REPUBLIC OF KENYA

MINISTRY OF HEALTH

ANNUAL REPORT 2019

NATIONAL TUBERCULOSIS, LEPROSY AND LUNG DISEASE PROGRAM

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Acronyms

ACF	active case finding
ACSM	advocacy, communication and social mobilization
ADR	adverse drug reaction
aDSM	active TB drug safety monitoring and management
AFB	acid-fast bacilli
AFRO	African Regional Office (of the World Health Organization)
AIDS	acquired immunodeficiency syndrome
AMR	antimicrobial resistance
ART	antiretroviral therapy
BC	bacteriologically confirmed
BCC	behaviour change communication
BCG	Bacille Calmette-Guerin
BMI	body mass index
BOLD	burden of lung disease
BSC	biosafety cabinet
CAD	computer-aided detection
CBHI	community based health insurance
CBO	community based organization
CDC	Centres for Disease Control and Prevention
CDR	case detection rate
CFR	case fatality ratio
CHC	community health committee
CHE	current health expenditure
CHEW	community health extension worker
CHS	Centre for Health Solutions
CHV	community health volunteer
CHW	community health worker
CI	confidence interval
CIDP	county integrated development plan
COC	Clinical Officers Council
CoE	centre of excellence
CoK	Constituion of Kenya
COPD	chronic obstructive pulmonary disease
CPD	continuous professional development
CPT	cotrimoxazole preventive therapy
CQI	continuous quality improvement
CR	cure rate
CRH	county referral hospital
CSO	civil society organization
CSR	corporate social responsibility
CTBC	community tuberculosis care
CTLC	county tuberculosis and leprosy coordinator
CU	community unit
CU	Central Unit
CV	community volunteer
CXR	chest x-ray
TB ARC II	TB Accelerated Response and Care
USAID	United States Agency for International Development

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ACKNOWLEDGEMENT

The Division of National Tuberculosis, Leprosy and Lung Disease Program (DNTLD-P) is gratefully to all the TB stakeholders: the Government of Kenya (GoK), all the county governments, development partners, civil society, FBOs and communities for their support and contribution towards TB control in 2019. Special thanks go to The Global Fund to fight Aids, Tuberculosis and Malaria (GFATM), USAID/TB ARC II activity, Clinton Health Access Initiative (CHAI), World Health Organization (WHO) and AMREF Health Africa for their financial and technical support during the year.

Successful development of this report was made possible through the commitment of various individuals from; DNTLD-P, USAID/TB ARC II, WHO and Amref Health Africa TB project by dedicating their time during writing and review of the report.

The meeting to review and finalize the report was made possible through the financial support of USAID/TB ARC II.

We finally thank the communication team in the program for their editorial work and final design of the report.

VISION

A Kenya free of TB and leprosy, and reduced burden of lung disease

MISSION

To ensure provision of quality care and prevention services for all people in Kenya with TB, leprosy, and lung diseases.

EXECUTIVE SUMMARY

Dr. Elizabeth Onyango

Kenya continues to step up the fight against major communicable diseases that are of public health concern including Tuberculosis and HIV. In 2019, Kenya launched the first ever patient-centered and costed National Strategic Plan (NSP) for Tuberculosis (TB), Leprosy and Lung health 2019-2023 with a vision of a Nation free from TB and Leprosy and reduced burden of Lung Diseases. The aspiration of the Ministry of Health is to reduce the detection gap by ensuring that all people with TB have access to diagnostic TB services, holistic quality care and TB prevention in the general population.

An estimated 147,000 people fell ill with Tuberculosis in 2019, yet only 86,385 people were diagnosed, treated and notified to the National Tuberculosis Program. Accordingly, the latest TB prevalence survey (2015/16), found that the country misses nearly half of the people with TB. This translates to a treatment coverage of 59%, down from 63% in 2018. Men remain the most affected population contributing to 65% of all notified cases with children accounting for 9.7%. Public sector contributed 81% of all TB cases, the private sector 15%, FBOs 3% and prisons 1%. Robust efforts to find missing people with TB through implementation of active case finding in high volume facilities across the country, targeted community screening outreaches, contact investigation and implementation of innovative strategic initiatives such as pay for performance and private sector engagement have been put in place. This has also been made possible through financial and technical contributions by Global Fund, AMREF, USAID and WHO.

The program continued to strengthen access to TB diagnostic services through strengthening sample referral and availing diagnostic equipment. Gene Xpert remains the test of choice for TB diagnosis, with 189 machines spread across the country. The National TB reference laboratory in Nairobi and KEMRI/CDC KISIAN in Kisumu remain central in providing culture and drug susceptibility testing for both first and second line (DST) services. In 2019, the program embarked on the expansion of culture and DST services to three additional laboratories by deploying three laboratory technologists to support

decentralization in Machakos, Malindi and Kitale. In addition, AFB microscopy sites increased from 2320 in 2018 to 2555 in 2019. External quality assurance (EQA) coverage during the same period was 93% with over 95% of the facilities posting acceptable results. Despite these achievements, the country still faced challenges as far as uptake and optimization of these services are concerned.

Ongoing TB/HIV collaborative interventions yielded commendable HIV testing rates of 98% among TB patients, a co-infection rate of 26% and ART uptake of 96% in 2019. In addition, treatment success rate for the cohort that started treatment in 2018 was 84% against a target of 90%. A documented death rate of 6.5% and lost to follow up rate of 5.5% remain some of the obstacles to achieving treatment targets. Malnutrition rate of 45% among all TB patients, 24% of whom are severely malnourished, could be a contributing factor of unfavourable treatment outcomes with the country experiencing erratic supply commodities.

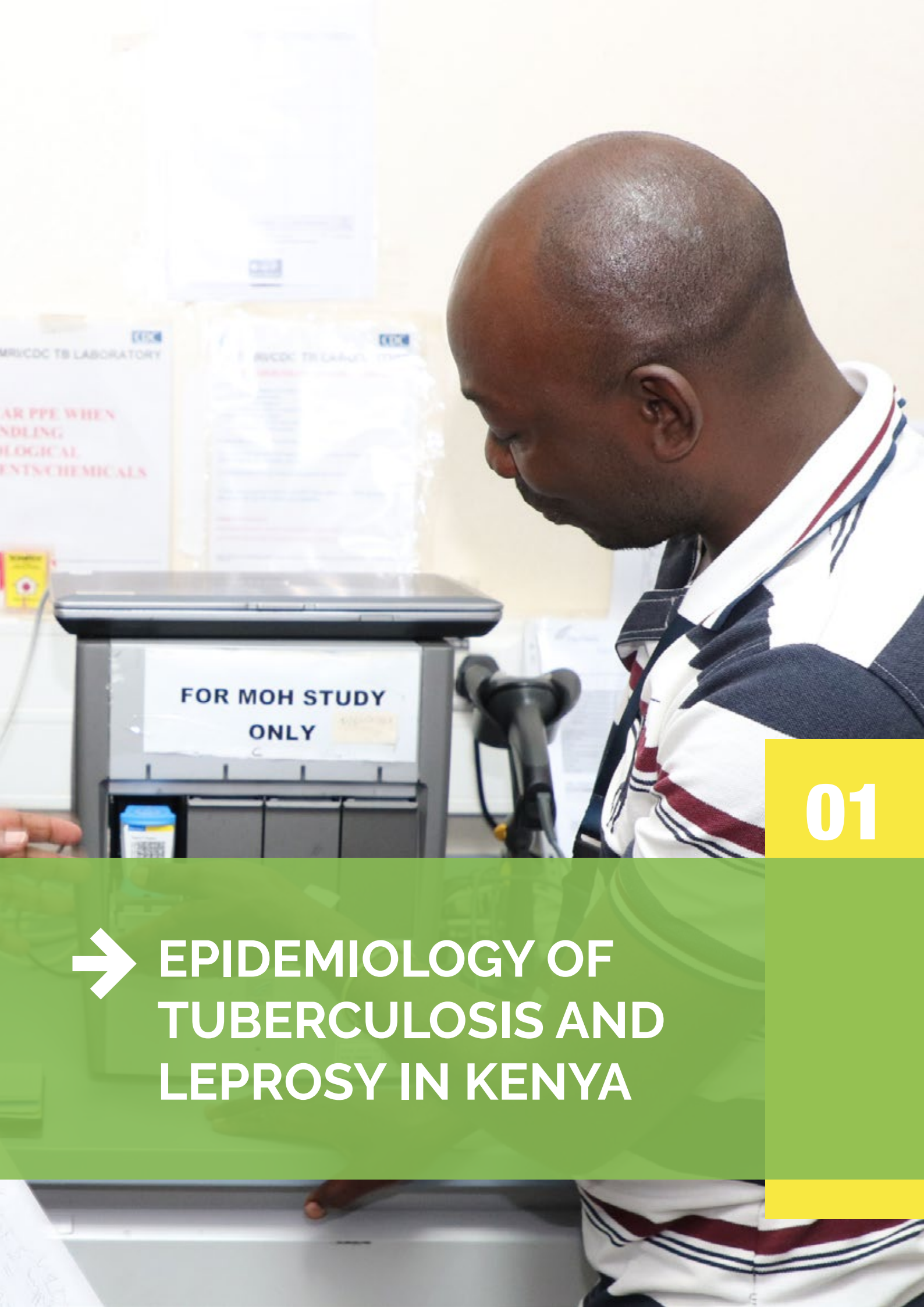
Kenya remains a high burden country for drug resistance tuberculosis, with the Ministry of Health implementing interventions geared towards strengthening access to universal access to DST. An estimated 2170 people fell ill in 2019, yet only 692 people were diagnosed translating to a detection gap of 68%. Gene xpert test was accessible to 44% of patients with all forms of TB, 98% of whom were previously treated patients. Rifampicin resistance (including MDR, Pre-XDR & XDR) accounted for 75% of the cases while 25% were mono resistant forms. Gene Xpert performance in 2019 was observed to have markedly improved as a result of an effective service contract agreement between the Ministry of Health and the service provider, with fewer breakdowns compared to the previous years. However, challenges in sample transport and limited internet coverage led to under reporting and sub-optimal access of gene xpert in some regions. All DRTB patients who were initiated on treatment had a treatment success rate of 73%. In 2019, the program, in collaboration with technical partners, embarked on a journey towards the adoption of WHO recommendations on injection free treatment guidelines for MDR TB patients and revised latent TB infection (LTBI) treatment guidelines to include the expanded population. The initial phase of LTBI implementation, targeting health care workers, began in Kiambu county with the support from CHAI.

Despite significant steps that the country is making towards elimination of leprosy, a number of counties in western and coastal regions continue to report rising cases of leprosy. The number of new cases rose from 110 in 2018 to 164 in 2019. Elimination is hampered by limited capacity among health care workers to diagnose and manage leprosy, unavailability of rehabilitative services and limited resources to support leprosy activities, with WHO providing support with the supply of medicine. Treatment outcomes of patients initiated on treatment was: 53% were released from treatment, 10% were declared to be out of control, 2% died, 4% transferred out and 31% yet to complete treatment.

Data quality assessment was conducted in 25 counties to assess the quality of data following recovery from technical disruption of the data collection system. To strengthen reporting and recording, monitoring and evaluation tools were printed and distributed to all the counties. Finally, the program received a total of USD 52,588,078 to fund TB control in the country from various sources - this was 86% of the total need, leaving an unfunded gap of 14%. Of the total need , the Global Fund funded 41%, GoK 35% and USAID 10%.

Dr. Elizabeth Onyango

Head; Division of National Tuberculosis,
Leprosy and Lung Disease - Program



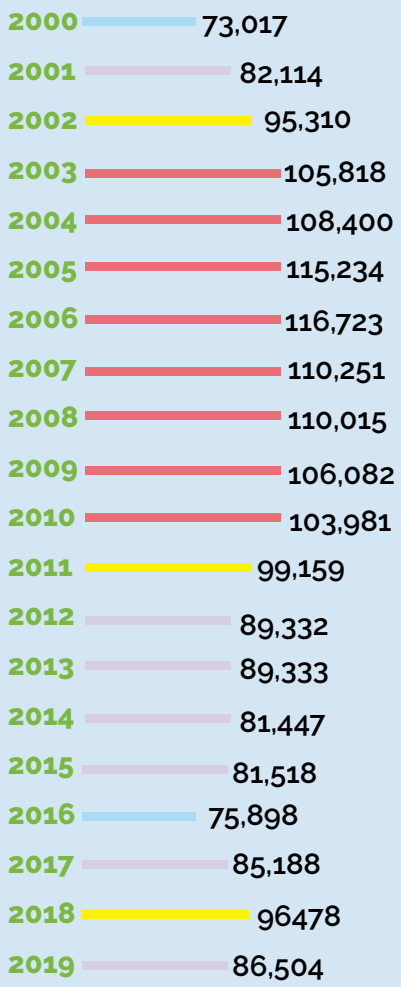
01

EPIDEMIOLOGY OF TUBERCULOSIS AND LEPROSY IN KENYA

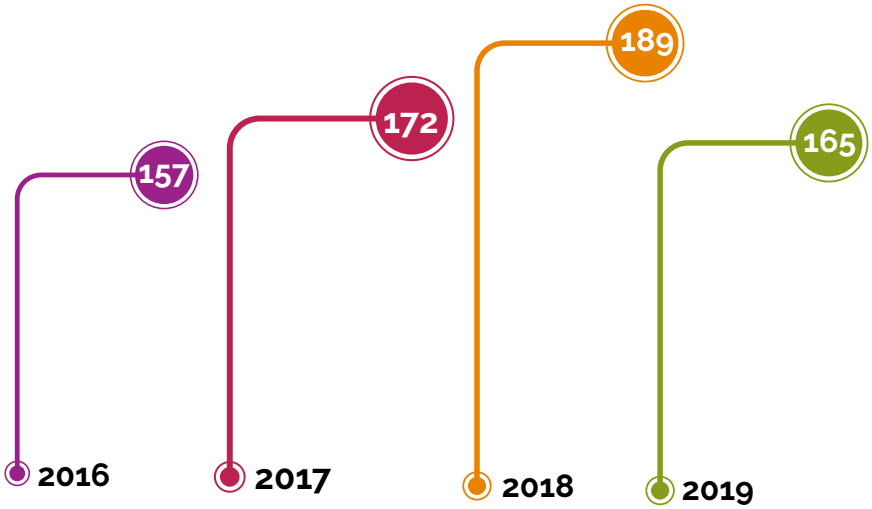
1.1 Drug Susceptible Tuberculosis

Kenya reported an increase in TB case notification between 2016 and 2018. However, the country reported a 10.4% decline in drug susceptible TB (DS TB) cases, from 96,478 cases notified in 2018 to 86,385 cases in 2019. This can be attributed to operational challenges resulting in sub-optimal implementation of active case finding (ACF) in health facilities, delayed implementation of public-private mix (PPM) initiatives and widespread industrial action by healthcare workers in some counties. During the reporting period, the Division of National Tuberculosis, Leprosy and Lung Disease Program (DNTLD-P) conducted re-sensitization of county health teams and health workers in 12 high burden counties that recorded the greatest decline in TB case finding in response to the challenges. Figure 1 demonstrates the trend of DS TB case notification in Kenya between 2000 and 2019.

DSTB Case Finding in Kenya 2000- 2019



In 2019, Kenya recorded a 12.7% decline in CNR from 189 per 100,000 population in 2018 to 165 per 100,000 population. This is in comparison with the estimated TB incidence rate of 292 per 100,000 population during the reporting. The counties reporting highest CNRs include Turkana, Meru, Tharaka Nithi and Nairobi while those with least notification rates are Wajir, Mandera, Nandi and Bungoma. A breakdown of TB CNR in the 47 Counties in 2019.



DS TB case notification rates (CNRs) in Kenya, 2016-2019

In 2016, Kenya rolled out a revised TB diagnostic algorithm with GeneXpert as the first test of choice for TB diagnosis as recommended by WHO. In 2019, re-sensitization of health care workers on the TB diagnostic algorithm with emphasis on GeneXpert testing may have resulted in an observed increase of 3.4% in bacteriologically confirmed TB cases.

The TB prevalence survey, 2015/2016, demonstrated a TB prevalence rate of 809 per 100,000 among men which was twice that of females at 359 per 100,000 population, with the highest rate documented among the 25 - 34 age-group at 716 per 100,000.

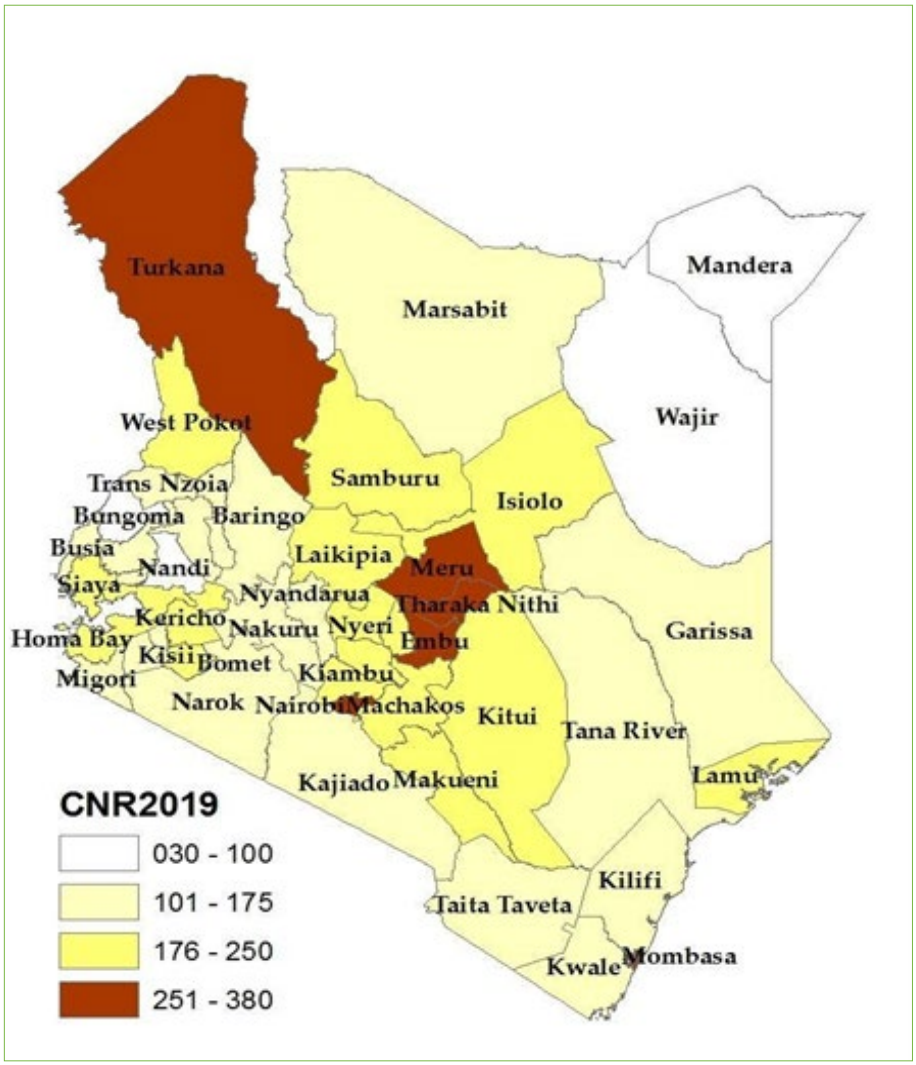


Figure 1: Map of Kenya with showing case notification rates across 47 counties in 2019

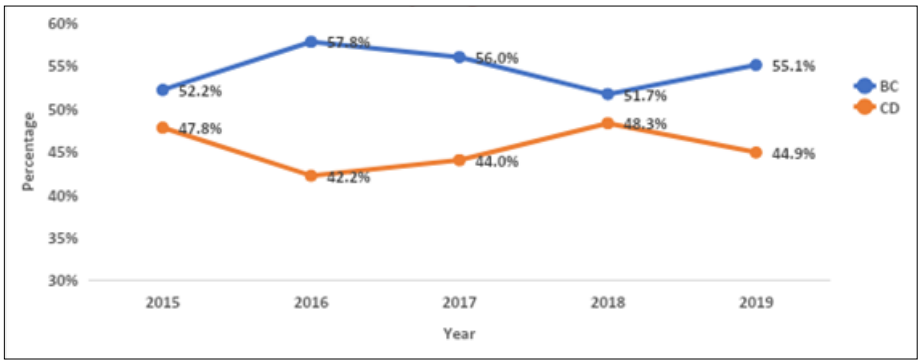


Figure 2: DS TB Case notifications by type of diagnosis in Kenya, 2015- 2019

In 2019, 65% of DS TB cases notified were men, who were mostly within the 20-44 year age-groups and the elderly population above 60 years of age as shown in figure 5 below.

DS TB
Case Notification

Age groups 20-44 and 60+ reporting more cases

64% Male

36% Female

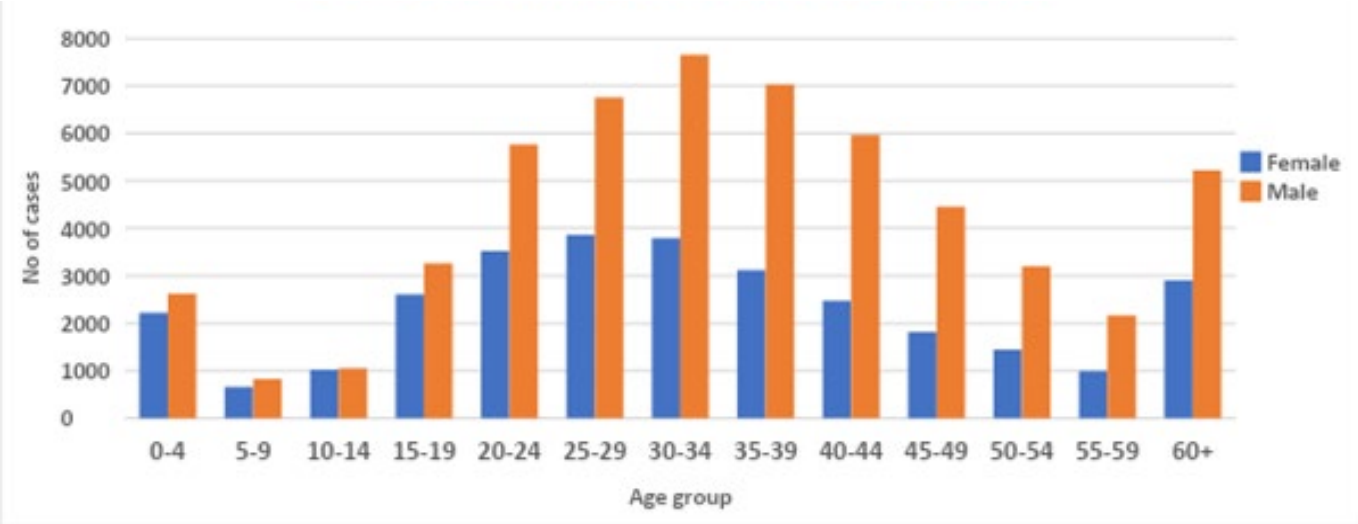
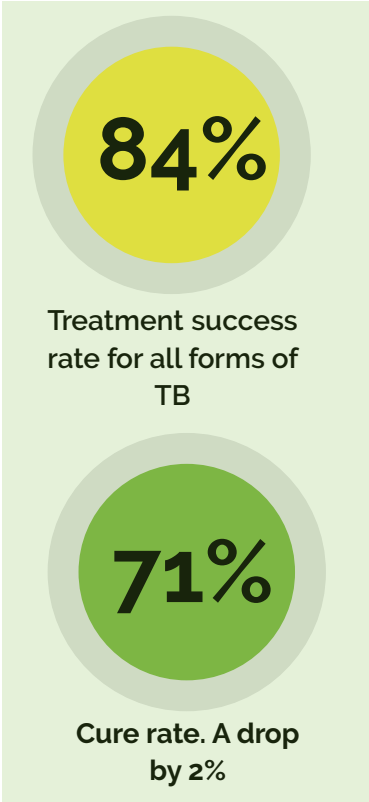


Figure 3: Age-sex distribution of DS TB cases in Kenya, 2019

Treatment Outcomes among Drug Susceptible TB Cases in Kenya

The country reported an increase in treatment success rate (TSR) for all forms of TB from 82.4% for the 2017 cohort to 84% for 2018 cohort. Most counties reported a decline in cure rate resulting in a 2% decline in the national cure rate from 73.4% in 2017 to 71% in 2018. This decline can be attributed to poor treatment adherence among patients leading to high loss to follow up rates, sub-optimal sputum microscopy follow up among bacteriologically confirmed cases, inadequate health worker capacity affecting monitoring of persons with TB and gaps in documentation.

There was a slight increase in death rate from 6.3% for patients registered in 2017 to 6.5% for those registered in 2018 against a national target of <5%. Mortality audit tool was introduced in 2019 to aid in understanding the circumstances around the outcome with an aim of improving the quality of care. The proportion of patients who were not evaluated declined from 4.6% to 3%, largely as a result of regular data review during quarterly review meetings. Treatment adherence and loss to follow up still remain key challenges among some TB cases resulting in discontinuation of treatment and unfavourable outcomes. Continuous health education and awareness of the same remains paramount to mitigate this gap.



1.2 Drug Resistant Tuberculosis

Kenya remains a high burden country for both drug sensitive (DS) and drug resistant (DR) TB. An estimated 2,170 patients fell ill with RR/MDR TB in 2019 yet only 692 DR TB cases were notified translating to a treatment coverage of 32%. Although this was a marginal increase from 681 in 2018, surveillance system strengthening remains a priority to find missing patients with drug resistant strains. The sustained increase in detection of DR TB cases may be attributed to increased access to DST made possible by sputum sample networking and; capacity building of healthcare workers to carry out DR TB surveillance. Drug susceptibility testing (DST) was 31.1% among new TB patients in 2019.

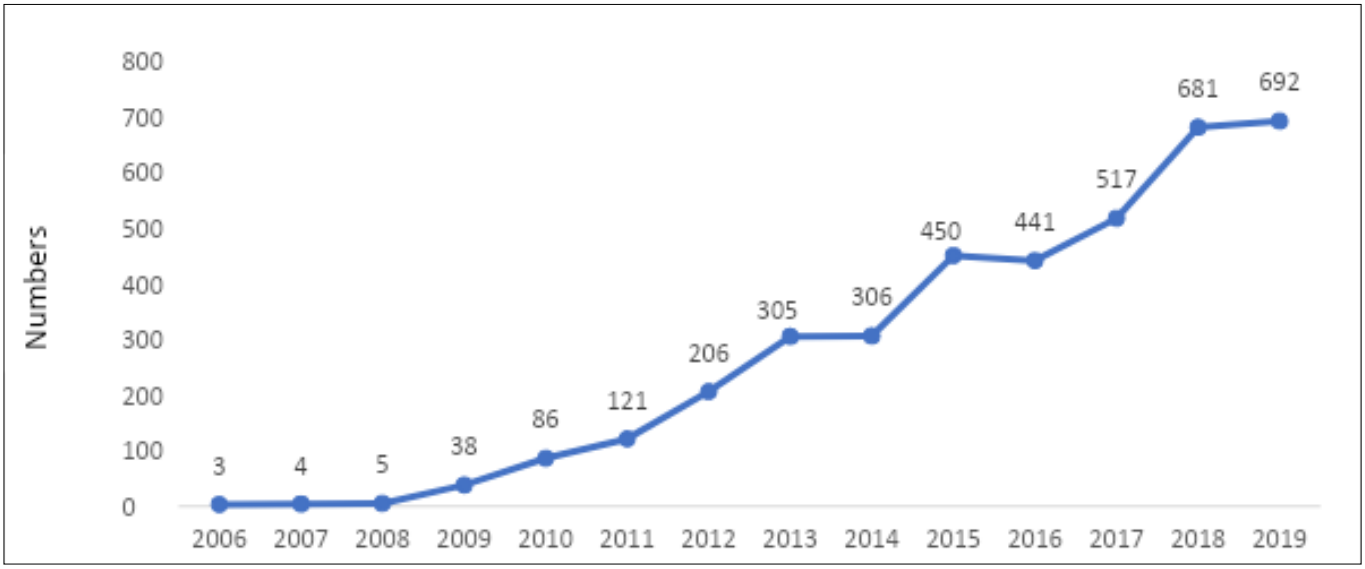


Figure 4: Trend of drug resistant TB cases in Kenya, 2006-2020

1.2.1 Characteristics of DR TB Cases notified in Kenya, 2019

Distribution of DR TB patients was observed across all counties, with the highest number of cases reported in Nairobi County accounting for 14% followed by Mombasa 7%, Turkana 6%, Nakuru (5%) and Meru 4%. Samburu and Tana River counties notified the least number of patients, with only two cases each.

Among the DR TB patients notified in 2019, 516 (75%) had rifampicin resistant (*including MDR, XDR & Pre XDR*) and 172 (25%) mono-resistant (excluding RR). Only 1 XDR and 8 Pre-XDR cases were notified. Access to second line DST has seen Kenya diagnose Pre-XDR and XDR TB patients since 2017, with at least one XDR case notified annually except in 2017 when 2 cases were notified.

In 2019, 38% of DR TB patients were HIV co-infected, a notable decrease from 47% in 2016. The ART uptake was reported to be 96%. Undernutrition was recorded among 27% of children and 56% of adult DR TB patients, of whom 20% of them had severe malnutrition.

1.2.2 Treatment Outcomes among DR TB Cases in Kenya, 2017 Cohort

The treatment success rate for all DR TB cases notified in 2017 was 73%. The death rate has been high over the years with 15% being reported in the 2017 cohort.

While the treatment success rate among Monoresistant (Excluding RR) TB cases has been increasing, a decline was reported among PDR (Excluding RR) and RR cases between 2015 and 2017. The TSR among Pre-XDR and XDR which has had 1 or 2 cases has been at 100% for both 2016 and 2017.

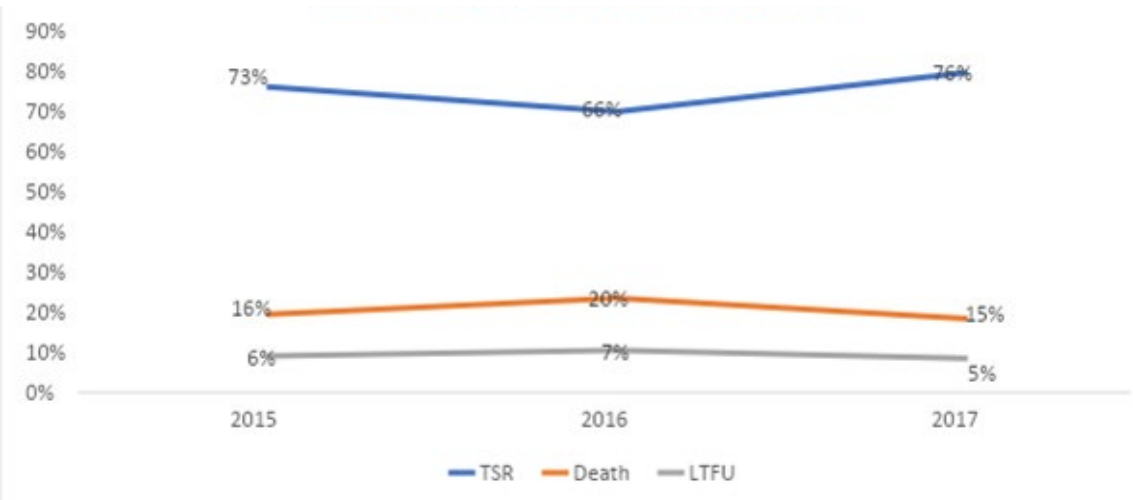


Figure 5: Treatment outcomes of DR TB patients in Kenya, 2015-2017

The treatment success rate was significantly lower among HIV co-infected DR TB patients at 64% compared to 85% among the HIV negative cases. Children had a higher treatment success rate of 81% compared to adults at 76%. The death rate among adults was 3 times higher at 15% compared to that in children. DR TB patients with a normal nutritional status had a higher treatment success rate at 84% compared to the malnourished who had a success rate of 64% and a death rate that was twice as high as the normal ones at 18%.

1.2.3 Introduction of injection-free regimen for MDR TB

Kenya started the implementation of the programmatic management of drug resistant TB (PMDT) in 2006. In October 2017, the country launched the shorter-term regimen (STR) which is administered for 9-11 months, replacing the longer conventional regimen given for 18 months, which had injectable agents as core drugs. Following the development of new drugs for treatment of MDR TB and the high ADR profile associated with injectable medicines, the WHO released new guidelines in 2019 recommending an all-oral regimen. In the new recommendations, WHO reclassified second line TB medicines with preference for oral medicines (new and repurposed). The new and repurposed are associated with reduced deaths, treatment failure and relapse, and no deafness. Kenya adopted the WHO guidelines and developed protocols to guide in the treatment of DR TB with support from WHO and USAID through the Tuberculosis Accelerated Response and Care II (TB ARC II) Activity.

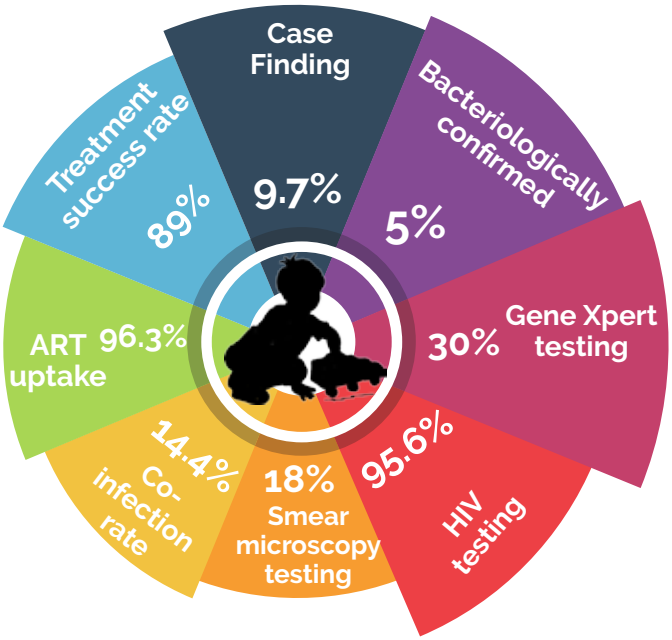
1.3 Paediatric Tuberculosis

1.3.1 Introduction

Childhood TB continues to be a recognized global public health problem. Children are infected either directly from an index adult case or from reactivation of latent TB. The predisposing factors include: under-developed immunity, congested living conditions, malnutrition, congenital heart diseases, chronic deprivation and HIV disease among others.

1.3.2 Case Finding

In 2019, 8,393 children (0-14 years) with TB were notified which constituted to 9.7% of all notified TB cases. However, this was a drop of 14.4% compared to 2018. Bacteriological diagnosis among children in 2019 was 5%. Counties that accounted for paediatric diagnosis of above 20% of the total all TB cases notified include: Nakuru (27%), Baringo (26%), Turkana (23%) and Nyeri (21%). In Turkana county, the Catalyzing Peadiatric TB (CaP TB) which was implemented through support of EGPAF from August 2018 to December 2019 aided in the achievement of increased case finding observed in children.



Out of all the notified childhood TB, 30% had GeneXpert results while 18% had an initial smear test done. HIV testing was conducted among 95.6% of the children, with a co-infection rate of 14.4% and ART uptake of 96.3%. The co-infection rate was lower than among adults.

1.3.3 Treatment Outcomes among paediatric cases

While treatment success rate among children was close to the national target, cure rate is still very low at 66%, a pointer that there could be gaps in conducting sputum follow up. Death rate and loss to follow-up among children each stood at 4%. The best performing counties in regards to treatment success rate were Wajir, Lamu, Nyandarua, Kericho and Kisii.

1.3.4 Nutrition

An estimated 24% of children were severely malnourished while 9% were moderately malnourished in 2019. Only 51% of the severely malnourished and 43% of the moderately malnourished received therapeutic feeds. Thirteen (13%) of the paediatrics were not evaluated for malnutrition.

1.3.5 Drug resistant TB in children

The country has recorded a declining trend in the number of notified paediatric DR TB cases year-on-year since 2017, when a record 21 children were notified. In 2019 x cases of pediatric DR TB cases were notified. This was despite increased surveillance and capacity building of healthcare workers on diagnosis of DR TB in children.

1.4 Tuberculosis/HIV and Other Co-Morbidities

1.4.1 Tuberculosis and HIV

HIV testing among TB patients remained high at 98% in 2019, with some counties like Nyamira and Homabay testing all patients with TB. Isiolo tested the least at 82%. HIV testing was similar across the genders but higher among adults at 98% as compared to children at 96%.

There was a slight decline in co-infection rate at 26% in 2019 as compared to 27% in 2018. The ART uptake was 96% with Uasin Gishu county reporting the least at 79%.

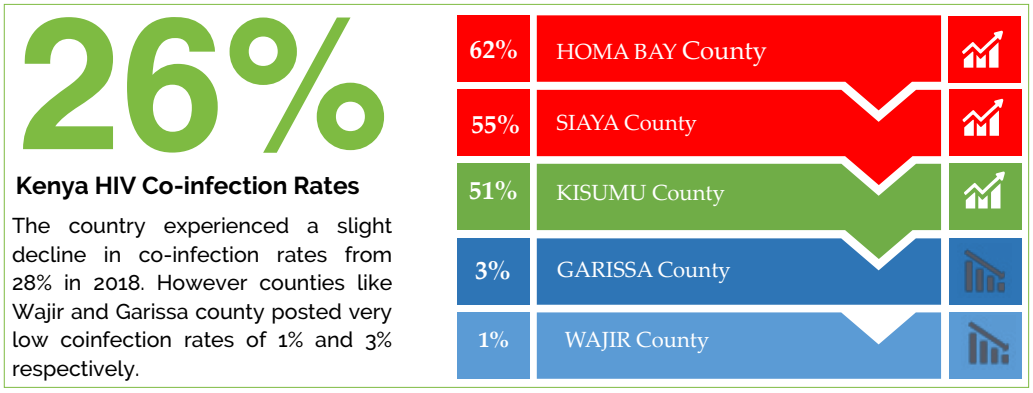


Figure 6: TB/HIV co-infection rates in Kenya and select counties

1.4.2 Tuberculosis and Diabetes

Since 2016, the program, in collaboration with the Non-communicable diseases (NCD) department in MoH has been carrying out activities to strengthen TB/DM collaboration. These activities include training of trainers of trainers (ToTs) and frontline HCWs; development of SOPs, job aids and training materials; and procurement and distribution of random blood sugar (RBS) testing kits to a few counties. In 2019, several frontline health workers in select counties were trained on bi-directional screening and management of TB/DM. These included health workers from Nakuru, Meru, Nyeri, Kakamega, Siaya and Machakos counties. The training covered pathogenesis, diagnosis, management and interactions of the two diseases. In addition, in 2019, recording and reporting for these conditions were aligned in the diabetic patient files to include TB screening indicator. The two programs will continue strengthening and monitoring these processes in the coming years.

1.5 Leprosy

Kenya has reported a rising trend in leprosy case detection since 2018. Between 2018 and 2019, there was a 49% increase of cases from both the endemic and the non-endemic counties, an indication of ongoing community transmission. In 2019, 15 Counties reported at least 1 leprosy case, with Bungoma, Kilifi and Kwalecounties reporting the highest number of new cases

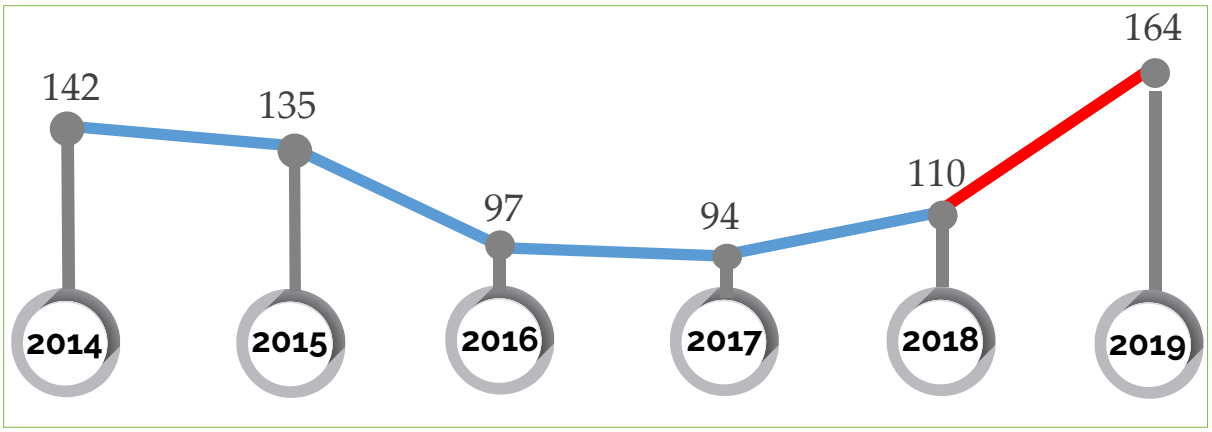
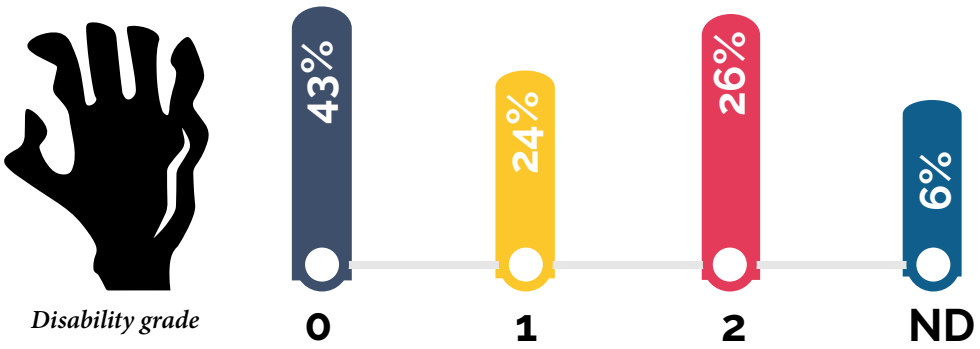


Figure 7: Trend of leprosy case finding in Kenya, 2014-2019

1.5.1 Disability Grading for Leprosy

In 2019, 26% of leprosy patients had disability grade 2 and 24% had grade 1. The DNTLD-P will continue to build capacity among TB and Leprosy coordinators on disability grading of leprosy patients so as to improve patient follow-up and quality of care for all patients on treatment.



1.5.2 Treatment outcomes for leprosy patients

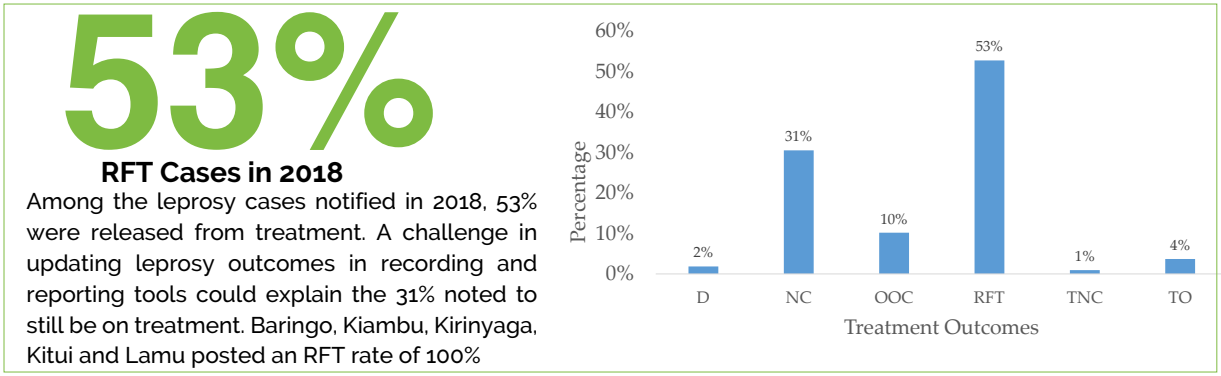


Figure 8: Treatment outcomes of leprosy patients, 2018

1.6 Latent Tuberculosis Infection (LTBI)

In line with WHO recommendations on the use of shorter rifapentine-based regimen (3-HP) for treatment of LTBI, the country embarked on an exercise of developing an LTBI policy document through the support of WHO. Two workshops were held in October and December 2019 to develop LTBI policy and a health care workers' guideline on management of Latent TB infection. These workshops brought together technical officers from the National TB program, CTLCs representatives, NASCOP, KEMRI, members of the Civil society, patients' advocates and representatives and partners including CHS, EGPAF, CDC, Stop-TB Partnership, NEPHAK, CHAI and WHO.

In 2019, the MOH procured Interferon Gamma Release Assay (IGRA) test kits for use in the testing for latent TB infection. Successful development of the health care workers' sensitization package and subsequent training was conducted with support from CHAI.

1.6.1 TB preventive therapy among Under 5 years

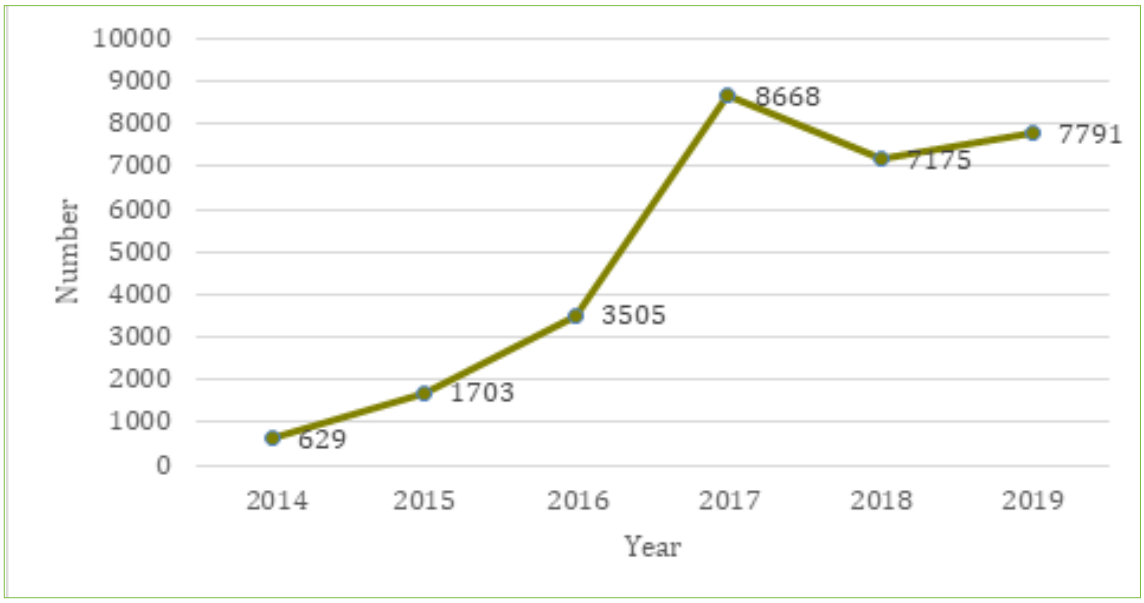


Figure 9: Trend of TB preventive therapy among under-5 years, 2014-2019

The number of under five children initiated on isoniazid preventive therapy (IPT) in 2019 was 7,791 (49%) against a set target of 15,866. The uptake of IPT is still sub-optimal. There is need to scale up this intervention to ensure that all children exposed to bacteriologically confirmed cases are screened for TB and subsequently initiated on TPT when found to be negative.

1.6.2 Treatment Outcomes for Isoniazid Preventive Therapy

Among the under five children initiated on IPT, 81% completed treatment. This was an improvement of 30% compared to 2017 where 51% had an outcome of treatment completed. This is attributed to consistent sensitizations among health care workers on the need to track patients initiated on IPT.

Table 1: Treatment outcomes of TB preventive therapy among under-five, 2018

Isoniazid preventive therapy outcomes (2018 cohort) for under 5yrs					
Outcome	Treatment completed	Died	Discontinued	Lost to follow up	Not Evaluated
Proportion	81%	0.1%	1.1%	1.90%	16%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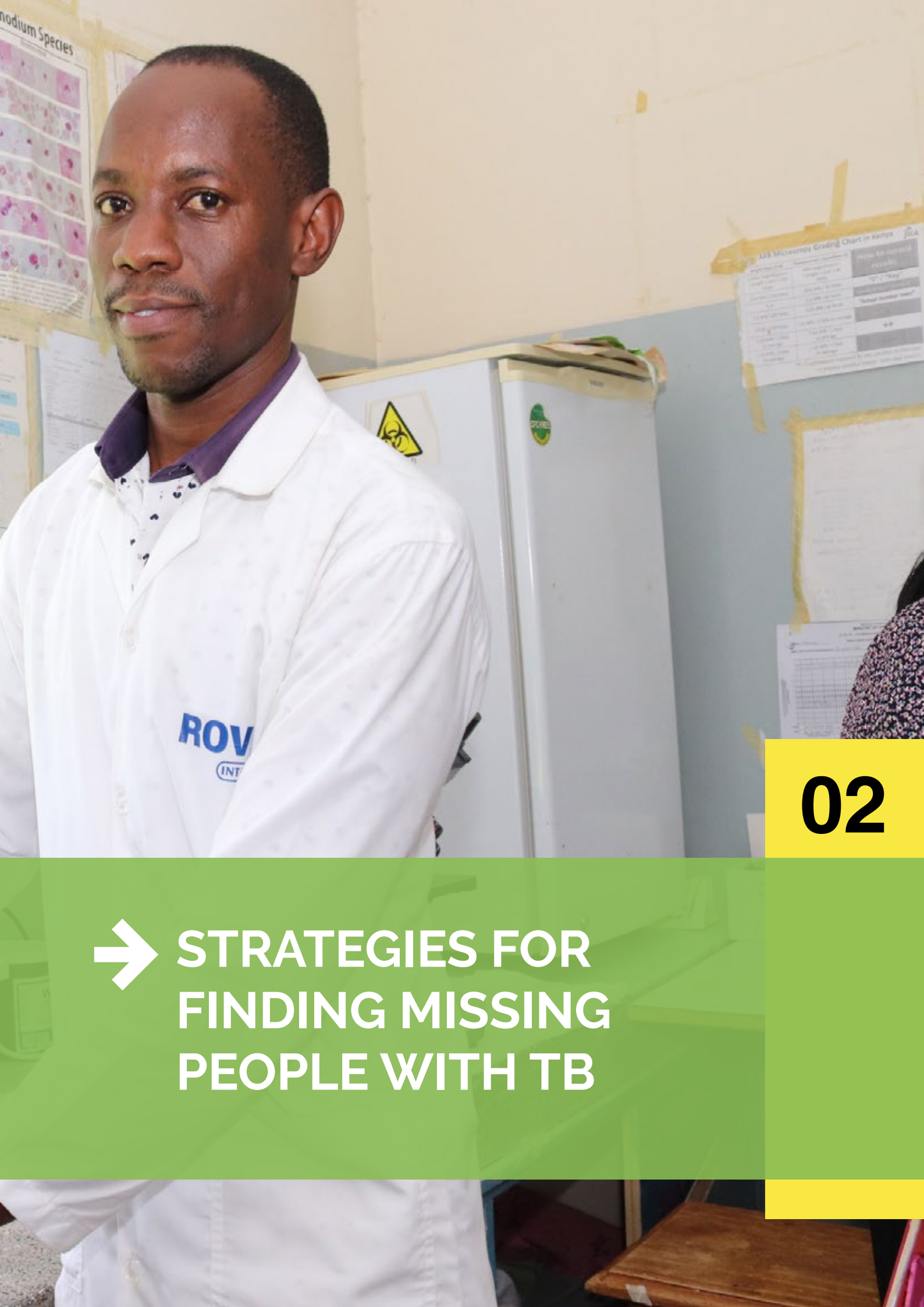


02

STRATEGIES FOR FINDING MISSING PEOPLE WITH TB

In 2019, some 86,385 cases including 8,3963 children and 692 DR TB patients were notified with TB in Kenya. This represents 10.4% decline in case notification compared to 2018. This may be attributed to various challenges, most importantly the prolonged and widespread industrial action by health care workers across the country.

2.1 Background

Kenya is estimated to be missing 40% of the incident TB cases according to the Kenya TB prevalence survey conducted between 2015 and 2016. To find the missing people with TB, DNTLDP with support from partners implemented various interventions to close the detection gap. Strategic initiatives (SI) to find missing people with TB have been implemented under support of GF through Amref Health Africa as part of interventions to find missing people with TB at both community and health facility levels in public and private sectors.

Through Kenya innovation challenge fund for TB (KIC TB) initiatives, interventions put in place at community level include systematic screening of contacts of bacteriologically confirmed TB patients, routine screening of targeted high-risk groups, and using innovative approaches to create awareness in the community, screen and refer for laboratory testing.

Implemented iInterventions to find missing people with TB at facility level include involvement of private sector, active/intensified case finding within facilities and motivation of health systems through Pay-for-performance (P4P) initiative among others.

2.2 Kenya Innovation Challenge Fund for TB (KIC-TB)

KIC-TB is a strategy to complement the country's efforts to motivate and engage key stakeholders to find the missing people with TB in the community. The key focus is to create demand for TB services and to ensure that people presumed to have TB in the community are identified and linked to health facilities for diagnosis and treatment. In this initiative, nine innovative proposals commenced in the third quarter of 2019 across six counties as outlined below.

Table 2: Summary of innovations being implemented under the KIC-TB initiative

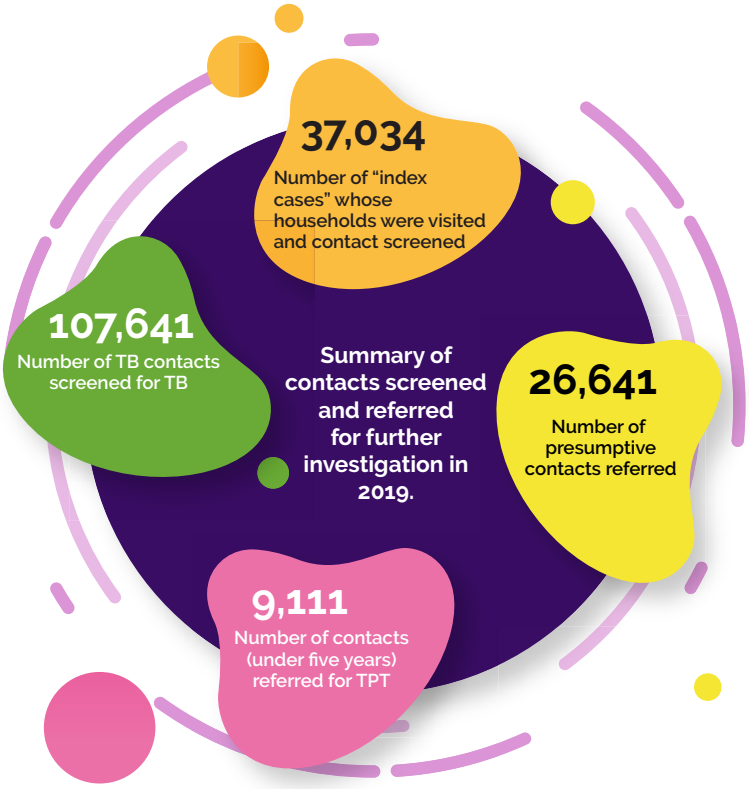
Sub-recipient/ organization	County	Summary of innovation
ReSok	Nairobi	Using unstructured supplementary service data (USSD) platform for enhanced self-screening for TB among men in workplaces informal settlements
Community Support Platform	Kakamega	Using school-going children to screen family members and household contacts
Resources Oriented Development Initiative	Kiambu	• Expanding TB screening in congregate settings to include detainees in prisons & police cells; prison & police officers, and their families • Use of SMS platform for self-screening of plantation and industry workers
North Star Alliance (NSA)	Mombasa	Expanding TB screening services for truck drivers and corridor communities

Partnership for an HIV free Generation (HFG)	Mombasa	Finding people with TB among Matatu crews and associates with linkage to health facilities.
TAC Health Africa	Nairobi	Using manned call centers and financial support to enhance screening for TB in informal settlements
Heroes Oasis Counselling Center	Homa Bay	Strengthening TB screening in prisons through enhanced use of champions Use of USSD platform for self-screening in the community
Sema Limited	Nairobi	Use of Automatic Screening Teller Machine (ASTM) for self-screening of persons seeking services at Huduma Centers, Passport control office and SGR terminus
NAIS Healthcare Limited	Kajiado	Integrating private sector and incentives to increase TB screening in informal settlements

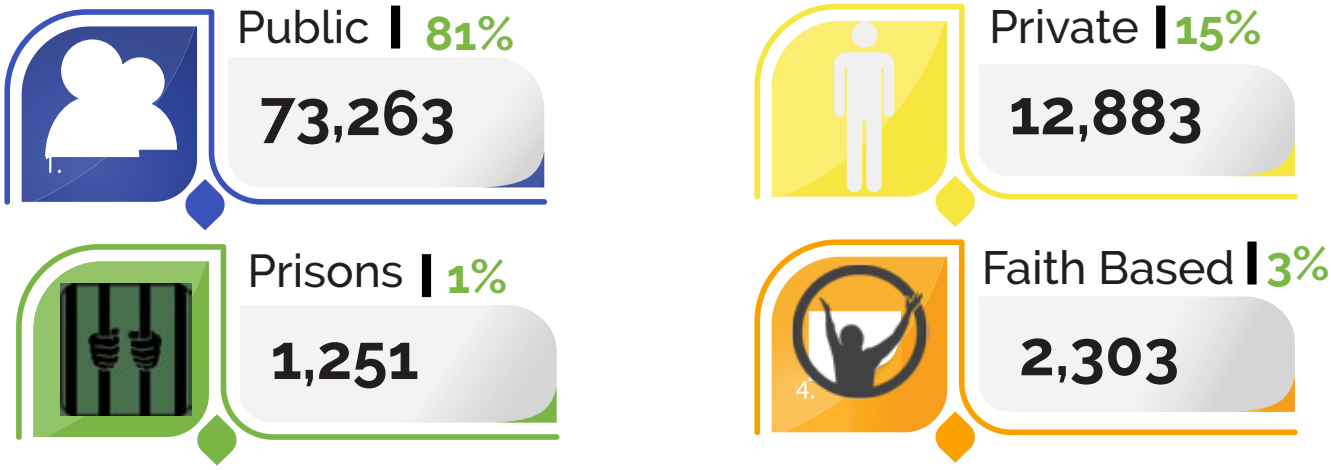
Since the commencement of strategic initiatives in quarter three 2019, a total of 103,424 people were screened and 17,652 people with TB symptoms were identified. After further clinical assessment of 3,376 people were found to be presumptive TB cases and all were referred for GeneXpert testing with a 4% positivity rate. Out of this initiative, 132 patients were diagnosed with TB and 124 linked to treatment.

2.3 Contact Management and Investigation

Contact management is one of the key strategies for finding people with TB. Contact tracing by community health volunteers (CHVs) supplement contact invitation by HCWs. The strategy is implemented in all the 47 counties in Kenya through Global Fund by sub-recipients (SRs) supported through Amref Health Africa. Community screening tools have been provided to CHVs who record all household contacts and refer those with symptoms to health facilities for further evaluation and TB testing. Those under 5 years of age who screen negative are initiated on TB preventive therapy.



In 2019, 37,034 households of bacteriologically confirmed TB patients were screened for TB and reverse contact tracing conducted for household members of children under five years to identify the index case(s). An average of 3 contacts were reached per household.



Summary of contacts screened and referred for further investigation in 2019

2. 4 Public Private Mix (PPM)

DNTLD-P through partners has continued to implement the PPM action plan (2017-2020) that aims to strengthen and expand the engagement of the private sector in the fight against TB as an effort to increase access to TB and MDR TB prevention, care and control services. About 12,880 TB cases were notified from the private sector in 2019, accounting for 15% of all notified cases.

Achievements per PPM Intervention

1. **Engage the unengaged formal and informal health service providers including standalone clinics and chemists:** In order to optimize engagement in the TB response in private sector, the PPM committee of experts/ technical working group mapped different stakeholders and type of engagement. The main focus was to engage the unengaged formal and informal health service providers including standalone clinics and chemists. These were implemented through Global Fund's support and the counties included Garissa, Kajiado, Kiambu, Kisumu, Mombasa, Nairobi, Nakuru and Kilifi. 538 health facilities were engaged (311 clinics/ nursing homes; 218 pharmacies/ chemists and nine (9) laboratories) were engaged across the 8 counties and were linked to sputum sample transportation to GeneXpert sites (private or public). As of December 2019, 18,861 people were screened for TB and 82 of them diagnosed.

2. **Private sector engagement and partnership through utilization of various PPM models:** the aim is to expand and improve private sector engagement and partnership through utilization of various PPM models in order to improve and expand private sector partnership. In 2019, institution/provider PPM and corporate models were supported through support from USAID.

    - Institution/Provider model: Involved engaging of Tunza clinics networks which include 'small' individual owned clinics. However, some clinics are within nursing homes and medical centers that have laboratories and admit patients. A total of 100 health facilities were engaged in Nairobi, Mombasa, Nakuru, Kiambu, Tharaka Nithi, Meru, Isiolo and Embu counties. Eighty-eight (88) health care workers were trained using the integrated TB curriculum. In 2019, a total of 36,068 patients were screened in the Tunza facilities, about 2,500 presumptive TB cases identified and 2,024 sent for diagnosis at various gene Xpert sites. Out of the total presumptive cases tested, there were 61 patients diagnosed with TB.

    - Corporate Model: The focus is to reach the males in the economically productive age group. In 2019, health departments in priority industrial counties were engaged including Kisumu, Nakuru, Nairobi, Mombasa, Kwale and Machakos counties. In 2019, a total of eight (8) companies were reached and sensitized on TB. Screening for TB was done in three companies with a total of 1147

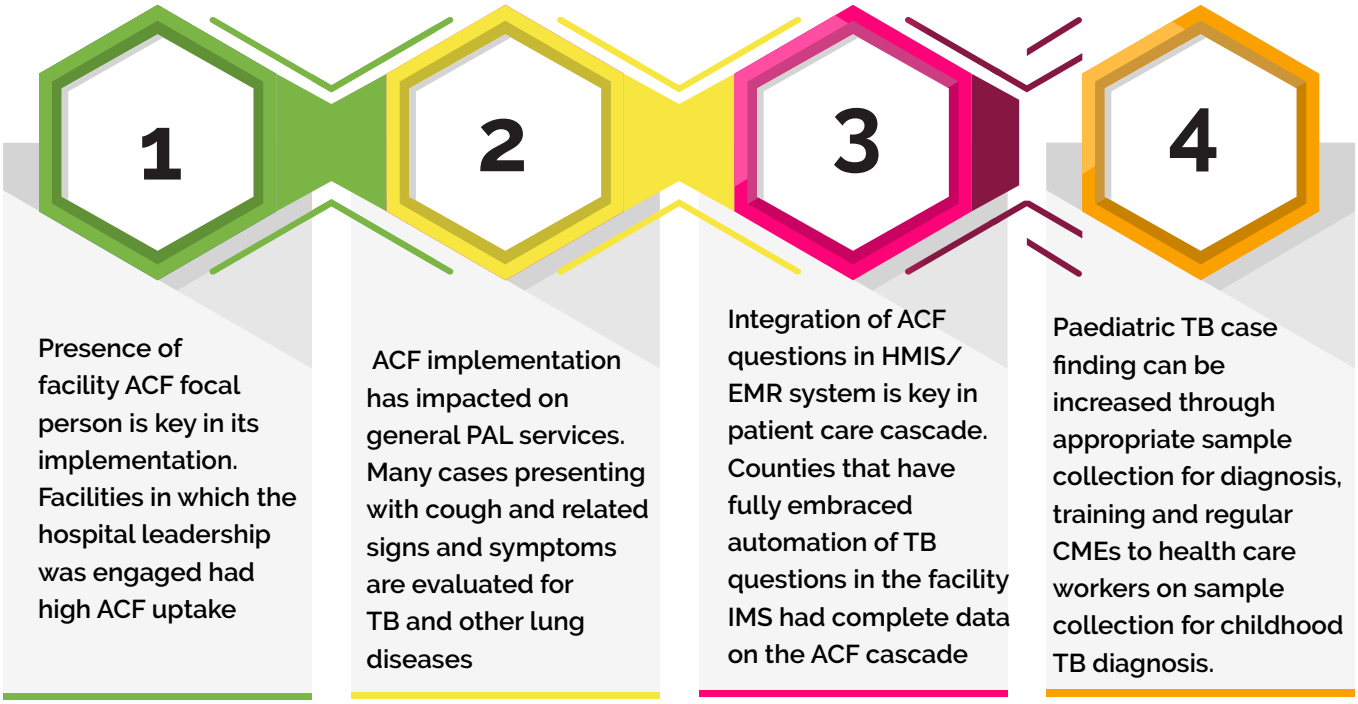
workers screened, 107 Gene Xpert tests done, and of all tested one was Gene Xpert positive and 8 had X-rays suggestive of TB. All the nine patients were initiated on treatment.

3. Establishment of diagnostic hubs in selected private laboratories: TB Reach Project Wave 6 aimed to contribute to finding missing people with TB through strengthening diagnostic capacity of laboratories in the private sector. Genexpert MTB/RIF were placed in private laboratories to provide free TB diagnosis (diagnostic hub) and linking chemists, private clinics and nursing homes to identify people with presumptive TB (spokes) to the hub. A referral mechanism to refer the people presumed to have TB or sputum specimens to the diagnostic hubs (networking) was done. An information system linking hubs and spokes was developed and is in use. Cooler boxes, falcon tubes, cartilages and reporting tools were distributed to the hubs and spokes, and a motor-cycle rider engaged to transport samples in each region. The counties include Kiambu, Machakos, Kajiado, Nakuru, and Trans Nzoia. In 2019, a total of 140 providers were mapped, 87 sensitized - 33 spokes linked to the network, and Xpert machines placed in 5 private laboratories. As at December 2019, 634 tests had been performed through this project, 45 TB cases diagnosed (44 bacteriologically) and all diagnosed patients were initiated on treatment.

2.5 Active/ Intensified Case Finding

Intensified case finding for TB Involves systematic screening for TB among all patients presenting to health facilities regardless of presenting complains or presence/absence of TB symptoms/ signs. Through the support of Global fund, the NTLDP has scaled up facility Based Active Case Finding (FB-ACF) to all the 47 counties. The scale up involved 2 high volume facilities from each of the 290 sub-counties including the county referral hospitals. Linkage assistants have been engaged in 138 facilities to support HCWs in screening and linkage to diagnosis and treatment. Sensitization on ACF has been conducted in 4,867 health care workers. Experience sharing workshop was conducted to share experience and best practices.

In 2019, a total of 141 lay workers (linkage assistants) were continuously engaged in 138 facilities to support health care workers in screening and linkages. Further, 4,867 HCWs were sensitized on ACF. Staff from facilities gathered to share best practices at a national experience sharing workshop, aimed at fostering cross-learning among healthcare workers.Implementation of ACF was affected by widespread health care worker industrial action across the country, low adoption of ACF by healthcare workers, non-integration of ACF questionnaires within EMRs, and shortages of GeneXpert cartridges.

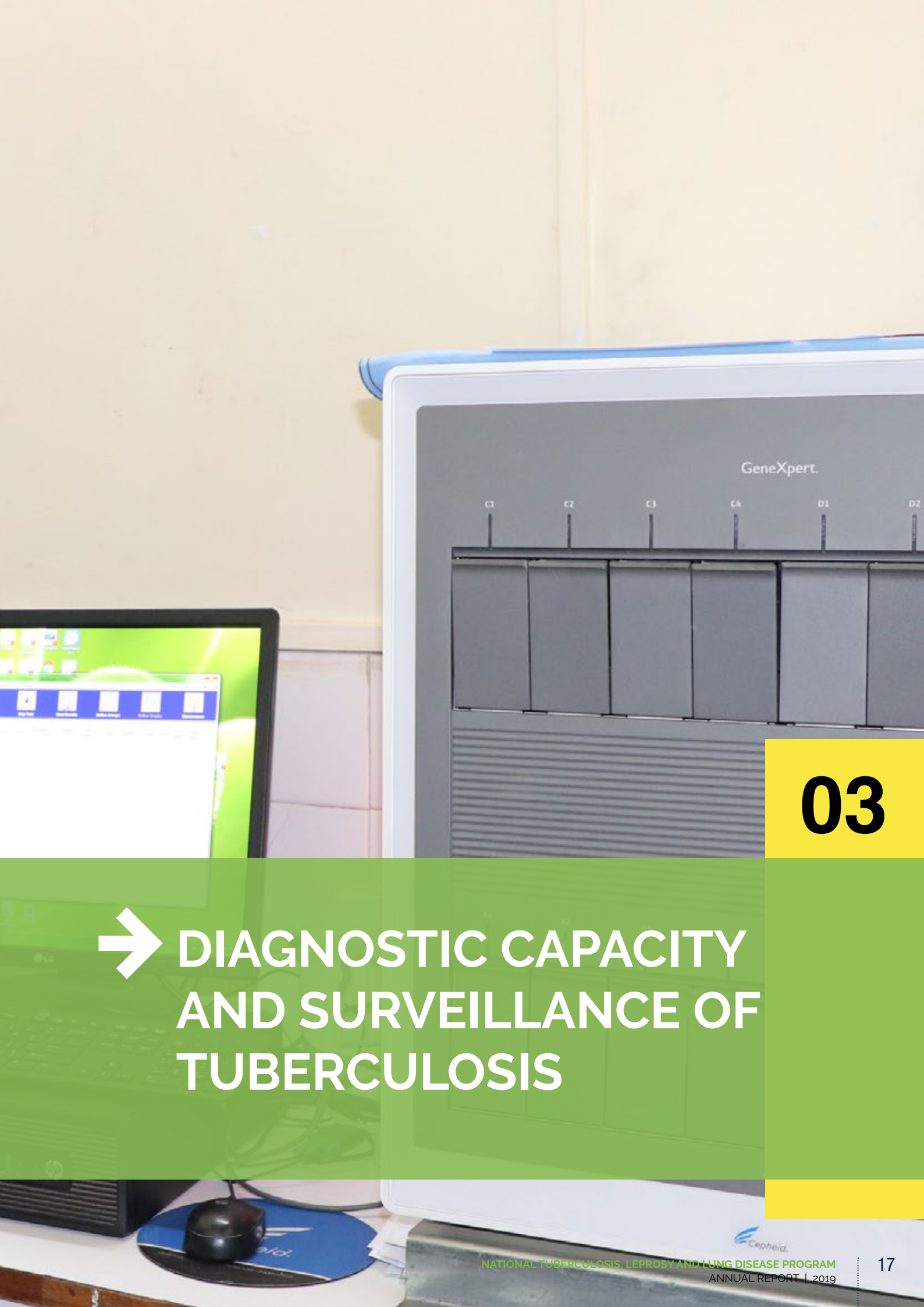


2.6 Pay-for-Performance

A Pay-for-Performance initiative (P4P) was designed to incentivize in-facility efforts to improve case finding. A general framework for implementing the P4P initiative was agreed upon and focused on 13 high-burden counties which include Nairobi, Kiambu, Mombasa, Homa Bay, Kakamega, Nakuru, Garissa, Meru, Kilifi, Siaya, Kitui, Makueni and Turkana. A total of 197 health facilities were sensitized and formally engaged. These facilities were drawn from public, private and faith based/ missionary facilities. The main goal of P4P is to contribute towards finding missing people with TB and successfully treating them. The performance is based on increase in the number of TB cases notified and quality of care for patients on treatment which are scored and rewarded according to the performance.

The challenges encountered included delayed signing of performance agreements with counties, widespread health care worker industrial action, stock-outs of Gene Xpert cartridges and lack of a budget to support logistics for field-based technical assistance.

In the 13 counties, there was a 5.4% decline in notified cases in 2019 compared to a similar period in 2018 (23,093 cases notified in Q3-4 2019 compared to 24,418). This decline was however less steep compared to that of the whole country which was at 8.5% (44,153 from 48,243). Non-participating counties had a decline of 11.6%. The general decline in performance may be attributed to the challenges described above, most notably the widespread and prolonged industrial action by health care workers. While performance did not improve, the slightly better performance in P4P counties compared to non-participating counties suggests that P4P may have had an impact in improving TB case finding and notification.



03

DIAGNOSTIC CAPACITY AND SURVEILLANCE OF TUBERCULOSIS

HIGHLIGHTS

2,555

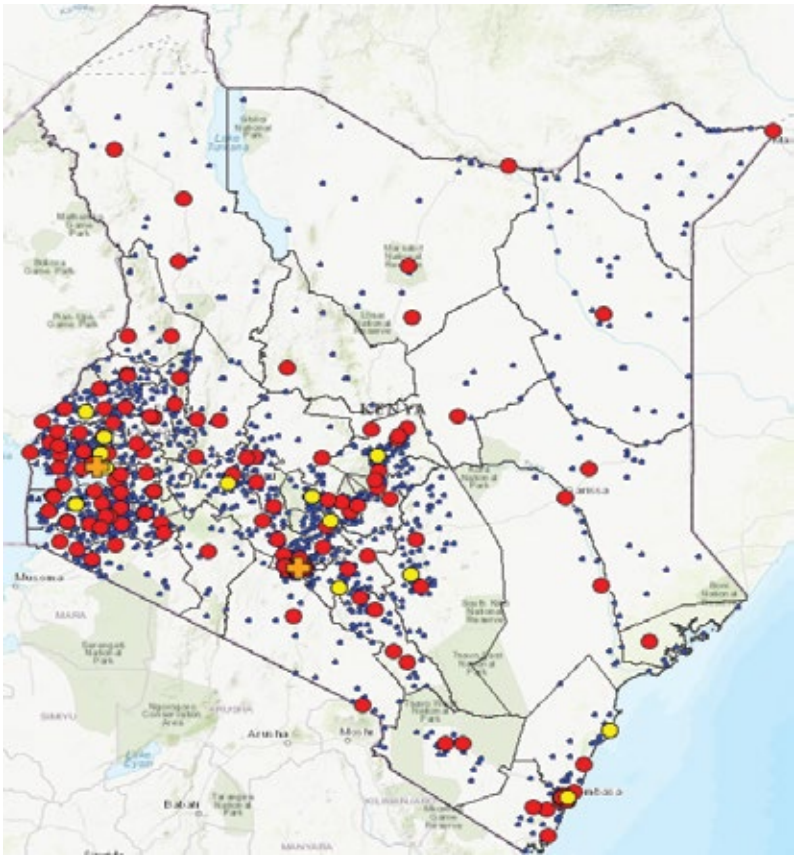
Total number of sites offering microscopy increased by 10% from 2,320

200

Total number medical laboratory technologists trained on AFB refresher and EQA

3.1 Distribution of Diagnostic Services in Kenya

The country uses AFB microscopy, GeneXpert and culture in the diagnostic algorithm to be able to diagnose and do surveillance to support TB control. Below is a map showing the placement of all these diagnostic tools in the country.



189

Number of GeneXpert machines distributed across the country by the end of 2018.

KEY:

- GX4t
- GX16
- Smear Site (ZN/ FL)
- Culture Site

3.2 Tuberculosis Microscopy Services

Microscopy remains an effective method for the diagnosis of TB cases and monitoring of TB treatment progress. During the year, efforts were put in place to scale-up the number of microscopy sites by working closely with counties and implementing partners. The total number of sites offering microscopy increased by 10% from 2,320 to 2,555.

AFB refresher and EQA training was conducted to 200 medical laboratory technologists. All the laboratories during the year under review received adequate AFB commodities. Fluorescent Microscopy coverage was at 70% which is still low and therefore requires attention to facilitate transition to 100%.

3.2.1 External Quality Assurance (EQA) Performance

For the year 2019, the performance indicators were below 5%. EQA analysis recorded a total of 200 smears to be High False Positive (HFP) while 139 were High False Negative (HFN). The reports from Quarterly Review Meetings (QRM) showed that the main cause of errors was as a result of high staff turnover. These reports further indicated a challenge with transcription errors and lack of inclusion of internal quality controls. There is need to train and also refresh the controllers to attain accurate results in reading and reporting of the EQA slides.

The total number of laboratories that reported to have participated in EQA were 2377 (93%) out of which 1269 (50%) participated in all the quarters while 1,107 (43%) participated in only one quarter.

The TB program is in the process of digitizing the EQA reporting system. At the end of the 2019,75 SCMLTs had been trained on online reporting.

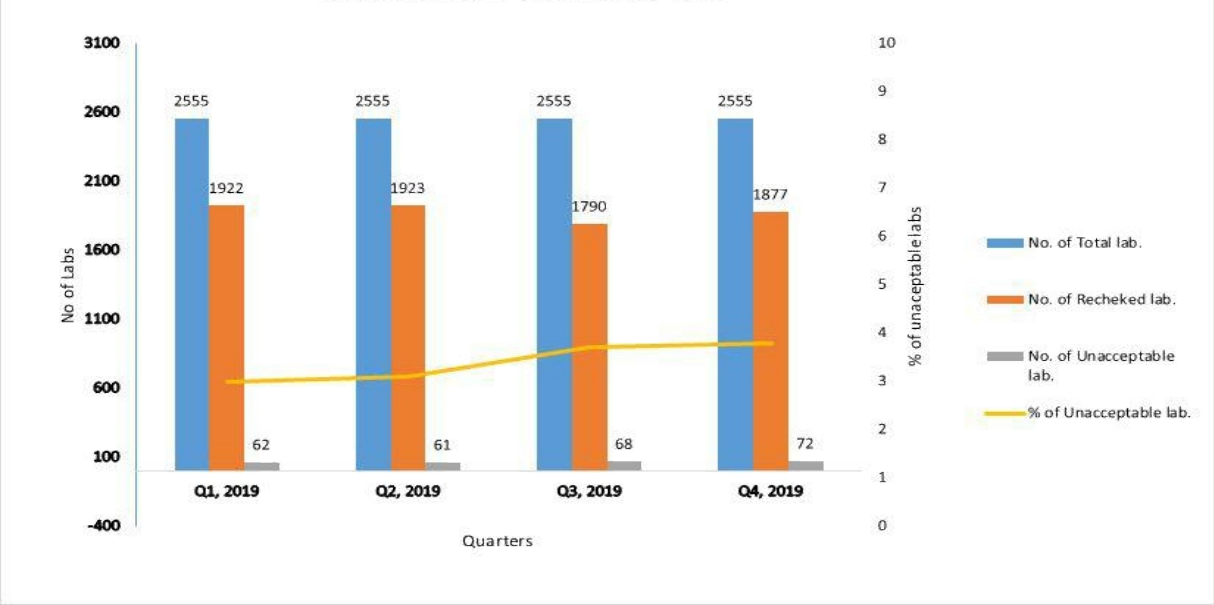


Figure 10: The trends of AFB workload showed an increase in 2019 as compared to 2018

Challenges of EQA Administration

- Staff turnover was noted to be a major challenge which led to closure of some laboratories in some counties.
- Majority of the staffs have not undergone mentorship on AFB microscopy
- There is a gap in the documentation and data collection by the EQA Workbook.
- There is delayed submission of EQA reports from the counties
- The laboratory space in most of the laboratories is inadequate

Way forward on AFB Microscopy.

- Support supervision should be enhanced
- DNTLD-P in collaboration with Counties to ensure mentorship is done to staff
- Scaling up online EQA reporting

3.3 GeneXpert Testing

Through support of the Global Fund and other partners, The DNTLD-P has managed to operationalize189 GeneXpert machines since 2011.The placement varies from the county referral hospitals to few health centres, aith based hospitals and private facilities. The testing platform has greatly improved the turnaround time for laboratory diagnosis of tuberculosis while helping detect drug resistance cases promptly. All the GeneXpert machines are supported with Service Level Agreement to ensure maintenance is done.

3.3.1 GeneXpert Performance Indicators

In the year 2019, a total of 327,054 samples were tested with 30,924 found to have MTB out of which 516 had Rif resistance. This data covers 165 out of 189 facilities. The rest of the 13,120 samples had either no result, invalid result or error as shown in the table below.

Table 3: Number of samples tested using GeneXpert technology

Total		MTB	MTB	No results	Invalid	Errors
Samples	MTB Negative	positive	positive			
Received		Rif.	Rif.			
		Negative	resistant			
327,054	**282,928 (86.5%)**	**30,924 (9.5%)**	**883 (0.3%)**	**1,591 (0.5%)**	**1,489 (0.5%)**	**10,040 (3.1%)**

The categorization of children who accessed the GeneXpert test showed that although children were tested, they were few. The various age categories are as listed in the table below (for those whom age was available);

Table 4: Number children tested using GeneXpert technology

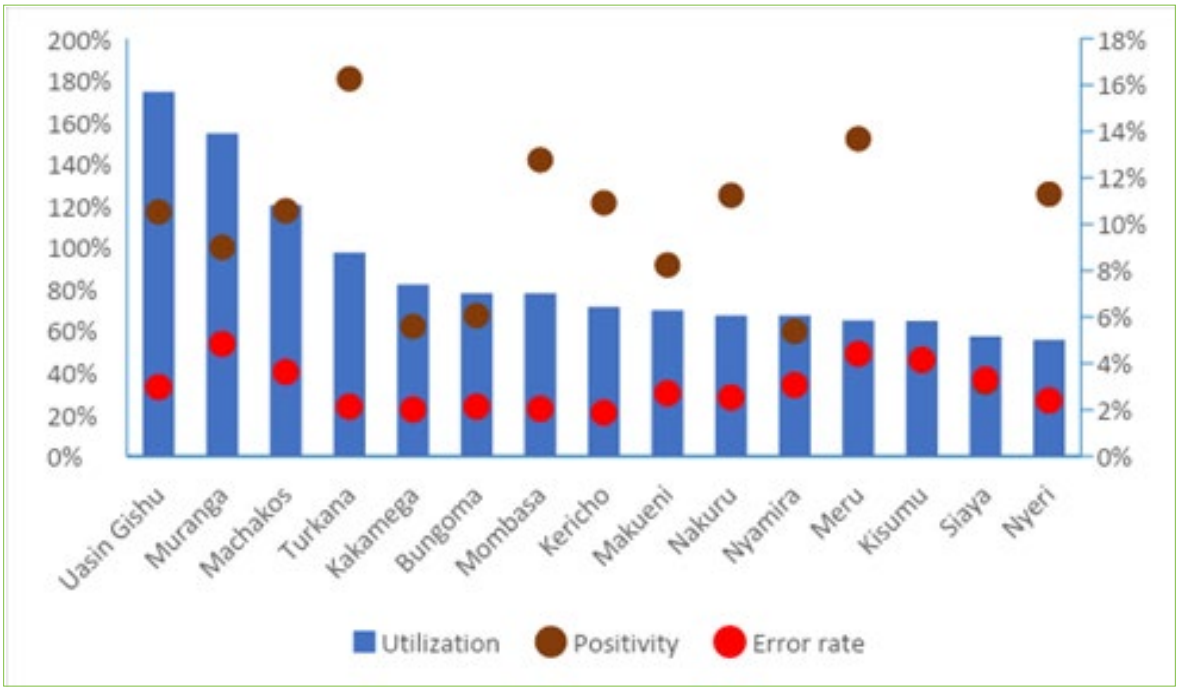
Age category	Total tests done	MTB Detected	MTB	Detected	Rif
			Resistant		
<5 years	3375	96	13		
6-15 years	14,404	418	8		
> 15 years	140,604	13,910	277		

Most patients who accessed GeneXpert test were new presumptive and symptomatic PLHIV.

Table 5: Type of patients tested using GeneXpert technology

Patient Category	Total tests done	MTB Detected	MTB Detected
			Rif Resistant
New presumptive	124,400	11,657	189
Symptomatic PLHIV	18,436	1,607	41

Although many samples were referred to the GeneXpert sites for testing, the yield was low compared to the test ratio of one in every four. Most counties had an average positivityof 10% as well as an error rate of 5%.



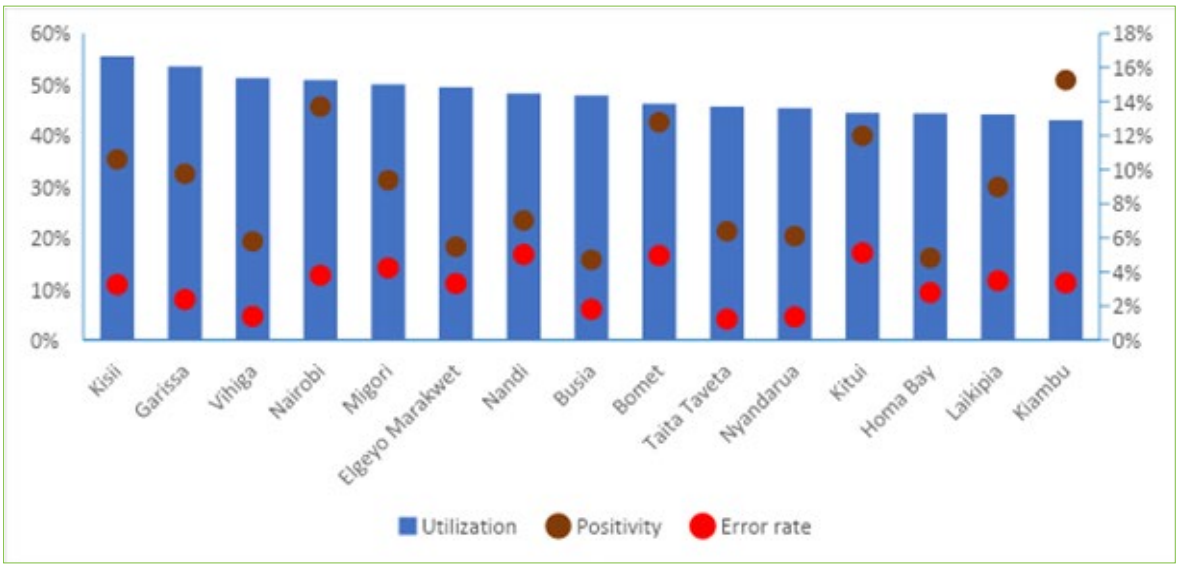


Figure 11. Positivity oanderror rate of GeneXpert in Counties

Challenges of GeneXpert Testing

- Low uptake of GeneXpert testing especially for the children
- Sub-optimal GeneXpert coverage (according to network optimization) especially in hard-to-reach areas
- Low GeneXpert utilisation rates of 60%
- Low GX LIMS utilisation of 70%
- Minimal private laboratory sector engagement to test TB using GeneXpert

Suggested Solutions to the Challenges

- Scale up county adoption of the sample referral guidelines
- Upgrade the GX LIMs' servers for an efficient service
- Private sector engagement and equipment installation

3.3.2 Sample Referral Systems

A National Guidelines for Integrated Laboratory Specimen Referral Networks (2019) was developed to strengthen the sample transportation network. This was achieved through the support of USAID and CHS TB ARC II activity in collaboration with DNTLD-P and FIND. The guide identifies the priority gaps as listed in the NSP 2019-2023 with a target for this Sample Referral System (SRS) to have 80% of the counties to establish a TB sample referral system that covers 75% of the Level 2 to Level 6 health facilities by 2023.

The considerations in this SRS development included the geographical distribution of the facilities as easy to reach, moderate and hard to reach areas.

Sample Referral Systems Challenges

- Sub-optimal integrated sample referral coverage across the country
- Majorly the SRS is supported by partners compromising sustainability
- Little support by counties

Proposed Solutions to the Challenges

- Dissemination of the National Guidelines for Integrated Laboratory Specimen Referral Networks (2019) to counties to own and factor budgets in their annual work-plans.
- Continued support through TAs to build capacity of counties for adoption

3.3.3 Capacity Building

Targeted GeneXpert refresher training was done to 100 laboratory officers from various counties. The training was specifically meant to improve on the quality of testing and adherence to laboratory SOPs as well as safety of testing.

3.4 LF LAM (TB LAM)

TB LAM is a WHO-approved test done using a urine sample for the severely ill patients and those with CD 4 cell counts less than or equal to 200 cells/µL

TB LAM was piloted in 12 counties (Homabay, Siaya, Kisumu, Busia, Kisii, Kakamega, Uasin Gishu, Nyandarua, Nairobi, Nakuru, Mombasa and Kiambu) and showed good incremental yield when used together with GeneXpert. Its use has been incorporated in guidelines.

3.5 Kenya National Tuberculosis Reference Laboratory

3.5.1 Background

The National Tuberculosis Reference Laboratory is an ISO 15189 certified facility supporting DRTB surveillance by providing TB culture services. A total of 14,353 samples were received in 2019 for TB culture, of which 65% were from previously treated patients, 19% were monthly MDR-TB treatment follow-up samples. NTRL Nairobi received 12,555 (87%) of the samples while 13% were received at Kisumu Kisian laboratory. Out of the 14353 samples, 98% (14179) were accepted for culture and DST. The samples tested for first line TB drug sensitivity were 1990 (14%). The procedure at NTRL included AFB and both LJ and MGIT culture.

Increased workload can be attributed to improved testing capacity at NTRL, increased awareness of drug resistance surveillance and early case detection among previously treated patients by the counties. Out of the 12,555 samples received in Nairobi, the contribution of RR samples was 376 (3%), this shows that very few counties are sending RR samples for culture and line probe assay (LPA)

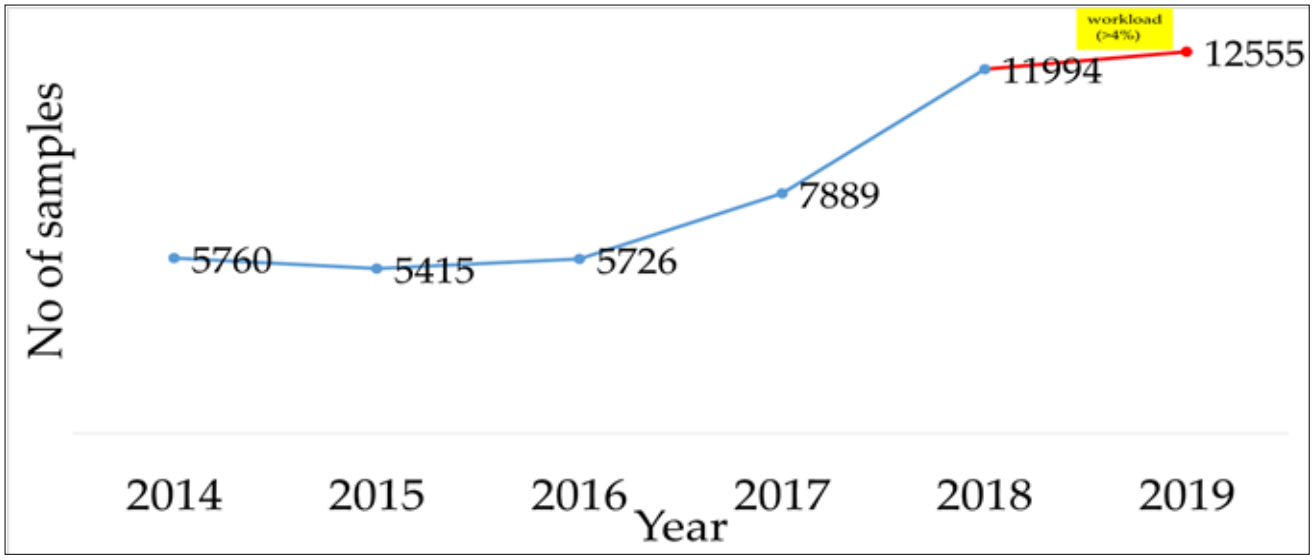


Figure 12: A graph showing a gradual increase in NTRL workload in 2019

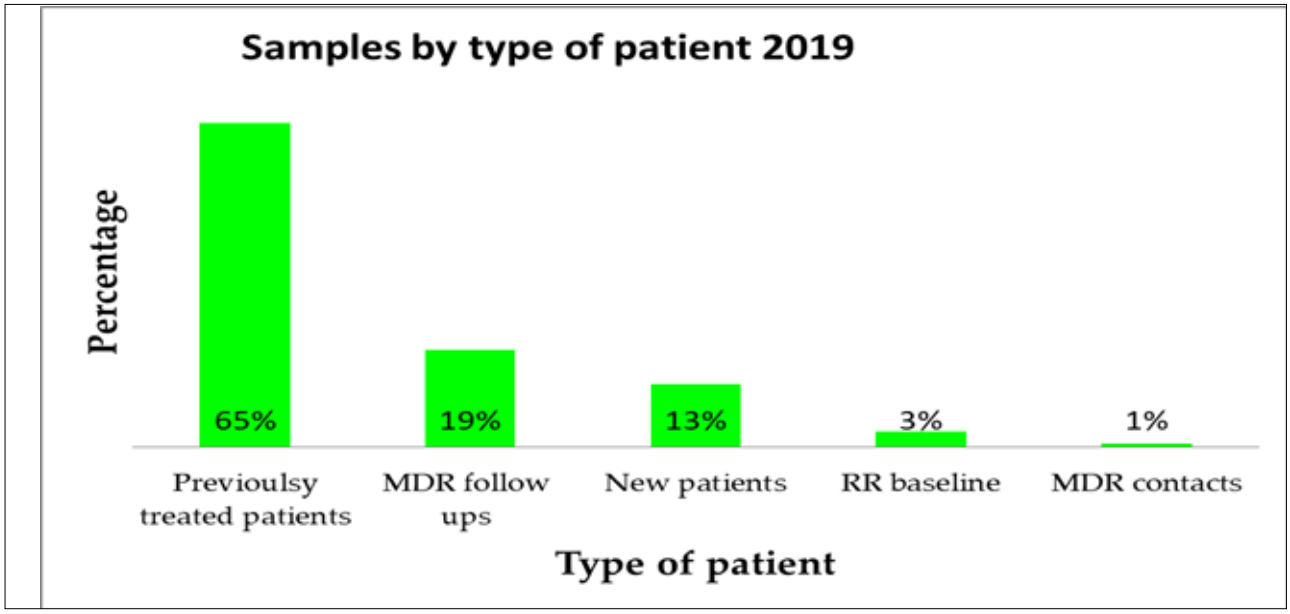
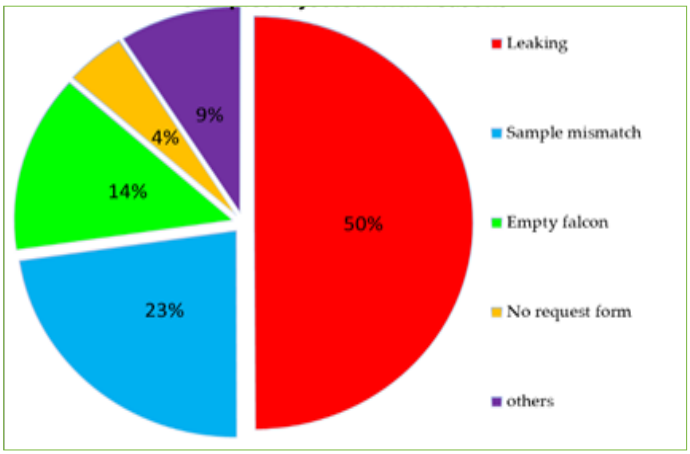


Figure 13: A graph showing samples received at NTRL in 2019 by category of patient



Most samples rejected were due to leakage. This calls for proper sample packaging and transportation training

Figure 14: A chart showing samples rejected at NTRL with reasons

Challenges Encountered in the Delivery of TB Culture and DST Services

- The main challenges for NTRL in the year was stock out of some reagents
- Poor sample collection procedure being used; out of 158 samples that were rejected, 50% were due to leakage. Additionally, delay in sample transportation and delivery to NTRL was noticed in many counties, for example, Baringo had an average of 30 days of Transit TAT, Lamu 25 days, Taita Taveta 23 days, and Kwale and Kiambu 19 days each.
- Culture contamination was one of the challenges. This is because some county facilities keep the samples for a long time before they deliver them to NTRL. Kilifi had 188, Laikipia had 81, Mandera had 43 and Taita Taveta had 40 samples with contaminated TB culture test results contributing to untimely delivery of TB culture services.

3.5.2 GeneXpert and Smear Microscopy Proficiency Panel Production and Coordination

The support of Panel Testing to all facilities has increased gradually from 15 GeneXpert facilities in 2013 to 158 GeneXpert facilities in 2018. This has since covered most of the GeneXpert facilities through the support of CDC. Currently the NTRL has capability to do in-country production of panel tests. The plan is to ensure sustainability and have 100% coverage.

NTRL has since conducted PT enrolment in 50 pilot facilities and plans to enroll all the testing sites moving forward. Below are the trends for PT implementation:

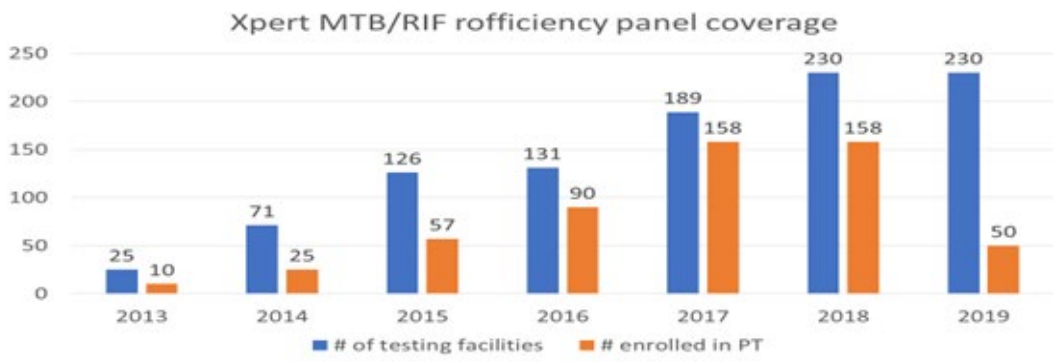


Figure 15: Trends for PT implementation:

NTRL also received smear microscopy PT production technology transfer from SRL Uganda in November 2019 and is now ready to support TB diagnostic network with both EQA and also internal quality control materials as required in the ISO 15189 standard.

04

SOCIAL SUPPORT, NUTRITION AND UHC

HIGHLIGHTS

ARTICLE 43

The most prominent provision of the Constitution of Kenya in the TB response that guarantees the right to the highest attainable standards of health.

93

Total number of lawyers sensitized on TB human rights

4.1 Tuberculosis and Human Rights

4.1.1 Background on TB and Human Rights

Tuberculosis is a disease of poverty and inequality with many factors increasing vulnerability to contracting or reducing access to diagnostic, preventive and treatment services associated with people's ability to realize their human rights.

TB response strategies in Kenya have been formulated and implemented in a manner that respects the national values, especially through ensuring the participation of TB affected communities. The most prominent provision of the Constitution of Kenya (CoK) in the TB response is Article 43 that guarantees the right to the highest attainable standards of health.

In addressing this, the TB Program together with Amref Kenya, Stop TB Partnership - Kenya (STP-Kenya), Kenya Ethical, and Legal Network (KELIN) concluded a sensitization of 93 lawyers on TB human rights in 2019. It aimed at engaging lawyers and advocates to offer pro-bono services for TB patients with issues relating to human rights violations.

The TB program has further engaged the county and sub-county TB coordinators on patient charter and patient rights, which is central to addressing stigma and discrimination among health professionals.

4.1.2 Healthcare Workers' Champions' Engagement

The Stop TB partnership - Kenya (STP-Kenya) identified and engaged health care workers who have had TB as advocates among health care workers in a bid to address stigma and discrimination amongst themselves. The initiative hopes to promote uptake of periodic TB screening among healthcare workers.

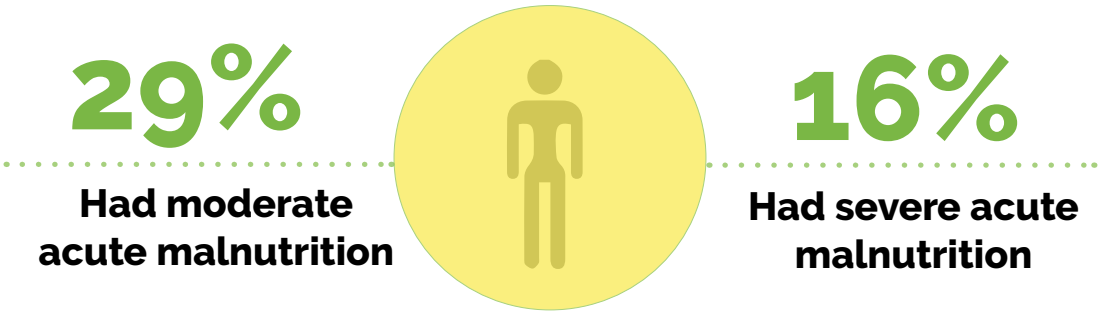
Steve Omondi-*A nurse at Kenyatta National Hospital (KNH). Steve has been engaged through a contract with Stop TB partnership - Kenya to sensitize medical students in institutions of higher learning and county executive committee members of health. Additionally, he continues to sensitize health care workers at his duty station KNH.*

Dr. David Mungai-*A surgeon at Othaya Hospital and an MDR TB survivor. Dr Mungai has been engaged in sensitizing about stigma and discrimination targeting higher-level stakeholders including parliamentary caucus and global public private mix arena. He is recognized as a WHO advocate for healthcare professionals.*

Naomi Muthua -A nurse in Nyandarua County and a former TB coordinator who has been using her experience in TB as a health care worker both nationally and globally to create awareness on TB related stigma and discrimination. For her work, Naomi is a recipient of the Kochon award - highest award in TB fraternity.

4.2 Nutrition

In 2017, the NTLD-P conducted a TB Patient Cost survey that indicated that between 27.1% and 53.7% of TB affected households experienced food insecurity. Additionally, the high cost drivers among the DR-TB patients were largely attributed to nutritional supplement while among DS-TB patients, the main cost drivers in order of cost were hours lost, nutritional supplements and direct medical costs.
In 2019, 45% of the diagnosed drug susceptible and 54% of drug resistant TB were undernourished at the time of diagnosis.



Unsteady supply chain management leading to untimely procurement of nutritional supplements affected provision of nutritional support to TB patients in 2019.

Table 6: Nutritional Status of DSTB Patients in 2019

BMI CLASSIFICATION			FOOD SUPPORT	
	Number	Proportion	Number	Proportion
Normal	33,453	39%	2,624	8%
Moderate Acute Malnutrition	24,730	29%	10,880	44%
Severe Acute Malnutrition	14,312	17%	8,415	59%
Overweight	4.433	5%	401	9%
Obese	4,505	5%	732	16%
Not Evaluated	5,071	6%	808	16%
Total	**86,504**		23,860	28%

Table 7: Nutritional Situation of DRTB Patients in 2019

BMI CLASSIFICATION			FOOD SUPPORT	
	Number	Proportion	Number	Proportion
Normal	262	38%	79	30%
Moderate Acute Malnutrition	234	34%	162	69%
Severe Acute Malnutrition	133	19%	103	77%
Overweight	25	4%	0	0
Obese	22	3%	8	36%
Not Evaluated	12	2%	6	50%
Total	**688**		358	52%

Table 8: Nutritional Situation of Children, 2019

BMI Classification			Food Support	
	Number	Proportion	Number	Proportion
Normal	1839	22%	595	32%
Moderate Acute Malnutrition	753	9%	326	43%
Severe Acute Malnutrition	2026	24%	1,028	51%
Overweight	761	9%	233	31%
Obese	1911	23%	402	21%
Not Evaluated	1122	13%	281	25%
Total	**8,412**		2,865	

4.3 Social Protection

WHO End TB Strategy established three high-level indicators to monitor TB progress globally, one of which is the percentage of TB patients and their households that experience catastrophic costs as a result of TB. The Global TB Report emphasizes the importance of making TB financing more sustainable to reduce out-of-pockets expenses and improve overall performance of TB programs.

Kenya has adopted UHC as the framework for the national health care system as stated in Vision 2030, the Constitution 2010, and the National Social Protection Policy in 2012 which include objectives to reduce financial shocks due to ill health and ensure sustainable healthcare financing.

In order to meet the UHC objectives and ensure no TB patients and their households face catastrophic costs due to TB, The National Tuberculosis, Leprosy and Lung Disease Program started a sponsorship program to enrol all the Drug Resistant (DR) TB patients into NHIF in June 2017. The Program pays Ksh 500 per month for each DR TB patient for a period of two years. The purpose of this sponsorship program is to ensure patients don't incur catastrophic expenditures when they seek medical care. About 619 patients had been enrolled into the scheme by 2019.

Once a patient is diagnosed at the health facility, he/she is registered in the nearby NHIF branch office and the patient details notified to NTLD-P for payment processing to the NHIF account. Out of the 689 patients eligible for NHIF in 2019, only 310 (46%) benefited from NHIF. The low NHIF enrolment rate was partly attributed to the following:

- Patients not having national identity cards which is mandatory for NHIF registration
- Request for the service not made to the program by SCTLCs which also affects the patient stipend and DOT workers support
- Failure of patients to take the first step to register in the nearby NHIF branch

Through the Global Fund support, patients with DRTB receive monthly cash transfers of up to Ksh 6,000 to reduce the burden of transport and food related costs. Money is sent directly to beneficiaries through their mobile phones or of trusted nominees for patients who do not have registered phone numbers, using the online TIBU Cash platform.

In 2019, an estimated 1,160 (90%) patients with DR TB received social support at least once during the year, against the expected 1,286. A total of 766 health care workers providing DOT services to patients on the community based model of care were also supported with transport at least once in 2019. On average, 503 patients and 285 DOT workers were supported each month. This was a drop from 2018 where an average of 652 patients and 382 DOT workers were supported.

05

SUPPLIES MANAGEMENT AND PHARMACOVIGILANCE

HIGHLIGHTS

12

Total number of commodity meetings held to review commodities dashboard

79%

Reporting rate rose by the end of Year

5.1 Forecasting and Quantification

Two workshops were held in April and November 2019 for regular quantification and forecasting of both first and second line medicines, including all the programmatic commodities procured to support care and treatment and program admin. The two workshops generated the report and new lists of health products, which laid the basis to initiate the successive procurements for the year 2019/2020.

5.2 Commodity Allocation Tool

A web-based system was developed by the program with support from CHAI (Clinton Health Access Initiative) for supply of TB Medicines. The platform is linked to HIS 2 and KEMSA LMIS-2. Targeted users were national, county and sub county commodity managers. A pilot training workshop was held in October 2019 for the following counties Embu, Makueni, Kisumu, Kajiado, and Kiambu. Thereafter, Phase 1 roll out was done in December 2019 for the following counties; Busia, Kakamega, Nandi, Vihiga, Bungoma, Homa Bay, Migori, Nyamira, Siaya, Kisii, Elgeyo Marakwet, Trans Nzoia, Bomet, Narok, Kericho and Nakuru.

The expected outcomes as a result of implementing the commodity allocation tool were:

- Increased proportion of sub-counties sending commodity reports-to 100%
- Reduced duration in order processing and validation from current three weeks to three days
- Increased proportion of order fill rate at the national and county level to 100%
- Reduced proportion of sub – county stores-with commodity expiries to 0%
- Eliminate frequent emergency orders
- Encourage timely reporting
- Monitor stocks in the KEMSA warehouse on a weekly basis
- Dashboards generation

5.3 Joint Support Supervision and Redistribution

This exercise was conducted in March and November 2019 whose aim was to assess availability of tracer TB commodities, assess inventory management practices, audit the commodities data quality, carry out redistribution of any overstocked or short dated commodities and establish challenges, if any, on operationalization of county commodity TWGs.

5.4 Joint Post Market Surveillance (PMS)

This was a nationwide drugs products quality assurance study done annually through sampling and assay with result generation and report writing. Data and samples were collected over a two-week period in July, 2019.

The laboratory results for TB tracer molecules, sampled and analyzed, their results are expected one year from the start of the exercise.

5.5 Joint Commodity TWG Managers' Workshop

This is an annual event aimed at strengthening commodity security structures for county commodity technical working groups. This workshop was conducted in May 2019 with the objective of rolling out the national TWGs into county commodities TWGs. The county commodity TWGs are held every quarter in the respective counties. The result is the improvement in commodities security in the counties which has risen by minimum expiries and out of stocks through local redistributions.

5.6 National TB Commodity Security Meetings

The meetings are held on a monthly basis with membership from DNTLD-P and other partners/ stakeholders. A total of 12 meetings were held in 2019 to review commodities dashboard and 2 pager reports

5.7 Distribution of TB Medicines

D-NTLD-P Commodity Section conducts monthly National Order Management Team (NOMT) meetings to evaluate and project the monthly National TB orders and quality status for distribution and use in our patients and to sustain Good Distribution Practice (GDP) in the Program. There were 12 NOMT meetings held in 2019, reports and distribution memos were generated as well.

5.8 Commodity Reporting and Request Rates 2019 on DHIS2

TB commodity reporting and request for the year 2019 started at a low rate - 52% overall reporting and only 45% of reports being timely. Over the months the reporting rate rose to 79% at the end of December. Timeliness of the reports also rose to 70% as at the end of December 2019. Partners, including USAID-TB ARC II and CHAI assisted in strengthening of the system leading to the rise in the reporting rates.

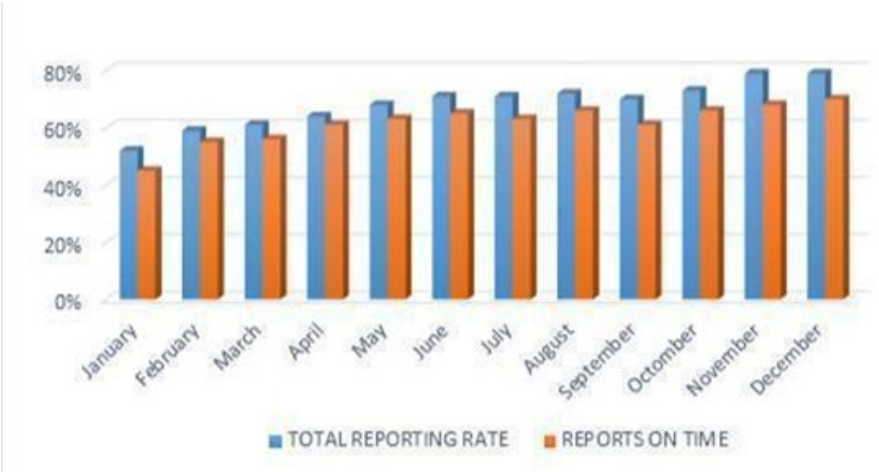


Figure 16: Trends for PT implementation:

5.9 ADSM and Pharmacovigilance

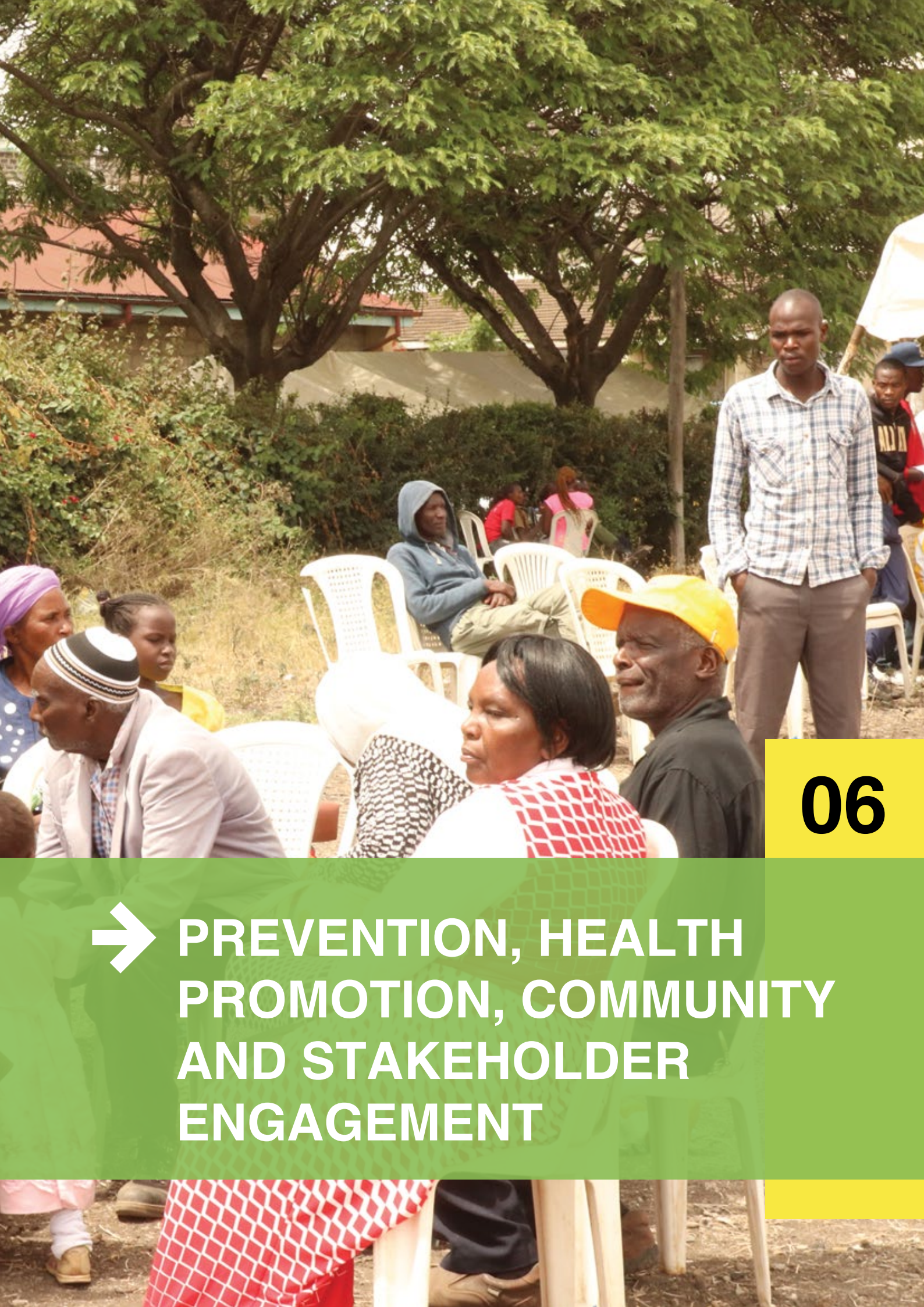
In 2019, the program designed and completed the ADSM road map. The roll out of related ADSM activities was planned for the year 2020, with up to Ksh 12 million being set aside for this purpose.

Challenges

- Quality of reports remains a challenge to many health care workers handling commodities due to sub-optimal supply chain management knowledge and skills..
- Delayed commodity reporting resulting intodelayed delivery of commodities by KEMSA.
- Inadequate reporting of ADRs by the clinicians, either through the online or paper platforms hinder appropriate planning for related commodities and patient care.

Way Forward

- Where possible TB program, counties and sub county teams to train staff handling supply
- Counties and sub counties minimize staff turnover and ensure enough staff are posted to their respective centers in order to retain quality services at their level.
- TB sub county stores who comprise of 21% those not reporting be followed through their counties to make sure they report since the program is using pull system to distribute commodities.
- TB program together with CHAI make sure the remaining 26 counties have been trained on Tb medicines allocation tool for equitable purposes.



06

PREVENTION, HEALTH PROMOTION, COMMUNITY AND STAKEHOLDER ENGAGEMENT

HIGHLIGHTS

12

Health reporters/journalists from different media houses trained

228

Schools reached and 141,704 students sensitized on TB messages

6.1 Background

Prevention, health promotion, community and stakeholder engagement entails: Advocacy, Communication, Social Mobilization, Community Engagement, Institutions of learning, TB prevention in congregate settings and TB Infection Prevention and Control (IPC) activities among others. Below is a brief of activities undertaken of 2019.

6.2 2019 World TB Day Commemoration

Kenya commemorated 2019 World TB Day on 24th March. The global theme, **"It's time",** was meant to ensure the world is reminded of the commitments made and the timely need for action in scale up, research, funding, human rights and accountability. Kenya localised the theme to: **"It's time for a TB-free Kenya."** The commemoration was held in Thika Stadium in Kiambu County. Pre-world TB day activities were conducted in all the sub counties in Kiambu county to create awareness and mobilize the community and leaders to join hands in fighting TB.

Table 9: World TB Day Key outputs:

No.	Activity	Outcome
1	Launch of National TB, Leprosy and Lung Disease Strategic Plan 2019-2023	A National Strategic Plan (2019-2023) guiding the management of TB, Leprosy and Lung health in place.
2	Launch of county (Kiambu) TB free initiative	Initiative aimed at mobilizing domestic efforts to support TB prevention, treatment and care in counties launched.
3	Key Address by Chief guest - Health Cabinet Secretary, Kiambu First lady, WHO Country Representative, Centre for Disease Control (CDC) Kenya representative, AMREF Health Africa in Kenya Country Director, KANCO CEO among others invited dignitaries	Commitment by National and county leaders, and partners to sustain strategies geared towards ending TB in Kenya

6.3 Development of an Advocacy, Communication and Social Mobilization Strategy

The program enlists advocacy, communication and social mobilization as key strategies in achieving the National TB goals and targets as highlighted in the NSP. With support from Global Fund and USAID-TB ARC II, the program developed a draft combined Advocacy, Communication and Social Mobilization (ACSM) Strategy aligned to the 2019-2023 NSP.

MEDIA CAMPAIGN

WTB DAY-IEC

6.4 Advocacy for Political Goodwill

The program recognized the key role played by parliamentarians in resource mobilization and allocation from both domestic and global sources. Under the leadership of Stop TB Partnership Kenya, the program has continuously engaged the health committee in parliament through the Parliamentary TB caucus which is hosted in Stop TB Kenya. In 2019, the two institutions hosted the first ever East African Parliamentary TB summit, which brought together 9 MPs from five Eastern Africa Countries. These included: Ethiopia, Kenya, Uganda, South Sudan and Tanzania. The MPs made commitments to advocate for achievement of the UNHLM targets. They also urged their Governments to make pledges to GF. This contributed to attaining the targeted USD 14 Billion in the GF replenishment conference that took place in November of that year.

Stop TB Kenya also built capacity of 70 TB advocates from 10 in counties. The trainings which were aimed at enhancing advocacy skills and TB community response were conducted in Nairobi and Bungoma Counties. The advocates were drawn from the infected and affected communities as well as people with interest in TB matters. The advocates have participated in key program and community activities geared towards empowerment and ending stigma.

6.5 Engagement of Infected and Affected Communities

The infected and affected communities have been enlisted as a main stakeholder in TB response in Kenya. With support from Stop TB Kenya, a national Network of TB champions was formed with leadership structures and clear terms of references. The program has made efforts to ensure they are included in all policy making processes and their inputs are integrated in the process.

6.6 Media Training

With support from GF and in collaboration with USAID through TB ARC II activity, Stop TB Partnership Kenya and other partners, the program capacitated 25 health reporters/journalists from different media houses. The training included updates with the latest TB data, progress in TB Research and development, the various global commitments that the country has endorsed and the targets that the country was benchmarking upon. The journalists were also sensitized on TB related stigma, discrimination and human rights. The training generated increased interests in TB which saw several stories in both electronic and print media. This also created a stronger partnership between the media houses and the program which is hoped to be sustained beyond this engagement.

6.7 Mass Media TB Awareness Campaign

The 2019-2023 NSP notes that there is limited TB awareness and updated information levels in communities. The program sought to reduce this gap through raising awareness with the aim of creating demand for TB services. The different strategies used included:

6.7.1 TV and Radio Adverts

The program ran above-the-line campaign on four TV stations (KTN, NTV, K24, Citizen TV) and 11 FM radio stations (Classic FM, Radio Jambo, Hope, Musyi, Kass, Maa, Mulembe, Kameme, Qwetu, Ramogi and Radio Maisha). Production and airing of the spots were supported under the Global Fund while monitoring was made possible through the support from USAID funded TB ARC II.

Output –TB awareness created among the general public.

6.7.2 Out of Home Branding

In addition, the program and the USAID funded TB ARC II activity ran an Out-of-home (OOH) campaign which highlighted the six major TB symptoms and a call to action dubbed, **'Pimwa TB, Tibiwa, Ishi Poa'** (Get screened for TB, get treated, and live well). This included branded walls, matatu seats, and entertainment joints. This was based on the gaps identified during a Population Effectiveness Test (PETs) study done across 8 focus counties (Mombasa, Nairobi, Nakuru, Kisumu, Embu, Meru, Tharaka Nithi and Isiolo) and a desk review on knowledge, attitudes and practices in relation to TB.

6.7.2.1 Wall Branding

58 strategic sites were branded across seven counties covering 154,616.67 square feet. Regions covered were: Nairobi and environs, Nakuru, Kisumu, Meru, Embu, Tharaka-Nithi and Isiolo. The wall branding was mounted in spots with high human traffic which included; Commuter zones, Health zones, Informal high-density areas, and the wider community congregate, including markets and community centers.

6.7.2.2 Matatu Seats Branding

Matatus are the main mode of public transport and the majority of the population are likely to use it every so often. It, therefore, was a viable avenue for reaching the general public with targeted information.

Achievement: - Estimated reach of 2,543,580 over 3 months (A report from PS Kenya)

Table 10: Breakdown of vehicles branded and the estimated monthly traffic by county

County	Number &Type of Vehicle Fitted								Monthly Passengers
No. of Seaters	11's	14's	26's	29's	33's	35's	37's	Total Vehicles	
Nairobi	-	-	1	1	13	-	5	20	321,120
Mombasa	-	-	-	2	5	-	1	8	156,000
Kisumu	-	14	-	1	2	1	-	18	89,160
Nakuru	-	16	-	-	-	-	-	16	119,280
Embu	-	15	-	-	-	-	-	15	78,120
Tharaka Nithi	-	15	-	-	-	-	-	15	25,200
Meru	-	18	-	-	-	-	-	18	50,400
Isiolo	4	-	-	-	-	-	-	4	8,580
Total								**114**	**847,860**

6.7.2.3 Entertainment Joints Branding (Snapper Frames Branding)

In the quest for 360-degree messaging, the program also branded the interiors of 65 popular entertainment joints in densely populated areas with a potential reach of over 3 million people per annum. The frames primarily targeted the youth and involved working in tandem with the other out-of-home elements and also supporting digital campaigns. The chosen counties have a more pronounced entertainment culture.

6.7.3 Social Media

With support from USAID through TB ARC II, the program ran a social media campaign on DNTLD-P's Facebook and Twitter accounts. The sponsored adverts (only on Facebook) had numerous engagements on the platforms through likes, retweets, sharing, comments and inboxes. The banner advertisements were linked back to DNTLD-P's website to offer detailed information on issues related to TB. The digital objectives were to increase awareness of tuberculosis symptoms within the 20 – 35 years age cohort, leveraging influencers and programmatic media buying.

Achievements: The Facebook page garnered 2,027,508 impressions and had 148,604 engagements (comments, clicks, likes or shares).

For the target 24 – 35 years age cohort, the campaign reached 201,814 unique people and achieved 928,788 impressions.

People viewed the campaign message on Android mobile devices (1.7 million impressions) and were in Nairobi county (781,818 impressions).

6.8 Publishing of Quarterly Newsletters

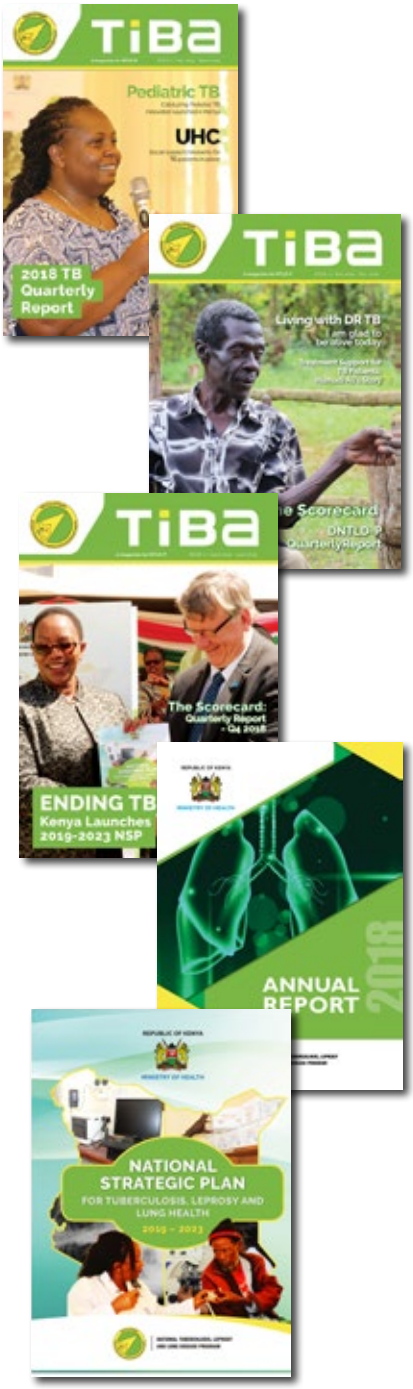
The DNTLD-P quantified and reported on successes of the program's activities undertaken by the national unit, county governments and partners. The publishing of 'TiBa', the official DNTLD-P quarterly newsletter is aimed at keeping stakeholders and the public informed of the progress and successes made by the program towards the fight against TB, Leprosy and other lung diseases.

Achievements - Three online editions were Published.

6.9 Design, Printing and Publishing of Key Program Information Education & Communication Materials (IEC)

The PHP & Community Engagement unit carried out reviews, layouts and designs of IEC materials for effective program communication. Some of the materials included: Key population Training Guide, National TB Preventive Treatment Standard Operating Procedures, TB/HIV Job Aids, Data Quality Assessment Report, 2018 Annual Report and Drug Resistant TB Information Package for patients and the community. The program with the support of GF and USAID under the TB ARC II also developed IEC materials for world TB day with the aim of creating awareness on TB to the general public and specific target audiences.

Sampled publications



6.10 Community Engagement

Community engagement is the process of working collaboratively with and through communities to address issues affecting their well-being. Community-based TB activities are conducted outside the premises of formal health facilities (e.g. hospitals, health centres and clinics) in community-based structures (e.g. schools, places of worship, congregate settings) and homesteads.

Community engagement was largely through involvement of CSOs to work with CHVs in line with Kenya strategy for community health. With the Global Fund support, the non-state principal recipients (Amref and Kenya Red Cross society) supported targeted outreaches in collaboration with DNTLD-P. Planning of the outreaches was done with multi-stakeholders including national and county governments, prisons authorities and other institutions. Targeted were prisons, schools, medical training colleges, drug dens, urban informal settlements, factories, bus parks and general community settings.

Table 11: Summary of community engagement

Description of the activity	Target and Output
Pre-WTBD Screening of people in congregate settings in Kiambu County (Schools, Bus Parks, Factories)	8648 screened,18 confirmed Positive for TB disease
Sensitization of MCAs on TB on the *Mulika TB County Initiative* which is a campaign towards ensuring prioritization of TB in resource allocation as a domestic resource mobilization strategy	92 MCAs reached
Screening people who inject themselves with drugs (PWIDs) in two drop-in centres (Githurai and Pangani) by Kenya Red Cross	1300 screened, 17 confirmed positive
Screening prisoners at Shimo la Tewa Prisons	1997 screened,n6 Confirmed as positive
Screening of people in informal urban settings and Prisons in Embu municipality	6840 persons screened, 79 Positive
Screening of Prisoners and staff in Kangeta Prisons-Meru County	1443 screened, 7 Positive
Screening of Prisoners in Meru Prisons	1243 screened, 2 positives
Screening of Prisoners in Garissa Prisons	817 screened 3 Positive, 7 initiated on treatment based on chest X-rays
Review of draft Community TB Tools	Updated draft Advocacy Communication and Community Engagement Strategy Updated draft Participants Training manual for TB Updated draft for Community TB training slides. Reviewed IEC materials

Major Achievement During the Outreaches

During outreach sessions, five (5) local radiographers were inducted (on-job training) to increase the capacity of radiographers to operate mobile digital X-ray machines. They were drawn from Mombasa, Meru (2), Tharaka Nithi,and Embu counties. The engagement of the MCAs enhanced political goodwill towards prioritization of TB programming in resource allocation in Kiambu County.

6.11 School Health

6.11.1 Background

Limited TB awareness and updated information levels in communities is a gap that the country seeks to bridge to ensure patient-centered care. There was a need to focus on promotion of care seeking and prevention in the community. 6.11.2 Strategy Pursued

As part of Pre-world TB day activities in 2019, DNLTD-P in partnership with CHS Kenya and Amref Health in Africa and St Joseph's CBO conducted school health activities in five TB high burden counties (Mombasa, Kisumu, Meru, Kiambu and Nakuru) in Kenya. The aim was to innovatively introduce TB agenda in schools and ensure it is mainstreamed in the day-to-day running of schools. The school health activities encompassed the following strategies:

- County entry meetings with the various stakeholders through consultative meetings with (MOH, Ministry of Education and Teachers Service commission)
- Sensitization of school heads and the school fraternity on TB
- Development of performing arts theatre activities (Dramatized folk songs, poems, spoken word and skits) by students on TB
- School health competition dubbed "Schools TB awareness Festival" and health drama festivals
- Presentation and prize giving in the world TB day to the winning top schools

6.11.2 Achievements

Of the targeted 249 boarding schools, 228 (92%) were visited and 141,704 students sensitized. 59% (134) of them participated in the competition and presented 209 items (poems, skits, spoken word and folk songs) and approximately 2,900 people attended. The first 3 winners per county and 1 school for the disabled (118 students) were supported to attend the world TB day and presented one item each reaching community members in the event. A total of 228 schools were reached and 141,704 students were sensitized on TB messages

Lessons Learned, Challenges and Gaps

- Multisectoral engagement is necessary for easy resource mobility and attainment of smooth operations in institutions of learning
- There was minimal funding for school health activities that affected the scope and target.
- This has also resulted in a gap on follow-up of activities to ensure that health promotion and TB screening is done continuously in institutions of learning

Recommendations

- There is a need to involve school children as agents of change to their families and community at large.
- There is a need to develop strategies to mainstream continuous TB screening and health promotion in schools
- There is a need to conduct sanitary inspection reports in Schools by area PHOs with relevant recommendations to be able to address overcrowding in schools from the highest policy level
- There is a need to develop a circular/ document for the Cabinet Secretary to be circulated to the counties regarding TB and other disease prevention in schools
- Mainstream TB as a track in the Music and Drama festivals conducted yearly in collaboration with the Ministry of Education and Teachers Service Commission.

6.12 Infection Prevention and Control

Tuberculosis Infection prevention control within our health facilities in Kenya is part and parcel of DNTLD-P mandate to ensure that health workers in all facilities across the country are empowered to be able to prevent TB infections in the facilities. The facilities targeted were TB High burden facilities and MDR sites. The target under IPC in 2019 was to Train county TOTs on IPC as well as IPC facility sensitization in MDR sides.

Table 12: Infection Prevention and Control Summary of Achievements in 2019

Activity	No of counties reached	Facilities reached	Output/ Participants
Trainer of trainers (TOT)	23	CTLCs	25
IPC sensitization to HCWs	47	26 per Quarter* 14 HCWs	1,456

07

MONITORING, EVALUATION AND PLANNING

HIGHLIGHTS

93%

Level of agreement between TIBU and the facility register for all the sub-counties visited .

MARCH 24TH

National Strategic Plan 2019-2023 launched during the World TB Day commemoration at Thika Stadium

7.1 Work Planning

The implementation of program activities is based on quarterly, semi-annual and annual work plans that are developed by the policy and planning section in liaison with other sections in the program.

In 2019, two work plans were developed. An initial half year plan for the period January –June 2019 was developed which was an excerpt of the annual plan that had been developed in consultation with all partners in 2018. A schedule of activities was prepared matching available funds, source of funds and responsible persons to ensure performance and tracking.

An annual work plan for July 2019-June 2020 was developed in May 2019. The joint planning meeting brought together program officers and partners (AMREF, CDC, CHAI, WHO, TB ARC II). This process began with a sensitization of all participants on the National Strategic Plan (NSP) targets, priorities and funding gaps to ensure proper alignment of the work plan. Thereafter teams were formed as per the NSP thematic areas to review operational workbooks, list of activities, budgets and develop schedules per quarter.

7.2 County Strategic Plans

The program successfully completed and launched the National Strategic Plan 2019-2023 on 24th March 2019 during the World TB Day commemoration at Thika Stadium, Kiambu County. With recognition that County Governments are the main stakeholders in the process of its implementation, the program began the development of County Strategic Plans to ensure that the NSP is well interpreted and cascaded to address the special needs and diversities in the 47 counties. This process engaged all the counties in developing the County operational workbooks and M&E frameworks that are yet to be launched for implementation.

7.3 Performance Review Meeting

To ensure continuous monitoring and evaluation of performance against the national strategic plan and global targets, the program brings together all counties annually for performance review. The theme of the 2019 meeting was **"Excellent performance for quality of Care".** TB ARC II provided logistic and technical support for the review meeting which was attended by County TB Coordinators, County Pharmacists, County Lab coordinators and County directors from the 47 counties, TB implementing partners and DNTLD-P program officers. This meeting achieved the following:

- Reviewed the performance against program targets for the 47 counties
- Conducted in-depth county specific discussions on key issues and action plans,
- Provided updates of the national strategic plan 2019-2023 and key activities, and
- Developed draft County strategic frameworks.

ISONIAZID PROPHYLAXIS SURVEY

PLHIV who initiated IPT, 3,712 (95.4%) completed their treatment, 97 (2.5%), stopped/discontinued treatment, 46 (1.2%) were lost to follow up, 22 (0.6%) transferred out and 14 (0.4%) died.

7.4 Sentinel Surveillance in Kenya

Multidrug-resistant tuberculosis (MDR-TB) is a major challenge to ending TB by 2035. In Kenya, the drug resistance survey (DRS) conducted in 2015-2016 showed the prevalence of MDR TB to be 0.7% among new cases and 2.1% among retreatment cases. However, according to WHO, in 2019, the incidence was estimated to be 1.3% among new patients and 4.6% among previously treated patients. Based on these findings there is a significant detection gap between estimated cases and diagnosed cases.

The Division of National Tuberculosis, Leprosy and Lung Disease Program (DNTLD-P) established ten sites for DR-TB sentinel surveillance in 2018 to monitor the DR-TB situation in Kenya. This study aimed to assess the performance of DR-TB surveillance and determine its strengths and weaknesses. Instead of attempting to gather surveillance data from all health facilities, a sentinel surveillance system selects, either randomly or purposefully, a small group of health facilities from where to gather data. These health facilities then receive greater attention from health authorities than would be possible with general population based surveillance.

As DR-TB is more difficult and costly to treat, there are increasing concerns about its continued spread and negative impact on the population and health systems. Effective response to DR-TB should not only focus on treating drug-susceptible tuberculosis, but also include strong surveillance systems, drug susceptibility testing for all patients with tuberculosis, rapid linkage to effective treatment, and patient-centred care throughout the treatment course.

Table 13: : Sentinel Workload Progress

COUNTY	Total sample sent for culture
Mombasa	64
Uasin Gishu	33
Homabay	32
Meru	12
Garissa	3
Marsabit	6
kajiado	1
Busia	0
Nairobi	0
Nakuru	0

7.5 Technical Assistance Missions

In the year, a total of 31 counties were visited for the TA missions.

Quarter 1	Quarter 2	Quarter 3	Quarter 4
1. Mandera	1.Embu	1.Nairobi	1.Taita Taveta
2. Wajir	2.Tharaka Nithi	2.Kwale	2.Garissa
3. Vihiga	3.Kajiado	3.Tana river	3.Migori
4. Nandi	4.Narok	4.Lamu	4.Nyamira
5. Kisumu	5.Nakuru	5. Marsabit	5.Machakos
6. Mombasa		6.Isiolo	6. Laikipia
7. Turkana		7.Nandi	7.Transzoia
8. Nairobi		8.Samburu	8.Kajiado
		9.Kitui	9. Busia

During the missions, TB policy documents were available though most were concentrated in the TB clinic. Further, there is minimal or no budget for the TB program in the counties and the perspective is that it is a parallel program. In some counties, there is no involvement of SCTLCs and CTLCs in the CHMT and SCHMT activities.

In some counties, presumptive registers were available in the headquarters but not well distributed to the peripheral health facilities. In addition, the register was not well understood in some facilities with others not setting targets. Recording and reporting of ACF data in the facility EMRs and DHIS was a major challenge.

7.6 National Data Quality Audit

Quality data is critical in the implementation of TB control activities as it generates evidence which is pivotal for decision making, policy formulation and guides implementation approaches. It is therefore imperative to ensure that appropriate validation and audit checks are conducted routinely to assure the same across data collection levels.

Provision of updated recording and reporting tools, which are in conformity with WHO standards, is vital for capturing essential data elements. Further, routine supervision, continuous capacity building and mentorship is necessary to ensure proper usage and fidelity of outcomes. DNTLD-P conducted a national data quality assessment in July 2019 in 25 counties.

For DSTB, the overall level of agreement between TIBU and the facility register for all the sub-counties visited was 93% in 2018 compared to 96% in 2017 for all forms of TB while for bacteriologically confirmed it was 95% in 2017 and 92% in 2018. The level of agreement between the patient record cards went up from 51% in 2017 to 59% in 2018 for all forms of TB.

Nationally in 2017 for DRTB, the level of agreement in the aggregate numbers for all forms of DRTB between the patient log books and registers was 100%, and 116% between registers and TIBU. Leprosy data had 100% level of agreement in 2017 and 111% in 2018.

Table 14: Cross cutting recommendations

#	Recommendation	Level	Priority	Responsible Person(s)
1	Create adequate offsite back-ups for TIBU data with a weekly replication schedule.	National	High	NTLD - P
2	The MoH through NTLD-P should be involved in contracting and oversight of service providers.	National	High	NTLD-P & Supporting Partners
3	The program should ensure that all the recording and reporting tools have all the relevant data inputs. The program should also develop a recall mechanism for all outdated tools and ensure all tools to have versions indicated.	National	High	NTLD - P
4	The program, counties and implementing partners should consider digitizing facility records	National, County	High	NTLD-P, Counties & Partners
5	County Directors of Health should be take lead in tracking TB indicators through random data checks at the facility by strengthening supervision and coordination at the county and Sub county level.	County	High	County
6	There should be an orientation package for new staff deployed at the chest clinic	County	High	County
7	NTLD-P should conduct routine tools inventory assessment	National	Medium	NTLD - P
8	The program to put in place measures to ensure notification of cases in TIBU is done within timelines to avoid spill over.	National	High	NTLD - P

7.7 TIBU System Support

DNTLD-P focussed on strengthening data management control and server security. The program also finalized on the data recovery measures that had been instituted in 2018. User feedback and reviews were used to continuously strengthen the recovered data while focussing on the recommendations and findings of the Data Quality Assessment. The quarterly review meetings also provided a platform for quick reviews and implementation of data recommendations from Data Quality Assessment and findings from continuous system reviews.

Through TB ARC II, DNTLD-P was able to migrate the TIBU servers to reduce system downtime. This exercise was completed with both patient and finance data being migrated. In the set ups of the cloud servers, the service provider ensured that a mirror service for the live instance is provided for failover reasons. Additionally, disaster recovery options are now catered for with the data snapshots of the current servers being taken on a daily basis. DNTLD-P has gone further to set up a firewall as an additional security layer.

7.8 TIBU Phase III Roll out 2019

DNTLD-P rolled out TIBU phase III to the coordinators in the central region, Nyanza region and Rift Valley regions during the year. TB coordinators were introduced to modules on pharmacovigilance, active case finding, contact management, asthma, community TB and advocacy. The M&E team continues to review data sets from these areas to assess for conformity and use in decision making.

7.9 Surveys Conducted in 2019

Although Isoniazid prophylaxis for PLHIV was successfully rolled out in Kenya in 2015, there was limited data available to determine optimum efficacy and as such a survey to assess its outcomes was successfully conducted. The findings showed that the PLHIV who initiated IPT, 3,712 (95.4%) completed their treatment, 97 (2.5%), stopped/discontinued treatment, 46 (1.2%) were lost to follow up, 22 (0.6%) transferred out and 14 (0.4%) died.

08

FINANCE, ADMINISTRATION, HUMAN RESOURCE AND CAPACITY BUILDING

HIGHLIGHTS

$52,588,078

Total funding received from various sources during the year .

$8,683,130

The total funding gap of representing 14% against a costed NSP budget

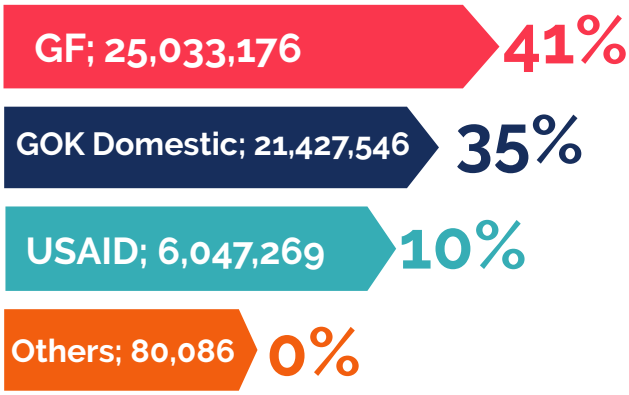
70%

The implementation of the TB interventions realized a fund utilization rate of 70% across all sources of funding during the year.

8.1 Funding and Financial Performance

The fight against Tuberculosis received financial support directly from the Government, The Global Fund to Fight Aids Tuberculosis and Malaria (GFATM), TB Reach as well as indirectly from partners who include, USAID (Centre for Health Solutions, KAPTLD and CHAI). However, the funding gap has not been sufficiently filled as documented in the NSP.

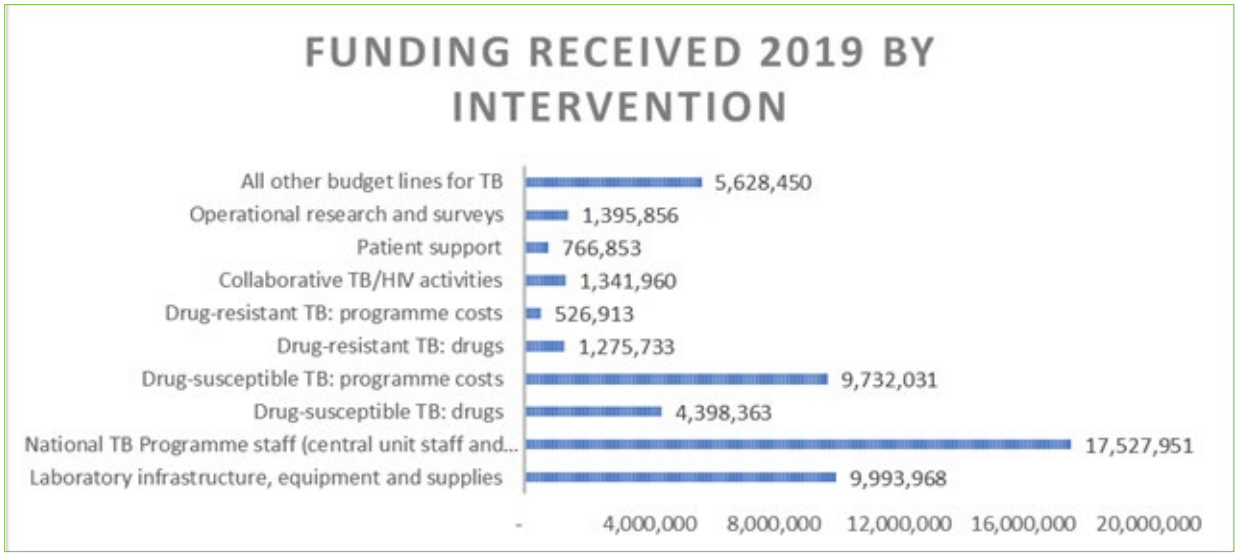
The total funding received from various sources during the year amounted to USD 52,588,078 (Kshs 5,316,721,687) for implementation of TB interventions against a costed NSP budget of USD 61,323,939 (Kshs 6,193,717,855) leaving a gap of USD8,683,130 representing a gap of 14%.



Funding gap USD8,683,130

14%

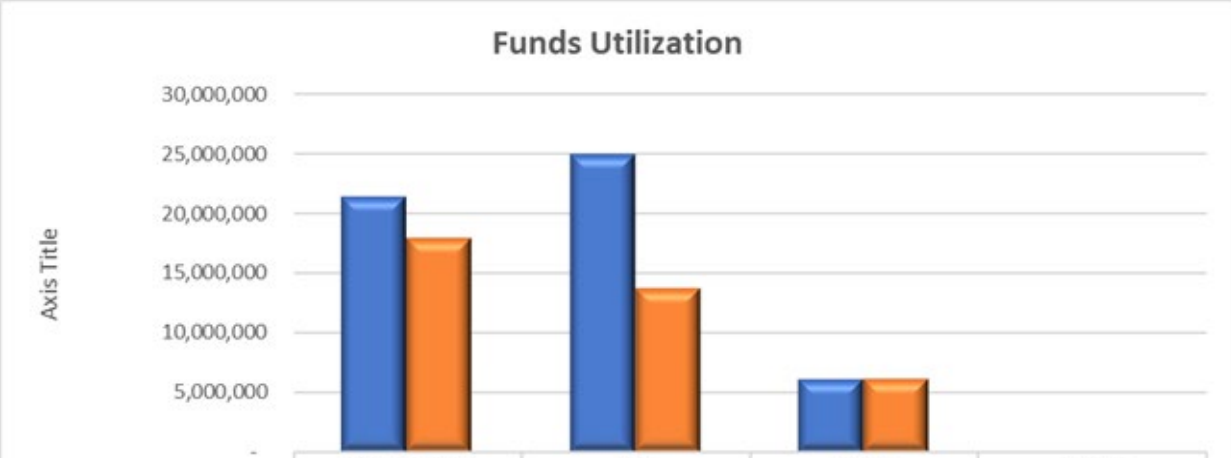
Funding received in 2019 (USD)



The implementation of the TB interventions realized a fund utilization rate of 70% across all sources of funding during the year.

2,335
HCW supported through routine refresher trainings of various carders and Integrated Curriculum on TB through Global fund

1,795
HCW trained reached through the weekly paediatric ECHO sessions.



	GoK Domestic	GF	USAID	Others
Funding Received 2019	21,427,546	25,033,176	6,047,269	80,086
Expenditure 2019	17,853,434	13,687,810	6,100,410	95,670

8.2 Capacity Building and Training

8.2.1 USAID-Supported Trainings and Capacity Building Activities

Capacity building of health care workers and TB coordinators
In the year under review, the National Tuberculosis Leprosy and Lung Disease Program (NTLD-Program) and TB ARC II through USAID support undertook several capacity building activities targeting health workers and TB coordinators at County and National level. A summary of these activities is shown in the table below.

10th Union training

A key training conducted in collaboration with the International Union against Tuberculosis and Lung Disease (The Union) is the 'Principles of TB Care and Prevention: Translating Knowledge to Action training' for 120 County and Sub County TB coordinators popularly known as TBData4Action training. These trainings targeting county and subcounty teams were held in Muranga, Nakuru and Kisii counties. During the year, TB ARC II supported the 10th Union training targeting DNTLD-P staff. The training was conducted between 30th June and 6th July 2019 to the 32 National TB program team in Mombasa.

Strengthening TB ECHO in capacity building

NTLD-P with support from USAID through TB ARC II also supported ECHO learning sessions which aim at enhancing health worker capacity for TB diagnosis, treatment and prevention. ECHO sessions have proved to be valuable as many participants can be reached at the same time from their various locations. Through the weekly paediatric ECHO sessions, the project was able to reach 1,795 HCWs as shown in the table above.

Capacity building -Training on Leadership and Management in Health

USAID through TB ARC II supported 59 health workers to participate in the University of Washington Department of Health Leadership and Management training. This was a 10-week online course whose goal was to improve the delivery of quality health services by strengthening the leadership and management skills of the program. Participants had a course completion rate of 94%. The table below shows the composition of health workers trained through TB ARC II support.

TB Integrated Curriculum Training of Health Care Workers

Training of Healthcare workers is core in ensuring that the fight against lung diseases continues successfully. The Tuberculosis integrated curriculum standardizes information and practices at the service delivery points. The NTLD-P with support from The Global Fund trained a total of 250 ToTs (100% of the target) and 1,011 HCWs (101% of the target) in 2019. The HCWs trained were majorly nurses (428) and clinical officers (361). The chart below shows the number of HCWs trained and their respective cadres:
In support of the PPM initiatives, the trainings also involved HCWs from a mix of facilities with 89% coming from Public facilities, 6% of participants being drawn from Private facilities and 5% coming from Faith based organizations (FBOs. In the reporting period, USAID TB ARC II supported various other capacity building and sensitization sessions which included Schools heads/Nurses on TB screening,

Table 15: Summary of training activities supported in the reporting period

Training/ sensitization	Counties	Female	Male	Total
School heads/nurses TB Screening Sensitization	Meru	99	59	158
	Kisumu	37	35	72
	Mombasa	39	35	74
	Nakuru	68	49	117
KPA	Mombasa	4	1	5
KMA	Naivasha	3	2	5
Sensitization of CHMTs on TB control in corporate settings and TB workplace policy	Nairobi	18	9	27
	Mombasa	-	2	2
	Nakuru	-	8	8
Online TB data for Action – Mombasa county	Mombasa	12	22	34
PSK county orientation	Nairobi	8	7	15
PSK private sector sensitization	Several	33	33	66
Quality Improvement Sensitization	Nairobi	13	12	25
Weekly Pediatric ECHO trainings (Various topics)	Country wide	808	987	1,795
Injectable Free regimen	Country wide	69	78	147
Human Resource for Health Data management	Several	1	1	2
Engaging the private sector in TB control (ECHO discussion)	Several	18	16	34
Leadership and Management in Health	Several	34	25	59
Total		**1,264**	**1,381**	**2,645**

8.2.2 Global Fund Supported Trainings and Capacity Building

During the year the TB program supported routine refresher trainings of various carders of healthcare workers and Integrated Curriculum on Tuberculosis support through Global fund totalling 2,335 HCWs

Table 16: Summary of refresher trainings for HCWs

Type of Training	No. of HCWs Trained
AFB Refresher	156
Integrated TB Curriculum	1261
D4D Training	98
GeneXpert Training	29
ICD10 Training	92
IPT Training	34
Paediatric TB Training	207
PMDT Training	125
TB DM Training	206
TIBU Training	28
TOT For ICD10	99
Grand Total	**2335**

In addition, the TB program continued to facilitate sensitization of HCWs at sub-county health facilities on ACF implementation, IPC Sensitization, NPA/NGA sensitizations and OJT for NTRL.

8.3 Human Resources

The Division of National Tuberculosis Leprosy and Lung Disease Program (DNTLD-P) has a total staff establishment of 35 GoK, 109 GFATM supported, 3 FELTP,13 Interns, 1 seconded by CHAI, 3 by USAID and 1 by CDC to NTLDP. The GFATM TB grant continued to support a total of 99 county -based staff.

Table 17: Staff Distribution

Row Labels	GOK	GF	USAID	FELTP	TB Reach	CDC	CHAI	INTERNS	Total
Head of Program	1								1
Care & Support	5	1	1	2	1		1	-	11
Commodity & Logistics	4	-	-	-	-	-	-	-	4
Admin& Finance	16	-	-	-	1	1	-	6	24
MER	2	7	-	-	1	-	-	5	15
PHP	3	1	-	-	-	-	-	2	6
Policy Planning	2	1	1	-	-	-	-	-	4
Laboratory	2	99	1	1	-	-	-	-	103
Total	**35**	**109**	**3**	**3**	**3**	**1**	**1**	**13**	**168**

8.4 Fleet Management

The TB program has a fleet of vehicles totalling 23 supported by partners and GFATM, out of which 15 are used to support program implementation at national level and 8 vehicles are at county level.

Table 18: Vehicle fleet

Location/County	No
KWALE COUNTY	1
BUSIA COUNTY	1
EMBU COUNTY	1
GARISSA COUNTY	1
ISIOLO COUNTY	1
KISII COUNTY	1
NAIROBI COUNTY	1
NYERI COUNTY	1
PROGRAM	15
Grand Total	**23**

23 Total number of vehicles the program has.

15 Number of vehicles at the National level

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