

POLICY Brief

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Ministry of Health

Enhancing Access to Tuberculosis services to achieve UHC

Insights from the Kenya Health Facility Assessment 2018/19

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Executive Statement

Kenya still remains one of the 30 high TB burden countries in the world, therefore, the need to make TB services accessible to all. TB services constitute diagnostic, treatment and preventive services. There have been considerable investments done by the government and partners in TB diagnosis, treatment and prevention in the country in the last few years.

In this policy brief we describe the access to diagnostic and treatment services. On average, only one in every four health facilities have TB diagnostic services with

variation across Counties, the private and public sectors. Among the TB diagnostic services available in the Kenyan facilities, sputum smear microscopy examination was the most common followed by rapid testing (Gene Xpert). This is due to the limited number of Xpert equipment available and the criteria used to guide distribution of Xpert equipment namely health facility workload, availability of a laboratory with adequate power and space for Xpert installation. The patient pathway analysis showed that most patients with presumptive TB will first seek care in lower-level health facilities which lack the capacity for rapid TB DRTB diagnosis hence diagnostic delays. Thus, the need for strengthening referral networks.

Despite TB treatment being free to the patient, there was variation to treatment services across counties and between urban and rural populations. People living in rural areas were slightly more likely to access TB treatment services than those in urban areas. This shows that TB services are not yet well integrated with the other routine primary health care diseases.

Availability of drug resistant TB services and tracer items were quite low based on the assessment. This can be attributed to the fact that not all health facilities notify drug resistant TB cases and the commodities are usually availed once a case is notified in a health facility.

As Kenya works towards universal health coverage, it is crucial to not only strengthen tuberculosis services, but also ensure greater integration with other routine primary health care diseases. Additionally, the National TB Program needs to operationalize the guidelines and action plans that have been developed to increase private sector engagement in TB diagnosis and treatment. Finally, though the Global Fund has also allocated funding in the current grant to ensure active involvement of the private sector in implementation of TB interventions, there is need for more resources especially from the government.

Introduction

Kenya is among the 30 high burden countries listed by the World Health Organization which together account for more than eighty percent of the world's TB cases (WHO, 2019). Until recently, Kenya's TB burden was believed to be declining till 2016 when the prevalence of TB was found to be 426 per 100,000 population. This translates to about 150,000 TB cases (NTLD-P, 2016).

In 2018, the National TB program notified 96,478 cases of -Drug susceptible TB (DS TB), which is about 60% of the estimated TB burden, with about 40% of the estimated cases of DS TB being missed. This is despite the considerable investments done by the government and partners in TB diagnosis, treatment and prevention in the country.

Concerted efforts must therefore be put in place to ensure that strategies towards early identification and treatment initiation are implemented to close the gap.

Key Messages

- TB diagnostic testing services were available in one in every four health facilities assessed
- Sputum smear microscopy examination services were available in over 90% of public primary and secondary & tertiary hospitals
- People living in rural areas were slightly more likely to access TB treatment services than those in urban areas:
- All first-line TB medications were available in 83% of public primary hospitals, 68% of the secondary & Tertiary hospitals and 37% of the medical clinics.
- More than 60% of the government facilities had all the first-line TB medications compared to 41% of the private facilities
- About a quarter of the facilities in Kenya provide any services for drug resistant TB
- Only 1% of the health facilities had all drug resistant TB tracer items

For the 2018 cohort, the treatment success rate for all forms of DSTB was 82.5% (a slight drop from 83% in 2017), lost to follow up rate of 5.8% and the mortality rate was 6.5%.

Drug Resistant Tuberculosis (DR TB) continues to be a major public health challenge in Kenya and the cases have been increasing over the years. The trend is expected to rise with increasing access to drug sensitivity testing following the scale up of gene Xpert machine coverage and the increased capacity for 1st and 2nd line probe assay (LPA) in the country. The prevalence survey and other studies (Scott et al., 2011) have confirmed the superior role of Xpert in providing bacteriological confirmation of tuberculosis, compared with microscopy making it an essential tool for drug-resistance screening in the country.

There have been efforts made towards building the capacity of counties for early diagnosis and treatment of DRTB and improving TB surveillance among those living with HIV and children.

In 2018, a total of 708 DR TB cases were diagnosed and enrolled on treatment. The treatment success rate (Cohort 2017) was 76%, death rate 14.5% and lost to follow up rate of 5%.

Over the years, funding for TB control activities has relied heavily on donor funds, but these have been declining since the country attained lower middle-income status. The government has stepped in to close the gap by increasing its financial commitment to fight TB (The Global Fund, 2015). As the country continues to make progress in the fight against TB, there is a need to ensure sustainable financing for TB control.

Despite the progress made in provision of free TB diagnosis and treatment in Kenya, there is a high proportion of TB-affected households experiencing catastrophic costs due to TB. The TB patient costs study found that TB can impose profound costs on families, reporting that a third of TB affected households and two thirds of drug-resistant TB affected households experience catastrophic costs as they seek care for TB (Ministry of Health, 2017). In addition, it highlighted that TB is a cause of poverty, with 28% of TB patients using negative coping mechanisms like taking a loan, use of savings and sale of assets to meet the expenses for seeking TB diagnosis and care. This means that people may not access healthcare due to financial difficulties and addressing these financial barriers may encourage more individuals in the community to seek care for TB and help close the current case detection gap. The direct non-medical costs due to nutrition and food supplements constitute an important cost item while accessing TB services and can be addressed in the emerging Universal Health Coverage (UHC) and social protection schemes in Kenya. All patients with TB need to have a nutrition assessment done at start and during the course of their treatment to guide nutrition management decisions.

The Kenya Health Facility Assessment highlighted that TB diagnosis and treatment services were available in less than half of the facilities assessed.

Methodology

This policy brief uses findings from the Kenya Harmonized Health Facilities Assessment (KHFA) 2018/19, as well as evidence from a review of documents such as the Annual Health Sector Performance Report and the Joint Health Facilities Assessment Reports. Publications on access to TB services were also used to collaborate the findings. The KHFA entailed a review of health facilities in Kenya and their ability to provide services using a modular approach. The modules applied included: Availability, Readiness, Management Support Systems, Quality of care and Community health systems. The survey population included 2,927 facilities with representation across counties, ownership levels and facility types.

For both drug susceptible and drug resistant TB, service availability assessed the presence of diagnosis and treatment services while readiness to provide the services was based on the presence of the tracer items.

Results

1. Drug Susceptible TB

Service availability

Availability of basic equipment

Even though on average 7 out of 10 health facilities had basic equipment, only one in four had all the basic equipment tracer items. The most available basic equipment was stethoscope and blood pressure apparatus at 94% of the health facilities. Other equipment available in health facilities were thermometer, adult scale, child scale and light source in 90%, 87%, 52% and 44% respectively.

Availability of TB diagnostic services

The availability of TB diagnostic testing services varied between counties and between the private and public sectors.

Nationally, TB diagnostic testing services were available in about a quarter of the facilities (26%). In rural areas, 28% of the facilities had TB diagnostic capabilities, but this dropped to 22% in urban areas.

By managing authority, Government facilities had the highest capability for TB diagnostic testing at 38% closely followed by NGO/FBO facilities at 33% while Private owned facilities had the least at 9%. Based on facility type, 93% of public primary and 90% of the secondary & tertiary facilities had TB diagnostic testing services while only 25% of the dispensaries and 6% of the medical clinics offered the service. At the county level, availability of TB diagnostic testing services ranged from a low of 9% in Baringo and Kiambu to a high of 59% in Vihiga.

(i) AFB Microscopy

On average, one in four health facilities had sputum smear microscopy examination services. There was a relatively high availability of sputum smear microscopy examination services in public primary (91%) and Secondary & Tertiary hospitals (90%). However, the service was available only in 23% of the dispensaries and 6% of the medical clinics. Microscopy is considered a pragmatic tool for diagnosis in remote areas and was available in almost equal proportions both in rural and urban areas, at 27% and 21% respectively. By managing authority, microscopy services were more available in government facilities at 33% compared to 8% in the private facilities. At the county level, availability of sputum smear microscopy examination services ranged from a low of 7% in Baringo and 9% in Kiambu to a high of 57% in Taita Taveta and 52% in Siaya. Less than 20% of the health facilities in 17 counties had sputum smear microscopy examination services available.

(ii) Gene Xpert

The prevalence survey confirmed the superior role of Xpert in providing bacteriological confirmation of tuberculosis, compared with microscopy. Xpert is also an essential tool for drug-resistance screening. Nationally, Gene Xpert services were available in only 11% of the health facilities. There was a relatively high availability of Gene Xpert services in secondary and Tertiary hospitals (85%) compared to the dispensaries and medical clinics at 9% and 3% respectively.

The availability of TB Diagnosis by rapid testing (Gene Xpert services) was quite low in both the urban (13%) and rural (10%) settings. By managing authority, Gene Xpert availability was also quite low

across the categories with Government and NGO/FBO facilities having almost the same proportions at 15% and 14% respectively while private were the lowest at 3%.

Availability of Gene Xpert services was generally quite low across the counties with all the counties recording less than half of the facilities having the service. This ranged from a low of 0% in Wajir and 1% in Garissa, Mandera, Murang'a and Nandi to a high of 44% in Taita Taveta and 41% in Siaya.

Access to TB Treatment Services

As with diagnostic access, access to treatment services varied across counties and between urban and rural populations. People living in rural areas were slightly more likely to access TB treatment services than those in urban areas. The Kenya Health Facility Assessment had 3 indicators to measure the access to TB treatment. These were; Prescription of drugs of TB patients, Provision of drugs to TB patients and Management and treatment follow-up for TB patients.

i) Prescription of drugs for TB patients

Nationally, 34% of the health facilities had the capacity to prescribe drugs for TB patients. Secondary & Tertiary and public primary hospitals had the highest capacity at 95% while medical clinics had the least at 7%. By managing authority, Government facilities had the highest capacity at 52%, followed by NGO/FBO at 40% while private facilities had the least at 10%. Prescription of drugs for TB patients varied by locality with the rural facilities having a higher capacity at 39% than the urban at 23%. At the county level, the capacity to prescribe drugs for TB patients ranged from a low of 10% in Mandera to a high of 65% in Nyamira. Less than 20% of the health facilities in 6 counties had the capacity to provide this service.

ii) Provision of drugs to TB patients

Nationally, 37% of the health facilities had the capacity to provide drugs to TB patients. Public primary and Secondary & Tertiary hospitals had the highest capacity at 96% and 90% respectively while medical clinics had the least at 7%.

By managing authority, Government facilities had the highest capacity at 57%, followed by NGO/FBO at 45% while private facilities had the least at 9%.

Provision of drugs for TB patients varied by locality with the rural facilities having a higher capacity at 43% than the urban at 24%. At the county level, the capacity to provide drugs to TB patients ranged from a low of 13% in Mandera to a high of 74% in Nyamira. Less than 30% of the health facilities in 15 counties had the capacity to provide this service.

iii) **Management and treatment follow-up for TB patients**

Nationally, 37% of the health facilities had the capacity to manage and offer treatment follow-up for TB patients. Public primary and Secondary & Tertiary hospitals had the highest capacity at 96% and 95% respectively while medical clinics had the least at 7%. By managing authority, Government facilities had the highest capacity at 57%, followed by NGO/FBO at 46%. while private facilities had the least at 11%. Management and treatment follow-up for TB patients varied by locality with the rural facilities having a higher capacity at 44% than the urban at 25%. At the county level, the capacity to manage and offer treatment follow-up for TB patients ranged from a low of 13% in Mandera to a high of 73% in Nyamira. Less than 30% of the health facilities in 15 counties had the capacity to provide this service.

Service Readiness

The mean availability of TB tracer items was 67%, however, only 18% of the health facilities offering TB diagnosis and treatment services, had all five TB tracer items. More than half (58%) of the health facilities had all first-line TB medications as seen in figure 1 below.

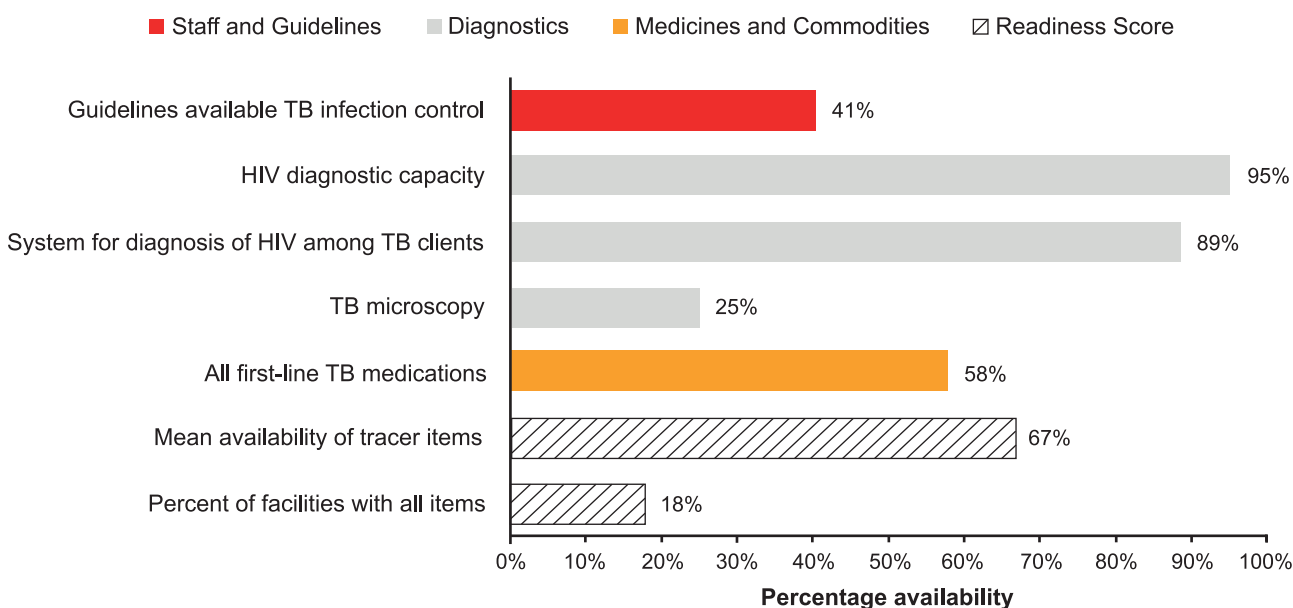


Figure 1: Proportion (%) of facilities that have tracer items for TB diagnosis and treatment services among facilities that provide this service (N=1427), Kenya 2018

The mean availability of TB tracer items was more than 50% in all the 47 counties. However, there was variation across the counties in the readiness to provide TB diagnosis and treatment services. Slightly more than half of the health facilities in Murang’a (54%) and Embu (52%) had all the TB tracer items. Kitui (4%), Baringo (7%) and Tana River (7%) had less than 10% of their facilities having all the TB tracer items. Availability of all first-line TB medications in facilities that offered TB services was highest in Tana River (87%), Laikipia (83%), Isiolo (81%), and lowest in Lamu (19%), Wajir (24%), and Mandera (25%) counties. Based on the facility type, all first-line TB medications were available in 83% of public primary hospitals, 68% of the secondary & Tertiary hospitals and 37% of the medical clinics. More than 60% of the government facilities had all the first-line TB medications compared to 41% of the private facilities. There was little variation across the various TB tracer items, between urban and rural facilities.

2. Drug Resistant TB

Service Availability

Nationally, about a quarter of the facilities in Kenya provide any services for drug resistant TB. Facilities are more likely to follow up drug resistant patients for adherence (17%), perform contact tracing (17%), facilitate social support (15%) and provide the drugs (15%) for DR-TB patients. Less than 10% of the health facilities can diagnose DR-TB at the facility (6%) and by referral (12%) as seen in the Figure 2 below.

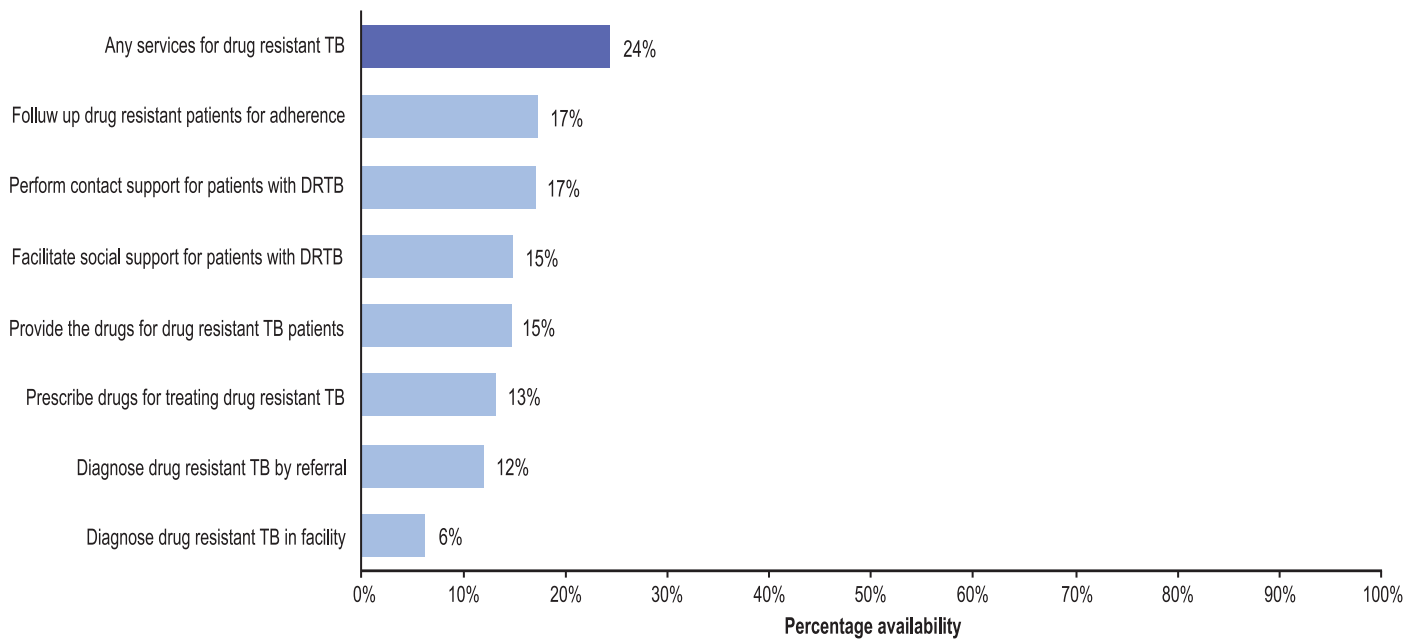


Figure 2: Proportion (%) of facilities that offer drug resistant tuberculosis diagnosis and treatment services (N=2927), Kenya 2018

At the county level, the capacity to provide any services for drug resistant TB ranged from a low of 10% in Kiambu to a high of 56% in Kisumu and Bungoma. By facility type, 95% of secondary & tertiary hospitals, 82% of public primary hospitals and 3% of medical clinics offered any services for drug resistant TB. Availability of services for drug resistant TB was highest in government facilities (39%), followed by NGO/FBO facilities (29%), and was lowest in private facilities (5%). About a quarter of rural facilities (28%) offered services for drug resistant TB, compared to 17% of urban facilities.

Service Readiness

Readiness to offer drug resistant tuberculosis services was assessed based on the availability of the three tracer items; All facility staff screened for TB in last 12 months, National treatment medicines for drug resistant TB, Facility capacity or system for testing rifampicin drug resistance externally, with documented feedback on results.

In Kenya, service readiness for drug resistant TB was at 17% with only 1% of facilities having all drug resistant TB tracer items as shown in Figure 3 below.

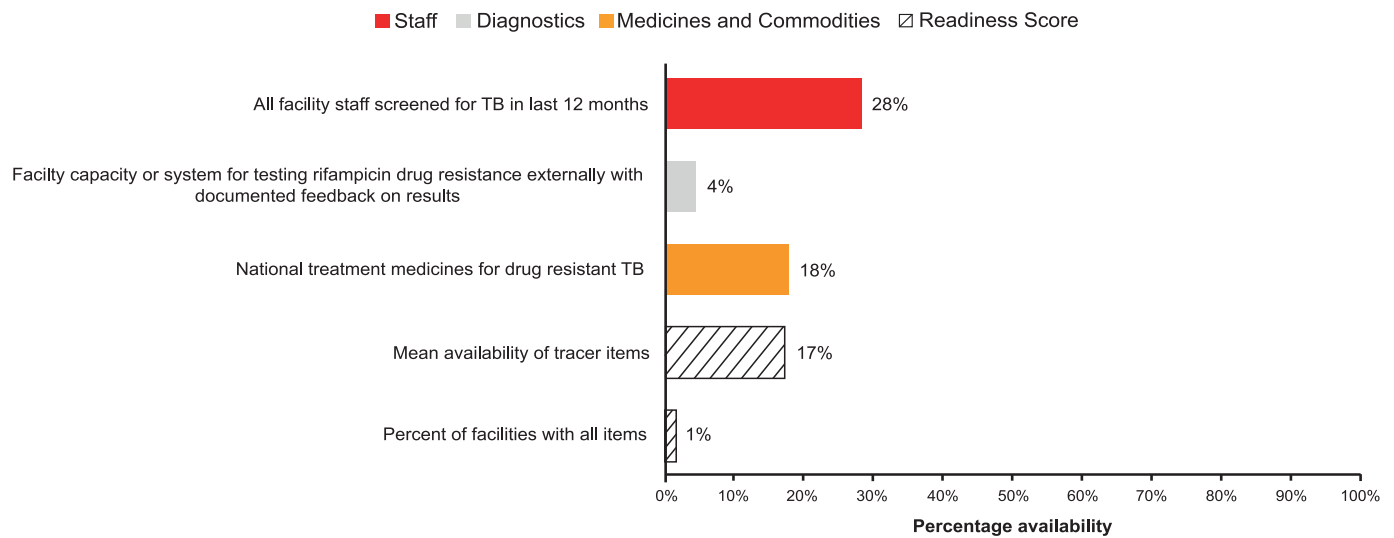


Figure 3: Proportion (%) of facilities that have tracer items for drug resistant tuberculosis diagnosis and treatment services among facilities that provide this service (N=882), Kenya 2018

The mean availability of drug resistant TB tracer items was highest in Kisumu and Laikipia at 30% while it was lowest in Wajir at 2%. By facility type, the availability of DR-TB tracer items was highest in secondary and tertiary hospitals at 44% and lowest in medical clinics at 10%. This did not differ by managing authority as the tracer items were available in 17% of the government, 18% in NGO/FBO and 16% in private facilities. However, mean availability of drug resistant TB tracer items was higher for facilities in urban (26%) than in the rural (14%) areas.

Discussion

The Kenya Health Facility Assessment highlighted that TB services were available in less than half of the facilities assessed. This shows that TB services are not yet well integrated with the other routine primary health care diseases.

Among the TB diagnostic services available in the Kenyan facilities, sputum smear microscopy examination was the most common followed by rapid testing (Gene Xpert). This is due to the limited number of Xpert equipment available and the criteria used to guide distribution of Xpert equipment namely health facility workload, availability of a laboratory with adequate power and space for Xpert installation.

The patient pathway analysis showed that most patients with presumptive TB will first seek care in lower-level health facilities which lack the capacity for rapid TB DRTB diagnosis hence diagnostic delays. Thus, the need for strengthening referral networks. Microscopy is considered a pragmatic tool for diagnosis in remote areas and was available in greater proportions of public primary facilities, compared with the private ones. The rapid testing via the Gene Xpert is also available in all the counties but mostly in the higher levels (Secondary and Tertiary hospitals) though the sites are much less than the microscopy ones.

TB diagnosis by clinical symptoms was quite low since it depends on whether the clinician reviewing the patient has a higher suspicion that the case could be having TB based on the present symptoms.

For the TB diagnosis by chest X-ray, the National TB Programme is yet to release a directive on the use of chest X-rays as a means for TB diagnosis hence the low prevalence.

TB Culture diagnosis was generally low due to the fact that only two laboratories in Kenya have the capacity to conduct the Culture/DST testing; the National TB Reference laboratory in Nairobi and the KEMRI CDC Kisumu Laboratory in Kisumu County. Also, most of the health facilities have no capacity to conduct the Culture/DST testing.

The Assessment highlighted that most of the private facilities were not offering TB diagnostic testing services. This finding is in line with a TB patient pathway analysis (to better understand the alignment between patient care seeking and tuberculosis service availability) which showed that 42% of suspected TB patients access the private sector as the initial point of care (Masini et al., 2017). Early diagnosis of tuberculosis and rapid treatment initiation are crucial for tuberculosis care and for interrupting transmission and require delivery of tuberculosis care services where most patients seek initial care.

Availability of drug resistant TB services and tracer items were quite low based on the assessment. This can be attributed to the fact that not all health facilities notify drug resistant TB cases and the commodities are usually availed once a case is notified in a health facility.

Recommendations

- As Kenya works towards universal health coverage, it is crucial to not only strengthen tuberculosis services, but also ensure greater integration with other routine primary health care diseases
- TB diagnosis in the private sector could be improved; the National TB Program needs to operationalize the guidelines and action plans that have been developed to increase private sector engagement in TB diagnosis and treatment. Though the Global Fund has also allocated funding in the current grant to ensure active involvement of the private sector in implementation of TB interventions, there is need for more resources especially from the government

References and Useful Resources

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