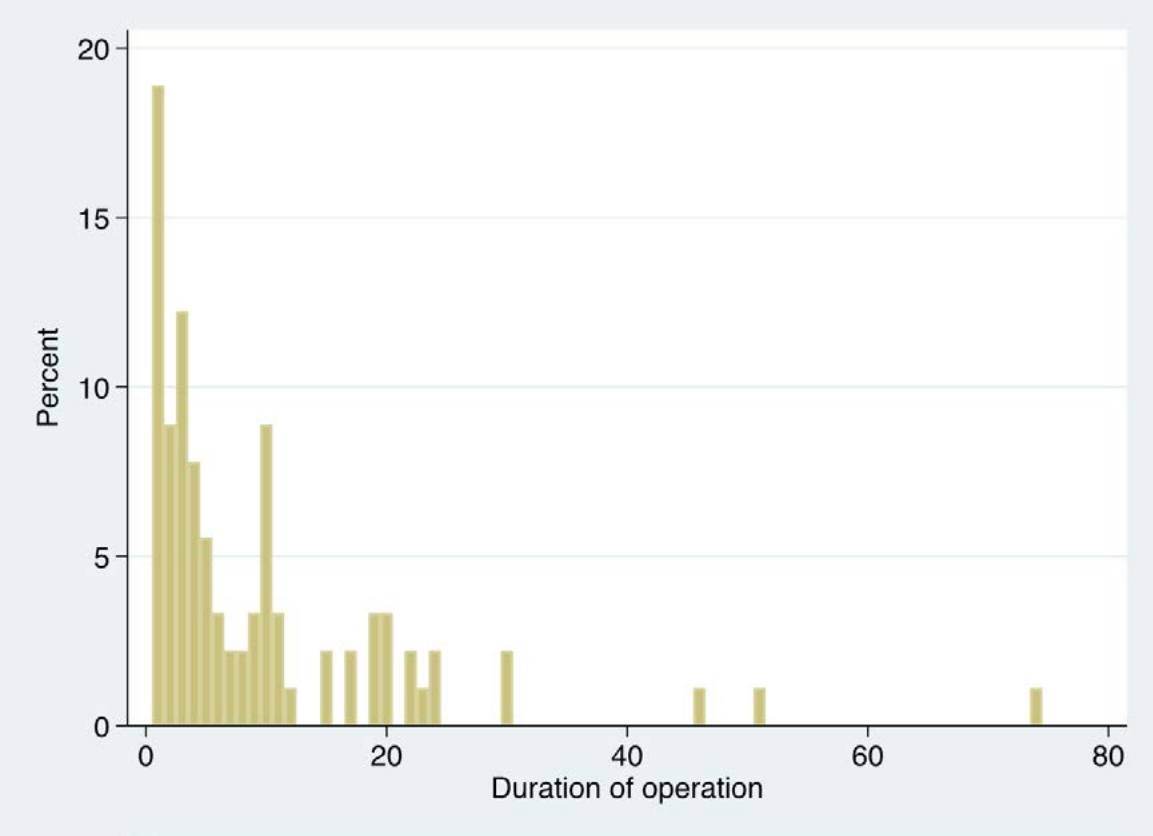
in the study from two high TB burden districts (Lusaka and Kitwe) of Zambia. Larger concentration of private facilities were observed in Lusaka (83%) compared to Kitwe. The result also showed that retail pharmacies comprise bigger and rapidly expanding share of the private health care providers in the two districts.

Table 22: Type of facility by location

Facility Type	Kitwe n (%)	Lusaka n (%)	Total Number
Private for profit hospital	3(42.9)	4(57.1)	7
Private for profit clinic	4(14.3)	24 (85.7)	28
Private pharmacy	7(14.6)	41(85.4)	48
Private standalone laboratory	0	4 (100.0)	4
NGO/FBO hospital	0	3 (100.0)	3
NGO/FBO heath centre	1(25.0)	3(75.0)	4
Corporate hospital	2(100.0)	0	2
Corporate clinic	1 (14.3)	6(86.7)	7
Total	18(17.5)	85(82.5)	103

Private facilities, notably for-profit facilities, are showing rapid expansion in the past 10 years. Seventy five percent of facilities have been registered in the last 12 years, and about 10% of them being registered in the last one year. For private for-profit and corporate facilities the duration of operation ranges from 1 to 74 years with medium duration of 5 years.

Figure 9: Duration of operation (years) of for-profit and corporate facilities



All for-profit hospitals and 19% of clinics provide inpatient services with hospital bed capacity ranging from 6 to 40 (median of 18 beds). About 67% of NGO/FBO hospitals and health centres have inpatient beds ranging from 12-1482. The Coptic Church hospital is the largest faith based facility with 1482 bed capacity that provide varied number of specialised services both as outpatient and Inpatient. Thirty three percent of corporate facilities provide inpatient services, with bed capacity ranging from 6-150.

4.7.2 Early diagnosis of TB, including drug sensitivity testing (DST)

Laboratory service availability, quality and capacity

About 71% FBO hospitals/clinics and 58% of the for-profit and corporate hospitals/clinics have general laboratories. A total of four standalone private laboratories in Lusaka provide TB diagnostics services for patients referred by private

providers in additional to other general laboratory services. There is no private standalone laboratory in Kitwe, hence private facilities largely depend on public facilities and their own means.

Availability of sputum microscopy: Among for-profit hospitals/clinics with general laboratory, 15 (71%) have sputum microscope. However, almost all of them claim that they do not use the available microscope for different reasons, including insufficient infrastructure, limited profit generation from the test compared to the cost for supplies and maintenance. About 44% of the corporate hospitals and 57% (3) of the FBO hospitals/clinics have microscope. However, only 1 of the three FBO/NGO facilities use their microscope for TB diagnosis. All of the standalone laboratories use microscopy for TB diagnosis. These results demonstrate that TB diagnosis using microscopy is almost non-existent in for-profit and NGO/FBO facilities, hence depend by and large on standalone private laboratories or in some instances, especially FBOs, on MOH facilities.

Table 23: Availability of TB laboratory tests by type of private facility

Facility Type	Microscopy n (%)	GeneXpert n (%)	Solid culture n (%)	Liquid culture n (%)	FL-LPA n (%)	SL-LPA n (%)	Total facilities with lab services
Private for-profit hospital/clinic	15 (71%)	2 (6%)	0	0	0	0	0
Corporate hospital/clinic	4 (44%)	1 (11%)	0	0	0	0	9
NGO/FBO hospitals/ clinics	3 (57%)	0	0	0	0	0	7
Standalone laboratories	4 (100%)	1 (25%)	1 (25%)	1 (25%)	1 (25%)	1 (25%)	4

Availability of Gene-Xpert: The WHO recommended rapid molecular tests for TB, like Gene-Xpert, are not widely available in private facilities. Gene-Xpert is available in only 2 (6%) of for-profit facilities (though they claim that they never use it) and 1 (11%) of corporate hospital with general laboratory services. None of the FBO facilities have Gene-

Xpert. Only 1 (25%) of the standalone laboratories have Gene-Xpert, however those without this machine, such as Lancet and Metropolis send specimen to their parent laboratories that are located abroad in South Arica and India respectively. All laboratories with Gene-Xpert have adequate infrastructure and technical capacity to do the test.

MOH seem to engage only corporate facilities in providing laboratory support for TB diagnosis. All of the for-profit hospitals/clinics get their microscopy and supplies from private suppliers. Three (75%) of the corporate facilities receive their microscope and or Gene-Xpert, including consumables (reagents, cartridges, slides, gloves and personal protective equipment, sputum containers, etc.) from MOH. The MOH provides these TB laboratory commodities under the condition that facilities should provide free services and notify results.

Chest X-ray is not commonly available in private facilities. Only 23% of corporate and for-profit hospitals/clinics and 57% of FBO hospitals/clinics have a chest X-ray facility. From the standalone laboratories, 1(25%) provide X-ray for TB diagnosis. Chest X-ray is one of the commonest other tests ordered by private facilities as TB diagnostic test despite its limited specificity for the diagnosis of pulmonary TB, and is especially suitable for screening, triaging and as commentary test in childhood TB diagnosis.

All of the corporate facilities that are engaged by MOH use national algorithm to do TB tests. Whereas only one of the four standalone laboratories use national (WHO) algorithms or guidelines for TB related tests.

Quality of TB laboratory services

In facilities with TB laboratory services, interruption due to stock outs and equipment down time is rarely encountered.

The national external quality assurance (EQA) provided by National TB Reference Laboratory (NTRL) and its partners doesn't include private laboratory facilities. Out of the four standalone laboratories only one reported EQA results for all the tests available in the lab with all the proficiency tests for both 2017 and 2018 showing satisfactory results. In the remaining three laboratories EQA was either not done or data was not available. In all the for-profit hospitals who claim to have microscopy and Gene-Xpert, EQA tests were not carried out as they were not using them for TB tests.

Three of the corporate facilities who obtained microscopy from MOH received EQA from NTRL for 2018 and the results showed satisfactory proficiency. One mine hospital that received Gene-Xpert from MOH is not yet enrolled for EQA. For FBO hospital/clinics only 1 out of the 3 facilities have data on EQA with satisfactory proficiency as the remaining two facilities do not use their microscopy for TB.

The case of the centre for infectious disease research of Zambia (CIDRZ) laboratory

CIDRZ is an NGO general laboratory established in 2001 by University of North Carolina. From 2011 it has become a local NGO. It is mainly engaged in research with support from different donors, in addition to providing diagnostic services to patients referred by private facilities. It was the first organization to receive PEPFAR funding in 2005 and still receiving more funds for scaling up HIV services. It is highly engaged in TB diagnosis, including culture (both solid and liquid), identification and providing both first and second line drug sensitivity tests (DST).

It is the biggest and ISO accredited laboratory in the country offering variety of general and up-to-date phenotypic and genotypic tests. It also supports the University of Zambia in teaching students. The laboratory provides TB diagnostic tests for private clinics/hospitals, NGOs, and other standalone laboratories with fee.

On average the lab does at least 20 microscopy, 10-15 culture and 30-40 Gene-Xpert tests per month. The lab uses its own currier system for collection of specimen and distribution of results. It is a self-sufficient facility, in terms of power supply and transportation.

The lab works on ad hoc basis with MOH in technical support (guidelines development) and calibrations but not involved in DST and EQA to support the limited coverage by NTRL. The facility is willing to work with MOH/NTRL with cost sharing mechanisms to cover its overhead costs and able to financially sustain its operation.

Capacity of National TB Reference Laboratory (NTRL)

The NTRL is mandated to provide technical support, including external quality assurance (EQA) for all network laboratories at the lowest health centre (HC) level, district level, provincial level and tertiary level. While the majority of public hospitals in the country have laboratories, only a small number of health centres have laboratories. In total, 357 government facilities have public health laboratories that includes 238 health centres, 82 district level hospitals, 29 provincial and 10 tertiary hospitals. The availability of TB diagnostic facilities and coverage for EQA is very low in private health facilities in general, in for-profit facilities in particular ***(Table 23).***

Table 24: National TB diagnostic and EQA coverage

	FBO health facilities N (%)	For-profit and corporate health facilities	MOH/non-MOH Government facilities
The number of facilities with microscopy	73 (48%*)	13 (2%)	314
The number of facilities with Gene-Xpert	15 (10%**)	1 (0.2%)	226
Number of facilities covered by EQA (Total)	15 (21%**)	0	216

** Percentages are estimated based on the total number of CHAZ facilities indicated in table 19.*

*** Percentages are estimated based on the number of facilities with microscopy*

NTRL supported by two other culture laboratories, namely University Teaching Hospital (UTH) and Tropical Disease Research Centre (TDRC), provides DST and EQA in the three regions. The three laboratories have both liquid (MGIT) and solid culture and FL-LPA.

To meet the End TB Strategy targets, WHO-recommended rapid TB diagnostics (WRDs) should be available to all persons with signs or symptoms of TB, all bacteriologically confirmed TB patients should receive DST at least for rifampicin, and all patients with rifampicin-resistant TB should receive DST at least for fluoroquinolones (FQs) and second-line injectable drugs (SLIDs). However, the NTRLs have limited capacity to develop network of TB laboratories that also include private laboratory facilities that use modern diagnostics, have efficient referral systems, use standard operating procedures (SOPs) and appropriate quality assurance (QA) processes, and have adequate biosafety.

The EQA and DST covers some government facilities only (including few CHAZ facilities), and so far, it was not possible to include any for-profit laboratories due to capacity limitations. The EQA is only done for microscopy and the coverage is limited to provincial and tertiary level facilities, and unable to include district level hospitals and health centres due to budget constraint, which is mostly funded by Global Fund. EQA for Gene-Xpert is provided externally by Uganda Supra National Reference Laboratory (SRL-Uganda) and National Institute of Communicable Disease (NICD) of South Africa.

The NTRL is staffed by 8 biomedical technologists and 1 lab manager and stands at three stars SLIPTA (Stepwise laboratory Quality Improvement Process Towards Accreditation) assessment, which was last done in 2017 due to delays in renovating the air handling system. Due to insufficiency of the TB specimen carrier system, the turnaround time for TB specimen referral, including DST results is very slow. The last drug resistance survey (DRS) was done in 2014 without the inclusion of private facilities.

The monitoring and evaluation system in the NTRL is paper based, resulting in delays and incomplete reporting. The NTRL and its partners do not have strategic plan, and it was considered to be covered in the national TB strategic plan, though the lab part was not detailed enough.

NTRL acknowledges the high possibility of missing out TB cases going to private facilities, and the lack of SOPs, algorithms and capacity buildings in these settings. The cost of Gene-Xpert and microscopy is considered one of the key issues that constrain working with private sector.

Other key issues on TB diagnostic services availability and capacity

- Private for-profit facilities seem to be not interested buying Gene-Xpert machine for TB test. The cost of Gene-Xpert machine, including its running costs are considered expensive and outweighs the profit that could be generated.
- Two for profit facilities and two of the standalone laboratories reported the use of commercial sero-diagnostic tests for TB, which are not recommended to be used by WHO in low and middle-income settings, notably in high TB and HIV burden settings, because of its low sensitivity in these settings.
- Some private facilities collect and send samples to private or MOH laboratories, but do not use national guidelines. There is also a concern by private standalone laboratories on the quality of samples sent by private providers.

"The amount we spend to get Gene-Xpert, including cartridges is higher than the profit we can generate because we know we could only see few TB patients in a year. TB is not a common problem"

Staff from for-profit facility

Reporting and data availability

Data unavailability from most of the testing facilities was a challenge to estimate the number of suspected TB samples/patients seen, and new and relapse patients with suspected TB tested using sputum microscopy and Gene-Xpert to make comparisons between the different private health care providers. Most of the data came from the corporate/mine facilities that receive laboratory supplies from MOH. The data that came from for-profit facilities were obtained from the results they receive from private labs that they sent specimen to. Three of the standalone facilities were reluctant to provide data even though they store data for their own consumption. None of the standalone laboratories report or notify cases to MOH. This was particularly important as most private clinics/hospitals use these labs and the data could have been used as proxy to estimate cases seen in private facilities and track them.

Table 4 demonstrates that using this snapshot of data from few private facilities, it can be seen that significant number of people get tested for TB in private facilities, but many of them were not reported to MOH.

Table 25: Total number of tests conducted in 2018 by type of facility

	Corporate and for-profit (n*)	FBOs (n*)	Standalone lab (n*)
Total number tested for TB using microscopy	719 (8)	No data	164 (1)
Total number tested for TB using Gene-Xpert	354 (8)	No data	No data

** Number of reporting facilities*

Laboratory Human Resource and capacity building

Laboratory staff shortage is not an issue in any of the private for-profit facilities as they can employ when necessary. There is adequate supply of lab graduates from in-service training institutions. The influx from government facilities for better benefits is another source for human resource in private laboratories. However, high staff turnover is an issue in FBO/CHAZ facilities. Other staff working in private labs also include haematologists and biomedical scientists.

Table 26: Median number of permanent lab staff in private clinics/hospitals with laboratory services

	Lab technologist Median (range)	Lab technician Median (range)	Number of facilities with general lab services
For profit clinic/hospital	1 (0,4)	0 (0,9)	21
Standalone laboratories	6 (0,9)	0	4
NGO/FBO hospital/clinic	1 (0,7)	0 (0,1)	5
Corporate hospital/clinic	3 (1,7))	0.5 (0,1)	4

Cost of TB diagnosis

In private for-profit clinics/hospitals who provide TB treatment services and in standalone laboratories patient pays for diagnostic services. In corporate facilities, staff get free diagnostic services but patients from the surrounding community are charged moderate fees (e.g. Cinozam friendship mine hospital, University of Zambia clinic for non-student patient). In Coptic Church clinic patient pay K100 for X-ray and K400 for culture. Otherwise, TB diagnosis is freely provided in all the three FBO facilities with microscopy.

The cost for sputum microscopy and Gene-Xpert is higher in private clinics and hospitals, as they mostly use other standalone laboratories. They put additional charges to the costs of the standalone laboratories to facilitate the diagnosis and follow up of TB. The high cost of diagnosis in private for-profit facilities is a hindrance to service accessibility, especially to patients that do not have medical insurance cover.

Table 27: Average cost for TB diagnostics by type of facility

Facility type	Sputum microscopy Median (range) (n*)	Gene-Xpert Median (range) (n*)	Culture Median (range) (n*)	Chest X-ray Median (range) (n*)
Private for profit hospital/clinic	K120.00 (45,200)) (9)	K495 (300,900) (5)	K348 (300,495) (4)	K137.5 (70,200) (5)
Corporate hospital/ clinic	K45 (40,50) (2)	-	-	K150 (1)
Standalone laboratories	K48.48 (30, 80) (3)	244.10 (158.2,330) (2)	K470 (1)	150 (1)

** Number of reporting facilities*

4.7.3 TB Treatment Services

Availability of TB treatment services

There is limited engagement of private health care providers in treatment of tuberculosis (30%) in the two study districts. About 27% of for-profit, 29% of FBO/NGO and 44% of corporate hospitals/clinics provide TB treatment. All the FBO/NGO and corporate hospitals/clinics that provide TB treatment receive free drugs from MOH, while this provision is limited to only 44% of the for-profit hospitals/clinics- the rest using private local suppliers. Facilities receiving free drugs and other support from MOH are expected to provide free treatment and monthly report to MOH.

Table 28: Tuberculosis treatment service availability by facility type

Type of facility	Availability of TB treatment service n (%)	Total facilities
For-profit hospital/clinic	9(26.5)	34
FBO/NGO hospital/clinic	2(28.6)	7
Corporate hospital/clinic	4(44.4)	9
Total	15 (30%)	50

DOT is not commonly used to follow treatments in the premises of the for-profit and FBO/NGO hospitals/clinics. In most instances close relatives are used as treatment supporters. Almost all the corporate facilities use DOT in the treatment of their employees. All of the private hospitals/clinics treat drug sensitive cases (DS-TB) only and claim to use fixed dose combinations.

Key issues:

- Affordability and availability of drugs in private facility: Anti TB drugs are expensive and are not readily available in the market. It has become a challenge to refer patients who are unable to afford to government facilities for free treatment as patients prefer to continue the follow up in the private settings. Drug stock out is common due to erratic availability from local suppliers.
- During data collection it was observed that few for-profit clinics/hospitals claiming that they are not proving TB treatment services while stocking anti-TB drugs in their pharmacy. After making the diagnosis of TB using other standalone diagnostic labs or own facility, it is unlikely that patients will be referred to government facilities while the facility is stocking anti-TB drugs. Cases that need to be notified to MOH could have been missed out this way.
- Patients visiting private facilities usually refuse to get tested for TB, because of the stigma attached to it and it is considered a disease of the poor. This has created delays in diagnosis.

"The free treatment in private facilities is hidden. They get payment though consultations, other lab tests, etc."

A key informant from government

Use of national guidelines and capacity building

All the treatment facilities in the corporate and FBO clinics/hospitals and most of the for-profit hospital/clinics (78%) use national guidelines for treatment of TB. Training have been offered by MOH on the application of national treatment guidelines, particularly to those facilities that the government is providing drugs and diagnostic support. Majority of the trainings were conducted in 2017 and 2019.

Private facilities engaged by MOH manage paediatric TB cases according to the national guidelines. However, no clear information is available from non-collaborating private facilities on the management of paediatric TB. Some claim that they have never seen paediatric cases at all.

Key issues:

- The capacity building effort, including training and availing guidelines is not extended to the for-profit hospitals/clinics that are not engaged by MOH, even though they provide TB treatment services.
- Limited supportive supervision by MOH for collaborating facilities

Referral, Reporting and Case Notifications

About 50% of the for-profit facilities that do not provide TB treatment, they first diagnose the patient before referring to government facilities for treatment. They use private laboratories to send samples or refer patients for diagnosis. After diagnosis, patients are usually referred to nearby government facilities using the hospital/clinic own referral slip with results attached. It is a common practice to hold patients for longer before decision is made for referral. Coughing patients are usually subjected to wide range of investigations and treatments using different cough syrups, flue medicines and antibiotics.

All the FBO/NGO and corporate facilities that do not provide TB treatment services refer suspected/presumptive TB cases to government or other FBO/NGO facilities for further diagnosis and treatment.

All FBO/NGO and corporate TB treatment facilities and 44% of the for-profit treatment facilities notify cases of TB to MOH. Based on the sample, the proportion of private facilities case notification in the two districts is 20%. If the for-profit facilities are considered separately the proportion goes down to 8%. Table 8 below demonstrates the limited records available for cases of TB and their follow up data.

Table 29: Total number of cases registered in 2018 by type of facility

	For-profit hospital/ clinic (n*)	Corporate hospital/ clinic (n*)	FBO/NGO hospital/ clinic (n*)
Total presumptive TB patients seen/screened in the year (#)	209 (8)	5049## (7)	363 (2)
Total diagnosed as TB	38 (7)	102 (6)	97 (2)
Total sputum smear positive (SS+)	36 (7)	28 (5)	37 (2)
Total patients tested using Gene-Xpert	15 (5)	351 (4)	0 (0)
Total RR-TB	0 (5)	3 (4)	0 (2)
Treatment success (total number who completes treatment and cures or become smear negative) (@)	13 (2)	71 (5)	116 (2)
Number of relapse cases (cured TB patients who are re-diagnosed as smear-positive case) (@)	7 (4)	5 (5)	2 (2)
Number of deaths (@)	6 (4)	8 (5)	6 (2)
Number of patients with treatment failure (@)	0 (4)	0 (5)	1 (2)
Number of patients lost to follow-up/default (@)	82 (5)	3 (5)	7 (2)

** Number of reporting facilities*

 # includes facilities providing TB screening and referral, in addition to TB treatment/notifying facilities

@ The total numbers are based on cohort of cases, hence denominator is unknown

The number is high because corporate facilities do regular staff screening for TB

Key issues:

- There is a concern by for-profit facilities that referred patients are not well received by the public health care workers. The feedback from patients indicated that they have to face a longer waiting time to be attended to.
- Due to the business model in for-profit facilities there is a push on the patient to come back even after referral is provided. To that effect, the main issues raised by these facilities is the lack of feedback on the patients referred to government facilities.
- Most for-profit facilities indicated that clients are reluctant to be referred to government facilities for a number of reasons, such as long queue, lack of privacy and stigma attached to TB, attitudes of health care workers, etc. In some cases, patients want to go to other private clinics for referral.

Patient follow up: treatment adherence and defaulter tracing

Private facilities engaged by MOH provide patient follow up according to the national guidelines. Different strategies are used by these facilities to ensue adherence, such as using TB treatment supporters, through weekly drug refills in the facility, frequent follow up visits, and phone follow ups. However, in facilities that are not engaged by MOH, a system for adherence and defaulter tracing is not in place.

4.7.4 Systematic Screening of Contacts and high risk groups

Systematic screening of contacts of TB index cases

Few private facilities (22%) provide systematic screening of contacts, notably for-profit facilities (18%) due to the fact that only 30% of these facilities are providing TB treatment services (Table 27). Almost all FBO/NGO and corporate facilities that provide TB treatment services do screening of contacts of index cases of TB. However, none of the private facilities providing contact tracing services were able to provide data on the number of contacts screened for the year 2018. In most of the for-profit facilities contact tracing is done through the index case and phone calls. The FBO/NGO facilities in addition use community volunteers or treatment supporters.

All of the facilities providing contact tracing services use national guidelines and have been trained. Majority of trainings were provided in the last two years.

Table 30: Availability of TB contact tracing services

	Facilities providing services (n/%)	Total number of facilities
Private for-profit hospital/clinic	6 (17.7)	34
NGO/FBO hospital or HC	2 (28.6)	7
Corporate hospital/clinic	3 (33.3)	9
Total	11 (22.0)	50

Systematic screening for high risk groups

Few private facilities (18%) provide systematic screening for high risk groups. However, this is implemented in almost all private for-profit facilities that provide treatment services. In corporate and FBO/NGO facilities systematic screening for high risk groups is commonly provided. This demonstrates that involving private sector in TB treatment can augment the implementation of other preventive and promotional activities. The regular health screening initiative in corporate sectors, as part of the occupational health and safety policy, was an opportunity for integrating/implementing TB/HIV screening activities and strengthen reporting.

None of the private facilities, except one corporate facility providing high risk group screening were able to provide data on the number of high risk groups screened for the year 2018.

All of the facilities providing high risk group screening services use national guidelines and have been trained. Majority of trainings were provided in the last two years.

Table 31: Availability of systematic screening for high risk groups

	Facilities providing services n (%)	Total number of facilities
For-profit hospital/clinic	8 (23.5)	34
NGO/FBO hospital or HC	4 (57.1)	7
Corporate hospital/clinic	6 (66.7)	9
Total	18 (36.0)	50

Key issues in systematic screening

- Community based TB programs are not linked to private for profit facilities to support systematic screening and treatment adherence.
- Lack of guidelines and training in systematic screening is the main issues that hinder the participation of for-profit facilities.

4.7.5 TB/HIV Collaborative Activities

TB/HIV collaborative activities are relatively widely practiced in private facilities due to involvement of private sector in HIV/ART for decades. It is a common practice that both presumptive and confirmed TB cases seen in TB treatment facilities and those that provide diagnosis and referral services undergo screening for HIV. In those facilities that provide TB treatment services, TB patients are regularly screened for HIV depending on their HIV status.

All of the facilities providing TB/HIV collaborative activities, both in FBOs and for-profit, use national guidelines and have been trained. Majority of trainings were provided in the last two years.

Table 32: Availability of HIV testing services in presumptive and confirmed cases of TB by facility type, 2018

	Facilities providing services n (%)	Total number of facilities
For-profit hospital/clinic	23 (67.7)	34
NGO/FBO hospital or HC	4 (57.1)	7
Corporate hospital/clinic	4 (44.4)	9
Total	31 (62.0)	50

HIV patients who have follow ups in the private facilities are regularly screened for TB depending on their TB status. In corporate facilities screening for TB and HIV is commonly practiced biannually for the employees, as part of the occupational health policy. In those facilities that provide TB treatment services, HIV patients are regularly screened for TB depending on their TB status.

Table 33: Screening of HIV patients for TB by type of facility, 2018

	Facilities providing services (n/%)	Total number of facilities
Private for profit hospital/clinic	16 (47.1)	34
NGO/FBO hospital/clinic	4 (57.1)	7
Corporate hospital/clinic	4 (44.4)	9
	24 (48%)	50

Key issues:

- Few facilities were able to provide data on TB/HIV collaborative activities, hence it was difficult to analyse the number of confirmed or presumptive cases of TB that are screened for HIV and HIV patients screened for HIV for the year preceding the survey.
- As shown in tables 31 and 32, it is important to note that the TB/HIV collaborative activities in private facilities coverage need to be scaled up
- When one has TB-HIV co-infection it will be inconvenient for the patient not able to get the services at one stop in facilities where either TB or HIV services are unavailable, and this could lead to loss to follow up.
- Some providers have a concern that patients attending private clinics are very difficult to convince to test for HIV as they usually dictate what tests to be done for them
- Lack of guidelines and training in TB/HIV collaborative activities is one of the main issues that hinder the participation of private facilities

4.7.6 Preventive Treatment of Persons at high risk of TB

Few private facilities (24%) provide preventive treatment for TB (IPT) for high risk cases, mostly limited to those facilities providing TB treatment services and or TB/HIV collaborative activities. Almost all of the facilities providing preventive treatment services use national guidelines for their activities and received trainings by MOH and partners.

Table 34: Availability of services for preventive treatment of TB for high risk groups by type of facility

	Facilities providing services n (%)	Total number of facilities
For –profit hospital/clinic	6 (17.7)	34
NGO/FBO hospital/clinic	2 (28.6)	7
Corporate hospital/clinic	4 (44.4)	9
Total	12 (24.0)	50

Other key issues:

- Limited data availability in facilities implementing preventive treatment for TB
- A concern by practitioners that some people refuse to take IPT, because of perceived risk of developing resistance in the future and a stigma associated with TB
- Stock out of pyridoxine

4.7.7 TB infection prevention and control

Infection prevention and control for TB is rarely implemented in private facilities, even in those providing TB treatment services and those that do diagnosis and referral of patients and handle TB sputum specimen. Most of the facilities exercise general infection control activities, not specific to TB. Lack of guidelines and training in TB infection control is one of the main issues that hinder the implementation in private facilities

Table 35: Availability of TB infection prevention plan by type of facility

	Facilities providing services n (%)	Total number of facilities
For –profit hospital/clinic	4 (11.8)	34
NGO/FBO hospital/clinic	2 (28.6)	7
Corporate hospital/clinic	2 (22.2)	9
Total	8 (16.0)	50

4.7.8 Tuberculosis Drug Supplies and Management

Almost all private facilities have pharmacy (89%) except few corporate and for-profit clinics. All the TB treatment facilities stock and dispense first line anti-TB drugs. Two of the for-profit hospitals and 3 of the clinics obtain the anti-TB drugs from private suppliers. All FBO/NGO, corporate and the other for-profit private clinics/hospital obtain their medicines from the MOH to provide free treatment for TB patients.

Table 36: Availability of pharmacy by type of facility

	Facilities with pharmacy n (%)	Total number of facilities
Private for –profit hospital	7 (100.0)	7
Private for-profit clinic	21 (75.0)	27
NGO/FBO hospital	3 (100.0)	3
NGO/FBO health centre	4 (100.0)	4
Corporate hospital	2 (100.0)	2
Corporate clinic	3 (43.0)	7
Total	40 (89.0)	50

Nine (19%) of the 48 standalone pharmacies in the sample stock and sale anti TB drugs. All of them dispense first line drugs. Two pharmacies in addition stock and sell second line drugs (floroquionilones and second line injectable). According to Zambian Medicine regulatory Authority (ZAMRA) a pharmacy is manned by registered pharmacist and there is no restriction for stocking and selling medicine, including vet medicines. All of the retail pharmacies buy drugs from private suppliers.

Standalone pharmacies are not engaged by MOH to do screening and referral of TB cases. Almost all see coughing patients and treat them with different types of cough syrups, flue medicines and antibiotics. Most claim that they advise these patients to go to government facilities or other private facilities if treatment is thought to be unsuccessful after multiple visits.

Drug stock outs are commonly encountered in private retail pharmacies and for-profit hospitals/clinics that get the drugs from private suppliers due to erratic supplies in the market.

Other key issues:

- People go to standalone pharmacies to get anti TB drugs and even to seek treatment for TB. The risk of misdiagnosis, receiving wrong treatment, and use of counterfeit drugs are potential health hazards.
- There is a rapid increase in the number of pharmacies in the country, in Lusaka and Kitwe in particular. The growing number of pharmacies are not compatible with the manpower (inspectors) in ZARMRA. As a result, inspections could not be implemented regularly; it is basically risk driven. Renewal is also carried out through risk based approach.
- Pharmacies stocking ant-TB drugs claim that the demand for the drugs is low because it is freely available in public facilities. The slow sale oftentimes result in expiry of drugs.
- The high cost of anti TB drugs in the private pharmacy is a hindrance for accessing treatment as most patients could not afford.

"Most of the time pharmacists are unavailable in retail pharmacies to assist clients..... medicines are dispensed by lay persons. "

A key informant from Government

4.8 Coordination, communication and advocacy

4.8.1 Coordination

NTP engagement of private sector, particularly the for-profit private healthcare providers and informal private sector (traditional healers) has so far been limited and some of the initiatives for engagement are in their infancy. The NTP has established a Public Private Mix Approaches (PPM) secretariat with 1 focal person for public-private liaison. The secretariat works in consultation with all NTP units. The NTP uses existing structures to deliver PPM – which include TB coordinators at province and district levels. District TB Coordinators are expected to extend their supervision to private sector.

A PPM action plan 2017-2021 has been developed and is being implemented. This plan lays out the actions on how to engage the private sector. PPM activities have not been implemented according to plan. Training or orientation of private sector including traditional healers is going on. Key preparatory activities such as development of a model of

engagement with private providers and development of an MoU were skipped. There is a realisation that these were critical foundational activities that needed to be carried out. As a result, trainings have not been useful because the NTP has no post training plan. For instance, once the private sector providers are trained, they are not told what is expected next and how they can engage.

The PPM are largely donor funded: the SATBHSS supports the PPM focal person while other donors for the TB programme are Global Fund, USAID/PEPFAR support PPM activities. The PPM initiative may not be sustainable beyond the period of donor funding.

Key issues

- The PPM action plan was developed in 2016 and needs to be updated
- The PPM action plan has not been fully implemented. Some of the key foundational activities were not implemented
- District TB coordination have not been sensitised on PPM
- District TB coordinators are also doing other work and view PPM as added workload
- PPM secretariat solely the one responsible for private sector engagement; other NTP units have not appreciated their roles in engagement with private sector

4.8.2 Collaboration with MOH

The collaboration between MOH/NTP and private providers in TB is just starting. Very few private facilities (12%), majority of them from corporate or NGO/FBO facilities, have started collaboration in some form of early diagnosis, treatment and/or referral. The collaborative activities are underway without any MoU and entails provision of free drugs or laboratory supplies by MOH, depending on the facility capacity, in exchange for free treatment, referral linkage for diagnosis (Gene-Xpert test, etc.) and reporting.

Table 37: Collaboration between MOH and private facilities

Type of facility	Collaborating facilities N (%)	Total number of facilities
Private for-profit hospital/clinic	5 (14%)	36
Private for-profit pharmacy	0	48
Private laboratory	1 (25%)	4
NGO/FBO hospital/clinic	2 (33%)	6
Corporate hospital/clinic	4 (44%)	9
Total	12 (12 %)	103

Following are summaries of opinions and suggestions of health care workers in sample private facilities. The following general parameter was applied to analyse the qualitative responses: few means less than 25% of the response; some means between 25-50% of the response; most means above 50% of the response.

Challenges of working with MOH

Due to recent start of collaborative activities, no significant challenge was reported by collaborating facilities. The providers show eagerness to sustain the collaboration and receive capacity support, in terms of training, getting guidelines and supportive supervisions.

Key incentives or advantages to work with MOH/NTP (for collaborating facilities)

- Providing services close to the community and to those who prefers getting services at private settings was mentioned by most as key incentive to work with MOH.
- Most consider getting capacity support from MOH, such as training and guidelines as key incentives to work with MOH.

"The ministry doesn't consider us as partner...."

A staff from for-profit facility

Reasons of non-collaboration with MOH/NTP (for non-collaborating facilities)

Few	• There is no need for collaboration as government is providing free diagnosis and treatment services for TB • Few think that they may not need any collaboration with MOH as they see few suspected cases of TB in their facility • Few do not want collaboration with MOH because of either limited space or they want "TB infection free facility" • Facilities that provide subspecialised services view themselves as having no role to play in TB despite the fact that they deal with TB and refer cases
Some	• Some are not sure of why the government is not collaborating with them, especially those that are new • Private health care providers are neglected or not trusted by government to work in TB programs. There is a boundary between the private and public sector.
Most	• Government/MOH has never approached their facility for any collaborating activities regarding TB, but expressed their willingness to work.

"If people from MOH comes it should be only for issues related to licensing, not for any collaborative activities.....We are more than willing to work with MOH"

A staff from for-profit facility

The perceived benefits/advantages of private facilities for collaboration with MOH (for non-collaborating facilities)

Few	• In private companies employing large staff, the collaboration is considered an opportunity for the employees to get service within the company premise. With this arrangement the company could benefit by reducing absenteeism and improving productivity.
Some	• Increased access and coverage of TB services as private facilities are widely spread and mostly found closer to the community.
Most	• Most would agree that the collaboration will enhance the service quality and standardization, and ultimately benefit the patient • Patients would get the TB related services where they want. Many of the patients who visits private facilities would prefer getting all the diagnostic and treatment services there, in one place. They do not want to be referred to government facilities for reasons, such as long queue, stigma, perceived low quality and inconvenience, etc. • It is an opportunity for patients who prefer services in private facilities but couldn't afford the cost • The collaboration will help in decongestion of services at government facilities and bring more patients to private facilities • The potential for increased visibility and recognition that will come with the collaboration with MOH. The collaboration with MOH is considered as an opportunity to increase patient load in the facility, resulting in increasing profit from consultations, management of co-morbidities, and follow up of contacts. • Improved knowledge on TB specimen handling, diagnosis and treatment, including getting updates on latest guidelines and protocols

Concerns/challenges for future collaboration with MOH (for non-collaborating facilities):

Few	• Long and bureaucratic administrative process in government • It will take time for patients to know that these services are provided at private sector, as private facilities are not allowed to advertise to the public on mass media.
Some	• The collaborative strategy shouldn't mix private business and free services. It was a concern of some providers that the engagement of the private facilities shouldn't be at the expense of the business model of the sector. • Negative attitude and mistrust towards the private sector in health by the government • Inconsistent supply of drugs and reagents, including stock outs
Most	• Lack of seriousness of government in implementing plans • Busy work environment in private facilities could be a hindrance for collaborative activities, like attending trainings or meetings.

"I felt blessed to be visited by the MOH team to talk about health services..... This visit is an important step in closing the existing gap between MOH and private sector"

Private facility owner

The needs of private facilities for collaboration with MOH

Private facilities that are collaborating with the MOH and those that are interested to collaborate have expressed what they need form MOH as follows:

Few	• Compliance by MoH to MoU • Human resource support for data handling • Registers and reporting forms • Furniture, like medicine cupboards, etc. • HIV test kits
Some	• Regular supportive supervision and monitoring • Refresher trainings
Most	• Training • Guidelines • Consistent supply of anti TB drugs, diagnostic and infection control equipment and consumables depending on needs

"We have limited knowledge on specimen handling, diagnosis and referral. We need training, guidelines to improve quality of referral and case notifications. So many cases are missed out because of lack of collaboration. "

Director of private facility

Contribution of the private sector

Following are the suggestions by private providers on what can they can contribute for the collaborative efforts between government and private facilities:

Few	• Community sensitization • Corporate facilities promised to sponsor training and other technical support, procure TB drugs
Some	• Data capturing and reporting • Provision of care closer to the people • Allowing facility staff to attend trainings
Most	• Human resource, infrastructure, space and time

"We are happy to see government engage private sector..... We need feedback on outcome of this study and eager to see it implemented."

Owner of private facility

Comments and recommendations

Some	• The choice people make where to get services need to be respected and be seen as opportunity to provide the necessary care through collaboration between government and private sector.
Most	• The collaborating facilities want to continue working with MOH providing TB services • Both collaborating and non-collaborating private facilities stressed the need for training and latest guidelines on TB diagnosis and management. • Most expressed their willingness to work with MOH in TB and the importance of involving private facilities in TB prevention and care. Most welcome the current visit related to the study and wanted to see its implementation.

"MOH should spearhead and fast-track the process of engagement of the private sector. This step taken by MOH is very important for everyone to benefit and control TB."

Staff from private facility

4.9 Communication

There is no strategy for communication with private healthcare providers in place. However, NTP shares information on TB guidelines with professional associations and also plans to hold a meeting with private practitioners in 2019.

4.10 Risks

Key informants interviewed do not find major risks in private sector engagement in TB control. The potential risks identified include:

- Private sector receiving free drugs from government and charging patients at cost; and equipment provided to private sector may be used for other purposes other than TB if there are no proper mechanisms for coordination and monitoring
- Failure of private sector to share data
- Inability of HPCZ to monitor unqualified practitioners
- Private healthcare providers may seek short cuts and not adhere to guidelines in order to increase profit
- Not engaging private sector is in itself a risk because patients are seeking services in formal and informal private sector; and they are likely to receive poor quality services

The benefits of engaging private sector outweigh potential risks. The strategy for engaging private sector in TB control should include risk mitigation measures such as (i) Effective coordination mechanisms, (ii) Clear accountability spelt out in a memorandum of understanding or agreement; and (iii) effective monitoring of private sector.

4.11 Monitoring and evaluation

The NTP has in place a national M&E system. This system is implemented mainly in the public and FBO health facilities and it has not been extended to the private sector. The District Health Office is responsible for health services in the district including those provided by the private sector. The for-profit private healthcare providers should be reporting to the district through the DHIS system. However, few private sector facilities are reporting, particularly those run by corporates such as mining companies. Majority of the private clinics are not reporting. Non- reporting by for-profit healthcare providers distorts the TB data.

4.12 Recommendations/ opportunities for engaging private sector in TB control

The following are the recommendations on opportunities to enhance private health sector involvement in TB and also to address gaps and challenges identified

Regulatory environment

- Strengthen the capacity of regulatory agencies: Both HPCZ, ZAMRA and MSD are unable to effectively monitor compliance with regulations. The capacity of these agencies should be strengthened to cover all private healthcare providers – particularly the for-profit facilities. Capacity development should focus on human resources and development of innovative approaches for ensuring compliance. Currently, these agencies enforce compliance through inspections which requires human and huge financial resources.
- Build alliances with professional associations to improve compliance with regulations: HPCZ and ZAMRA should develop partnership with Faculty of General Practitioners of Zambia (FGPZ) and the Zambia Medical Council (ZMC) to strengthen self-regulation as one way of ensuring compliance and contributing to quality health services in the private sector.
- Strengthen the collaboration with regulations agencies and NTP: This collaboration is necessary for the programme to complement the regulatory agencies in monitoring compliance with regulations in for-profit healthcare providers
- Strengthen the capacity of NTP to monitor compliance with TB specific regulations among for-profit healthcare providers. This will ensure the quality of TB services provided in the private sector meets standards set in the national TB guidelines. For instance, NTP needs to dedicate regional focal persons monitoring TB services in the private health sector.

- Integrate TB in the continuous professional development programmes: CPD programmes run by FGPZ and ZMC present a cost-efficient opportunity to integrate topics on TB.
- Develop an industry-wide TB programme: The Chamber of Mines is well placed to develop a mining industry (sector) TB programme to be implemented by all its members. This will ensure that all mines and allied companies play a role in TB prevention and treatment. Currently, TB activities are more pronounced in large companies.
- Develop legislation to regulate traditional medicine/traditional healers: This legislation will provide a basis for programmes such as NTP to monitor and collaborate more effectively with traditional healers.
- Strengthen self-regulation of traditional healers: The capacity of the Traditional Health Practitioners of Zambia (TPHAZ) needs to be improved to enable them regulate and better coordinate their members. This will include strengthening TPHAZ secretariat; coordination mechanisms and mapping the traditional healers.

Mode of engagement

- Develop a well-defined model of engagement for for-profit healthcare providers: Based on lessons learnt so far from the manner in which the for-profit healthcare providers operate and from the HIV programme, the NTP should develop a comprehensive model to expand the involvement of for-profit facilities in TB control. The accreditation model applied by the HIV programme is a good practice to be considered. The model should clearly define the roles of the NTP (government) and the private health providers, the incentives scheme, accountability mechanisms and reporting among other areas. Overall, this model should aim at expanding free or cost-efficient TB service delivery in among for-profit private healthcare providers.
- Scale up the involvement of private pharmacies in TB control: The model for engagement of pharmacies in TB control implemented by PATH/USAID should be scaled up and sustained. This involves training staff in the pharmacies to enable them screen and refer presumptive TB cases to health facilities.
- Scale up the involvement of traditional healers in TB control: The on-going initiative funded by USAID and implemented by PATH offers lessons on how to engage traditional healers in TB control. This initiative should be scaled up in all districts. In addition, healthcare workers should be sensitised to enhance collaboration and built a positive attitude towards traditional healers.
- Improve data management and reporting in for-profit health facilities: Extend the use of “smartcare” into for-profit healthcare providers

- Strengthen TB services in the mining sector as through:
    a. Strengthening referral of mineworkers from small and medium scale mining enterprises. For instance, public health facilities should keep disaggregated records that show the number of mineworkers diagnosed with TB to facilitate reporting to OHSI and NTP.
    b. Strengthen data collection in order to track ex-mineworkers who seek services in public health facilities where they are not identified as ex-mineworkers.
    c. Disaggregate data reported from the mines to the national TB programme in order to identify the cases of TB in the mines
    d. Link mineworkers on TB treatment with nutritional support programmes
    e. Raise awareness on TB among management of mining companies
    f. Provide Gene-Xpert in the private health facility to improve diagnosis given that the facilities are the first point of contact for the workers. This will ensure they make accurate diagnosis. Sending workers to OHSI delays diagnosis.

Incentives and enablers

Develop an incentive and enablers scheme for tailored to or appropriate for various categories of private healthcare providers:

- Develop an incentive and enablers scheme for for-profit healthcare providers which include non-financial and financial aspects. For instance, the model applied by the HIV programmes which provides drugs and other commodities to for-profit healthcare providers in change for provision of free services except for patients paying for consultation services could be explored. Other non-financial incentives that for-profit healthcare providers consider important include training, support for infection control equipment and consumables. Incentives and enablers can be spelt out in an MoU with the for-profit healthcare providers. Di-incentives such as lack of trust and bureaucratic processes should also be addressed.
- Incentives for pharmacies: Pharmacies seek recognition and the credibility that comes with collaborating with government. Therefore, NTP should look for ways of branding pharmacies undertaking TB screening and referral and engaging them in programme events where they can gain visibility.
- Incentives and enablers for traditional healers: A key incentive for traditional healers is recognition for being involved in a government programme. The NTP can provide traditional healers with branded materials such as T-shirts and bags and involve them in events that give them visibility. Secondly, NTP should address healthcare workers' negative attitude towards traditional healers which works as di-incentives.

Financing

- Expand TB services in for-profit healthcare providers through reducing cost: The recommended model of engagement (based on accreditation mechanism) will reduce cost by having for-profit service providers providing free TB services but charging for consultations and other auxiliary services.

Capacity building

- Developed a comprehensive need-based capacity development plan for for-profit healthcare providers, pharmacies and traditional healers
- Use approaches relevant to for-profit healthcare providers in delivering training
- Integrate training on TB into continuous professional development programmes
- Provide diagnostic equipment to high volume for-profit healthcare providers

TB service delivery in for-profit private healthcare providers

(i) Improvement of early diagnosis and drug sensitivity testing (DST) in FBO and for-profit healthcare facilities

- Improve the human resource, material and technical capacity of NTRL in a sustainable manner to foster its coverage in EQA for network of TB laboratories that also include private laboratory facilities, have efficient TB specimen referral system and DST.
- Enhance involvement of the laboratory unit in MOH and other quality control actors at the ministry and partners, through increased capacity enhancement to strengthen the monitoring of private laboratory services to comply with standards and follow SoPs.
- Engage FBO and for-profit healthcare providers to increase utilisation of idle microscopy capacity. This would include providing these facilities with lab commodities.
- Improve diagnostic capacity of FBO, for-profit healthcare providers and standalone laboratories, for instance by providing these facilities with equipment such as Gene-Xpert and commodities. Currently, for-profit healthcare providers do not find it profitable to invest in Gene-Xpert. The facilities can be assessed to identify where Gene-Xpert machines can be placed for optimal use. This will also reduce the cost of TB tests in the private sector and alleviate the problem of sending specimen overseas as far as India.
- Extend the NTRL EQA and DST to private laboratory facilities and increase coverage of EQA in FBO facilities.

Engaging the ISO accredited private laboratory, like CIDRZ could substantially complement the expansion of EQA and DST services to peripheral laboratories.

- Train private laboratory personnel in the latest national guidelines and algorithms
- Expand the laboratory information system to private labs to enhance reporting
- Ensure the use of chest X-ray for screening, triaging and as complementary test in childhood TB diagnosis.

(ii) Treatment services

- Increase TB services availability in the private sector through an accreditation system as one of the models of engagement recommended above. This will address the issue of affordability (given the high cost of TB treatment in the private sector) and clarify the policy on engagement of private sector in TB control.
- For-profit clinics/hospitals that are not ready for engagement as TB treatment centres need to be targeted to be actively involved in TB screening and referral
- Train private healthcare providers on TB guidelines. The survey found that only those provided drugs by government have been trained.
- Increase TB supportive supervision for private healthcare providers
- Strengthen referral mechanism from private to public sector through sensitising healthcare workers to develop a positive attitude towards patients referred by private sector and to also provide feedback
- Establish a system for treatment adherence and defaulter tracing for private health facilities currently engaged by MOH. Linking private providers to network of community based volunteers will strengthen adherence follow up and defaulter tracing
- Expand health education program in private facilities to reduce misconceptions about TB by clients, and hence increase provider initiated testing.
- Develop a communication strategy to sensitise the public on the availability of services in private facilities, including what to expect on TB related services provided.

(iii) Systematic screening of contacts and high risk groups

- Strengthen contact tracing through establishing a system of contact tracing appropriate for private healthcare setting; training private healthcare providers on national guidelines and providing them with data collection and reporting tools.
- Establish linkage between private health facilities and community based TB programmes to support systematic screening of contacts

- Strengthen systematic screening of high risk groups especially in private and corporate facilities that are providing TB treatment services through training, providing guidelines and providing a register for data recording and reporting tools.

(iv) TB/HIV collaborative activities

- Scale up TB/HIV collaborative activities in private health facilities and support the facilities to provide integrated TB/HIV services in one service point
- Train private healthcare providers and provide them with TB/HIV collaboration guidelines
- Strengthen data system for TB/HIV integrated services in private health facilities
- Expand health education and counselling activities, using IEC materials and job aids targeting TB and HIV patients to increase testing for HIV by TB patients and vice versa. .
- Use existing HIV platform to strengthen the TB workplace program in corporate sector and TB/HIV collaborative activities in in all private health care facilities. .
- There is a need for establishing a TB workplace policy and program in private sector where it is not available and the HIV workplace policy is either weak or non-existent. The new WHO guidelines are useful to guide the process.

(v) Preventive treatment of persons at high risk of TB

- Scale up preventive TB treatment in private health facilities through sensitisation and provision of drugs, training and guidelines
- Expand sensitization activities on IPT, using IEC materials and job aids
- Improve data system for preventive treatment of TB

(vi) TB infection prevention and control

- Develop and disseminate guidelines for TB infection control to private health facilities
- Support private health facilities to develop TB infection control plans

(vii) Tuberculosis drug supplies and management

- Train and provide supportive supervision to pharmacies on good dispensing practices for patients with coughs especially for pharmacies stocking TB drugs
- Monitor management and dispensing practices of pharmacies

- Engage retail pharmacies on TB symptomatic screening and referral, by providing the necessary training, tools, and recording and referral forms
- Strengthen the human resource capacity of ZAMRA to enhance its capacity to implement systematic inspection, monitoring, provision of training and other capacity building activities to pharmacies in private sector.

Coordination, collaboration, communication and advocacy

- Establish a PPM secretariat or unit (beyond having a focal person)
- Train NTP staff on private sector engagement
- Establish a coordination mechanism for PPM that includes involvement of private sector
- Review and update the PPM action plan
- Conduct a comprehensive mapping of private healthcare providers in the country
- Strengthen the relationship and built trust between NTP and private healthcare providers
- Develop and implement a PPM advocacy and communication plan
- Develop a PPM risk management plan
- Extend the national M&E system to the private sector with appropriate modification
- Orient district TB coordination on PPM
- Mainstream responsibilities for PPM in the NTP
- Sensitise NTP managers on PPM to ensure NTP and private sector understand each other

Monitoring and Evaluation

- Provide TB reporting tools to private healthcare providers
- Extent data quality assessments to private healthcare providers
- Include private healthcare sites in the on-going piloting of smartcare electronic data management system

Risk management

- Ensure effective coordination mechanisms to private healthcare providers
- Include clear accountabilities spelt out in a memorandum of understanding or agreement with private healthcare providers

Section 5: Mozambique study findings and recommendations

5.1 Private health sector

The health system comprises of public and private sector healthcare providers. It is estimated that public health sector provides about 70% of the health services while private sector (all forms) provide the rest. Private sector in the country is growing and mainly provide curative services[10]. Unlike Malawi, Zambia and Lesotho, Mozambique does not have a significant presence of faith-based healthcare organisations (FBO) health facilities.

The public sector healthcare system is structured into levels 1 to 4. Level 1 comprises of health centres providing primary healthcare and supervised by the Primary Healthcare Department. TB, Malaria and HIV programmes are fall under this level. Primary healthcare centres provide 70% coverage of public sector services. The government has a total of 1700 health centres countrywide. However, healthcare centres (level 1) constitute 95% of government facilities while levels 2 to 4 constitute 5%. The facilities are not adequate and hence the problem of physical access to healthcare. Human resources for health care are also not adequate, particularly the specialist doctors. Funding for public healthcare is also low. Overall, public healthcare system faces capacity constraints which affects quality service delivery. The government has developed partnerships with donors who fund TB, Malaria and HIV programmes to a large extent. Donor assistance plays a key role in provision of drugs and other commodities and support for service delivery systems, although these programmes are managed vertically. The challenges facing the public health system underscores the need to engage private healthcare providers. However, this engagement is limited.

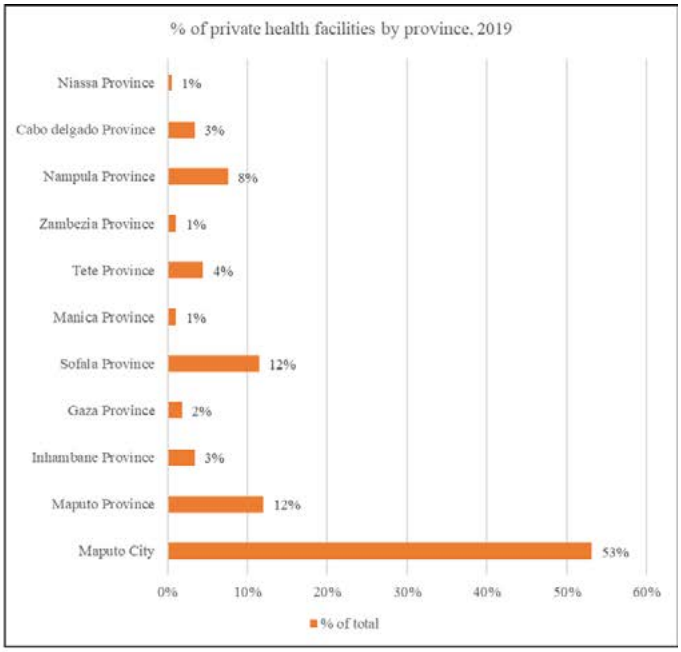
Private health facilities: A total of 382 private health facilities ranging from small clinics, specialised services to large hospitals. 65% of the facilities are in Maputo province with Maputo city having 53% of the facilities. Large hospitals (which are currently the only ones engaged by government in TB service delivery) are in Maputo city.

[10]Statistics not based on key informant observation

Figure 10: Registered private health facilities, 2019

Number of private health facilities by province, 2019

Provinces	health Post	Health Facility	Laboratories	Optic Centre Private Practitioner	Clinic	Ambulances	Private Physiotherapist	Health insurance company	Hospital	Dental Clinic	Hospitals	TOTAL
Maputo City	42	35	12	24	36	5	8	11	4	1	23	2	203
Maputo Province	23	11	1	2	1	5					3	0	46
Inhambane Province	4	6	0	0	2	1					0	0	13
Gaza Province	4	2				0					1		7
Sofala Province	23	3	3		10	5							44
Manica Province		1			1	2							4
Tete Province	6	6		1	4								17
Zambezia Province					2	2							4
Nampula Province	11	2	2	4	4	2					4		29
Cabo delgado Province	6	2	2		1	2							13
Niassa Province						1	1						2
Total	119	68	20	31	61	25	9	11	4	1	31	2	382



Traditional healers: Traditional healers also constitute an important health service provider in Mozambique. The Directorate of Traditional Medicine has 109,642 traditional healers registered as at 2019. The highest proportion (23%) is in Zambezi province followed by Nambula (18%) and the least proportion is in Maputo province. The table below shows the distribution of traditional healers by province. Traditional healers are not homogenous as they constitute herbalists, spiritual healers and diviners while some combine these practices. Others double as traditional birth attendants while others play the dual roles as community health workers.

Table 38: Number and percentage of traditional healer by province

Province	No. of Traditional healers	% of total
Cidade Maputo	1 351	1%
Provincia Maputo	1 328	1%
Gaza	5 762	5%
Inhambane	1 552	1%
Manica	20 198	18%
Sofala	13 164	12%
Tete	3 311	3%
Zambezia	25 091	23%
Nampula	16 094	15%
Cabo Delgado	4 787	4%
Niassa	17 004	16%
Total	**109 642**	**100%**

5.2 Regulatory environment

5.2.1 Regulation of private healthcare providers

Regulations for public private partnerships to structure engagement with private healthcare providers have not been established and Mozambique seeks to learn from other countries. The country does not have an autonomous (or semi-autonomous) agency to license private healthcare providers and enforce regulations. Instead, the MoH licences private health facilities. The MoH at national level licenses large clinics and hospitals while the responsibility of licensing of small clinics is decentralised to provincial level. The MoH national office is required to monitor provinces to ensure licensing requirements are followed.

TB related regulations: Only MoH imports TB drugs into the country to ensure control and rational use. Private clinics are not allowed to import TB drugs. All TB cases should be notified to the national TB data system. Data from private sector is reported mainly from large hospitals in Maputo city. There is no data from small private clinics across the country. Some of the small clinics diagnose or screen for TB and refer patients to public facilities; and these cases are notified by public facilities.

Key issues

- Both legislative and institutional frameworks for regulating private health sector are inadequate. Licensing of private healthcare providers is done by the MOH both at national and provincial levels compared to other countries which have legally established autonomous regulatory agencies,
- MoH has limited capacity to inspect private healthcare providers to ensure compliance
- Non-compliance with policies and regulations among some of the private healthcare providers
- Some private clinics hold on to patients for long and often refer patients to public sector in worse clinical condition
- Provincial MoH offices do not always follow requirements for licensing small clinics
- Clinics are not always adhering to quality standards and those found to be in violation are often closed
- Difficult to get data from some private clinics. Such clinics don't submit reports and MoH has to visit the clinics to collect data
- Operational challenges beyond the control of NTP hindering effective monitoring of private healthcare providers

5.2.2 Self-regulation: Mozambique Medical Association

A professional body for doctors, the Mozambique Medical Association, is in place. This association is expected to promote self-regulation. The association has approximately 900 members. Its objectives are to protect the interests of doctors, advocate for better healthcare and improve doctors' working conditions and terms of service. The association currently has a good relationship with government, engages MoH in policy issues and is involved in changes made to regulations. It also disseminates regulations to members.

The association serves three categories of doctors:

(ii) Those working full time in private sector. These doctors have limited benefits from the association and most don't pay their membership fee

(iii) Those working in public sector and part-time in private sector facilities. These doctors in some instances have problems with the private sector because they are not paid the dues they are supposed to be paid and seek the association's intervention.

(iv) Those who have signed exclusivity agreement to work public sector only. These benefit most from the association most. The association advocates to have their salaries increased because they have no supplementary income sources. This affects doctors mainly in the capital where most private clinics are

concentrated. Those in other districts where private clinics are very few have limited opportunities to work in the private sector.

Key issues

- The association plays a minimal role in promoting quality standards. It views this as the role of the MoH. Its focus is on protecting the interest of doctors such as improving their remuneration.
- The association serves mainly doctors in public sector; and has less benefits for those in private sector
- The association does not provide continuous professional development due to lack of funding

5.2.3 Regulations of traditional healers

Mozambique has a clear institutional framework for coordinating traditional healers. Through the National Directorate of Traditional Medicine, the MoH engages traditional healers in prevention and promotion of health. The directorate trains traditional healers in management of patients of conventional diseases with cultural perception attached to them such as TB; family planning as well as traditional birth delivery (traditional birth attendants). In this respect, traditional healers are partners of the MoH in community health. They are the fore front workers attending to patients before they come to a health facility. The directorate estimated that 70% of patients go to the traditional healers before visiting a health facility.

The directorate monitors traditional healers' services. It has in place provincial and district traditional medicine focal persons working closely with TB and other programmes. At facilitate level, there is focal person who records patients referred to the facility by traditional for TB diagnosis. However, there are some challenges because a patient has several entry points to the facility and the directorate is seeking a better way of tracking referred patients. The directorate plans to establish an electronic data collection system to improve management of data from traditional healers.

Traditional healers also have their own associations operating at national and provincial levels coordinating their activities. These associations are linked to the National Directorate of Traditional Medicine. AMETRAMO is the oldest traditional healers' association but with time, five additional associations have emerged servicing different interests of traditional healers. Each association has its provincial and district level branches and all are legally registered.

Key issues

- Traditional healers hold patients for too long trying different medications and refer late when patients condition has deteriorated
- Self-coordination of traditional healers is fragmented

5.3 Models of engagement

The MOH/NTP has in place a mode of engagement for large hospitals and traditional healers but no clear engagement with small private clinics and pharmacies.

5.3.1 Engagement with for-profit healthcare providers

(i) Formal engagement with for-profit hospitals

The government has formal arrangements with private hospitals to provide TB services since 2010. The government provides these hospitals with TB drugs and the hospitals in turn provide free TB services (except consultation fees) and report TB data to the national TB programme. This arrangement is with the few large hospitals based in the capital city, Maputo. The challenge with this mode of engagement is that MoH has limited capacity to monitor implementation or compliance with this agreement to ensure hospitals do not charge patients. The hospitals may also receive free TB drugs but doctors may not notify TB cases.

(ii) Engagement with small for-profit clinics

There is no engagement between NTP and small for-profit clinics. Often these clinics try to manage TB patients and only refer them to public health facilities when they fail. Referral is done when the patient condition has deteriorated. In addition, referrals made by private clinics are often ignored by public healthcare workers and patients are investigated all over again.

(iii) Engagement with private pharmacies

No model of arrangement is in place for private pharmacies in TB control. However, key informants observed that some pharmacies are screening and referring patients.

(iv) Pharmaceutical manufacturers

There are no pharmaceutical manufacturers in Mozambique. All TB drugs are imported.

Key issues

- Private health facilities can improve access to TB services but they have to follow national guidelines
- Some clinics (in Maputo) have microscopy and are diagnosing and treating TB but they are not reporting
- Patients seek services in private sector anyway thus there is a need to engage private sector to end TB
- Anti-TB drugs are only in the public sector, thus private sector has to access drugs from government. This presents an opportunity to engage private sector.

5.3.2 Model of engagement for traditional healers

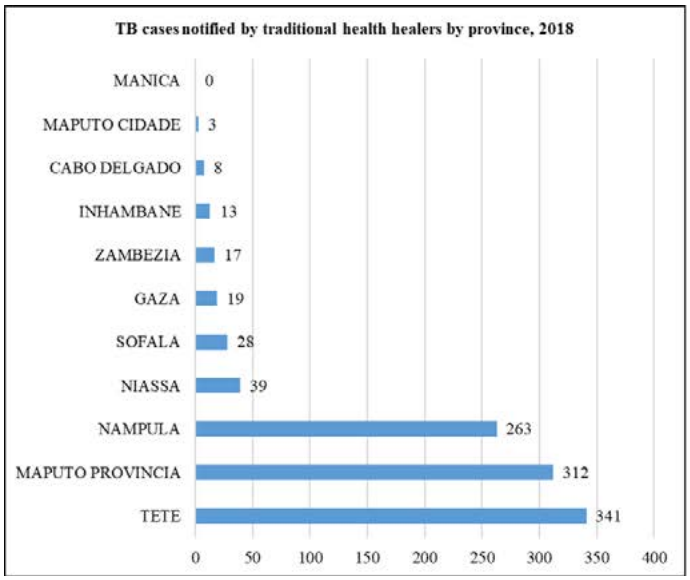
Mozambique has a well-established model of engagement of traditional healers in TB control. The government has a programme for traditional healers which sensitises them on how to deal with patients presenting with coughs and other TB symptoms. Traditional healers are trained every year at provincial level. They are involved in screening and referral of patients with TB symptoms to health facilities. The NTP has provided them with a referral form completed for each case referred. They also escort some of the patients to referred facilities to ensure successful referral. It was observed that some of the referrals are done to community healthcare workers especially where distances to health facilities are long. Further, they have been provided with registers for recording presumptive cases referred. Traditional healers have also been trained in DOTS and conduct outreach at community level for patients lost to follow up and to ensure treatment adherence. MoH involves traditional healers in DOST because communities trust them and they are closer to patients given the long distances to health facilities. Upon completion of TB treatment, patients go back to traditional healers to continue treatment for other conditions.

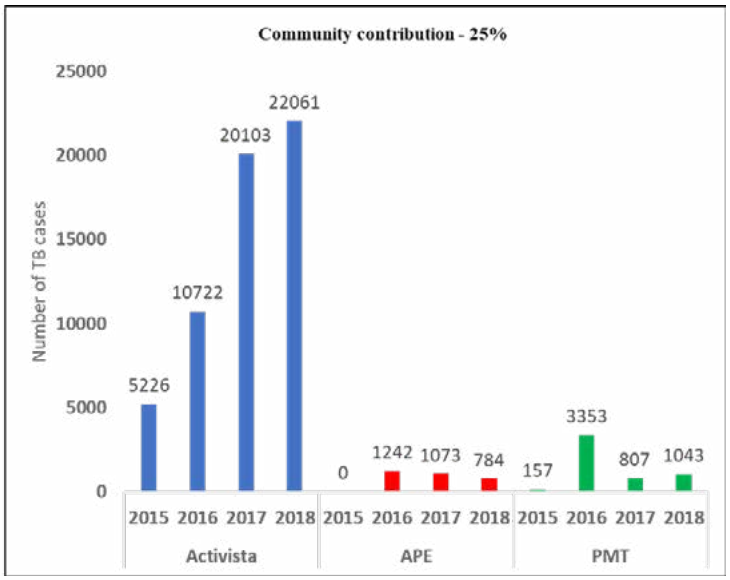
Training offered to traditional healers has had a positive impact. Traditional healers indicated that they have good knowledge of TB. For instance, they are able to recognise all major symptoms of TB, they use personal protective equipment such as facial masks and gloves when handling patients, some accompany patients to health facilities and keep in contact with the family members to follow the patient, they provide patient education such as how to prevent TB transmission. Traditional healers also hold monthly meetings where they sensitise members on health matters including TB.

A few examples of good practice in MoH engagement with traditional healers were noted:

- In one district, focal person at the health facility meets with the traditional healers once a month to discuss coordination issues. This meeting is also attended by other healthcare workers.
- District 2 – traditional healers work directly with the in-charge at the health facility. The health facility receives, stamps the referral forms and returns to the traditional healer as the secretary. In the absence of the in-charge, the process does not work well and no one receives the forms.
- District 3 – healthcare workers attend traditional healers meetings to assess how they screen/assess TB and educate them on screening. They are also involved in loss to follow and referral patients to health facilities. They also go to the household to support adherence to treatment

Figure 11: TB cases notified by traditional healers





Key issues

- Patients referred to health facilities by traditional healers are not well received by healthcare workers; healthcare workers do not recognise traditional healers referral forms
- Not all traditional healers know how to write, thus some do not give patients referral forms
- Difficulty in influencing traditional healers to change their knowledge/mindset about TB and accept scientific knowledge

- Entrenched believes (misconceptions) among traditional healers and patients on what causes TB results in delay in referral
- Patients diagnosed with TB, if not supported by the referring traditional healer, can give up on treatment and return to the traditional healer for treatment. Hence the need to involve the traditional healers not only in referral but also in supporting conventional treatment.
- The data from health facilities show low number of patients referred by traditional healers which does not match the referral forms issued

5.4 Incentives and enablers

The incentive scheme in place is limited to the few large hospitals in Maputo city that government is engaging in TB service delivery. For these hospitals, the Government supplies medicines and lab reagents while patients do not pay any charges including consultations. There are no incentives for private clinics because there is no government engagement with these clinics. Private clinics are of the view that the engaging with government will improve the clinic/ hospital image or reputation.

Government is also engaging traditional healers in TB control. Government given them with non-financial incentives which include branded T-shirts and bags and prizes for the best traditional healer. These items increase the visibility and recognition of the traditional healers resulting in building their credibility in the community.

5.5 Financing

In the public sector, TB services are free irrespective of wealth quintile. Patients pay only 1 Metical to be attended and 5 Metical for medicines. Free services are expected to increase access to healthcare. Public servants pay a percentage from their salaries for medical assistance to finance the free health services in public sector. Informal workers and those in the private sector do not pay, a policy that raises issues of equity in financing for healthcare.

Patients pay for services at for-profit private facilities in two ways – out of pocket or through insurance. Patients covered by insurance are those working in private companies. Although healthcare in public health sector is free, patients go to private sector because they perceive services in the public sector to be of low quality, facilities are congested, health worker-patient relationship is poor, healthcare workers have a negative attitude towards patients and waiting time is long. Therefore, irrespective of cost, patients will continue seeking services in for-profit facilities for these reasons.

Currently, the government is a exploring social insurance scheme where all persons can contribute. A Social Health Insurance policy paper has been reviewed by the Ministers' Council. A revised policy paper will be presented in the next Ministers' Council. Government has agreed in principle to set up a Social Health Insurance. However, Government is seeking lessons from other countries such as Rwanda to fully understand the dynamics and risks of implementing a social health insurance.

5.6 Capacity building

Mozambique has a dual system that allows doctors and other healthcare workers to work in both public and private sector. As a result, government has a challenge in retaining doctors and other professional in public service. Most of these professional prefer to work in Maputo city where there is a high number of private health facilities where they can work part time. Those who don't want to work in rural districts move to private sector on full time basis. Private sector also offers attractive remuneration hence most professionals move from government. This has depleted capacity in the public sector, especially in rural districts.

Secondly, the dual system means that those working in public sector and part time in private clinics have information about TB due to the training they attend in public sector. Those working in private sector full time do not have same level of information; and their level of suspicion of TB is low.

With regard to training, government conducts separate training for private clinics from that of government facilities. However, most healthcare workers in private clinics have not been trained on TB and do not have national TB guidelines and this affects the quality of TB services they provide.

Traditional healers on the other hand are traditional healers are trained every year through the directorate of traditional medicine. However, given the large number of traditional healers in the country, not all are reached annually.

5.7 TB services provided

5.7.1 Private healthcare providers sample

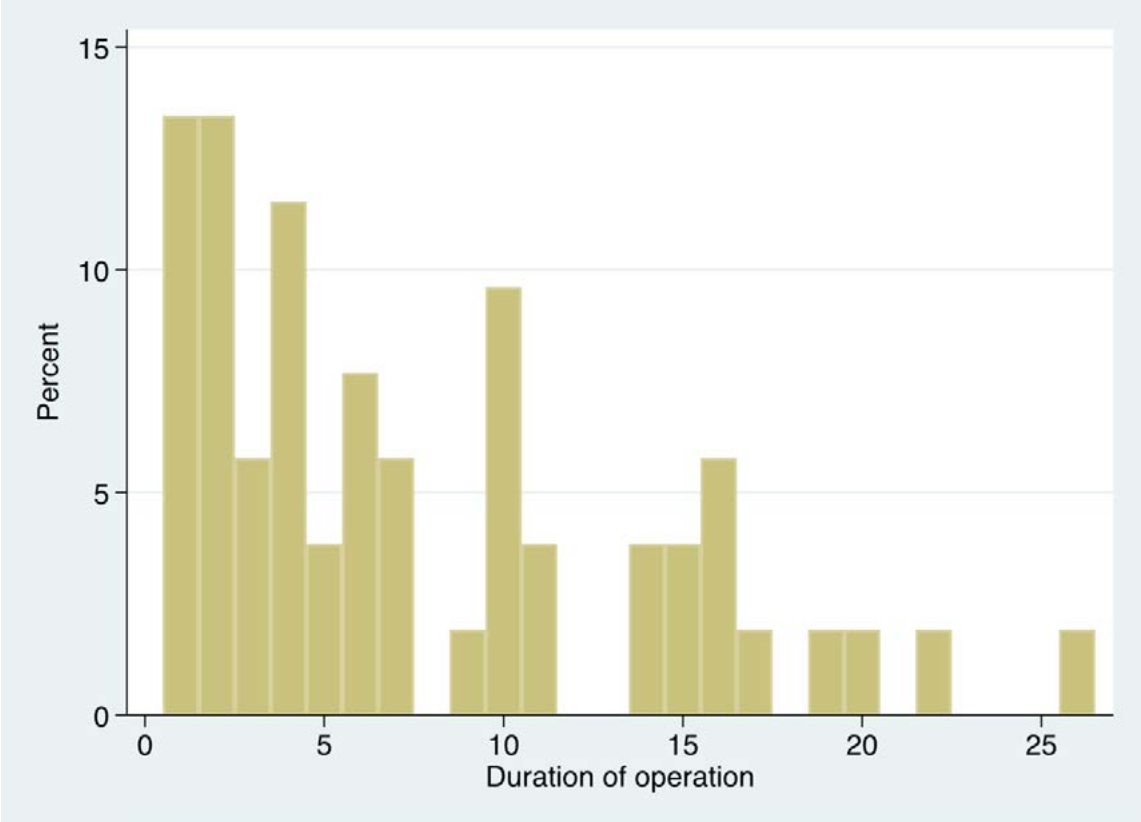
TB services provided by private healthcare providers were assessed using a quantitative questionnaire administered to a sample of private healthcare facilities. A total of 53 representative sample of private facilities were included in the study from two high TB burden districts (Matola and Tete). Majority of private facilities were found in Matola (76%) compared to Tete. NGO/FBO health facilities are unavailable in both districts.

Table 39: Type of private facility by location

Facility Type	Matola N (%)	Tete N (%)	Total Number
For-profit hospital	1(100.0)	0	1
For-profit clinic	12(66.7)	6 (33.3)	18
Standalone for-profit pharmacy	23(85.0)	4(15.0)	27
Standalone for-profit laboratory	0	1 (100.0)	1
Corporate clinic	3 (50.0)	3(50.0)	6
Total	39(75.6)	14(26.4)	53

Rapid expansion in private health care providers was observed in the last five years. Seventy five percent of the facilities were registered in the last 10 years, while 50% of them were in existence since the last five years. The median duration of operation was 6 years, ranging from 1 to 26 years.

Figure 12: Duration of operation (years) of for-profit and corporate facilities



About 28% and 33% of for-profit and corporate clinics respectively provide inpatient care. The private hospital has a 30 bed capacity inpatient service.

5.7.2 Early diagnosis of TB, including drug sensitivity testing (DST)

Laboratory service availability and capacity

General laboratory services are widely available in both for-profit and cooperate facilities. All, except one clinic in for-profit facilities have laboratories. Similarly, only one of the corporate clinic does not have laboratory. Only one standalone laboratory is available in the two districts (in Tete district).

None of the private facilities, including the standalone laboratory have smear microscopy or Gene-Xpert for TB diagnosis. Some of the private facilities refer patients to the provincial hospitals for diagnosis.

Majority of facilities (more than 65%) reported that they use rapid tests (commercial sero-diagnostic tests) for TB diagnosis, which are not recommended to be used by WHO in low and middle-income settings. There is only one private laboratory in the capital Maputo that has got TB microscopy in the entire country. Some key informants suggested that private facilities most probably avoid TB laboratory services due to issues of biosafety and infection control.

The for-profit hospital, 4 (25%) of the for-profit clinics and 2 (33%) of the corporate clinics have a chest X-ray machine. Chest X-ray is the commonest other test ordered by facilities as TB diagnostic test despite its limited specificity for the diagnosis of pulmonary TB, and is especially suitable for screening, triaging and as commentary test in childhood TB diagnosis. Almost all for-profit facilities have a common practice of ordering extensive tests for suspected TB patients, including full blood count, ESR, Gram stain for sputum, ultrasonography, HIV rapid test, renal and liver function tests, etc.

National TB Reference Laboratory (NTRL) Capacity

The NTRL, under the national institute of health, provides oversight and technical support for clinical laboratories in government and FBO/NGO facilities in early diagnosis, DST, treatment follow up, and EQA. The NTRL joins hands with two regional laboratories (Beira and Napula regional laboratories) to cover network laboratories in the regions. NTRL covers Maputo and Southern region, Beira laboratory covers the central regions, and Napula laboratory covers the northern region.

The NTRL is ISO accredited lab that is fully equipped with diagnostic facilities to do culture, identification and DST, including second line DST using MGIT. The EQA service covers both microscopy and Gene-Xpert; currently about 39% of health facilities covered in the country. This low coverage in EQA indicate that the NTRL need to capacitate itself to expand its coverage to all network laboratories. Few for-profit clinics/hospitals in Maputo (about four) that are involved in TB treatment services send specimen to NTRL labs using their own currier system, including for DST.

The NTRL plan is addressed under the national health institute strategic plan. However, private sector was not

involved in the planning process and plan didn't cover their engagement. The network laboratories under NTRL use lab information system (LIS) installed in Napula and Maputo, the installation for Beira being in process. Through this system it was possible to pull out information at all levels.

The laboratory units, within the primary health facilities, provide a wide range of services, among them smear and GeneXpert. They are coordinated by lab focal persons at district and province levels and, at the central level, by Central Department of Laboratories. This department works hand in hand with NTRL focusing on distribution and follow up of smear microscopes and GeneXpert, TB specimen referral system (TSRS) and logistics for EQA.

At the end of this year there is a plan to increase Gene-Xpert coverage to 184 facilities and to change all microscopes into fluorescent microscopy (352 currently have that). Since 2016 Gene-Xpert was used as first line test for TB diagnosis nationwide. Facilities without Gene-Xpert refer patients to the nearby facility for test.

The human resource for NTRl and two regional labs is as follows: NTRL has 1 lab manager, 1 data manger, and 10 lab technicians; Nampula regional lab has 6 lab technicians, including lab manager; Beira regional lab has 7 lab technicians, including lab manager. Short staffing is posing a challenge for the three reference labs, and there is a plan to hire more staff using the World Bank project fund. The function of the three laboratories is heavily dependent on financial support from donors.

Figure 13: Microscopy and Gene-Xpert national coverage, 2018

	FBO/NGO health facilities	For-profit health facilities	Government/MOH
Number of facilities with TB microscopy	-	0	411
Number of facilities with Gene-Xpert	-	0	110
Number of facilities with both microscopy and Gene-Xpert	-	0	22

Other key issues:

- Human resource shortage in the network laboratories and at national level in the laboratory department at MOH
- Many network laboratories need infrastructure improvements
- Inadequate equipment maintenance

Laboratory Human Resource and Capacity Building

All private facilities have at least one laboratory technician or technologist and most expressed their ability to increase staff depending on service expansion in the laboratory. In some facilities there are more lab technician than they are available in the regional reference laboratories. For example, one private hospital has 9 lab technicians compared to 6 in Napula regional laboratory.

Capacity building support is not provided by NTP/NTRL for the laboratory staff in any of the private facilities because they do not have any engagement in TB diagnosis.

Table 40: Median number of permanent laboratory staff by facility type

	Lab technologist Median (range)	Lab technician Median (range)	Number of facilities
Private hospital	1	3	1
Private clinic	0 (0,5)	1.5 (0,7)	16
Standalone lab	1	1	1
Corporate clinic	0.4 (0,1)	0 (1,2)	5

The case of Tete provincial hospital:

The hospital provides clinical services for patients referred by private facilities who seek specialist care with service charges depending on the type of service provided. This is an approach used by the hospital to provide services for paying patients who seek quick services in the government facility, including TB diagnosis, and generate income to cover some of its overhead costs

5.7.3 TB Treatment Services

Availability of TB treatment services

None of the private facilities provide TB treatment services in the two districts. The MOH didn't engage any private facilities in the two districts as a treatment or screening and referral site.

Majority (72%) of the for-profit clinics and hospital and 33% of corporate facilities diagnose and refer cases to the nearby government public health facility. Some of these for-profit facilities make preliminary diagnosis using their own rapid test and/or chest X-ray facilities. Others also make arrangement with provincial hospitals both in Tete and Matola to order Gene-Xpert tests (as Gene-Xpert is the first line test for all suspected cases according to the national guidelines) with the patient paying for the test. Once a patient is diagnosed for TB, the provincial hospital will register the patient and refer to the public health facility for treatment follow up if rifampicin resistance is ruled out.

About 29% of the for-profit and 67% of corporate facilities refer suspected cases directly to any of the nearby government facilities using their own referral slip. None of the facilities both in for-profit and corporate keep presumptive register and have referral forms provided by the MOH, and hence data is unavailable on presumptive cases referred or diagnosed.

In majority of for-profit facilities, it was a common practice to treat coughing patients with different cough syrups and antibiotics through multiple follow up visits before making decisions on referral to government facilities.
Three of the corporate clinics in Tete (Two mine company clinics and one tobacco company clinic) seem to have an organised referral system and close collaboration with the MOH (DHO) in referral and feedback arrangement.

Tobaco company clinic in Tete: the company clinic provides immediate referral of suspected cases of TB to the nearby government facility where the patient lives. The company keeps record of suspected and diagnosed cases of TB based on the communication channel established with the public facilities. In 2018 there were 7 presumptive and 6 diagnosed cases of TB in the company. In 2019, so far 6 presumptive and 4 confirmed TB cases were detected.

Mine company-VALE: The company clinic writes referral letters to the public health facility with all the supporting information, including clinical findings and lab results for suspected TB cases. However, patients usually go to the

government health facility on their own because they have health insurance cover. When the patient is diagnosed with TB, his/her case will be presented to the medical board. The patient will then be on leave for two months while on treatment. After two months, TB conversion and occupational health fitness will be assessed. If the patient converted and fit he/she will be allowed to work in a less risk assignment. All permanent and contract employees are covered with insurance, including their dependants. If the patient doesn't convert or not fit for work after occupation health assessment, he/she will continue on leave with pay until treatment completion. TB is not compensated in the company. As part of the occupational health and safety policy of the company employees undergo regular screening for silicosis and other occupational health, including TB.

Systematic screening of contacts of index cases of TB and high risk groups for TB are not implemented in any of the private facilities. The systematic screening for contacts of TB patients is expected to be implemented in the government health facility where the patient is treated and followed up. National guidelines for screenings of contacts and high risk groups was developed in 2018.

Implementing systematic screening in health care workers is becoming a challenge because of stigma. The NTP is developing separate guidelines for health care workers to alleviate the problem. Another challenge include tracing and screening ex-miners from South Africa. A mobilization campaign is underway using peer based approach.

Other key issues:

- Some of the for-profit facilities collect sputum and send to the government facility for TB test without following proper procedures for sputum collection and infection prevention. None of the facilities dealing with coughing patients and who does sputum sample collection use or aware of the national or WHO guidelines for infection prevention related to TB.
- Due to the business model in private for-profit facilities there is a push on the patient to come back even after referral is provided. To that end the main issues raised by the private for profit facilities is the lack of feedback on the patients referred to government facilities.
- Most private for-profit sites indicated that clients are reluctant to be referred to government facilities for a number of reasons such as, long queue, lack of privacy, stigma attached to TB, attitude of health care workers, etc.

Human Resource

Larger number of doctors or other practitioners are available in the private facilities compared to scarce human resource in the public facility. According to WHO estimation, there are only three doctors per 100,000 people in Mozambique. The private hospital has 5 doctors and the median number of doctors in clinics was 1, ranging from 0 to 15 doctors working permanently, in addition to par time staff.. Training on TB or guidelines of TB have never been provided by the MOH for any of the private facilities.

Table 41: Average number of permanent clinical staff by facility type

	Doctors Median (range)	Degree graduates Median (range)	Diploma graduates Median (range)	Nurse Median (range)	Number of facilities
Private hospital	5	0	0	2	1
Private clinic	1(0,15)	0 (0,5)	0 (0,3)	3 (0,15)	16
Corporate clinic	1 (1,8)	0	0 (0,4)	2 (0,11)	6

5.7.4 TB/HIV Collaborative Activities

TB/HIV collaborative activities are rarely implemented in private facilities in the two districts. Only two facilities, one corporate and one for-profit, provide HIV testing and counselling of suspected TB patients as part of an investigation for suspected/presumptive TB patients.

The corporate facility (the tobacco company clinic) provide free ART services in the clinic in collaboration with the MOH. Patients get ART treatment in the company's clinic whereas they follow their TB treatment at the government facility. This is an example of missed opportunity of providing TB/HIV collaborative activities at one stop. All of the eight presumptive TB cases that were registered in 2018 were screened for HIV.

Two of the for-profit facilities claim that they screen HIV patients for TB. However, data is not available to substantiate that. One of the corporate facilities (the tobacco company clinic) provides TB screening for HIV patients in its ART clinic

on a regular basis depending on the patients' TB status. In 2018 the facility screened 61 HIV positive patients for TB. Only the staff at the corporate facility providing TB/HIV collaborative activities were trained in TB/HIV collaboration in 2018 which was organised by the MOH.

The NTP has recently finalised and disseminated the TB/HIV collaborative guidelines.

Preventive Treatment of Persons at high risk of TB

Preventive treatment of latent TB infection is implemented in public facilities using the national comprehensive TB treatment guidelines. NTP is currently in the process of developing latent TB infection management guidelines.
It is only the tobacco company clinic in Tete that provides preventive treatment for HIV patients as part of its ART program in the two districts. It was reported that the treatment coverage in HIV positive patients, including completion of treatment was 100% in permanent employees of the company. The INH completion rate in the permanent workers is high because of the strong follow up in the clinic. This is a good example of the benefits of service delivery in close proximity to the patient, especially to ensure adherence to treatment. The problem is with the seasonal workers who may leave the company before finishing their preventive treatment.

TB infection prevention and control

Using the national infection prevention and control (IPC) guidelines for TB the NTP has been assisting public facilities in the development of IPC plan and its implementation. Currently it is in the process of updating the guidelines using the recently released WHO guidelines.

Infection prevention and control plan for TB is not available in any of the private facilities and is barely implemented despite the fact that some facilities do diagnose and refer TB cases and handle sputum sample. Many of the Facilities try to implement general infection control measures.

Some of the challenges expressed by facilities include: lack of guidelines from MOH, including access to guidelines, and limited financial capacity to procure personal protective equipment like masks.

We can implement the infection control for TB, but we do not have the guidelines. The treatment guideline we have is a comprehensive document; it lacks details on infection control. "

A health care worker in one of the private facilities

5.7.5 Tuberculosis Drug Supplies and Management

Pharmacy is commonly available in private clinics and hospitals. About 84% of for-profit hospitals/clinics and 50% of corporate clinics have pharmacies. However, none of these facilities, including all the 27 standalone pharmacies stock or dispense anti TB drugs. This is attributed to the regulation that prohibits stocking of TB drugs in private pharmacies.

Table 42: Availability of pharmacy by type of facility

Type of facility	Facilities with a pharmacy n(%)	Total facilities
For-profit hospital	1 (100%)	1
For-profit clinic	15(83%)	18
Corporate clinics	3 (50%)	6
Total	19 (76%)	25

All standalone pharmacies see patients with cough. Almost all treat cough with flue medicines and different types of cough syrups depending on whether it is productive or not and use antibiotic if patient shows no improvement. Patients are usually referred to government health facility after multiple follow up visits, if TB is suspected.
None of the standalone pharmacies are engaged by the MOH do screening and referral of suspected cases.
Pharmacy technicians are commonly available in most pharmacies, including standalone pharmacies However very few pharmacies have pharmacist.

5.8 Coordination, communication and advocacy

5.8.1 Coordination of engagement with private healthcare providers

There are no mechanisms in place to coordinate NTP engagement with private health sector. There is no focal person for public private mix (PPM) approaches.

5.8.2 Collaboration with MOH

The collaboration between MOH and private facilities on tuberculosis prevention and care in the two districts is almost non-existent. Private public mix (PPM) for TB control is not implemented in the two districts. Only one corporate clinic in Tete (a Tobacco company clinic) implements TB/HIV collaborative activities for ART engaged by the HIV department.

Challenges and incentives/advantages of working with MOH:

- Currently only one company clinic (Tobacco company clinic) is collaborating with MOH in TB/HIV. The clinic faces no major challenge working with MOH. However, the company strongly suggested the integration of TB in HIV/ART service provided in the clinic because it will be more convenient for the patient and also for the company to provide both services in one roof. This will also strengthen further the TB/HIV collaborative activities, including data capturing and reporting.
- According to the clinic, the key advantage of the collaboration is for the patients. Patients have good access to quality prevention and care services at the company clinic and at the referral public health centres as a result of the collaboration between the company clinic and MOH. Access to capacity building/training in current developments in TB/HIV, including access to current protocols and guidelines are considered key incentive and as means of improving quality of service in the clinic.

Following are summaries of opinions and suggestions of health care workers in sample private facilities. We applied the following general parameters to analyse the qualitative responses: few means less than 25% of the response; some means between 25-50% of the response; most means above 50% of the response.

Reasons of non-collaboration with MOH/NTP

Some	• MOH has no interest or will to collaborate with private facilities and haven't thought about it. • Some say that they haven't felt that there is a need for collaboration.
Most	• NTP is not coming forth on issues of TB to engage private facilities. The NTP has never visited or approached for-profit health care providers, and this has resulted in limited awareness of the government TB strategy. • MOH sees the private sector as adversary • The experts at MOH perceive that the prevention and care for TB should be in the public health facility

"We have never been approached by people from MOH to do collaborative activities on TB. We are just left alone to do things on our own. "

A health care worker in one of the private facilities

Concern for future collaboration

Few	• Few clinics are not interested handling TB cases due to risks of transmission in the facility. They want the government to ensure availability of TB infection prevention personal protective equipment and necessary facilities. • Few fear of a unilateral or one sided decision making that may not take into consideration of the interest and context of the private facilities
Some	• Some are concerned about the free service policy of the government. They expressed the need for charging consultation fee if free drugs or diagnostic equipment to be provided for private facilities. • Availability of time for participating in trainings • Having the right infrastructure for providing diagnostic and treatment services • The perception of the public sector towards the private clinics is considered an obstacle for future collaboration. The private clinics are only seen as profit makers and not trust worthy.
Most	• Many of the facilities are excited about the idea of collaboration with MOH, but concerned about the commitment of government if it can be translated into action and be sustainable. Some of the concerns include: not getting the right commodity for diagnosis and treatment; not getting training on the current guidelines; and availability of registration materials, supportive supervisor, feedbacks, etc. • The burden of managing TB cases on clinic staff, including data handling and follow up

"The MOH has not yet been open for collaboration..... The health care workers in public health facilities have little trust on the activities of private clinics. When a confirmed TB is referred, they re-initiate the diagnosis."

A health care worker in one of the private facilities

The needs of private facilities for collaboration with MOH

Private facilities that are collaborating with the MOH and those that are interested to collaborate have expressed their need for collaboration as follows:

Few	• Subsidies for staff actively involved in service delivery and additional staff to be assigned by MOH , especially for data handling • Government assistance in the expansion of the facility to have adequate space for diagnosis and treatment of TB patients • Few also raised the importance of providing BCG vaccination in their facility
Some	• Public sensitization about the availability of TB prevention and care services in the private facility • Adequate supply of recording and reporting tools • Accreditation and memorandum of understanding to formalize the collaboration and to have a clear understanding on the expected roles and responsibilities on both sides to ensure quality of care and improve relationship.
Most	• Free supply of diagnostic and infection prevention equipment/ supplies, and anti TB drugs • Capacity building, such as training, access to current guidelines, protocols and algorithms

"We do not have information about the epidemiology of diseases, including TB. We really want this information badly..... This will help us plan and implement our prevention, diagnosis, and treatment activities, especially our health promotion activities. We need training on current developments in TB diagnosis, prevention and treatment."

A staff from a corporate facility

Contribution of the private sector

Following are the suggestions by private providers on what can they provide for the collaborative efforts between government and private facilities:

Some	• Provide data that would enable the country to track case notifications and treatment outcomes. • Service availability in the private sector is an opportunity to minimise distance to get services as private facilities are widely spread and more closer to the public than the government ones • Providing all TB related services for patients who chose to get services in private facilities • Better service provision of the patient when the diagnosis and treatment of TB can be done nearby and to their preferred site
Most	• Qualified health staff to provide services • Space for consultation and/or laboratory services depending on need • Provide free and quality services in return for free drug access and diagnostic equipment and supplies • Staff and clinic time

"We want to have autonomy to treat TB patients here, so that patients will have all the services in one place, including contact tracing because we have all the details of our employees."

A staff from corporate facility

Comments and recommendations

Few	• Few argue that the return of putting in place a TB treatment unit in their facility would be less compared to the expenses that will be incurred, as they expect to see few cases of TB patients. They suggest to focus on strengthening the screening and referral engagements. • To design a sample transport system that is more accessible and flexible • TB medicines should be available in retail pharmacies to be purchased with prescription
Some	• The need for a series of meetings and discussion forums between the private and public sector, including development partners and professional associations to shape up implementation strategies, agree on working modalities and drafting MoU.
Most	• Most respondents are excited about the idea of collaboration between government in TB prevention and care and hope to see it implemented. They attest that many patients chose to get services at private facilities, hence equipping these facilities with the required equipment, medications, and guidelines and providing staff with training is the best solution. • The need for awareness creation in the public on the availability of services in the private facilities, including clear communication of what to expect using combination of medias as an important step that should be implemented at the initial stage of engagement.

5.9 Risks

Given the limited engagement of NTP with private health sector, no major risks were identified. However, key informants observed that the potential major risk is in losing the gains made in TB control if private sector is not

engaged. Patients of all wealth quintile seek services in private clinics and they risk being poorly diagnosed and treated. Secondly, NTP also lacks authority to private healthcare providers to comply with regulations.

5.10 Monitoring and evaluation

The NTP does not have an M&E plan. M&E is a section in the NTP strategic plan and this is not sufficient to guide M&E activities. NTP is planning to develop the next TB strategic plan in 2020 and a separate M&E plan will be developed then.

The TB M&E system is not covering private sector. The priority concern for NTP is M&E capacity development because the programme has only one M&E focal person at the national level who relies on coordinators at provincial and district levels. However, these coordinators are engaged in other programme activities and they do not focus exclusively on TB. Thus, the M&E system does not cover private healthcare providers.

The NTP is piloting a patient tracking IT system in 5 provinces. This pilot is in its infancy. Healthcare workers have been trained and IT equipment supplied. This is an Electronic Medical Records (EMR) system which automates the TB register and allows access to real time data at all levels (district to national level) and will enable TB managers to track progress in patient management. It also allows robust data disaggregation. There is a potential for extending the system to private clinics based on lessons learnt during the pilot phase.

5.11 Opportunities and recommendations

The following are the recommendations and opportunities for improving the engagement of private healthcare providers in TB control in Mozambique.

(i) Regulatory environment

- Strengthen MoH capacity to inspect small clinics. There are those registered and those not registered. MoH should ensure the unregistered are registered.
- Strengthen oversight visits to private clinics to assess whether they are adequate to provide TB services as per regulations
- Review and update legislation for regulating healthcare providers and establish a relevant institutional framework to implement the legislation

(ii) Mode of engagement

- Develop a comprehensive model of engagement of for-profit healthcare providers as the one the government has with traditional healers. Some of the key interventions that should be included in the model are as follows
    - o Build private healthcare providers capacity to screen and referral especially the private clinics in areas where no government facility exists
    - o In engaging private clinics, start with screening of patients based on symptoms
    - o Provide free drugs and develop a mechanism to ensure private clinics does not sell/charge
    - o Conduct support supervision and mentoring of private healthcare providers
    - o Provide private healthcare providers information and training about TB management, standards, notification process etc.
- Establish a model of engagement for private pharmacies: This will include training pharmacy personnel, providing them with tools for screening and referral and monitoring them. Pharmacies can play a role in screening patients with coughs and other TB symptoms and referring them to health facilities.
- Strengthen engagement with traditional healers
    - o Sensitise healthcare workers to strengthen collaboration with traditional healers, and to recognise persons referred
    - o Strengthen linkage between facilities and traditional healers to scale up DOT. Traditional healers are best placed to undertake DOTS for the patients they refer due to the trust they already have in the traditional healers.
    - o Regularly update the knowledge of traditional healers to enable them pass on current information about TB to their patients
    - o Strengthen data system at health facilities to disaggregate TB cases refereed by traditional healers
    - o Scale up training coverage among traditional healers

(iii) Incentives and enablers

- Develop a comprehensive incentive scheme for private healthcare providers based on lessons learnt from the Maputo pilot
- Extent the incentives provide to private healthcare providers in the capital, Maputo, to other urban areas and provinces in a phased approach
- Maintain incentives provided to traditional healers

(iv) Capacity building

- Develop and implement a comprehensive programme for capacity building of private healthcare providers covering all capacity gaps identified through this study
- Engage private sector in training provided to public sector. Include private healthcare providers when training public sector HCWs
- Train private pharmacies in TB management to enable the screen and refer patients

(v) TB services

a) Early diagnosis of TB, including drug sensitivity testing (DST)

- Build diagnostic capacity in the private health sector. As mentioned in the findings, most private clinics have laboratories but they do not conduct TB tests while some are undertaking unrecommended tests. Capacity building is required through training, quality assurance and developing a network of labs to support proper referral of patients and sample referral system.
- Extend coverage of NTRL EQA to private laboratory facilities to ensure quality diagnosis, as the NTP strengthens engagement with private health sector
- Conduct a comprehensive training for lab personnel in the private health sector
- Develop guidelines for engaging private sector laboratories to ensure quality diagnosis
- Conduct supportive supervision and follow up on diagnosis guidelines
- Ensure all personnel working in private clinics labs have proper qualifications
- Provide support to improve the lab infrastructure in private healthcare facilities
- Ensure the use of chest X-ray for screening, triaging and as complementary test in childhood TB diagnosis.
- Improve the human resource, material and technical capacity of NTRL in a sustainable manner to foster its coverage in EQA for network of TB laboratories that also include private laboratory facilities.
- Enhance involvement of the laboratory unit in MOH and other quality control actors at the ministry and partners, through increased capacity enhancement to strengthen the monitoring of private laboratory services to comply with standards and follow SoPs.

b) TB treatment services

- Strengthen referral mechanism from private clinics/hospitals to public health facilities for diagnosis and/or treatment; and sensitise private healthcare providers on TB treatment guidelines to minimise delayed diagnosis.

- Standardise the screening and referral of presumptive cases from private facilities to public health centres, by providing training, guidelines and tools for recording, reporting and referral.
- Disseminate guidelines for systematic screening of contacts and high risk groups, conduct training and monitor implementation of the guidelines in private clinics
- Train private healthcare providers (who collect and transport sputum) on infection control and proper sample collection and transportation procedures
- Train private healthcare providers on the latest TB guidelines to improve quality of TB services in the private sector.
- Develop a communication strategy to sensitise the public on the availability of TB services in private facilities, including what to expect on TB related services provided.

c) TB/HIV collaborative activities

- Establish TB/HIV integrated services in the private healthcare facilities through training, dissemination of the TB/HIV collaboration guidelines, providing data tools and support supervision. Lack of TB/HIV collaborative activities in the private healthcare facilities is a missed opportunity for scaling up both services.
- There is a need for establishing a TB workplace policy and program in corporate sector where it is not available and strengthen where it is weak. The new WHO guidelines is useful to guide the process.

d) Preventive treatment of persons at high risk of TB

- Preventive treatment is only being done in corporate health facilities. Other private healthcare providers should be trained to either refer or provide treatment to people living with HIV on ART who have no active TB and other high risk groups, as per the national guidelines. This is particularly important for private clinics offering HIV services. The latent TB treatment guidelines which are under development should be disseminated to private clinics.

e) TB infection prevention and control

- Extend the support for development and implementation of TB infection prevention and control plan to private healthcare providers. This can be done through dissemination of the infection control guidelines, training, provision of personal protective equipment (as an incentive) and support supervision.

f) TB related pharmacy activities

- Engage retail pharmacies on TB symptomatic screening and referral, by providing the necessary training, tools, and recording and referral forms

(vi) Coordination, collaboration, communication and advocacy

- Hold coordination meetings with private clinics – large and small
- Strengthen NTP capacity to coordinate and engagement with private healthcare providers
    - o Establish a PPM secretariat and appoint a focal point person for engaging the private healthcare providers
    - o Develop guidelines on engaging private sector
    - o Mobilise resource to fund private sector engagement activities
    - o Training NTP staff on how to engage and speak private sector language
    - o Start small – select a few districts to pilot and select the private clinics. Not all of them at once.
    - o Strengthen provincial and district level coordination of private sector. Currently, there is no dedicated TB focal person at provincial and district level. If the NTP is to add more responsibilities by engaging private clinics, there will be need to at least a PPM focal person in each province.
- Establish a model for engagement of private healthcare providers
    - o Build partnerships and trust between NTP and private healthcare providers. This will include, among other approaches, holding of consultations with private health providers to understand what they can do and their concerns; and establishing an equal partnership platform for public-private engagement among.
    - o Develop a mechanism for engaging private clinics beyond the large hospitals. This would include developing an MoU where obligations of both government and private healthcare providers can be clearly defined.

(vii) Risk management

- NTP to develop partnership with regulatory agencies to enforce compliance private healthcare providers with TB regulations

(viii) Monitoring and evaluation

- Develop an NTP M&E plan which includes private health sector component
- Provide data tools, train and supervise private clinics screening or notifying TB cases.
- Install public sector TB patient management system in selected private clinics with high volume clients

Section 6: Lesotho study findings and recommendations

6.1 Private health sector profile

Lesotho has 126 private health facilities registered as at 2019. These include clinics and hospitals, pharmacies and standalone laboratories but do not include corporate health facilities such as those for mining companies. The table below shows majority (65%) are in Maseru and 7% in Leribe and other districts share the rest.

Table 43: All licensed private health facilities by district, 2019

District	No. of private health facilities	% of total
Berea	7	6%
Botha -Bothe	6	5%
Leribe	9	7%
Mafeteng	6	5%
Maseru	82	65%
Mohale's Hoek	4	3%
Mokhotlong	6	5%
Qacha's Nek	1	1%
Quthing	3	2%
Thaba -Tseka	2	2%
Total	126	100%

A breakdown of the private facilities by type shows that 83% of the facilities are private clinics and 19% are pharmacies while the country has a few (2%) standalone private pharmacies located in Maseru. This distribution shows that pharmacies can be engaged to scale up TB referral of presumptive TB cases in only five districts while private clinics can be found in all districts although the number greatly varies.

Table 44: Number of private health facilities by type, 2019

District	Pharmacies	Standalone labs	Clinics
Berea	1	0	6
Botha -Bothe	2	0	4
Leribe	1	0	8
Mafeteng	0	0	6
Maseru	14	2	66
Mohale's Hoek	0	0	4
Mokhotlong	0	0	6
Qacha's Nek	0	0	1
Quthing	0	0	3
Thaba -Tseka	1	0	1
Total	19	2	105

The Christian Health Association of Lesotho, the largest not-for-profit healthcare provider in the country, has a total of 84 healthcare facilities. 10% are hospitals, 86% health centres providing primary healthcare and 5% training schools. Maseru has the majority of the facilities followed by Leribe. Hospitals are well spread across 6 districts.

Table 45: CHAL health facilities by type and by district

District	Hospitals	Health centres	Nursing schools	Total	% of total
Berea	1	10	1	12	14%
Butha -Buthe	1	2		3	4%
Leribe	1	14		15	18%
Mafeteng		10		10	12%
Maseru	2	16	2	20	24%
Mohale's Hoek		4		4	5%
Mokhotlong		2		2	2%
Qacha's Nek	1	4		5	6%
Quthing		3		3	4%
Thaba -Tseka	2	7	1	10	12%
Total	8	72	4	84	100%
% of total	10%	86%	5%	100%	

6.2 Regulatory environment

6.2.1 Regulation of public and private healthcare providers

Legislative and institutional framework for regulation of healthcare providers, including for profit healthcare providers, is inadequate. Private healthcare facilities are licensed by the Ministry of Health; all health professional except nurses register with Dentists, Pharmacies and Medical Council of Lesotho while medicines are regulated by the MoH pharmacy directorate.

Private healthcare providers wishing to operate in Lesotho make an application to the Director General, MoH. The MoH has a review committee supported by the environmental health unit which assesses applications, including physical assessment of the infrastructure, and makes a recommendation to the Director General for licensing. The capacity of MOH to monitor licensed facilities to ensure compliance with regulations is limited. This responsibility is delegated to district health management teams but these teams also have heavy workload in managing service delivery in the public sector.

The MOH Quality Assurance Directorate is also expected to play a key role in ensuring compliance with quality standards in all healthcare settings. The directorate does not have a quality assurance strategy in place; it has a quality checklist which can be used in all facilities. The directorate has critical human and financial capacity constraints to undertake quality assurance. The directorate has only 3 staff including the Director. It relies on the support of programmes such as HIV, MNCH and TB to undertake quality assurance. For instance, it assesses the hospitals and health centres every quarter with support of the performance-based funding project supported by the World Bank. Left on its own, the directorate has no funding nor adequate staff to carry out quality assurance.

The Dentists, Pharmacies and Medical Council of Lesotho registers all professionals - pharmacists, doctors, lab technologists except nurses. The council registers individual professionals working in both public or private sector. The council operates both as a regulatory agency and a self-regulatory body. The role of the council includes discipline of professionals, ensuring internship by placing interns in health facilities and provision of continuous professional development to members in conjunction with Lesotho Medical Association. The council also has limited capacity to ensure compliance of professional to regulations.

Lesotho Nursing Council is a statutory body regulating nurses, nursing assistants and midwives. It sets standards, code of professional conduct and code of practice to guide the nursing practice. It also sets education standards for nursing training schools and assesses the training offered in these institutions. The Council is also responsible for monitoring all healthcare facilities to assess compliance of nursing personnel with standards and identify challenges facing nurses. Nurses opening clinics also have to apply to the nursing council for assessment of their qualification.

Key issues

- Lack of clear legislation or regulations on private healthcare providers licensing
- Lack of an autonomous body with a mandate to licence health facilities; licensing is done administratively
- Lack of capacity for monitoring compliance and ensuring quality standards
- Lack of overarching quality assurance strategy to guide programmes
- Limited capacity of the Dentists, Pharmacies and Medical Council of Lesotho to monitor health professionals. The council does not receive subvention from government.
- Due to a small number of doctors in Lesotho, even those Dentists, Pharmacies and Medical Council are engaged in their practice presenting a conflict of interest
- The nursing council has limited human resources to inspect nurses in all facilities including private clinics. The Council does not receive subvention from government and relies on fees paid by members.
- The nursing council faces challenges accessing some of the private clinics owned by doctors
- In some of the private clinics, the council found that nurses are asked by doctors to undertake tasks beyond their scope of work, which compromises quality of services

6.2.2 Private pharmacies and medicines

The MOH regulates pharmacies and medicines through the department of pharmacy. Pharmacies are expected to provide drugs by prescription. There is no specialised agency to regulate private pharmacies in the country.

6.2.3 Occupational health regulations in the mines

Regulations for mine health which touch on TB and other lung diseases are being updated. A policy on occupational health and safety is in draft form. However, mining companies are expected to conduct pre-employment medical examinations for each mineworker; free medical examination annually during the period of employment and exit medical examination and the point of leaving the mine. Mining companies should also report mineworkers with TB to

the Ministry of Labour for compensation. Mining companies are also expected to take measures to prevent TB and other lung diseases through regular environmental hygiene assessment, education for mineworkers and provision of personal protective equipment. A major weakness with mine health regulations is irregular inspection of the mines to assess compliance and existence of several small mines which have no capacity to comply with these regulations.

6.2.4 Regulation of traditional healers

There is no legislation nor regulatory body for the traditional healers or traditional medicine. Traditional healers are registered by the MoH. There are no mechanisms to monitor traditional healers. The national association for traditional healers is not functioning but districts have their own associations. The role of these associations includes discussing health issues including TB, diabetes, high blood pressure among others; collaborating with MOH; and helping members in case of a problem. The associations play a limited role in self-regulation given that their focus is in protecting member interest.

6.2.5 TB related regulations

National TB Guidelines: Lesotho has in place the National TB Guidelines that spell out all the standards and protocols for drug sensitive and MDR TB management. These guidelines have recently been updated to be in-line with WHO guidance. The guidelines are comprehensive enough to include key TB prevention and care issues, however detailed guidelines on systematic screening of contacts and high risk groups and preventive treatment for TB (IPT) are necessary. The updated guidelines are yet to be disseminated. However, private practitioners who have been targeted for training the past sent their staff instead of attending themselves. private practitioners also have a high staff turnover hence most of those trained have left the private clinics. Training is a major gap.

Infection control: The focus of NTP in infection control is in the public sector, with the IPC guidelines integrated in the TB treatment guidelines. A few instances when NTP has conducted support supervision in private healthcare facilities, private practitioners have been given feedback on weaknesses in infection control but they show little interest. They do not have masks and ventilation is poor although they know the requirements. Stand-alone infection control guidelines (based on WHO guidance) have not been developed to guide health facilities both in public and private to develop IPC plans, operationalise the plans and monitor infection control.

TB case notification: Compliance with case notification and overall reporting is poor. Private healthcare providers do not keep data partly due to limited staff.

6.3 Models of engagement

6.3.1 Purchase provider agreement: Government engagement with Christian Health Association of Lesotho (CHAL)

The Government has a purchase provider agreement with CHAL under which CHAL provides essential health service package within the conditions spelt out in the Memorandum of Understanding. CHAL facilities provide essential services in the same manner as government. Essential health services are free. CHAL charges a fee for indirect costs and standardised cost for services such as x-rays at the same rate as government. CHAL has its own cost structure for specialised services not considered under the essential service package such as ambulance services. Under this agreement, CHAL presents to government an annual cost of the services based on an allocation per service package and government is expected to fund through a subvention. CHAL is paid a lumpsum (in tranches of disbursements).

Under these arrangements, the provision of TB services is the same as in in government health facilities. CHAL also receives TB drugs from government given that government is able to negotiate lower prices for the drugs. NTP engages CHAL in all programme processes including supervision, development of TB guidelines and tools, training, TB commodities forecasting and quantification and strategic planning among others.

Key issues

- CHAL budget is in not funded in full and, consequently, has to cut costs to make up for budget shortfall. This has the impact of comprising quality services.
- Late disbursement of funds putting pressure on CHAL to seek funds from elsewhere to fund its cashflow

6.3.2 Service level agreement with selected private healthcare providers

The service agreement model for engaging private healthcare providers in Lesotho has evolved over several years. From early 2000, MoH started signing agreements with private healthcare providers (mainly doctors running small clinics) to provide TB/HIV services for a fee. The doctors were paid an agreed fee for every case seen. This engagement ended in 2010. From 2010 to 2014, Global Fund supported a local NGO called ALAFA to engage doctors to provide TB

and HIV services to workers in textile factories. The purpose was to reduce the time spent by the workers in seeking healthcare and thus resulting in loss of income. Workers are often not paid for the time not worked and they also lose bonuses. These workers have high HIV prevalence and TB co-infection and would spend significant time accessing treatment thus impacting on the factory output.

Private healthcare providers were expected to provide services at the factory premises to reduce time spent in seeking treatment. The Global Fund supported project ended in 2014. The MoH with co-funding from PEPFAR/EGPAF took over the initiative in 2016. The MoH has established health teams (one team assigned to one factory) comprising of a nurse, doctor and counsellor to provide TB/HIV to the workers on site. The team is expected to conduct TB and HIV screening on site and put PLHIV and TB patients on treatment. PEPFAR/EGPAF is supporting 5 doctors while the MOH pays for 12 doctors. The selection process for the doctors through a request for applications and assessment of applicants based on set criteria. The doctors provide the same service and are paid the same amount. Payment is attached to consultations made. The doctors submit reports of TB and HIV cases.

Key issues

- Government payment of the doctors is often delayed affecting service delivery
- Huge financial resources required to sustain and even scale up this model
- The model has set a precedent of incentivizing private healthcare provider through fee for service and it will be difficult to motivate them using non-financial incentives
- This model is involving a few doctors (16 in total). There is no engagement of other private healthcare provider in TB control
- Stigma associated with accessing health services at the factory site

6.3.3 Pharmacies

There is no engagement of pharmacies in TB in Lesotho.

6.3.4 Pharmaceutical manufacturers

There are no pharmaceutical manufacturers in Lesotho. All TB drugs are imported.

6.3.5 Provision of TB services to mineworkers

Public-private partnership model

NTP has a partnership with TEBA funded by several donors to provide TB services to mineworkers, ex-mineworkers and their families. The provides human resources recruitment services (among others) to mining companies in South Africa and has for years connected mineworkers from countries in southern Africa to employment opportunities in the mines in South Africa. In Lesotho, TEBA has three offices. TEBA services include running banking services for ex-mineworkers to access various providence funds payable them and for current mineworkers remitting funds home. Mineworkers visit TEBA offices regularly for banking services.

Clinics have been embedded into the TEBA premises to reach mineworkers and ex-mineworkers and their families. These clinics provide TB and TB/HIV services including TB screening, TB testing through Gene-Xpert, DS TB treatment, contact tracing, TB/HIV services and health talks.

TB drugs are free from MoH. The clinics have been integrated into the MoH supply chain to ensure no TB drugs stockout. MoH provides conducts support supervision to monitor service delivery and ensure quality service while TEBA provides premises for the clinics as part of its social corporate responsibility. The clinics use MoH data tools and reports regularly to NTP.

Key issues

- Occasional stock outs of medication for adverse effects
- Need for integration of SRH services to di-stigmatise services offered at the clinic
- Inadequate patient support due to limited staff
- Sustainability of the partnership beyond donor funding period

Provision of TB services in mining sector

Lesotho has 13 active mines which include four diamond mines and small quarry and sandstone mines. The extent to which these mines offer TB services depends on their capacity.

(i) TB services in large mining company

The largest diamond mine provides more TB services compared to other mines. The company has a well-equipped health facility with 15 staff (2 doctors, nursing officers and assistant nursing officers, occupational nurse, lab technologists, pharmacist and lay counsellors). The facility conducts TB screening for mineworkers, and sputum samples for presumptive cases are taken for lab test at nearby public health hospital. Drugs are provided by the Ministry of Health and the company facility reports data to MoH. The facility uses MoH registers and tools for reporting. TB cases are reported to the Ministry of Labour for compensation according to the Workman's Compensation Act. The National TB Programme visits the company facility for support supervision and data quality assessment. Healthcare staff at the facility have been trained by MoH.

Contact tracing if done in collaboration with the MoH. The mine is located in a remote area. Thus, the mine consults with the district TB coordinator who then contacts chiefs to reach the family of the index case.

The facility has in place infection control measures which include triaging coughing patients while awaiting consultations, ventilation of working areas, sputum collection, storage and transportation done by trained lab personnel and health education at the facility includes prevention of TB transmission.

The facility also offers TB/HIV integrated services. Every TB patient is tested for HIV and HIV patients are screened for TB. It also provides INH prophylaxis and cotrimoxazole for HIV patients.

Overall engagement with MoH is based on mutual understanding and not on a formal agreement. However, MoH is overstretched to be able to conduct regular support supervision. The company incures huge costs of hiring expertise from outside the country to periodically measure dust levels and advise on dust reduction measures, which is key for TB prevention.

(ii) The second diamond mine has a health centre in place but it is not well equipped to provide TB services. The company outsources TB screening, diagnosis and treatment to an outside clinic and pays for services rendered. Government inspection is irregular and no supervision has been undertaken by the MoH. The company has reviewed its work place policy to include the screening of both TB and HIV in the periodic medical examination of mineworkers. Occupational hygiene/health assessment is done every two years to measure dust levels and put in place mitigation actions. Education campaigns are also undertaken to teach workers in dangers of dust exposure and prevention methods. This company however does not cover contract employees. These employees are expected to

cover their own screening costs. It was observed that NTP has recently established a relationship with the mine under the SATBHSS project and has started requesting for TB data.

(iii) Small quarry and sandstone mines: These mines have no health facilities; have limited awareness of TB; and workers seek health services including TB in public health facilities. The SATBHSS project has an initiative transporting workers from these mines to access occupational health clinics for screening and treatment. In some instances, public health facility staff conduct outreach to the small mine workplaces to screen workers for TB and HIV.

Key issues

- There is no formal agreement between NTP and mining companies
- Mineworkers in small quarry and sandstone mines are also exposed to dust but have limited access to health services (beyond for the SATBHSS initiative)
- No mining company health facility has TB diagnostic capacity
- Mining companies have limited capability to undertake dust measurement

Traditional healers engagement in TB control

No formal engagement between NTP and traditional healers is in place. Focus group discussions with traditional healers found that over half of those consulted have never been trained on TB. A few (3 out of 20) have had TB themselves and they sought treatment at a health facility. however, majority had limited knowledge of TB. For instance, some indicated that they can treat TB through medication, praying for the patient and/or using special powers. They also noted that TB can go away through diarrhoea or by covering the person under boiling water until he/she sweats for TB to get out of the body. The understanding and perception of traditional healers about TB underscores the need to engage them to prevent further transmission and delayed diagnosis. In some districts, the DHMT meets with traditional healers to discuss health issues and these platforms can be used to sensitise them on TB.

The major challenges traditional healers face in collaborating with MOH (not specific to TB) include medical doctors not recognising them and no communication with MoH. Medical professionals criticise their medication.

The traditional healers would like to collaborate with MoH/NTP in order to (i) gain knowledge on TB and how to control infection, (ii) get MoH to support them with transport to reach the communities, (iii) be trained on TB and (iv) be provided with personal protectives, (v) be provided with referral forms and IEC materials, (vi) to be recognised and

treated like other health professionals. In return traditional healers can help in early TB detection by referring patients on time and track those lost to follow up.

Key issues

- Traditional healers themselves are at risk of TB infection
- The attitude of healthcare workers towards traditional healers needs to change if meaningful engagement of traditional healers in TB is to take place
- Traditional healers are not homogenous and therefore training should be sensitive to different groups
- Changing mindset of traditional healers to effectively collaborate with NTP will take time

6.4 Incentives and enablers

Incentives for FBO (not for profit) healthcare provider

The major FBO healthcare service provider is CHAL. Government has a comprehensive incentive and enablers scheme for CHAL which enables CHAL facilities to provide free TB services. As indicated in the section above, government, through the purchase provider agreement, provides CHAL with funding for all inputs of providing essential health package (human resources, operational costs and other indirect costs). Other incentives that have enabled CHAL to engage in TB control include the provision of free TB drugs and other commodities and involvement of CHAL in all programme processes. CHAL facilities largely operate like government facilities.

Incentives for for-profit healthcare providers

The government is providing financial incentives to for-profit healthcare providers to provide HIV services. Although these services are for HIV per se, they also cover HIV/TB cases. This arrangement been in place prior to early 2000. This service level agreement was also funded by the donors targeting the provision of HIV and HIV/TB services in textile factors up to 2014. The MoH and USAID have continued using this model since 2016. Over the years private healthcare providers have been incentivised through fee for service agreements and it will be a challenge to establish non-financial incentives to motivate private healthcare providers.

Currently, a small number (16) doctors are engaged in the fee for (HIV/TB) service agreement. There are no incentives for the rest of the for-profit healthcare providers.

Pharmacies and traditional healers: There are no incentive for pharmacies and traditional healers in place to enable them engage in TB control.

6.5 Financing

Patients seeking TB treatment in the for-profit healthcare facilities pay either through out of pocket or private insurance scheme. As indicated under incentives section above, workers in textile factories are attended to by private doctors but the cost is covered by government. Private facilities that receive anti-TB drugs from Government provide TB medications to patients for free. Large mining companies meet the cost of TB treatment for their workers but small mines have no capacity to do so. Government has no plan to introduce social insurance scheme. Therefore, the scale up of TB services in private health sector will depend on the type of incentives.

Key issues

- Financing for TB services offered in the for-profit private sector is largely from private sources – out of pocket or private insurance scheme
- A financial and non-financial incentive structure that will scale up private healthcare providers involvement in TB control is more feasible than use of insurance, given that government has no plan for social insurance
- No incentives (financial or non-financial) are in place for traditional healers and pharmacies given that they are not involved in TB control

6.6 Capacity building

Approaches for capacity building for not-for-profit and for-profit private healthcare providers varies. Not for profit healthcare providers (CHAL and NGOs) are included in the government capacity building activities. They are invited to trainings organised by government and also received TB guidelines, tools, job aids among others. They also participate in forums where information on TB is disseminated such as technical working group meetings.
The NTP targets private healthcare providers for training. TB treatment guidelines are also disseminated and distributed to private healthcare providers. However, those targeted in some instances send their staff to training instead of attending themselves.

Key issues

- Capacity building for private pharmacies and traditional healers is a major gap

- Substantial resources will be required to effectively train for profit and information private healthcare providers
- NTP has limited capacity to address the capacity gasp among for profit and informal private healthcare providers

6.7 TB services provided

6.7.1 Private healthcare providers sample

This section details the findings of the quantitative assessment of the TB services provided by private healthcare providers. A total of 54 representative sample of private facilities were included in the study from two high TB burden districts (Maseru and Berea) of Lesotho (Table 1). Larger concentration of private facilities were found in Maseru (87%) compared to Berea. The result also showed that for-profit clinics and retail pharmacies comprise bigger and rapidly expanding share of the private health care providers in the two districts.

Table 46: Type of facility by location

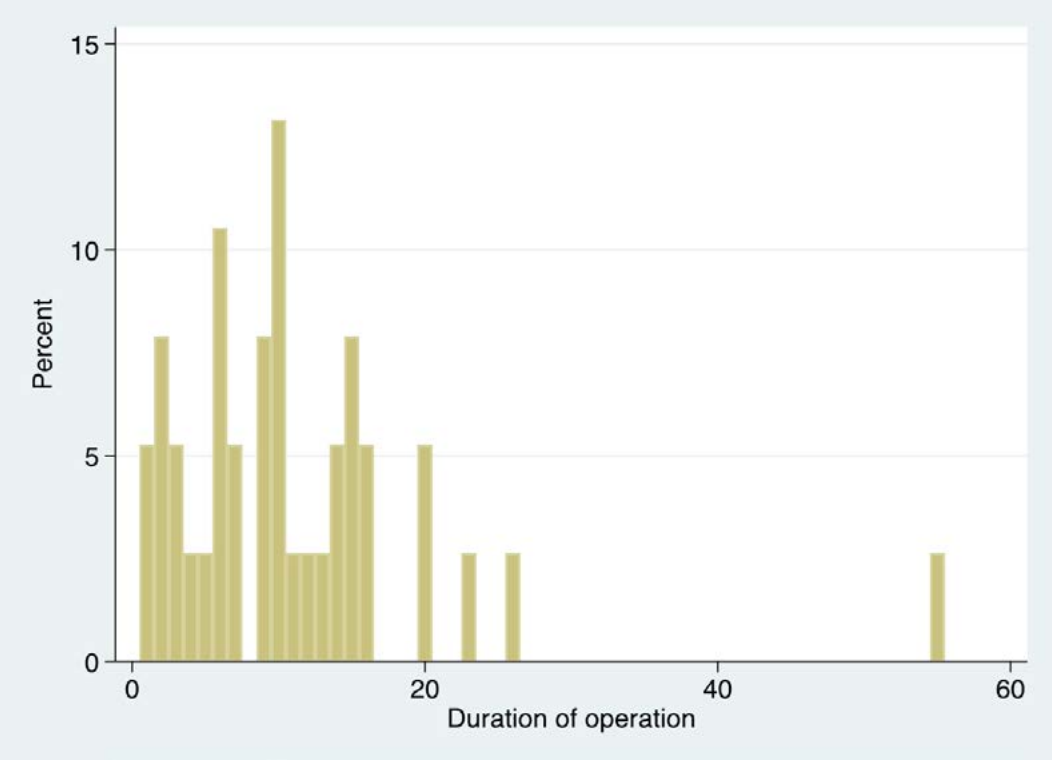
Facility Type	Maseru n (%)	Berea n (%)	Total Number
For-profit hospital	4 (66.7)	2 (33..3)	6
For-profit clinic	14 (100.0)	0	14
Standalone/retail pharmacy	14 (93.3)	1 (6.7)	15
For-profit laboratory	1 (100.0)	0	1
NGO/FBO hospital	1 (50.0)	1 (50.0)	2
NGO/FBO heath centre	11 (78.6)	3 (21.4)	14
Corporate hospital	1 (100.0)	0	1
Corporate clinic	1 (100.0)	0	1
Total	47(87.0)	7 (23.0)	54

Private for-profit facilities have been rapidly expanding in the past 10 years. About 50% of for-profit facilities were registered in the last 10 years. For private for-profit and corporate facilities, the median duration of operation was 10 years, with a range stretching from 1 to 55 years.

About 83% of for-profit hospitals and one clinic provide inpatient services with bed capacity ranging from 6 to 425. The two NGO/FBO hospitals have inpatient facilities with bed size of 102 and 152 respectively.

The corporate hospital belongs to National University of Lesotho (NUL). The corporate clinic in Maseru belongs to TEBA, that works with miners and ex-miners and its activity in TB will further be discussed in relevant sections below. One of the private for-profit hospital included in the sample was a public-private partnership (PPP) project hospital. It is a tertiary hospital with limited involvement in TB care. In exceptional cases TB treatment may be initiated in the hospital by borrowing drugs from one of its filter clinics that are engaged in TB/HIV prevention and care.

Figure 14: Duration of operation (years) of for-profit and corporate facilities



6.7.2 Early diagnosis of TB, including drug sensitivity testing (DST)

Laboratory service availability, quality and capacity

General laboratory services are not commonly available in private facilities. The two FBO hospitals, 14% of FBO/NGO clinics, 33% of the for-profit hospitals, and TEBA clinic (corporate clinic) have general laboratories.

All for-profit hospitals and clinics do not have any form of TB diagnostic facilities. They either use government or a private laboratory in Maseru for diagnosis or follow up of TB cases. One of the corporate facilities (TEBA clinic) use Gene-Xpert for diagnosis of TB. For patient follow up, including DST/microscopy this facility uses government lab facilities.

Only one standalone private laboratory is available in the country located in Maseru that provide TB diagnostics services for patients referred by private providers. This facility only collects and sends specimen to the main laboratory in South Africa (Bloemfontein). The diagnosis, including data processing are carried out in the main laboratory. This laboratory provides comprehensive TB diagnostic service, such as smear microscopy, rapid molecular tests (Gene-Xpert, FL-LPA, and SL-LPA), culture and DST using both phenotypic (MGIT/LJ culture) and genotypic tests (LPA). This facility mainly provides services for patients referred by private for-profit clinics/hospitals, corporate sectors and individual seeking laboratory services. The national MDR-TB hospital also uses this facility for DST when needed, with the support from Partners in Health.

The two FBO hospitals have Gene-Xpert machine and sputum microscope for diagnosis and follow up of TB. They also provide TB diagnosis and follow up support for the satellite NGO/FBO health centres and other government health centres, and private facilities that are engaged by government in treatment of TB.

Chest X-ray is not widely available in private facilities. Only 27% of corporate and for-profit hospitals/clinics and 27% of FBO hospitals/HCs have a chest X-ray facility. Chest X-ray is one of the commonest other tests ordered by private facilities as TB diagnostic test despite its limited specificity for the diagnosis of pulmonary TB, and is especially suitable for screening, triaging and as complementary test in childhood TB diagnosis.

All laboratories have adequate infrastructure and technical capacity to do the tests. The two FBO/NGO hospitals and TEBA clinic lab facilities use national algorithm to do TB tests. For the standalone lab, the type of algorithms it is using is unknown because the main lab where the actual tests are carried out is based in South Africa.

Quality of TB laboratory services

Service interruption due to stock outs and equipment down time has rarely been encountered in the past two years in facilities with TB laboratory.

The national external quality assurance (EQA) provided by NTRL and its partner's covers the two FBO lab facilities. The EQA results of smear microscopy and Gene-Xpert for both 2017 and 2018 show satisfactory results. For TEBA clinic, the EQA is provided by a Thistle SA. However, proficiency test for Gene-Xpert were not done in 2018 and the results for 2017 were unavailable.

Capacity of National TB Reference Laboratory (NTRL)

The NTRL is mandated to provide technical support, including supervision and external quality assurance (EQA) for all network laboratories in Government/FBO hospitals and health centres/clinics in the country. While the majority of public and FBO hospitals in the country have laboratories, only a small number of health centres have one. Overall 19 Public and FBO labs have smear microscopy, whereas 23 of them have Gene-Xpert machine. A total of 19 public and FBO hospitals/health centres have both smear microscopy and Gene-Xpert.

The NTRL is equipped with smear microscopy, culture (MGIT and LJ), Gene-Xpert, and FL-LPA. EQA using blind checking and onsite rechecking, for both Gene-Xpert and microscopy is done by NTRL in all the facilities. The facilities also get EQA from South Arica with support from development partners. The NTRL can't prepare panel and send to network laboratories due to inadequate capacity.

The limited availability of TB diagnostic facilities in both public and FBO health centres could put pressure on the hospitals and sample transport system. In addition, the TB lab facilities in these hospitals are expected to support private for-profit facilities that are engaged by MOH to provide TB services.

"Our laboratory is very small; the space doesn't allow additional Gene-Xpert machine. Yet, we need additional two machines because of a high volume of sputum samples. Our lab covers not only patients coming to the hospital, it also serves health centres that fall under it."

A health care worker at FBO hospital

The NTRL stands at four stars SLIPTA (Stepwise Laboratory Quality Improvement Process Towards Accreditation) assessment which was last done in 2018. It is staffed by 9 biomedical technologists, 1 lab manager and 2 data clerks. The volume of work at the lab due to high burden of TB in the country and the technical support and supervision for all network laboratories demands much more staff. Due to insufficiency of the TB specimen carrier system, the turnaround time for TB specimen referral, including DST results is very high. The problems related to electric power supply, and logistics and supply management has been causing some instances of service interruptions in the laboratory, and this issue is not addressed yet and may continue to affect performance.

The last drug resistance survey (DRS) was done in 2014, and TB prevalence survey is currently underway.

Other key issues on TB diagnostic services availability and capacity:

- Inadequate space for safe space keeping of sputum samples and delays in collection of samples for transportation to the diagnostic facility are common problems encountered in private facilities. The collection of specimen by transporting agency usually happens once in a week. Due to sample transportation delays results the turnaround time for Gene-Xpert results often takes more than a week.
- The results for DST and culture takes much longer than expected and in some instances results may not be returned at all

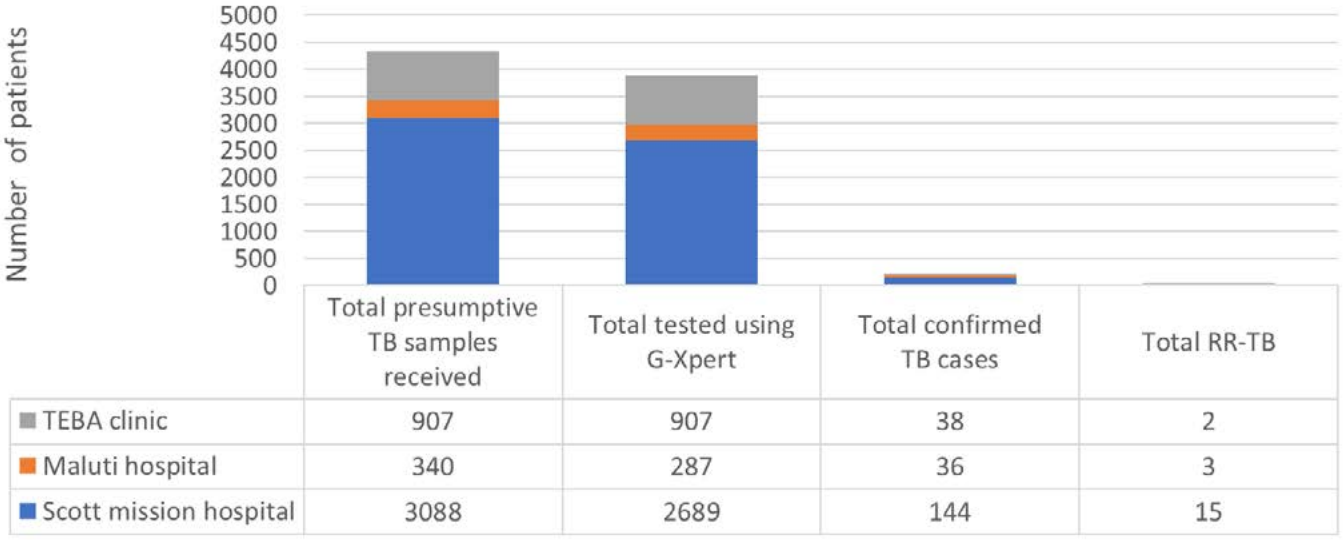
"Gene-Xpert results come to us after a week, and that creates too much inconvenience for our patients. We wish we could have our own lab...."

A health worker in FBO/NGO health centre

Reporting and data availability

Only three private facilities provide TB diagnostic services, which is limited to two FBO hospitals (CHAL facilities) and TEBA clinic that caters services for miners and ex-miners, including families. The graph below demonstrates the high volume of cases seen in these facilities.

Graph 2. Number of patients tested using Gene-Xpert in 2018 in three private facilities



	Total presumptive TB samples received	Total tested using G-Xpert	Total confirmed TB cases	Total RR-TB
TEBA clinic	907	907	38	2
Maluti hospital	340	287	36	3
Scott mission hospital	3088	2689	144	15

Laboratory Human Resource and capacity building

The two FBO hospitals are adequately staffed and received training organised by MOH and partners. They have on average 5 lab technologist/technicians. TEBA clinic has only one lab technician for both TB and HIV laboratory services. Cost of TB diagnosis.

The cost estimate obtained from the standalone laboratory showed the following: R26 for sputum microscopy, R1000 for Gene-Xpert, culture R1000. According to the lab, due to high cost of diagnosis most of the users are patients with medical insurance.

6.7.3 TB Treatment Services

Availability of TB treatment services

There is extensive engagement of private health care providers in treatment of tuberculosis in the two districts (84%). All FBO/NGO, about 75% of for-profit, and 50% of corporate hospitals/clinics provide TB treatment. All the treatment facilities receive free drugs from MOH and in return required to provide free treatment and regular reporting to MOH. According to most key informants the engagement of private facilities in TB treatment was long standing. However, there was no clarity on the presence of MOU and what conditions are attached to the free provision of drugs and other supports by MOH.

Table 47: Tuberculosis treatment service availability by facility type

Type of facility	Availability of TB treatment service n (%)	Total facilities
For-profit hospital	5 (83.3)	6
For profit clinic	10 (71.4)	14
FBO/NGO hospital	2 (100.0)	2
FBO/NGO clinic	14 (100.0)	14
Corporate hospital/clinic	1 (50.0)	2
Total	32 (84.2)	38

DOT is commonly used in private treatment facilities (73%). In most instances family members or close relatives are used as treatment supporters. Most FBO/NGO and few for-profit facilities also use community health workers (CHWs) of village health workers (VHWs) to support DOT. All of the private facilities treat drug sensitive cases (DS-TB) only and use fixed dose combinations according to the national guidelines.

Paediatric TB management

Most treatment facilities reported that they rarely see paediatric TB patients; or if they see some of them refer cases to Baylor (Paediatric clinic in Maseru) or other government or FBO hospital. Those who manage paediatric cases use the national guidelines and have been trained.

Tuberculosis in young children is nonspecific and difficult to diagnose. Clinicians should have a high index of suspicion for investigating TB and commencing young children on TB treatment. Children who are close contacts of an infectious TB case are at high risk of becoming infected with TB and developing active TB. Given this fact, the reported rare diagnosis of paediatric TB in private facilities could probably due to underdiagnoses. The national TB report also showed that, though the estimated incidence of TB is 10% the actual reporting at national level is in the range of 3-5%. This demonstrates that that there are significant number of missing cases both in private and public facilities. The 2018 DHIS data also showed that the percentage of eligible children aged under-five who are contacts of TB patients being treated for latent tuberculosis infection was 70%.

Other factors that have contributed to missing of paediatric cases in private facilities include, but not limited to: weak systematic screening of contacts of confirmed TB cases, particularly targeting children; contact tracing is a challenge due to wide area and difficult terrain that community volunteers have to cover, which is not also well resourced; low confidence of providers in young child TB diagnosis and management; and limited reporting from private facilities.

Use of national guidelines and capacity building

All treatment facilities use national guidelines for treatment of TB. Training have been offered by MOH and partners on the application of national treatment guidelines. Majority of the trainings were conducted in 2018 and 2019. The MOH and development partners also provide the treatment facilities with supervision and mentoring support. Few facilities have issues related to shortage of guidelines for all staff to refer to and have requested for soft copies.

Treatment follow up

Private facilities engaged by MOH provide treatment follow up, including treatment outcome monitoring, DST, adherence monitoring, etc. according to the national guidelines. At national level, there is high coverage for DST. According to 2018 data from DHIS2, the percentage of all TB patients for whom results of drug susceptibility testing were available was 93%.

Treatment adherence is mostly done through follow up visits using pill count, checking patient treatment card in addition to the DOT strategy explained above. Defaulting patients, if any, are traced through phone calls in many for profit facilities. Most FBOs/NGOs and few for-profit facilities get support from CBOs to use community volunteers/ VHWs to trace defaulters in the villages.

Reporting and Case Notifications

Almost all private treatment facilities, including FBO/NGO claim that they report to MOH using the ministries M&E system/DHIS2. Based on our sample estimate the proportion of private facilities case notification in the two districts is 93%. However, there is a strong concern from different units in the MOH on challenges of receiving report from private for-profit facilities. Most attest that the private facilities are not willing to report and this has resulted in underestimation of cases compared to the expected national estimates. According to data obtained from NTP/MOH, in 2018 the proportion of notifications for TB was 9.2% in FBO/NGO facilities, 6.8% in for-profit facilities and 54% in public facilities.

All treatment facilities refer RR/MDR cases to the MDR centre in Maseru. Enrolment of MDR patients on second line drugs and achieving optimal treatment success needs strengthening.

Table 48: 2018 national MDR-TB burden and follow up data

	Adults	Children
Number of MDR/RR cases newly diagnosed in 2018	186	5
Number of total cohorts of MDR/RR cases in 2018	246	4
Treatment success rate for cohort cases in 2018	68.3% (168)	100% (4)
Number of deaths	47	0
Number of patients with treatment failure	2	0
Number of patients lost to follow up/defaulted	1	0
Percentage of patients with Drug resistant TB enrolled on second line treatment (2016)	77%	

Majority of (64%) the for-profit and corporate facilities that do not provide TB treatment, diagnose the patient before referring to government facilities for treatment. They use private laboratories to send samples or refer patients for diagnosis. After diagnosis, patients are referred to their preferred facilities (private or public) using the facility's own referral slip with results attached. The MOH or any development partner do not engage the non-treatment facilities to do screening and referral of presumptive TB cases or provide any reporting tools. It is a common practice to hold patients for longer before decision is made for referral. Coughing patients are usually subjected to wide range of investigations and treatments using different cough syrups, flue medicines and antibiotics.

The table below demonstrates the high volume of TB cases being managed in private facilities. Data was extracted from 2018 records available for presumptive and confirmed TB case registers.

Table 49: Total number of cases registered in 2018 by type of facility

	For-profit and corporate hospital/clinic (n*)	FBO/NGO hospital/clinic (n*)
Total presumptive TB patients seen/screened in the year	8715 ((10)	83095 (15)
Total diagnosed as TB	391 (15)	1327 (14)
Total sputum smear positive (SS+)#	21 (12)	59 (12)
Total patients tested using Gene-Xpert	1269 (13)	7265 (14)
Total RR-TB	6 (12)	8 (14)
Treatment success (total number who completes treatment and cures or become smear negative) (@)	240 (9)	506 (15)
Number of relapse cases (cured TB patients who are re-diagnosed as smear-positive case) (@)	1 (10)	2 (14)
Number of deaths (@)	6 (4)	99 (16)
Number of patients with treatment failure (@)	0 (10)	2 (16)
Number of patients lost to follow-up/default (@)	11 (10)	25 (16)

** Number of reporting facilities*

 # Sputum microscopy is used in few facilities for diagnosis of TB, it is mostly used for treatment follow up. Gene-Xpert is the main test for diagnosis of TB in the country

@ The total numbers are for the year 2018, but could be based on cohort of cases, hence denominator is unknown

Human Resource

Clinical staff shortage was not reported as an issue in any of the private for-profit facilities as they can employ when necessary. There is adequate supply of clinical staff in the market to be hired either permanently or on par time basis. However, there is a demand by these facilities for assigning data clerks for managing recording and reporting related to TB and HIV.

Table 50: Median number of staff registered in 2018 by type of facility

	Doctors Median (range)	Nurse Median (range)	Number of facilities
Private for-profit hospital	1 (0, 18)	7 (1, 25)	5
Private for-profit clinic	1 (0, 2)	2 (1, 26)	14
Corporate hospital	3	4	1
Corporate clinic	0	2	1
NGO/FBO hospital	4.5 (0, 9)	58 (30, 86)	2
NGO/FBO health centre	0 (0, 2)	6 (1, 8)	14

6.7.4 Systematic Screening of Contacts and high risk groups

Systematic screening of contacts of TB index cases

Systematic screening of contacts of TB is reported to be widely implemented in FBO/NGO facilities (about 94%). However, in for-profit and corporate facilities half of them are not implementing the service. Very few facilities both in for-profit and FBO/NGO keep record of the number of contacts traced and screened. The 2018 DHIS2 data indicated that the percentage of eligible index cases of TB for which contact investigations were undertaken was about 60%.

In most of the for-profit facilities contact tracing is done through the index case to invite contacts and using phone calls, but in few instance a local CBO also helps provide support by using community volunteers/VHWs. Most of the FBO/NGO facilities use community volunteers/VHWs or treatment supporters in addition to encouraging index cases to invite contacts.

All of the facilities providing contact tracing services use national guidelines and have been trained. Majority of trainings were provided in the last two years.

Table 51: Availability of TB contact tracing services

	Facilities providing services (n/%)	Total number of facilities
Private for-profit hospital	2 (33.3)	6
Private for-profit clinic	9 (64.2)	14
NGO/FBO hospital	2 (100.0)	2
NGO/FBO HC	13 (92.9)	14
Corporate hospital/clinic	1 (50.0)	2
Total	27 (71.1)	38

Systematic screening for high risk groups

Systematic screening of TB in high risk groups is reported to be widely implemented in FBO/NGO facilities (about 94%). However, in for-profit and corporate facilities almost half of them are not implementing the service. Very few facilities in for-profit and FBO/NGO keep record of the number of high risk groups screened.

Most facilities providing screening of TB for high risk groups described the following individuals as the target for screening: prisoners, migrant workers, household contact of known MDR TB patient, healthcare workers, miners, ex-miners, household member of miner and ex-miner, factory workers, and children, and public transport workers. Most of the facilities (about 74%) providing high risk group screening services reported to use national guidelines and have been trained. Majority of trainings were provided in the last two years.

Table 52: Availability of systematic screening for high risk groups

	Facilities providing services (n/%)	Total number of facilities
Private for-profit hospital	3 (50.0)	6
Private for-profit clinic	10 (71.4)	14
NGO/FBO hospital	2 (100.0)	2
NGO/FBO HC	13 (92.9)	14
Corporate hospital/clinic	1 (50.0)	2
Total	29 (76.3)	38

Key issues in systematic screening

- The distance to villages and the difficult terrain is creating challenge in contact tracing by community volunteers, especially for older volunteers
- Community based TB programs are not linked to some of private facilities to support systematic screening and treatment adherence
- Some household contacts refuse to come for screening; and some patients who come to private clinic do not have time for screening or do not want to be screened
- The need for regular training to facility staff because of high staff turnover in some FBO/NGO facilities

6.7.5 TB/HIV Collaborative Activities

TB/HIV collaborative activities are relatively commonly practiced in private facilities due to involvement of private sector in HIV/ART for decades. It is a common practice that both presumptive and confirmed TB cases seen in TB treatment facilities undergo screening for HIV. In those facilities that provide TB treatment services TB patients are regularly screened for HIV depending on their HIV status.

All of the facilities providing TB/HIV collaborative activities, both in FBOs and for-profit, use national guidelines and have been trained by MOH and partners. Majority of trainings were provided in the last two years. The MOH (both the TB and HIV units) and partners also provide supportive supervisions for participating private facilities.

At national level (MOH) the TB/HIV collaborative activities are implemented on both HIV and TB units. The management is housed in the HIV side, including procurement and distribution of commodities and supplies, such as HIV test kits, etc. TB/HIV collaborative activities is embedded both in TB and HIV treatment guidelines. According to data extracted from DHIS2, in 2018 percentage of TB patients screened for HIV was 95%; and the percentage of HIV-positive TB patients on antiretroviral therapy was 92%.

Table 53: Availability of HIV testing services in presumptive and confirmed cases of TB by facility type, 2018

	Facilities providing services n (%)	Total number of facilities
Private for-profit hospital	4 (66.7)	6
Private for-profit clinic	12 (85.7)	14
NGO/FBO hospital	2 (100.0)	2
NGO/FBO HC	14 (100.0)	14
Corporate hospital/clinic	2 (100.0)	2
Total	34 (89.4)	38

HIV patients who have follow ups in the private facilities are regularly screened for TB depending on their TB status.

Table 54: Screening of HIV patients for TB by type of facility, 2018

	Facilities providing services n (%)	Total number of facilities
Private for-profit hospital	3 (60.0)	6
Private for-profit clinic	13 (92.9)	14
NGO/FBO hospital	2 (100.0)	2
NGO/FBO HC	12 (100.0)	14
Corporate hospital/clinic	2 (100.0)	2
Total	32 (91.4)	35

6.7.6 Preventive Treatment of Persons at high risk of TB

All FBO/NGO and corporate facilities provide preventive treatment for TB (IPT) for high risk cases. In for-profit facilities it is provided in about 33% of hospitals and 63% of clinics. All of the facilities providing preventive treatment services use national guidelines for their activities and received trainings by MOH and partners. Almost all indicated providing IPT for people living with HIV and under five children with contacts to confirmed TB case.

Table 55: Availability of services for preventive treatment of TB for high risk groups by type of facility

	Facilities providing services n (%)	Total number of facilities
Private for–profit hospital/clinic	2 (33.3)	6
Private for-profit clinic	10 (62.5)	14
NGO/FBO hospital	2 (100.0)	2
NGO/FBO clinic	14 (100.0)	14
Corporate hospital/clinic	2 (100.0)	2
Total	30 (79.0)	38

Key issues

- Majority of facilities providing IPT stressed the problem of frequent stock out of INH.

6.7.7 TB infection prevention and control

Few for-profit clinics have infection prevention and control plan (22%). It is also rarely implemented in those private facilities that diagnosis and refer patients and handle TB sputum specimen. Most of these facilities exercise general infection control activities, not specific to TB. Lack of guidelines and training in TB infection control is one of the main issues that hinder the implementation in private facilities

Other key issues:

- Some private facilities emphasized that the available infrastructure is not adequate enough to provide the necessary space and ventilation required for TB infection prevention and control

- Lack of personal protective equipment
- Some health workers are reluctant to use N-95 mask due to inconvenience

Table 56: Availability of TB infection prevention plan by type of facility

	Facilities providing services n (%)	Total number of facilities
Private for–profit hospital/clinic	5 (83.3)	6
Private for-profit clinic	4 (28.6)	14
For-profit standalone lab	1 (100.0)	1
NGO/FBO hospital	2 (100.0)	2
NGO/FBO clinic	9 (64.3.0)	14
Corporate hospital/clinic	1 (50.0)	2
Total	22 (56.4)	39

6.7.8 Tuberculosis Drug Supplies and Management

All private facilities have pharmacy. The TB treatment facilities receive free drugs from MOH and are required to provide free treatment and regular/monthly reporting to MOH. These facilities stock and dispense first line anti-TB drugs only.

Standalone pharmacies/retail pharmacies do not stock or dispense anti TB drugs and are not engaged by MOH to do screening and referral of TB cases. Almost all see coughing patients and treat them with different types of cough syrups and antibiotics. Some claim that they advise these patients to go to government facilities or other private facilities if treatment is thought to be unsuccessful after multiple visits.

6.8 Coordination, communication and advocacy

6.8.1 Coordination of PPM

Mechanisms for coordinating private sector engagement in TB are not in place. The NTP has no focal person to lead the engagement of private health sector; there is no PPM secretariat or unit and no platform through which NTP and

private health sector can hold consultations. NTP itself has inadequate staff to engage private healthcare providers. For instance, all NTP staff except 2 are funded by donors. The programme also has inadequate no funding which limits full scale engagement of the private sector.

6.8.2 Advocacy for PPM

The NTP strategic plan includes activities for strengthening public private partnerships. However, as observed earlier, implementation is affected by inadequate funding.

6.8.3 Collaboration with MOH

There has been a long-standing collaboration between MOH/NTP and private sector in TB with the exception of retail pharmacies.

The MOH/NTP in collaboration with development partners provides the following for collaborating private facilities: free TB drugs, free TB diagnostic services for referred patients, trainings, mentorship, supportive supervision, national guidelines, and recording and reporting tools. The private facilities are in return expected to provide quality services and regular reporting.

Table 57: Collaboration between MOH and private facilities

Type of facility	Collaborating facilities n (%)	Total number of facilities
Private for-profit hospital/clinic	16 (80.0)	20
Private for-profit pharmacy	0	15
Private for-profit laboratory	0	1
NGO/FBO hospital/HC	16 (100.0)	16
Corporate hospital/clinic	2 (100.0)	2
Total	35 (64.8)	54

Following are summaries of opinions and suggestions of health care workers in sample private facilities. We applied the following general parameter to analyse the qualitative responses: few means less than 25% of the response; some means between 25-50% of the response; most means above 50% of the response.

Challenges of working with MOH

Some	• Shortage of sputum collection bottles/pouches • Due to lack of continuity of training, some health care workers are left out to get update on current development in prevention and care of TB
Most	• Stock outs of TB-Drugs, INH in particular, and reagents • Delay in turnaround time for laboratory results due to slow sample transportation system and paper based reporting.

Key incentives or advantages to work with MOH/NTP (for collaborating facilities)

- Most consider getting free drugs, capacity support from MOH, such as training, supportive supervision and guidelines as key incentives to work with MOH
- Providing services close to the community and to those who prefers getting services at private settings was mentioned by most as key incentive to work with MOH.

Reasons of non-collaboration with MOH/NTP and perceived benefits for future collaboration (for non-collaborating facilities)

Most of the non-collaborating facilities do not know why they are not collaborating with MOH/NTP in TB. However, few of the for-profit clinics want to have collaboration and have already applied for accreditation. The retail pharmacies have expressed their interest for collaboration in the future.

The perceived benefits/advantages for collaboration with MOH

Few	• To provide the community with complete services, because the facility is providing HIV services
Some	• Increased access and coverage of TB services as private facilities are widely spread and mostly found closer to the community.
Most	• Getting up to date knowledge on prevention and care of TB • Most would agree that the collaboration will enhance the service quality and standardization, and ultimately benefit the patient

Concerns/challenges for future collaboration with MOH (for non-collaborating facilities)

Few suggested that patients visiting private facilities are wide spread, hence this makes tracking of patients for contact and defaulter tracing very difficult

The needs of private facilities for collaboration with MOH

Private facilities that are collaborating with the MOH and those that are interested to collaborate have expressed what they need form MOH as follows:

Few	• Financial incentives/risk allowance for TB staff • Support from CBOs for contact and defaulter tracing • Telephone/cell phone and air time to track contacts and defaulters • Support for infrastructure expansion, logistical support for transport, especially in FBO facilities • Focal person for TB in the facility and placement of screening clerks at the facility (in FBO/NGO facilities)
Some	• Refresher trainings • E-based data processing and reporting, including computer/tablets • Positive attitude towards private sector • Human resource support for data handling

Most	• Training • Regular supportive supervision and monitoring • Guidelines, recording and reporting tools • Consistent supply of anti TB drugs, diagnostic and infection control equipment and consumables depending on needs

Contribution of the private sector

Following are the suggestions by private providers on what can they can contribute for the collaborative efforts between government and private facilities:

Few	• Health education, community mobilization and outreach services • Screening for TB
Some	• Provide quality services to benefit the community • Data capturing and reporting • Allowing facility staff to attend trainings
Most	• Human resource, infrastructure, space and time

"We want to provide comprehensive services.... We have been providing HIV services for so long.....it is convenient for the patient and improve service uptake and effectiveness when both HIV and TB services are provided under one roof."

For-profit clinic owner

Comments and recommendations

Few	• A private health facility should be given equal treatment as public facility
Some	• Since training are usually provided for nurses, it has become a challenge to convince doctors to follow new protocols • A health care worker shouldn't do too much paper work, she/he has to focus on patient care • Help from MOH in contact and lost to follow up tracing • Regular supportive supervision and mentorship • Some FBO facilities stressed the need for more staff, focal person on TB and TB diagnostic equipment like Gene-Xpert and X-ray machine

"I am happy that MOH has come to us. This shows we are joining hands to fight TB ..... I am hopping the best out of this study."

Staff from private facility

6.9 Risks

There is no major risk in engaging private healthcare providers. Low level risks include the loss of patient at referral stage between private and public sector, poor monitoring of private healthcare providers and weak capacity on the part of government to ensure quality TB services. Key informants observed that not-engaging private healthcare providers poses a higher risk compared to engaging them. To mitigate any risks, there is need to strengthen the referral system between private and public sector TB sites and strengthening monitoring of private healthcare providers.

6.10 Monitoring and evaluation

The NTP has in place a national M&E system for collecting and reporting TB data at all levels. Data is generated at

health facilities using standard data collection tools; data tools for collecting data have been provided to health facilities and these include registers, daily tally sheets and reporting tools. Facilities report to the district level where reports are consolidated. District data clerks capture facility data into DHIS tool. DHIS data is available for access at district level by district information officers, programme staff and the district health officers while the same data is also accessible to national level NTP managers.

Use of data: TB data is used at facility level by health centre committees to assess how patients utilise services; at district level, TB coordinators and the district health teams review the performance of the TB programme while at national level, data is shared through joint review meetings, TB technical working group meetings and donors supporting the programme.

Currently, NTP is piloting a e-register system in 45 public health facilities to improve the capture and management of patients' data at facility level. The e-register will feed into the DHIS.

This M&E system covers both government and CHAL health facilities. NGOs data is also not disaggregated because they work at community level and the DHIS has no community level reporting tool. Data from community level is included in the facility data. Most for-profit healthcare providers do not report and those who report have a service level agreement with MoH. There is also no data from private pharmacies and traditional healers.

6.11 Opportunities and Recommendations for engaging private health sector in TB control

(i) Regulatory environment

- In the absence of a regulatory body, strengthen the MoH directorates (quality assurance, pharmacy and family health) to provide oversight and monitor how programmes are engaging the private sector
- Build the capacity of MoH and Dentists, Pharmacies and Medical Council of Lesotho to monitor compliance to regulations
- Review and establishment of clear legislation and regulations for healthcare providers including those in the private sector
- Support NTP to extent quality assurance and monitoring of programme specific regulations to private healthcare providers

(ii) Model of engagement

- Establish a model of engaging traditional healers in TB screening, referral and patient support. This includes involving traditional healers in DOTS.
- Use of accreditation (learning lessons from HIV programme) to ensure provision of quality TB services and also to expand involvement of for-profit healthcare providers
- In the mining sector, upgrade health centres around the mines to handle TB screening and provide other services and support large mines to upgrade their laboratory facilities to conduct TB diagnosis.
- Establish a mechanism for engaging pharmacies in TB control through training, providing them with referral tools and collecting from pharmacies in presumptive TB cases referred

(iii) Incentives and enablers

- Enhance non-financial incentives for involvement of private healthcare providers in TB to promote sustainable engagement

(iv) Financing

- Develop a model of engagement with private healthcare providers to have government provide free TB drugs and have access to low cost diagnostic facilities in exchange to reducing cost of TB treatment. This is critical because the Government has no plans to develop a national insurance scheme.

(v) Capacity building

- Develop and implement a comprehensive capacity building programme for for-profit healthcare providers, pharmacies and traditional healers

(vi) Provision of TB services by private health providers

a) Early diagnosis of TB: TSRS, capacity of NTRL,

- Strengthen the NTRL capacity to expand its EQA coverage and conduct all forms of DST
- Strengthen the TB sample transport system to improve result turnaround time for early diagnosis and DST in private facilities that depend on public lab facilities.
- Assess existing general labs in private sector for feasibility of upgrading any of the labs to carry out TB diagnosis
- Strengthen lab capacity in hospitals conducting TB testing for private healthcare providers. Increased capacity will be required especially if TB services are scaled up in private health facilities.

b) TB treatment

- Improve the management of childhood TB in private healthcare facilities through training, dissemination of guidelines and systematic screening of contacts of TB index cases including children at risk of TB
- Improve TB case notification through extending the e-register data management system to private healthcare providers and improving supportive supervision. In addition, provide feedback to private healthcare providers on TB data to encourage reporting.
- Engage non-treatment private facilities to conduct TB screening and referral

c) Systematic screening of contacts and high risk groups

- Scale up systematic screening of contacts through creating linkage between for profit private healthcare providers and community health care workers and local CBOs to complement use of phone calls
- Sensitise not for profit and for profit private healthcare providers to screen high risk groups for TB, disseminate guidelines and data collection tools to these healthcare providers
- Expand health education and counselling activities in private settings, using IEC materials and job aids to enhance screening of contacts and high risk groups. .

d) Preventive treatment of persons at high risk of TB

- Support for-profit private healthcare providers to provide preventive TB treatment through uninterrupted supply of drugs and relevant guidelines

e) Infection control

- Develop and disseminate guidelines for TB infection control to private health facilities and assist them developing infection control plans
- Train private for-profit facilities on infection control and consider providing them with personal protective equipment and extent monitoring of infection control to these facilities

(i) Capacity building for NTP to engage private sector

- Commitment from GVT to support TB by establishing a proper NTP with government staff.
- Currently, all activities involving the private sector have been donor funded e.g. training PS on guidelines, monitoring visits, training traditional healers

- NTP does not have adequate staff. Most of the staff are funded by donors. Of the 10 staff in NTP, only 2 are funded by government
- NTP requires capacity building – human and financial resources. NTP is currently understaffed and most staff are donor funded
- Private healthcare providers need close monitoring and this will require additional capacity in the NTP

(ii) Monitoring and evaluation

- Revisit the agreement/licensing (that allows then to open the facility) MoH has with private practitioners need to be reviewed, especially to strengthen reporting compliance
- Do this with the support of the person responsible e.g. DG or Director Clinical Services
- Explore opportunities for extending the piloting e-register to private healthcare providers to address bottlenecks private healthcare providers face in reporting. This will require providing healthcare providers with computers, training, data clerks etc. taking a lesson from HIV programme which has provided private healthcare providers with clerks to collect data.

(iii) Risk management

- Strengthen the referral system from private healthcare providers to public sector TB sites
- Extent monitoring and support supervision to private healthcare providers

Section 7: Conclusions and recommendations

7.1 Conclusions

Regulatory Environment

1. Legislation and regulations

a) Although the regulatory environment for healthcare providers in the four study countries varies, weak capacity to enforce or monitor compliance with regulations is common to all study countries. Regulatory bodies, whether autonomous or MOH directorates have inadequate funding from government and inadequate number of staff. For instance, two countries, Malawi and Zambia, have a well-structured legislation and regulations for licensing and monitoring public and private healthcare providers; and semi-autonomous

regulatory agencies established by law to regulate healthcare providers except traditional healers. However, these regulatory agencies have inadequate staffing, especially inspectors, and also receive inadequate funding from government. In Mozambique and Lesotho, legislation and regulations for healthcare providers are inadequate and the institutions in place to register and license private healthcare providers and monitor compliance with regulations have inadequate capacity. In both countries, licensing of private healthcare providers is done by relevant directorates of MoH. In Mozambique, licensing has been decentralised to provincial level yet capacity (staffing and financial resources) for oversight from national level is inadequate.

b) Regulation for mine health and safety: The regulatory environment for mine health and safety, more specifically occupational health, is inadequate in the study countries except for Zambia. Zambia has in place clear regulations for mine health and safety and the management of occupational health including TB and silicosis; and institutions are in place to operationalise the regulations. Mining companies are aware of the legislation and those interviewed are taking action to comply with regulations. Progress made in Zambia would be attributed to donor support as government funding for the regulatory bodies is inadequate. In Malawi, Mozambique and Lesotho, a donor funded initiative is also in place to strengthen mine health and safety regulations and capacity of Ministries of Labour (inspectorate department) to improve compliance to regulations.

c) Regulation of traditional healers: In all the countries, there is no formal legislation regulating traditional healers or traditional medicine. However, there are coordinating bodies in place focusing on holding meetings for members to discuss issues of their interest and interacts with MoH in various health matters. These associations vary in capacity with the associations in Malawi and Zambia having secretariats, which are poorly staffed and funded; the association in Lesotho is not functioning at national level and district level association work on their own; while coordination of traditional healers in Mozambique is done by the MoH directorate of traditional medicine, but the associations of traditional healers themselves are fragmented. NTPs will have to work with these associations given that they provide the avenue to reach individual traditional healers.

2. Self-regulation

a) Professional bodies for medical practitioners and for industry (such as chambers of mines) are expected to promote self-regulation. However, these bodies prioritise the interest of their members and provision of continuous professional development rather than strengthening compliance to regulations through instruments like the code of conduct.

3. TB related regulations

a) In all countries, TB related regulations are clearly set out in the TB guidelines. However, NTPs prioritise monitoring of use of the guidelines in public and FBO/NGO facilities than in for-profit private healthcare providers. Dissemination of TB guidelines to for-profit private healthcare providers is not as coordinated as it is for public healthcare providers. Instances where NTP monitors regulations into for-profit private healthcare settings are when it has an engagement with these providers e.g. providing free drugs and having a service agreement. Where such engagement exists for-profit private health care providers are trained on TB guidelines by NTPs. Another challenge facing TB related regulations is the capacity of NTPs to monitor compliance and capacity of NTRLs to monitor quality of laboratory services. NTPs and NTRLs have inadequate staff and resource to effectively monitor the public health facilities and an additional responsibility to monitor for-profit healthcare providers and informal private sector stretches their capacity even further.

Models of engagement

Models of engagement of private healthcare providers vary by type of private sector provider and country. Of note is that some models are well established in all countries and some are emerging. There are lessons to be learnt from each country and for the region. Understanding the private health care provider need is important to keep the relationship with TB patients beyond TB care.

1. Modes of engagement for faith-based organisations healthcare providers

a) The model of engagement with faith-based healthcare providers (managed by Christian health associations) is well established. This model is based on agreements signed between Government and the national Christian health associations whereby government funds human resources and operational costs of faith-based health facilities and secretariats of these associations in turn for free healthcare services provided according government policies. These facilities therefore operate the same way as public health facilities. This model has been in operation for several decades and has worked largely well except for systemic challenges. It is important to note, of the four study countries, only Mozambique has no faith-based healthcare providers and this model is not applicable.

2. Engagement of for-profit healthcare providers

a) Evidence of good practice models of engagement of for-profit healthcare providers have emerged in the study countries: the fee for service model in Lesotho, Memorandum of Understanding (MoU)/accreditation based engagement in Malawi, agreements with large hospitals in Maputo in Mozambique; and engagement and registration of selected hospitals and large clinics as TB notifying centres in Zambia. Key features of these models include government providing free drugs, diagnostic equipment, or paying for TB services offered by private healthcare providers. The overriding purpose is to reduce cost of providing TB services, improve quality and reporting.

b) For-profit healthcare providers engagement in TB services is determined by their capacity: Models of engagement based on capacity include screening and referral of patients, screening and referral of sputum for testing then treatment of patients at private healthcare facilities, diagnosis and treatment, and diagnosis and referral. Common among private healthcare facilities that they do not provide MDR-TB treatment services either due to government policy to have these treated in specific centres or lack of capacity.

3. Mode of engagement for pharmacies

a) Engagement of private pharmacies in TB control is in its infancy. In Malawi and Zambia, donor funded pilot projects are in place training pharmacies on TB screening and providing them with presumptive TB registers and referral tools. Selected pharmacies, especially in Malawi, are already screening and referring patients. These being a donor funded initiative, sustainability will be a challenge unless NTP mainstreams the initiative. In Mozambique and Lesotho, pharmacies are not yet engaged on TB control.

b) Only Zambia has pharmaceutical manufacturers. The other countries do not have such capacity in country. However, all countries, including Zambia, import TB drugs because the local manufacturers are not certified to manufacture TB drugs.

4. Traditional healers

a) There is consensus among policy makers and NTPs in the four countries on the need to engage traditional healers in TB control given that a large number of patients seek services from them. Traditional healers

are also at risk of contracting TB, as was the case in Zambia and Lesotho. Engagement of traditional healers in TB control varies from well-established model in Mozambique to almost no engagement in Lesotho. Mozambique has a well organised system for training traditional healers, providing them with referral tools and involving them in patient support and tracking those lost to follow up. In Malawi, a pilot project is in place training traditional healers on TB screening and referral. In Zambia, the training of traditional healers on TB control has also started through donor funding. Lesotho has not established formal engagement with traditional healers but some district traditional healer associations are engaging district health teams to have their members trained on TB and other diseases. In all countries, the relationship between healthcare workers and traditional healers is negative. Engagement with traditional healers offers an opportunity to scale up early TB case detection and finding of missed TB cases.

Incentives and enablers

a) Not for profit healthcare providers: Incentives and enablers for FBO healthcare facilities in Zambia, Malawi and Lesotho are well defined and comprehensive. Government provides financial incentives (human resources, operational and capital costs) and non-financial incentives which include involvement of FBO association in NTP (and overall health) policy, planning and programming processes.

b) For profit healthcare providers: Comprehensive incentive and enabler schemes for for-profit healthcare providers implemented at scale (as is the case with FBOs) is not yet in place. However, incentives are provided in targeted approach. Common incentives are inputs of free TB drugs to private healthcare providers in exchange for free services. In Malawi, government, through donor funding, have started providing laboratory equipment to selected private health facilities.

c) Incentives for pharmacies to engage in TB control have not been established. Engagement of pharmacies in Malawi and Zambia has recently started.

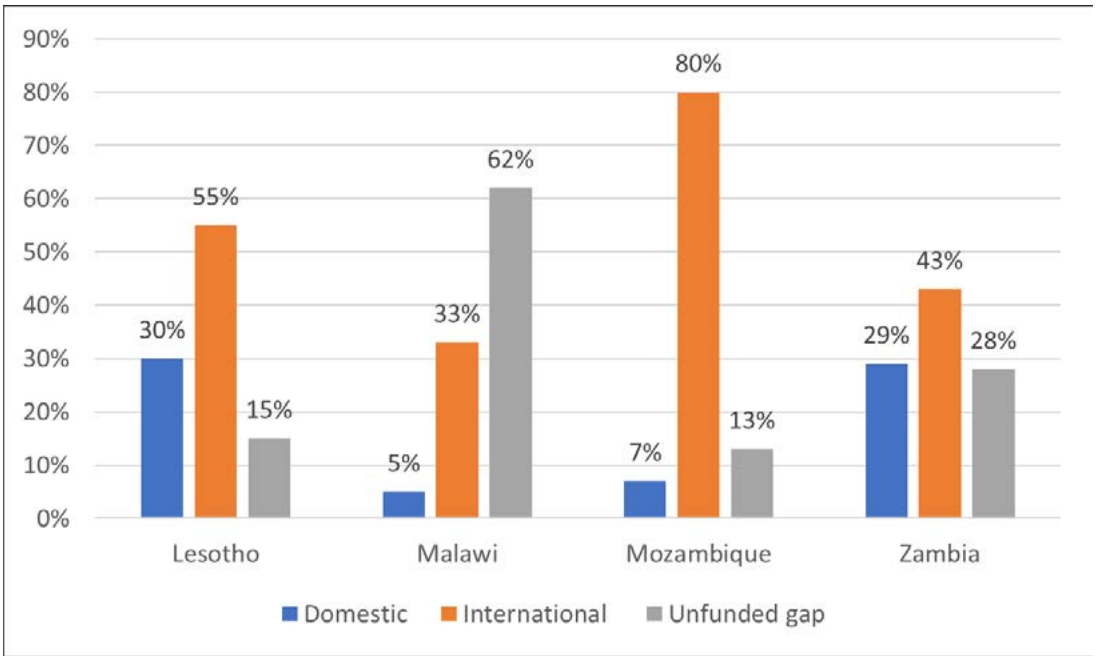
d) Incentives for traditional healers, where they are being engaged in Mozambique and Zambia, are non-financial – training on TB and other health issues, recognition by government which increases their credibility in the community and hence they receive more patients.

e) Private healthcare providers observed that non-financial incentives could motivate them to collaborate with government. These include the fact that participating in a government programmes improves their image and reputation and leads to increased number of patients hence increased revenue.

Financing

a) The four countries covered in this study have a funding gap of between 13% and 62% for the national TB programme. A high proportion of funding is from development partners (ranging between 33% in Malawi to 80% in Mozambique). Domestic funding is lower at less than 30%. Given this funding landscape, there is a need for NTPs to advocate for external funding programmes to integrate private sector engagement.

Figure 15: Funding for National TB Programme, 2018 (WHO 2019 Report)



b) Financing for patient seeking services from private healthcare providers is from two main sources – out of pocket or private insurance. However, patients in low income urban areas and some rural areas visit private healthcare facilities charging low fees but also providing quality un-assured services. These facilities are the first point of call due to distances to public health facilities among other reasons.

c) Government and donors subsidised services: This is the most common model for government (and donors) financing of TB services in private healthcare facilities. Government provides free drugs and other inputs in return for free TB services, except for charges for consultation and other auxiliary services. In this case, patients do not pay or pay a minimal fee.

d) National insurance scheme: Two countries – Zambia and Mozambique have a plan to introduce a social insurance scheme to finance healthcare including TB. This scheme offers an opportunity to expand TB services in the private sector. Lesotho and Malawi have no plans to introduce social insurance.

e) The most viable approach to expanding TB services in the private health sector is the provision of free drugs and other commodities (e.g. lab reagents, microscope) to selected private healthcare providers with capacity to engage in TB diagnosis and treatment. This approach reduces cost for the patient and will allow those in low-income areas where private healthcare providers are the closest or first point of contact to receive services.

Capacity building

a) Capacity building for not-for-profit healthcare providers (FBOs and NGOs) is integrated into the capacity building initiatives for public healthcare providers. FBO/NGO healthcare staff attend similar trainings with those from government. The challenge tends to be in the selection of individuals to attend training where government healthcare workers are given priority over those from FBOs and NGOs. This is an operational rather than a policy issue.

b) Capacity development for for-profit healthcare providers on the other hand is not based on a comprehensive capacity building programme. For profit healthcare providers collaborating with NTP in TB are often trained while those not engaged have limited training opportunities. TB guidelines are also disseminated to those engaged with NTP and to a limited extent those not engaged also receive the guidelines.

c) Pharmacies have a role to play in screening and referral of patients and in ensuring good dispensing practices for cough syrups and antibiotics. Malawi and Zambia have pilot projects training pharmacies on how to engage in TB control; while Mozambique and Lesotho have not started training private pharmacies.

d) Traditional healers training is comprehensively implemented in Mozambique while Zambia and Malawi have instituted pilot project for training them. Lesotho is yet to start any training programme for traditional healers on TB control.

e) Limited human resource and diagnostic capacity of NTRLs and allies is a challenge in expanding coverage and quality of TB diagnosis in private facilities.

Coordination, collaboration and advocacy

a) Mechanisms for coordination of private healthcare providers varies from country to country. Malawi has in place a PPM secretariat and regional focal persons coordinating engagement with private healthcare providers (hospitals and clinics, pharmacies and traditional healers). A PPM action plan is also in place and being implemented. Zambia has a focal person for PPM but limited support from regions and other NTP units in engaging with private healthcare providers. Mozambique and Lesotho have no focal person for PPM and it is not clear where the responsibility for coordinating private healthcare providers resides.

b) NTPs capacity to engage private healthcare providers effectively is weak. NTP staff have not been oriented adequately on how to engage private health sector. NTPs have inadequate staff hence engaging private health sector stretches already limited capacity and financial resources.

d) The willingness for private healthcare providers to collaborate with NTP/MOH on TB control exists. 80% of for-profit clinics in Lesotho, 12% in Zambia, 50% in Malawi (and 100% of large hospitals in Malawi); and none in Mozambique reported that they collaborate with MoH on TB service delivery. However, almost all for profit healthcare providers interviewed indicated willingness to collaborate with MoH for a variety of reasons – serving the community, recognition and image building.

Monitoring and evaluation

a) NTPs have M&E plans and systems in place. Tools (registers and reporting tools) are also in place. The system is mainly implemented in public and FBO health facilities and to a less extent in for profit facilities. In Malawi, selected TB notifying for-profit facilities have been provided with TB registers and reporting tools; those referring patients have presumptive case registers and referral forms. In Zambia, notifying facilities are

provided with TB registers and reporting tools. The same in Mozambique although this is limited to few large hospitals in Maputo. In Lesotho private healthcare facilities engaged in TB service delivery indicated that they report but data was not available in MOH.

b) There is limited progress applying digital health tools to facilitate case management, reporting/notification and TB specimen referral system in both private and public sectors. Digital health tools will help to monitor progress and build accountability for public and private providers. Countries are on early stage of using online systems to register and do the follow up of patients.

Risks

a) No major risks in engaging private healthcare providers were identified in the four countries. A few low risks identified include the potential of private healthcare providers receiving free TB drugs and charging patients and non-reporting. Non-engagement of private healthcare providers in TB control is viewed by all countries as a risk in itself because patients continue to seek services from private sector whether government engages them or not. This is likely to expose such patients to unassured quality of services. The recommendation to extend monitoring and supportive supervision to private sector will largely address most of the potential risks. Countries could also ensure a code of conduct is included in any agreement signed with the private sector.

7.2 Strategic recommendations

Recommendations specific to each country have been provided in respective sections. This section provides overarching strategic recommendations that cut across all countries.

In the process of engaging and scaling up Private Sector Participation in TB Control, the performance of the TB Program in each country need to be strengthened and keep building the path for financial sustainability

	Timeline of implementation	Ease of implementation	Potential partners
(i) Regulatory environment			
a) Strengthen the capacity of NTPs to monitor compliance with TB related regulations in for-profit healthcare settings including pharmacies. There is need for developing detailed guidelines for infection prevention and control (IPC) in some countries such as Lesotho, Zambia and Mozambique.	Short to medium term	Difficult	SATBHSS project and other development partners
b) Given the huge financial sources required to strengthen regulatory agencies, prioritise establishing or strengthening alternative mechanisms for ensuring compliance with regulations such as use of professional bodies, accreditation systems and social franchising	Short term	Less difficult	SATBHSS project and other development partners
c) Support (technical and financial) countries to improve legislation/regulations for healthcare providers– mainly Lesotho and Mozambique.	Medium to long term	Difficult	SATBHSS project
d) Support countries to develop legislation/ regulations for traditional medicine to enhance regulation of traditional healers	Medium to long term	Difficult	SATBHSS project

ii) Models of engagement			
a) Support a regional conference on good practices in engagement of for-profit healthcare providers, private pharmacies, traditional healers and stand-alone laboratories to serve as a knowledge exchange forum and for countries to prioritise one or two models of engagement that can be implemented in their context. A post conference action plan can be developed for each country. Existing other modes of engagement should continue alongside the best practice.	Short term	Less difficult	SATBHSS project
b) Support exposure visits to other high burden countries to facilitate experience sharing and adapt models of engagement to the Southern African context.	Short term	Less difficult	SATBHSS project
(iii) Incentives and enablers			
a) Establish cost-efficient financial and non-financial incentives relevant to different private sector healthcare providers – for profit facilities, pharmacies, stand-alone laboratories and traditional healers. The incentive and enablers scheme will also depend on the type of mode of engagement a country chooses to pursue.	Medium term	Difficult	SATBHSS project and other development partners
(iv) Financing			
a) Prioritise the provision of free input (paid for by government/ donors) to for-profit healthcare providers to reduce cost for patients especially for for-profit clinics in low income urban areas and rural areas.	Short to medium term	Difficult	SATBHSS project and other development partners

b) Provide countries developing social insurance schemes with technical support given that social insurance is likely to benefit all disease programmes including TB.	Short to medium term	Less difficult	SATBHSS project
(v) Capacity building			
a) Support countries to develop a comprehensive need-based capacity development programme for all types of private healthcare providers and use approaches appropriate to private sector to deliver capacity building. Technical aspects that require capacity building have been identified in the analysis of private healthcare providers TB services delivery in this study.	Short to medium term	Difficult	SATBHSS project and other development partners
b) Strengthen the human resource and TB diagnostic capacity of NTRL and its allies to improve coverage and quality of TB diagnosis in private facilities.	Short to medium term	Difficult	SATBHSS project and other development partners
(vi) Coordination, collaboration and advocacy			
a) Develop or update PPM action plan for each country taking into account findings of this study and prioritising actions for engaging private healthcare providers	Short term	Less difficult	SATBHSS project
b) Build the capacity of NTPs to engage private healthcare providers effectively, based on the PPM action plan referred to above. This includes additional financial and human resources and training of NTP staff.	Medium to long term	Difficult	SATBHSS project and other development partners

(vii) Monitoring and evaluation			
a) Review national M&E systems in place and develop a system tailored to the private sector. This will ensure the system, which is designed for public health facilities, is not transposed to private healthcare providers as is.	Medium to long term	Difficult	SATBHSS project and other development partners
b) The use of digital technologies to facilitate case management, reporting/notifications and TB specimen referral system should be further explored, accelerated, improved and scaled up nationwide in an integrated manner across the health system (public and private)	Medium to long term	Difficult	SATBHSS project and other development partners
(viii) private sector recognition/ award for excellence			
a) Design private sector recognition/ award for excellence in supporting TB control	Medium to long term	Difficult	SATBHSS project and other development partners

An excellence award for private healthcare providers engagement in TB service delivery should be based on factors that do not discriminate size or type of health facility. It should also be based on measurable factors and should have a clear purpose. It should also be based on factors within the control of the healthcare provider. In settings where the excellence award scheme is being piloted or implemented in public or private sector, exploring the lessons learned could be of benefit in the design. The following factors are recommended for the design of excellence award.

a) Purpose: the purpose should be to motivate private healthcare providers to provide the highest quality of TB services. The aim is to take facilities to highest level of standards in terms of quality of service irrespective of size of the facility.

b) Criteria for award: Excellence should be determined based on four aspects:

- Human resources/ personnel managing the facility: adequate skill mix and capacity, depending on the required standard set by regulators/MOH/NTP based on type and size of facility

- Environment or infrastructure at the facility, including availability of infection control plan, depending on the required standard set by regulators/MOH/NTP based on type and size of facility
- Methodology of providing services that meets the highest standards of TB care
- Reporting (timely, complete, and accurate)

e) A tool and procedures for assessing these four criteria can be developed. Assessment should be periodic and not one-off. Human resource, financial and technical capacities of NTP and other bodies involved need to be strengthened to ensure effective evaluation of the award.

f) Private healthcare providers can be requested to enrol on the excellence award scheme (opt-in) to generate buy-in or commitment to the award. The type of incentive for facilities to opt in shall be determined based on evidence and local context.

g) The private sector (thought private sector associations) could contribute to or be involved in the the design and administration/management of the award.

This approach was preferred by most key informants. The approach of using TB indicators to assess excellence was discouraged due to too many extraneous factors. It was also observed that a facility that meets the four criteria should be able to achieve TB outcome indicators e.g. treatment success but other factors hindering achievement of these outcomes may be outside the control of the facility. Secondly, it was observed that the excellence award can be step-wise. At the initial stage, the recommended approach can be adopted to improve quality of services before the next step of excellence award based on outcomes can be adopted.

Annex 1: Key informant interview guide

Key Informants Interview Guide	
Key informant	**Key questions**
MoH policy makers	- What role is the private sector playing in the provision of TB services? - How is the government facilitating or supporting private sector to engage in TB control? - What are the challenges of engaging private sector in TB service delivery? - How are the TB services offered by private sector financed? - What are the risks of engaging private sector in TB control? - What opportunities exist to strengthen private sector role in TB control?
NTP staff, PPM steering committee or technical working group members, development partners	1. What are the types of private health care providers in the country? (large hospitals, corporate (mining companies) clinics, individual practitioners, less qualified non-formal practitioners, pharmacies and laboratories) - Is there data on the volume/number of providers in different categories - How are they distributed across the country? 2. What type of TB services do private providers offer? 3. How are the private providers regulated? - With regard to: · Registration with relevant authorities · Certification for TB services · Accreditation to offer TB services · Notification of TB cases · Access to anti-TB drugs · Prescription and dispensing TB drugs · Infection control - What are measures taken to enforce the regulations - What challenges do private providers face in implementing regulations? - How have regulations contributed to improvement of quality of TB services provided?

	4. Does the NTP have formal arrangements for engaging private providers in TB service delivery? If so, - What role does the NTP play? - What is the role of private providers? - Is there an intermediary organisation? - Are there any scheme/model in place for engaging private providers? - How is it implemented? - What have been the successes of the NTP engagement with private providers? - What challenges does NTP face in engaging private providers? 5. How is the national TB programme managing TB service provision in the private sector? - What measures are available to involve all care providers in TB care and prevention? - What is the extent of involvement of private providers in TB care and prevention? - What measures are available to get notifications of TB cases from all private providers? - What is the availability of national guidelines in TB care and prevention? - What is the processes for involvements of private providers in the development of guidelines/protocols/algorithms? - What strategies are used to ensure that private providers are using/ follow national guidelines? - What are the quality assurance mechanisms put in place to follow through quality of care in private facilities? - What is the capacity of private providers in TB care and prevention? - What capacity building support is available? 6. What incentives are provided to private sector to engage in TB service delivery? 7. How is the private sector involvement in TB service delivery financed?

	- Who is funding the activities for coordinating and monitoring private providers? - How are the TB services provided by private providers paid for? - What are the challenges in financing services provided by private providers? 8. Does the NTP have a communication and advocacy strategy for engaging with private providers? - What type of information is shared with private providers? - What are the challenges in communicating with private providers? - What issues is NTP advocating for? What have been the results of the advocacy efforts? - What are the risks of engaging private providers in TB service delivery? - How can the risks be mitigated? 9. How is PPM monitored and evaluated? 10. What are the lessons learnt from engaging private providers in TB control? 11. What are the opportunities for engaging private providers in TB control?
National TB Reference Laboratory	1. What is the extent of involvement of private providers in TB diagnostics? 2. What measures are available to get notifications of TB cases from diagnostic facilities? 3. Describe the use diagnostic algorithms by the private sector 4. What is the capacity of private providers in TB diagnosis and DST? 5. What are the measures being applied to ensure quality of diagnostic services? 6. Are private providers included in the National EQA network? 7. What are the measures being implemented to ensure accessibility of DST for patients in private facilities? 8. Does the national TSRS cove private facilities, especially for DST?

	9. Does NTRL/MOH have TB lab strategic plan? Does it include or address engagement of private providers? 10. What are the opportunities in private sector to improve early diagnosis of TB including universal DST? 11. What are the main challenges? 12. What are the key lessons learned? 13. What can be done to improve the engagement of private providers in in early case detection and DST?
Regulatory agencies	1. What are the types of private health care providers in the country? 2. What measures is the agency taking to ensure registration of private health care providers in the country? 3. What is the system for enforcing regulations among private health care providers? 4. What are the achievements of the agency in strengthening regulations of private health care providers? 5. What opportunities for regulations offer in expanding access to health care services? 6. What are the major capacity gaps of the agency? 7. What challenges is the agency facing in regulating private health care providers?
Professional associations	1. What is the membership of the professional association? - How many members does the association have? - How are they distributed across the country? 2. What services does the association offer to the members? 3. What role, if any, is the association playing in ensuring quality of services provided by its members? 4. What are the major capacity gaps of association? 5. Are the members involved in provision of TB services? - What type of services do they offer? - What challenges do they face in offering TB services?

	6. What are the major risks in engaging private health care providers in TB service delivery? How can these risks be addressed? 7. What can be done to engage private health care providers in TB service delivery?
Intermediary organizations	1. What are the institutional arrangements between NTP (government) and private health care providers in which the organisation is involved? 2. What is the role (services) of the intermediary organisation in these arrangements? 3. What roles are NTP and private healthcare providers playing? 4. How is information shared among all key players? 5. What type of TB services are private providers offering under this arrangement? 6. Who is financing the costs of the intermediary organisation 7. How are the costs for TB services offered by private health care providers financed? 8. Are there any incentives provided to private health providers? If yes, what are the incentives? 9. What are the capacity gaps among the key players? NTPs, Intermediary Organisation and Private healthcare providers 10. What have been the achievements of these institutional arrangements? 11. What factors have facilitated the achievement of these results? 12. What are the key risks in engaging private providers in TB service delivery? How can the risks be mitigated? 13. What are the lessons in engaging private healthcare providers in TB service delivery?
Private health care providers	Private providers offering TB services 1. What type of TB services do you offer? 2. For corporate facilities: What work place TB programme is in place and what services are offered? 3. What are the regulations in place for the provision of TB services?

	- With regard to: a. Registration with relevant authorities b. Certification for TB services c. Accreditation to offer TB services d. Notification of TB cases e. Access to anti-TB drugs f. Prescription and dispensing TB drugs g. Infection control - How are the regulations monitored and enforced? - What measures have you taken to comply with the regulations? - What are the challenges in complying with the regulations? - How have regulations contributed to improvement of quality of TB services provided? 4. Do have any arrangements or agreement with NTP to provide TB services? If yes? - What is your role in the arrangements? - What role does the NTP play? - Is there an intermediary organisation? - Is there any scheme/model for engaging in TB service delivery? How is it implemented? - What have been the successes of engaging with the NTP/ government in TB service delivery? - What challenges are you facing in engaging with the TB programme? 5. What incentives are provided to private sector to engage in TB service delivery? 6. What motivates you to work or collaborate with government in the provision of TB services? 7. Have there been any effort to build private providers' capacity to improve quality of TB services? - What type of capacity building activities have you participated in? - What capacity gaps still exist?

	8. How are the TB services you provide financed - Who is paying for the cost of TB services you provide to clients? - What are the challenges in financing of the TB services you provide? 9. Does the national TB programme share information with you? What type of information is shared? How useful is the information? 10. What are the risks in engaging with the government/national TB programme? 11. What lessons have you learnt from engaging with the national/ government TB programme? 12. What are the opportunities for engaging private providers in TB control?

Annex 2: Questionnaire for private health care providers

STUDY ON OPPORTUNITIES FOR PRIVATE SECTOR PARTICIPATION IN TB CONTROL

Questionnaire for Private Health Care Providers

Instruction for Completing the Questionnaire

The questionnaire is divided into 8 sections based on the components of integrated care and prevention of TB. Please follow the instruction below to identify relevant sections for your response.

Section 1	To be completed by a standalone laboratory or any facility with laboratory services
Section 2-6	To be completed by any treatment facility (corporate/company clinic/hospital, private for profit clinic/hospital, NGO or FBO clinic/hospital
Section 7	To be completed by a standalone pharmacy or any facility with pharmacy services
Section 8	To be completed by all respondents

Background Information

Date of data collection: (m/d/y) _____

Interviewer's Name: _____

Interviewer initial: _____

Country: _____

Facility Name and Type:

Facility Name	
Type of facility	1. Private hospital 2. Private clinic 3. Individual practitioner 4. Private pharmacy 5. Private lab 6. NGO/FBO hospital 7. NGO/FBO clinic or health center 8. Corporate/mine hospital 9. Corporate/mine clinic or health center
Location: Name of selected city/ town	

How long has the facility been operating? _____ Years

For a clinic and hospital: How many inpatient beds does this facility have, if any _____

Name (s) of respondent (s) or those who help in compiling data:

Name	Position	Section (s) that responses are provided

SECTION 1: TB Laboratory Services: Early diagnosis of TB including universal drug-susceptibility testing (DST)

1.1 Does the facility have laboratory?	1. Yes 2. No → **Go to 1.3**

1.2 Availability and technical capacity to perform tests by type of method

Type	**1.1.1 Availability**		**1.1.2 If available: are you bale to conduct this test?**		**1.1.3 If available: is infrastructure adequate?**	
	1. Yes	2. No	1. Yes	2. No	1. Yes	2.No
Conventional light microscopy with ZN staining (CZN)						
Conventional Fluorescence Microscopy (CFM)						
LED fluorescence Microscopy (LED)						
Xpert MTB/RIF (Gene-Xpert)						
TB-LAMP						
Solid culture (SC)						
Liquid culture(MGIT)						
FL-LPA (First line LPA)						
SL-LPA (Second line LP)						

1.3 Does the facility have chest X-ray (CXR)?	1. Yes 2. No

1.4 If microscopy and/or Xpert MTB/RIF is unavailable where do you refer the patient or sample?	1) MOH/NTP 2) other private lab 3) do not refer patients 4) other, specify _____
1.5 What other lab tests do you do/order for TB patients? Please list them	1. 2. 3.

Comments or issues on availability, technical capacity and infrastructure

If TB Laboratory services are unavailable in the facility please move to→and fill-in 1.28, if the facility has laboratory or it is a laboratory facility

1.6 Where do you obtain TB lab commodities/supplies? (Tick that apply)	1. Buy from local market/supplier 2. Buy from international market/supplier 3. MOH/NTP 4. Other, specify_____

1.7 If you obtain TB microscopy, Gene-Xpert, and/or any supply from MOH/NTP, please list them	1. 2. 3. 4.

What conditions are attached to the supply of MoH/NTP commodities?

1.8 What guidelines do you use for the available tests? **(Tick that apply)**	1) National guidelines 2) WHO guidelines 3) Suppliers guidelines 4) None 5) Other, specify: _____

1.9 What algorithms do you use for tests?	1. National algorithms 2. WHO algorithms 3. Both 4. None

1.10 The number of new and relapse patients with suspected TB tested using sputum microscopy or other in the past year (Indicate NO DATA-888, if data is not available) (Write NA-777, if service unavailable)

Year	Number tested
2018	

1.11 How many new and relapse patients were tested using WHO recommended rapid diagnostics (Xpert MTB/RIF) in the past one year (Indicate NO DATA-888, if data is not available) (Write NA-777, if service unavailable)

Year	Number tested
2018	

1.12 Technical capacity to implement drug sensitivity testing (DST)

1.12.1 Are you able to perform First line DST (FL-DST)?	1.12.2 Are you able to perform second line DST (SL-DST)?	1.12.3 Are you able to perform DST on all drugs?
1. Yes 2. No 3. NA	1. Yes 2. No 3. NA	1. Yes 2. No 3. NA
If Yes, list type of test currently in use for FL-DST	If Yes, list type of test currently in use for SL-DST	

If DST is not available, how do you ensure access to DST (using culture/LPA or Gene-Xpert)?

1.13 Number of new and relapse patients who are sputum smear positive (SS+) with access to DST (in the facility or through referral)

(Indicate NO DATA-888, if data is not available) (Indicate NA-777, if not done)

Year	Number of SS+ patients	Number of patients who have DST results using culture or LPA	Number of patients who have DST results using Gene-Xpert only
2018			

1.14 What is the average turn-around time for the commonly used culture (i.e. time from sputum submission to receiving of culture results)?	_____days
1.15 What is the average turn-around time for the commonly used DST (i.e. time from sputum submission to receiving of DST results)	Commonly used method:_____ _____days

Do you have any comment or issue on TB specimen referral system (TSRS)?

How are quality assurance of tests ensured in the laboratory?

1.16 Do you encounter service interruption in the last one year	1. Yes 2. No
1.17 Do you encounter stock outs leading to service interruption in the last one year	1. Yes 2. No
1.18 Do you encounter equipment downtime leading to service interruption in the last one year	1. Yes 2. No

1.18 Provide the EQA/PTS results for microscopy conducted (If result is available, please attach copy of result certificate) (Indicate NA-777, if Microscopy is unavailable in the lab; indicate NO-888 if EQA not done or result unavailable)

2017 result (%)		**2018 result (%)**		**Who provided the EQA?**	**Remark**
1st half of the year	**2nd half of the year**	**1st half of the year**	**2nd half of the year**		

1.19 Provide the EQA/PTS results conducted for GeneXpert (If result is available, please attach copy of result certificate) (Indicate NA-777, if GeneXpert is unavailable in the lab; indicate NO-888 if EQA not done or result unavailable)

2017 result (%)		**2018 result (%)**		**Who provided the EQA?**	**Remark**
1st half of the year	**2nd half of the year**	**1st half of the year**	**2nd half of the year**		

1.20 Provide the EQA result for culture and identification (If result is available, please attach copy of result certificate) (Indicate NA-777, if culture is unavailable in the lab; indicate NO-888 if EQA not done or result unavailable)

2017 result (%)	2018 result (%)	Who provided the EQA?	Remark

1.21 Provide the EQA result for first Line DST (If result is available, please attach copy of result certificate) (Indicate NA-777, if FL-DST is unavailable in the lab; indicate NO-888 if EQA not done or result unavailable)

2017 result (%)	2018 result (%)	Who provided the EQA?	Remark

1.22 Provide EQA results for second Line DST (If result is available, please attach copy of result certificate) (Indicate NA-777, if SL-DST is unavailable in the lab; indicate NO-888 if EQA not done or result unavailable)

2017 result (%)	2018 result (%)	Who provided the EQA?	Remark

1.23 Biosafety

1.22.1 Is biosafety cabinets available [BSCs]?	1. Yes 2. No 3. Not applicable (NA)
1.22.2 Are air handling systems or adequate ventilation in place?	1. Yes 2. No
1.22.3 Do you have un-interrupted supply of personal protective equipment (N95 respirator)	1. Yes 2. No
1.22.4 Do you use national guidelines for biosafety?	1. Yes 2. No 3. Not available

1.24 Do you notify TB cases to MOH/NTP?	1. Yes 2. No
If no why?	
1.25 If yes, how do you notify?	1. e-based 2. Paper based
1.26 Ask to see a notification form	1. Present 2. Absent

1.27 Cases seen in the last one year (Indicate NO DATA-888, if data is not available) (Indicate NA-777, if any specific service is unavailable in the facility)

	2018
1. Total suspected TB samples/patients seen in the year	
2. Total SS+ cases	
3. Total tested using Gene-Xpert	
4. Total RR-TB	
5. Total MDR-TB	

Do you have any other comments or issues on reporting and surveillance of TB?

1.28 Laboratory human resource (technical staff)

Type of technical staff/qualification	Number
1. Lab technologist	
2. Lab technician	
3. Lab microbiologist	
4. Lab hematologist	
5. Other	

1.29 Lab staff training in the last two years

Name of training course	No. of people trained	Year	Training organizer (NGO/ donor, MOH, self-paid, lab/clinic)

1.30 Who pays for TB diagnostic tests? **(Tick that apply)**	1. Patient 2. MOH/NTP 3. NGO 4. Other, _____

1.31 Cost estimates for tests (Indicate NA, if service is unavailable)

Tests/examinations	**Cost per diagnostic**
Sputum microscopy	
Gene-Xpert	
X-ray	
Culture	

Any other comment or issue in lab human resource, capacity building, and cost of services

SECTION 2: Treatment of all people with TB including drug-resistant TB

2.1 Do you provide treatment services to TB patients in your facility?	1. Yes 2. No → **Go to 2.5**
2.2 If yes, do you provide DOTS for all patients?	1. Yes 2. No 3. For some

How do you provide DOTS?

2.3 If you provide DOTS, please provide the number of confirmed/presumptive TB cases under DOTS (new and repeat) in the past one year (Indicate NO DATA-888, if data is not available)

	2018
2.3.1 Number of confirmed/clinically diagnosed TB cases	
2.3.2 Those under DOTS	
2.4 What cases get treatment in the facility? **(Tick that apply)**	1. DS-TB cases 2. RR-cases 3. Some MDR cases 4. All MDR cases 5. XDR cases
2.5 If you are not providing TB treatment services, what do you do when you have a suspected TB patient?	1. Diagnose then refer 2. Refer 3. Other, specify_____
2.6 Where do you refer patients? **(Tick that apply)**	1. Other private facilities 2. Government/MOH health facility 3. Faith based/NGO health facility 4. No referral provided

If you are not providing TB treatment services but refer suspected cases, how do you do the referral?

What do you usually do for a patient with cough?

Do you have any issue or comment on referral linkages and case notifications to MOH/NTP?

If treatment of TB is not provided in the facility please only fill in 2.23, 2.24 and 2.25 only

2.7 If you treat TB patients, what guidelines do you use for management of TB? **(Tick that apply)**	1. National guidelines 2. WHO guidelines 3. None 4. Other, specify_____
2.8 If you follow national or WHO guidelines, have you been trained in using the guidelines?	1. Yes 2. No → **Go to 2.10**
2.9 Which year was the last training	_____
2.10 Do you use fixed dose combination for management of DS-TB?	1. Yes 2. No 3. NA
2.11 Do you use shorter regimen for patients with MDR-TB?	1. Yes 2. No 3. NA
2.12 If the answer is NO for question 2.11, are there any plans for piloting shorter treatment regimens or new drugs (e.g. bedaquiline, delamanid) for treatment of DR-TB?	1. Yes 2. No

If you have a plan for piloting shorter treatment regimens for MDR or new drugs, please describe

Any comment or issue on availability and use of national/WHO guidelines on TB treatment

2.13 Please describe the types of drugs provided and the duration of treatment for DS-TB

Drug	Duration of administration (month)
1.	
2.	
3.	
4.	
5.	
6	

2.14 If services are available, please provide list of the commonly used drugs in the facility for management of DR-TB. If services are unavailable please indicate NA-777; Indicate No Data-888 if data is unavailable

2.15 Do you provide TB drugs to your patients?	1. Yes 2. No
2.16 If Yes, where do you obtain the drugs? **(Tick that apply)**	1. Private supplier/s 2. MOH 3. Donors 4. Other, specify:_____

If you obtain any drug from MoH/NTP, please explain any conditions attached to the supplies?

Do you have any issue or comment on drug cost, availability of free treatment options?

How is drug quality and regiment monitored?

2.17, Do you notify TB cases to MOH?	1. Yes 2. No → **Go to 2.20**
2.18 If yes, how do you notify/report?	1. e-based 2. Paper based
2.19 Ask to see a notification form	1. Present 2. Absent

If no notifications are done, why?

How do you ensure access to DST (using culture/LPA or Gene-Xpert)?

2.20 Number of new and relapse patients who are sputum smear positive (SS+) with access to DST in the past one year (in the facility or through referral)
(Indicate NO DATA-888, if data is not available)

Year	Number of SS+ patients	Number of patients who have DST results using culture or LPA	Number of patients who have DST results using Gene-Xpert only
2018			

2.21 What is the average turn-around time for the commonly used culture (i.e. time from sputum submission to receiving of culture results)?	_____days
2.22 What is the average turn-around time for the commonly used DST (i.e. time from sputum submission to receiving of DST results)	Commonly used method:_____ _____days

2.23 Cases in the past one year (2018) (Indicate NO DATA-888, if data is not available) (Indicate NA-777 where necessary if service is unavailable in the facility)

	Number
1. Total presumptive/suspected TB patients seen/ screened in the year	
2. Total diagnosed as TB	
3. Total sputum smear positive (SS+)	
4. Total patients tested using Gene-Xpert	
5. Total RR-TB	
6. Total MDR-TB	
7. Number of patients with DR-TB (MDR-TB and RR-TB) enrolled on second-line treatment	
8. Treatment success (total number who completes treatment and cures or become smear negative)	
9. Number of relapse cases (cured TB patients who are re-diagnosed as smear-positive case)	
10. Number of deaths	
11. Number of patients with treatment failure	
12. Number of patients lost to follow-up/default	

How is treatment adherence ensured?

What are your activities on tracing defaulters who quit either during the referral or treatment process?

How do you ensure drug-safety?

How do you mange/treat children with TB?

2.24 Health facility human resource

Type of clinical staff/qualification	Number	Remark
1. Doctors (MBBS, specialists)		
2. Clinical/medical degree graduates		
3. Clinical/medical diploma graduates		
4. Nurses		
5. Other clinical staff		

2.25 Trainings attended in the past two years

Name of training course	No. of staff trained	Year	Training organizer (NGO/ donor, MOH, self-paid, clinic/hospital)

SECTION 3: Systematic screening of contacts and high-risk groups

3.1 Do you conduct contact tracing for contacts of index TB cases?	1. Yes 2. No
3.16 Do you provide screening for TB for high risk groups	1. Yes 2. No

If the answer for both 3.1 and 3.2 is No: Go to section 4

If the answer is yes for 3.1, how do you do contact tracing?

If the answer is yes for 3.2, for which high risk groups?

(Indicate **NO DATA-888**, if data is not available)

3.3 Total number of contacts screened for TB in the last one year (2018)	
3.4 Total number of high risk groups screened for TB in the last one year (2018)	

3.5 What guidelines do you use for screening of contacts and high risk groups? (Tick that apply)	1) National guidelines 2) WHO guidelines 3) None 5) Other, specify: _____ _____

3.6 If you follow national or WHO guidelines, have you been trained in using the guidelines?	1. Yes 2. No
3.7 If yes, which year was the last training?	_____

Do you have any comment or issues on systematic screening of TB and on availability and use of national guidelines?

SECTION 4: Collaborative TB/HIV activities and management of comorbidities

4.1 Do you counsel and test your TB patients for HIV?	1. Yes 2. No → **Go to 4.3** 3. NA → **Go to 4.3**

4.2 If yes, number of TB patients screened for HIV in the past year (2018) (Indicate NO DATA-888, if data is not available)

	Number
4.2.1 Total number of confirmed or clinically diagnosed TB cases	
4.2.2 Number of TB patients screened for HIV	
4.2.3 Number of HIV-positive TB patients on antiretroviral therapy	

4.3 Do you screen your HIV patients for TB?	1. Yes 2. No → Go to 4.5 3. NA → Go to 4.5

4.4 If yes, number of HIV patients tested for TB in the past year (2018) (Indicate NO DATA-888, if data is not available)

	Number
Total number of HIV cases	
Number of HIV patients tested for TB	

4.5 What guidelines do you use for collaborative TB/ HIV activities?	1. National guidelines 2. WHO guidelines 3. None 4. Other, specify_____ 5. NA → Go to section 5
4.6 If you follow national or WHO guidelines, have you been trained in using the guidelines?	1. Yes 2. No
4.7 If yes, which year was the last training?	_____

Do you have any issue or comment on TB/HIV collaborative activities?

SECTION 5: Preventive treatment of persons at high risk

5.1 Is preventive therapy for the treatment of latent TB infection implemented in your facility?	1. Yes 2. No → **Go to section 6**

5.2 If yes, list the type of patients provided with TB preventive treatment in your facility:

5.3 What guidelines do you use? **(Tick that apply)**	1. National guidelines 2. WHO guidelines 3. None 4. Other, specify_____
5.4 If you follow national or WHO guidelines, have you been trained in using the guidelines?	1. Yes 2. No
5.5 If yes, which year was the last training?	_____

Do you have any issue or comment in preventive care and on use of national/ WHO guidelines?

SECTION 6: TB infection prevention in the health facilities and workplace

6.1 Is an infection prevention plan developed/available	1. Yes 2. No → **Go to 6.4**
6.2 If the answer to 6.1 is Yes, is the plan/guidance developed based on a risk assessment?	1. Yes 2. No
6.3 If the answer to 6.1 is Yes, is the plan/guidance developed in accordance with national or international guidelines?	1. Yes 2. No
6.4 Do you provide training for administrators and healthcare workers?	1. Yes 2. No

What TB infection prevention activities are being implemented in the facility?
Administrative controls: Environmental and engineering controls: Personal protective equipment:

Are there any challenges in implementing infection control in your facility?

SECTION 7: TB related pharmacy services: Anti TB drug supplies and management

7.1 Does the facility have pharmacy (ask this, If the facility is not a standalone pharmacy)?	1. Yes 2. No → **Go to section 8**
7.2 Do you stock anti TB drugs?	1. Yes 2. No
7.3 Do you dispense anti TB drugs?	1. Yes 2. No → **Go to 7.8**
7.4 If yes, what type of TB drug do you dispense **(Tick that apply)**	1. 1st line drugs 2. Flouroquinilones 3. Second line injectables 4. Other, specify:_____ _____

7.5 Where do you obtain the drugs? **(Tick that apply)**	1. Private supplier/s 2. MOH/NTP 3. Donors 4. Other, specify:_____
7.6 How do you dispense TB drugs? **(Tick that apply)**	1. Free of charge 2. Patients pay for TB drugs 3. Patients pay additional charges for dispensing 4. Other, specify:_____
7.7 Were there any stocks out of TB drugs over the past 2 years?	1. Yes 2. No

If yes, when and for what reasons?

How is drug quality and regiment monitored?

Questions 7.8 - 7.13: to be asked in standalone pharmacies only

7.8 If you are not stocking/dispensing TB drugs, do you do screening and referral of suspected TB cases?	1. Yes 2. No
7.9 Where do you refer suspected cases? **(Tick that apply)**	1. MOH facility 2. Private facility 3. NGO/FBO clinics 4. Do not refer 5. Other, Specify:_____
7.10 Number of suspected cases referred in the past one year (2018/19)	

What do you usually do for a patient with cough?

7.11 Do you report suspected TB cases to MOH?	1. Yes 2. No
If No, why?	
7.12 If yes, how do you report?	1. e-based 2. Paper based
7.13 Ask to see a reporting form	1. Present 2. Absent

Do you have any issue or comment on TB drug management, cost, and availability of free treatment options?

7.14 Pharmacy human resource		
Type of technical staff/qualification	**Number**	**Remark**
1. Pharmacist		
2. Pharmacy technician/diploma		
3. Pharmacy assistant		
4. Other: specify_____		

7.15 Trainings attended in the past two years			
Name of training course	No. of staff trained	Year	Training organizer (NGO/ donor, MOH, self-paid, pharmacy)

SECTION 8: Collaboration with MOH

8.1 Do you have any collaboration with MOH in providing TB services?	1. Yes 2. No → **Go to 8.6-8.10**
8.2 If yes, for how long?	_____year

8.3 If yes, what does this collaboration entail?

8.4 If you have any collaboration with MOH/NTP what constraints/challenges are you facing?

8.5 What are your key incentives to work with MOH/NTP?

8.6 If you are not having any collaboration with MOH, why?

8.7 If you do not have any collaboration with MOH, are you willing to collaborate?	1. Yes 2. No

8.8 If no, why?

8.9 If yes, why? What are the benefits or advantages?

8.10 What do you see as constraints or challenges working with MOH/NTP?

From 8.11 - 8.13: to be answered by both collaborating and non-collaborating facilities

8.11 What do you need form MOH/NTP?

8.12 What can you provide or contribute?

8.13 Any other issues or comments

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