



# TiBa

A magazine for DNTLD-P

ISSUE 3 / Dec 2019

## Living with DR TB:

I am glad to  
be alive today

Treatment Support for  
TB Patients:  
Hamadi Ali's Story

The Scorecard:  
DNTLD-P  
Quarterly Report



**Don't let stigma prevent you from getting tested for TB. Head to your nearest health facility and get tested for today.**

If a household member is diagnosed with TB, it is important for all other household members to get screened especially children as they are at a

**HIGHER RISK**

of contracting TB



# inside

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The editor welcomes articles from  
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# Word from the Head, DNTLD-Program

Welcome you all to the third edition of TiBa – the official Newsletter of the Division of National Tuberculosis Leprosy and Lung Disease Program (DNTLD-P). To the DNTLD-P fraternity, stakeholders and our partners, I acknowledge your continued support and dedication to ending TB in Kenya with endless gratitude.

There is a need for us to intensify our efforts and rededicate ourselves to achieve our National and International goals and objectives. The full implementation of the National Strategic Plan for Tuberculosis, Leprosy and Lung Health 2019-2023 is key to the set objectives as it captures our aspirations as a program for this country. Our endeavor, thus, should be geared towards its full implementation.

This edition of TiBa highlights some of the Program's recent activities and achievements. The WHO 2019 report on the global impacts of TB, shows that Drug-Resistant TB continues to be a public health crisis. It's thus evident, that new participatory approaches are needed to reduce DR-TB cases and mitigate the challenges patients go through, before diagnosis and during treatment. In Kenya, people detected with DR-TB disease rose from 577 in 2017 to 689 in 2018. This is due to the efforts by the program to increase DR-TB surveillance, where, drug-susceptibility testing (DST) coverage for previously treated TB cases, a high-risk group, was 65.2% against a target of 90%. For the new cases, it was 44.8% against a target of 50%. Kisia and Abdallah, two former DR-TB patients take us

through their experiences, highlighting what most of our patients go through with their moving stories.

Digital technologies have complemented our healthcare system in TB care cascade and management. Keheala is one of the technologies with basic feature phones and smart phones which is improving adherence and clinical outcomes. Thus supporting the program in reducing TB related deaths, particularly among patients who are likely to fail adherence to medications.

The Public-Private Mix is another effective concept that can strengthen both sectors in addressing TB, Leprosy and lung health related treatment outcomes. It not only helps to mitigate the risks but also enhances the performance of all actors. The scorecard highlights some of the activities implemented by the program in the last quarter.

In conclusion, we wish to thank the presidency and our leadership at the Ministry of Health for their continued support as well as our partners for financial and the technical contributions offered towards the implementation of the 2019 - 2023 NSP. In particular, we are grateful to the County Governments, Global Fund, USAID funded TB ARC II, CDC, Stop TB Partnership Kenya, KAPTLD, MSF- FRANCE, and AMREF Health Africa.

Thank you for your support.

*Dr. Elizabeth Onyango*

**Head, DNTLD-P**





# Kenya TB PROFILE

## ESTIMATES OF TB BURDEN, <sup>a</sup> 2018

	NUMBER (thousands)	RATE (per 100 000 population)
Total TB incidence	150 (92–222)	292 (179–432)
HIV-positive TB incidence	40 (25–60)	79 (48–117)
MDR/RR-TB incidence <sup>b</sup>	2.3 (1.1–4.1)	4.5 (2.1–7.9)
HIV-negative TB mortality	19 (11–30)	38 (22–59)
HIV-positive TB mortality	13 (8.1–20)	26 (16–38)

## ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

New cases	1.3% (0.74–2)
Previously treated cases	4.4% (3.7–5.2)

## TB CASE NOTIFICATIONS, 2018

Total new and relapse	94 534
– % tested with rapid diagnostics at time of diagnosis	47%
– % with known HIV status	98%
– % pulmonary	85%
– % bacteriologically confirmed <sup>c</sup>	58%
– % children aged 0–14 years	10%
– % women	32%
– % men	58%
Total cases notified	96 478

## UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

TB treatment coverage (notified/estimated incidence), 2018	63% (43–100)
TB patients facing catastrophic total costs, 2017	27% (21–32)
TB case fatality ratio (estimated mortality/estimated incidence), 2018	23% (12–36)

## TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

	NUMBER	(%)
Patients with known HIV-status who are HIV-positive	24 950	27%
– on antiretroviral therapy	24 186	97%

## DRUG-RESISTANT TB CARE, 2018

% of bacteriologically confirmed TB cases tested for rifampicin resistance <sup>c</sup>	
– New cases	64%
– Previously treated cases	79%
Laboratory-confirmed cases <sup>d</sup>	MDR/RR-TB: 465, XDR-TB: 1
Patients started on treatment <sup>d,e</sup>	MDR/RR-TB: 470, XDR-TB: 1
MDR/RR-TB cases tested for resistance to second-line drugs	125

## TREATMENT SUCCESS RATE AND COHORT SIZE

	SUCCESS	COHORT
New and relapse cases registered in 2017	83%	83 088
Previously treated cases, excluding relapse, registered in 2017	72%	1 583
HIV-positive TB cases registered in 2017	78%	23 060
MDR/RR-TB cases started on second-line treatment in 2016	68%	308
XDR-TB cases started on second-line treatment in 2016	0	0

## TB PREVENTIVE TREATMENT, 2018

% of HIV-positive people (newly enrolled in care) on preventive treatment	
% of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment	34% (31–37)

## TB FINANCING, 2019

National TB budget (US\$ millions)	81
Funding source:	22% domestic, 15% international, 63% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

<sup>a</sup> Ranges represent uncertainty intervals.

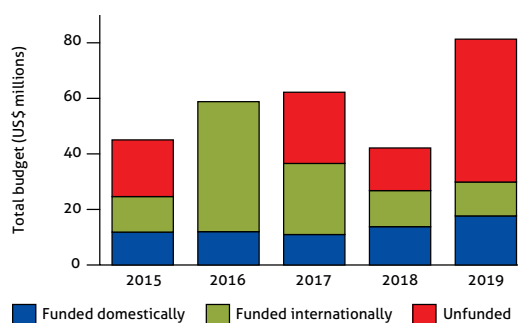
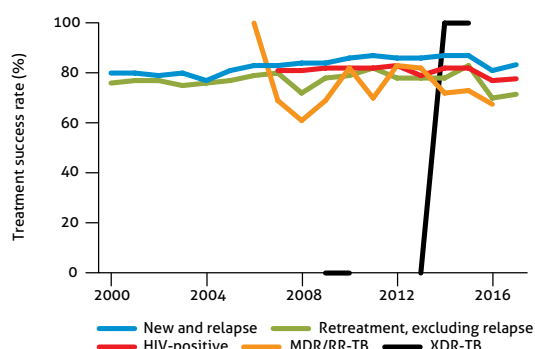
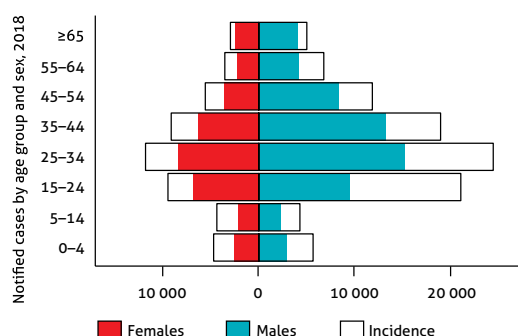
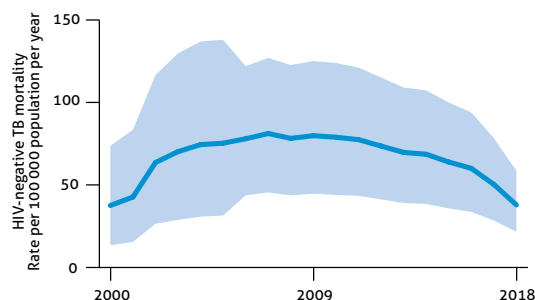
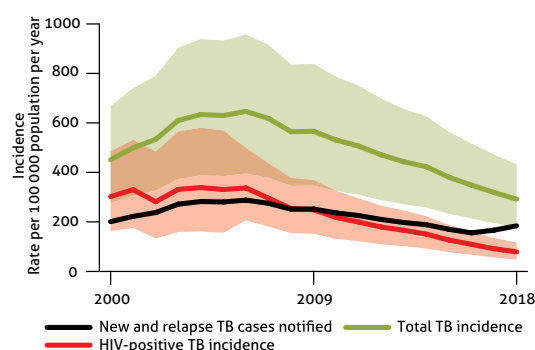
<sup>b</sup> MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

<sup>c</sup> Calculated for pulmonary cases only.

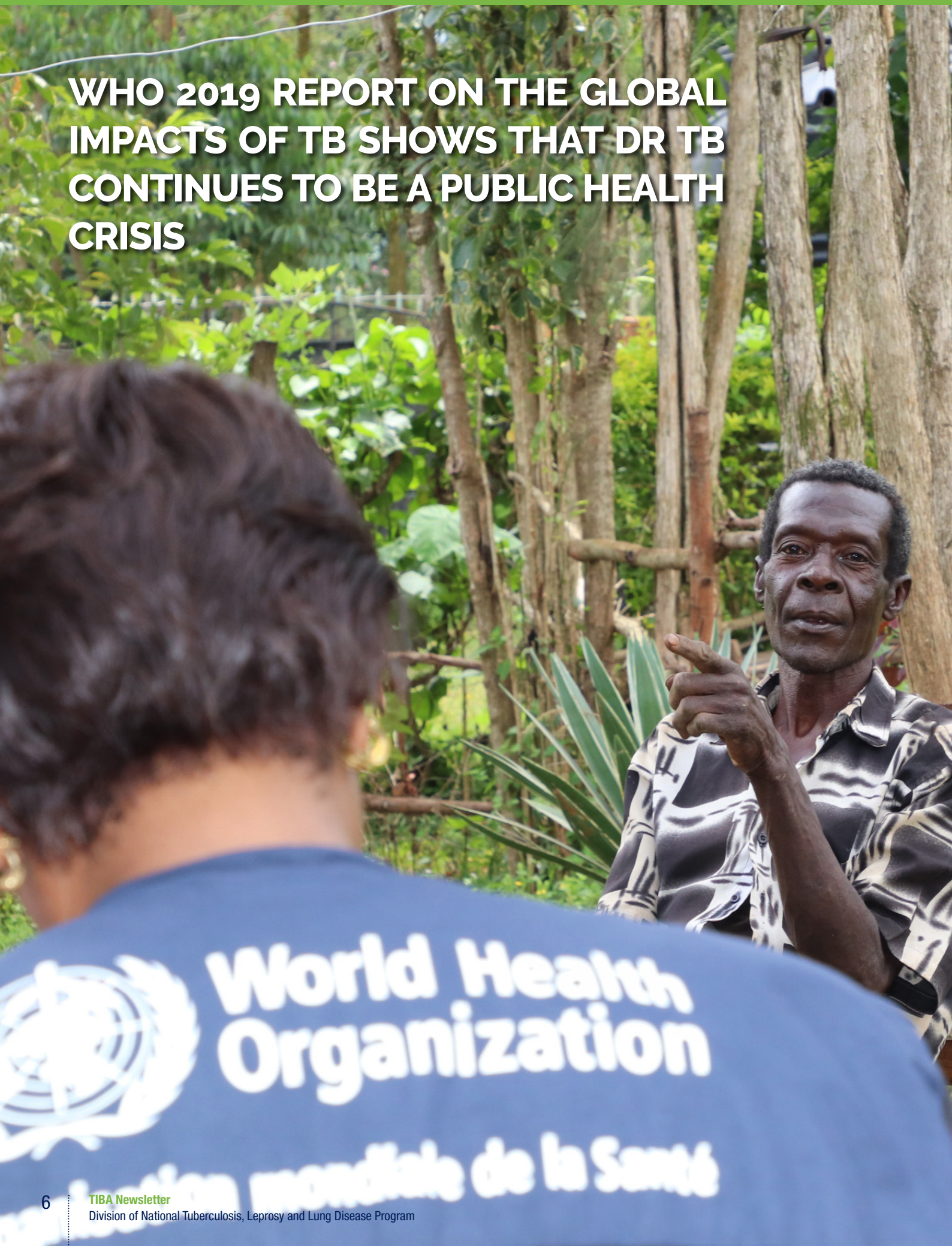
<sup>d</sup> Includes cases with unknown previous TB treatment history.


<sup>e</sup> Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

## POPULATION 2018 51 MILLION



# WHO 2019 REPORT ON THE GLOBAL IMPACTS OF TB SHOWS THAT DR TB CONTINUES TO BE A PUBLIC HEALTH CRISIS



 **World Health Organization**  
Organisation mondiale de la Santé



# Living with DR-TB: I am glad to be alive today

***A sputum culture test was done and he was diagnosed with Drug-Resistant TB, a form of TB that is resistant to treatment with at least one of the most powerful first-line anti-TB medicines***

By Mbetera Felix - DNTLD

Henry Kisia, 68 years old, a resident of Mbale town, Vihiga County, began having a cough in May 2018. He assumed the cough was normal and would go away with time. The cough persisted for a while and like most people who prefer over the counter prescriptions, he resorted to taking palliative drugs to manage the cough.

"I used to take painkillers like "sona moja" and "panadol" to ease the cough and go to the farm but I wasn't getting any better," he says.

With time, his health deteriorated. The cough got more serious and he became too weak that he couldn't till his farm or engage in daily chores at home. His wife and neighbours got concerned exerting pressure on him to see a doctor. He later visited Mbale Rural Training Centre, a government health facility for a check-up where he was diagnosed with Tuberculosis (TB).

"The news that I had TB hit me hard. I felt my world was crumbling down," he says. "The health care workers even came home to test my wife and my two children if they also had TB"

Gladly, none of his family members were infected. He was put on treatment immediately but unfortunately after two months of medication, his second-month sputum-smear examination turned positive. A sputum culture test was done and he was diagnosed with Drug-Resistant (DR-TB), a form of TB that is resistant to treatment with at least one of the most powerful first-line anti-TB medicines.

Kisia's medication was reviewed and he was put on a twelve month intensive treatment phase for the treatment of DR-TB. While under this treatment, Viviana Makokha, a nurse from the Centre used to visit his home and administer directly observed therapy (DOT) at 6.00 A.M every morning. The DOT was to ensure

that he receives and takes all medicines as prescribed by the doctors as well as monitor his response to treatment. She used to be supported by Linet Idaya and Rose Esendi who were community health volunteers (CHVs) and Unitor Ngonda, a cough monitor working at the health facility.

According to Ngonda, Kisia was put on an individualized new DR-TB regimen which is recommended by the World Health Organization (WHO) and has been adopted by Kenya.

"He wasn't really for the oral regimen which he considered to be a burden. His preference was on daily injections because he thought it would take lesser time and get healed faster," Ngonda says.

"He requested for the painful daily shots of which were less effective and with high toxicity which could cause psychosis and even permanent impairment of hearing. We however, prevailed upon him and he religiously took his medication without fail," Linnet adds.

Kisia's sorrows were evident in his eyes. His journey to healing wasn't easy. During the initial stages of his treatment, he was so weak and malnourished that he couldn't bury his late sister who had passed on. He couldn't do much at home. He was however offered nutritional supplements which helped him recover from the disease by strengthening his immune system, and improving his weight gain, and muscle strength, allowing him to return to his normal and active life. His wife encouraged him to eat and within no time, he was back on his feet and could

till his farm again. His enrolment to the National Health Insurance Fund monthly social support also came in handy in meeting his basic needs.

Today, Kisia is thankful to his wife, CHVs, and Mbale Rural Training Centre fraternity for supporting him through the entire treatment period.

"I am grateful to my wife and nurse Vivian. Despite of the challenges we had at home, they were really supportive during my treatment. Without their support, I would have been discouraged and defaulted on my medication," he says.

Dr. Joyce Onsongo, Disease Control and Prevention officer, WHO Kenya, notes that the emergence of patients diagnosed with DR-TB is a big challenge and a major health security risk in the country. Whereas she is impressed with Kisia's recovery, she reiterates the need to strengthen the relationship between health care services and the local communities to improve case detection, follow-up of TB patients and improve adherence to TB treatment.

WHO 2019 report on the global impacts of TB shows that DR-TB continues to be a public health crisis. In the preceding year 558 000 people worldwide developed TB that was resistant to rifampicin which is the most effective first-line drug, and of these, 82% had multidrug-resistant TB (MDR-TB). The WHO's End TB Strategy, the United Nations' Sustainable Development Goals and Kenya's 2019-2023 National Strategic Plan share a common goal aimed to end TB by 2030. With the increase of DR-TB cases, it will be a mirage to attain the set goals.

***"I am grateful to my wife and nurse Vivian. Despite the challenges we had at home, they were really supportive during my treatment. Without their support, I would have been discouraged and defaulted on my medication"***

## Treatment Support for TB Patients: Hamadi Ali's Story



Mr. Hamadi Ali, in his house

By Diana Kagwiria | TB ARC II

In March, 2019, 35-year-old Hamadi Ali was working as a shop assistant in Mombasa, Kenya when he began feeling weak and tired. At first, he ignored the discomfort associating it with the heavy lifting of cartons full of books that he was doing. As days progressed, his situation worsened, he started having chills, headaches, loss of appetite and night sweats.

"My health deteriorated as days passed by. I was becoming weaker by the day. Walking also became a problem as I would get tired after walking for a short distance. At work, I spent most of the time seated as my colleagues worked," Hamadi shares.

This prompted him to buy over the counter pain killers. The symptoms disappeared for few hours and returned when the medicine wore off.

"I continued taking the pain killers for one and half weeks with no improvement. My body could no longer take it anymore. I stopped working and stayed at home," Hamadi recalls.

His wife and sister urged him to visit a nearby local government facility, Likoni Sub County Hospital for further treatment. At the facility, upon explaining his symptoms to the doctor, he was referred to the facility's laboratory for sputum collection to test whether he had TB. Since it was already noon, the laboratory technician advised that for the best results, sputum had to be collected in the morning before consumption of food. He was given a sputum collection tube and instructed on how to collect sputum and was asked to return the sample for examination.

"The following day, early in the morning before eating anything I put the sputum in the tube and took it to the laboratory as told. The laboratory technician told me they would call me once the results were out," Hamadi says.

Hamadi was bacteriologically confirmed to have pulmonary tuberculosis and put on a six-month medication immediately after undergoing counselling. He was required to visit the facility every two weeks to monitor his progress as well as collect his medicines.

"When I was told I had TB, I had a mix of reactions. First, I was shocked because I had seen people die from the disease and thought of myself as the next victim. Second, I was at the same time relieved that I was sure of what was ailing me. The doctor calmly counselled me and told me if I take the medicines as instructed, I would get cured and because this is all I had been yearning for, I began the medication with the mindset that I would get cured," Hamadi recounts.

His wife, sister and children were also invited for TB screening, as it is a contagious disease, whose bacteria spreads from one person to another through tiny droplets released into the air through coughs and sneezes. Luckily, none of his family members had contracted the disease.

The doctor also advised him to practice cough etiquette as well as stay in a well-ventilated room to avoid infecting those around him. He also got nutritional counselling to ensure he eats a balanced diet.

After five and half months of taking his medication, his health has improved tremendously. He has regained the weight lost and no longer experiences any of the symptoms. He is now able to do part time jobs to feed his young family.

"I am no longer the weakling that TB had turned me to. I now feel stronger and better. I am improving daily. My weight has increased from 44 to 55 kilograms. I am now able to go out to work to put food on the table for my family as well as support them in other areas like paying school fees. In two weeks, I will have completed the medication and hopefully declared TB free," Hamadi told us during the interview in late September, 2019.

A delightful Hamadi shares that he is grateful to the health care workers and family for the support they have offered him during this time. "A big part of my recovery is because of the support I have gotten from the health care workers whom I interact with whenever I go to pick the medicine. They have always been friendly to me, making me feel wanted and that is the reason, I go back there to pick the medicine. Back at home, my wife and sister have also been supportive to me."

He continues, "Apart from reassuring me that I will get cured, they have always prepared for me nutritious meals as well as reminded me when I should take the medicine. They have gone further to set an alarm on our clock and written on our living room wall a reminder of when I should take the medicines."

He is also grateful to donors like Global Fund and USAID for facilitating his diagnosis and treatment, "Am thankful to the donors who have helped me get well. Since I was sent to the laboratory to have a sample taken and put on medication, I have not paid anything. This process would have been very difficult for me given the fact that I lost my job when I fell ill."

Hamadi is now using the knowledge he got on TB while undergoing his treatment as well as from reading, watching and listening to the ongoing TB awareness campaigns on radio, television, public service vehicles seats, posters and roadside walls, to educate his peers in the community that TB is a preventable, treatable and curable disease.

With support from USAID, Centre for Health Solutions – Kenya (CHS) implemented Tuberculosis Accelerated Response and Care II activity (TB ARC II) is working with the National TB program and other partners to reduce the incidence and number of deaths due to TB in Kenya. This is by increasing timely use of quality TB, TB/HIV & DR-TB treatment by strengthening health care provider and facility performance, and expanding and strengthening TB diagnostic network as well as by developing participatory approaches to improve TB service uptake through awareness and demand for TB services and treatment completion in the country among young men like Hamadi.



## My battle with extensively DR TB; Fatuma Abdalla



Fatuma Abdalla during the interview

By Diana Kagwiria | TB ARC II

**F**atuma Abdalla, 70 years old, was a farmer in her village Mwalulamba, in Kwale County until April 2017 when she fell ill. What started as a normal cough progressed to a chronic cough accompanied by chills, night sweats and loss of appetite prompting her to visit a local private health centre.

"At the private facility they diagnosed me with pneumonia where I got injections for seven straight days on top of a cocktail of drugs," Fatuma shares.

"Even after enduring those painful injections my mother's condition was not improving, rather it was getting worse. Every time I called her to check how she was fairing on, we had to cut short our conversations to allow her to cough as well as take a breath. My once energetic and active mother was now a feeble person who spent most of the time indoors sitting in her bed, as laying down was a problem due to the frequent coughs," Rukia, her daughter, interjects.

With no respite in sight and disturbed by her mother's deteriorating health condition and inexplicably weight loss, Rukia invited her mother to her home in Likoni, Mombasa. It is here that Fatuma was taken to Likoni Sub-County Hospital. Upon cross examination by a clinician and a sputum test, it was confirmed that she had pulmonary tuberculosis, a common form of TB affecting the lungs.

"The words of the doctor mentioning I had TB struck me to the nerves. I could not believe I was going to die of the same disease that had killed my husband and son a few years ago. I was only relieved after she sat me down and counselled me that the disease is treatable and curable if only I adhere to the medication as guided. And truly looking back my husband and son could have passed on due to non-adherence as I had seen them skip their medication," Fatuma recalls.

After the counselling Fatuma was put on treatment. By the end of the first week she had stopped coughing and the other symptoms had disappeared. She went back to the facility every two weeks to pick her medication and every month for sputum collection for culture test to monitor her response to the medication.

"Though the symptoms had disappeared, I always remained steadfast with the medication. The thought of losing my life and leaving my daughter and grandchildren behind gave me the motivation to keep pressing on," Fatuma says.

Fatuma was progressing on well until the fifth month when she began coughing again. Unfortunately, when the sixth month culture test was taken, the same month she was to complete the medication, results showed she had developed resistance to rifampicin, one of the first line drugs used to treat TB. She now had to start on a new nine-month regimen for drug resistant TB again.

"Unlike in the first treatment, this was a tough one. Apart from the tablets that I was swallowing, I also received daily injections that left my body aching. Despite all this, my determination to get cured was still alive. The support from my family and medics at the facility kept me going. Like when I lost appetite and began urinating blood, the doctor advised me to take a lot of water as well as to eat a lot of vegetables and fruits, and when I did this the side effects disappeared," Fatuma says.

A collaboration between the USAID funded Tuberculosis Accelerated Response and Care activity (TB ARC) with the National TB program early 2018 saw the enrollment of Fatuma to the National Health Insurance Fund (NHIF) to cover some of the non-related TB tests as TB treatment is free in all government facilities in Kenya.

"Apart from being enrolled to NHIF, I was also given a monthly financial support of Ksh. 6000 as well as nutritional supplements to boost my weak immune system. The stipend covered for my daily transport to the facility to receive the injections and other drugs as well as support my daughter in buying food for me," Fatuma recounts.

Unfortunately, she began having a hearing problem in the fourth month of the second regime leading her to stop taking one drug as advised by her doctor. By the fifth month, the TB in her body had become resistance to two more drugs; isoniazid and fluoroquinolone, making her an extensively drug resistance TB patient.

Being the first case in the facility, it took the intervention of the Tuberculosis Accelerated Response and Care II activity (TB ARC II), Coast Region Officer, Godana Mamo, who developed an individualized regimen for Fatuma. The regimen was sent to the National TB Program in Nairobi. After a few days the National TB Program sent a drug kit to Likoni Sub County Hospital for Fatuma to begin her medication.

According to the attending nurse, Saumu Ibrahim, "Since Mama Fatuma began the treatment for the extensively drug resistance TB, she has been responding well to it which is clearly evidenced in her activeness as well as weight gain which is increasing by day having improved from 30 kilograms to 58 kilograms at the time of the interview."

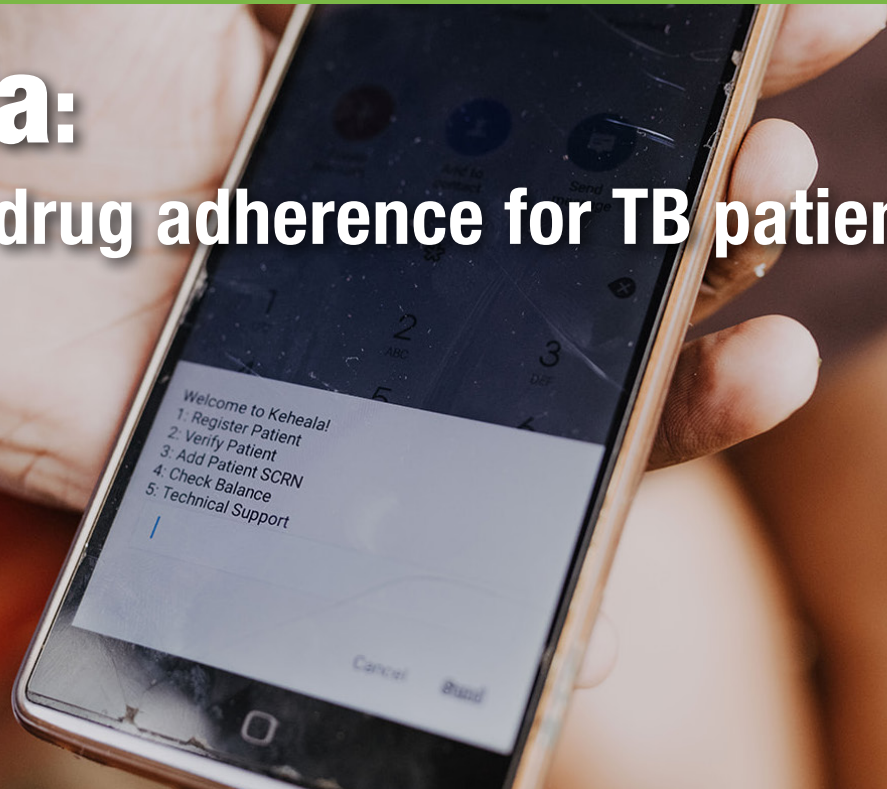
Nurse Saumu describes Fatuma as a lady who has been following the medication religiously without causing any trouble to her family and the health care providers.

"Not even a single day have I had a complaint with Mama Fatuma. She is one of the best patients. She comes to pick her medicines here when required even now that she has to come here every morning. While waiting for her turn to get in, you will hear her giving hope to other patients not to worry as they will get cured as well as the importance of adhering to treatment," Nurse Saumu says.

Having been counselled on the risks of spreading the bacteria to others, Fatuma's household comprising of her daughter and grandchildren are screened for TB periodically and the young ones have been put on isoniazid preventive therapy to prevent them from contracting the disease.

The USAID funded Centre for Health Solutions – Kenya, TB ARC II implemented activity is working with the National TB Program to reduce incidence and number of deaths due to TB in Kenya. This is by strengthening health care providers and facility performance, and expanding and strengthening TB diagnostic network to increase timely use of quality TB and drug resistance TB treatment to patients like Mama Fatuma.

# Keheala: Increasing drug adherence for TB patients



By Mbetera Felix – DNTLD-P

Digital technologies are increasingly being harnessed to support and complement our healthcare system including treatment of persons with Tuberculosis (TB). A number of these technologies are already improving adherence and clinical outcomes. Keheala is one of them.

Keheala is a digital health platform that delivers behavioural interventions and disease management tools through basic feature phones and smartphones thus improving healthcare access and treatment outcomes for patients.

Recently, in partnership with the United States Agency for International Development (USAID), the Ministry of Health through the Division of National Tuberculosis Leprosy and Lung Disease (DNTLD) and academic partners at Harvard and Yale, Keheala implemented a 1200 TB patient randomized controlled trial in Kenya. Patients using the Keheala intervention demonstrated a 68% reduction in the unsuccessful treatment outcomes - death, failed treatment and loss to follow up - compared to the standard of care control group.

As an intervention, it has been particularly effective for individuals who were likely to fail. According to Jon Rathausser, the CEO and Founder of Keheala, the system is fitted with a logistic regression

of treatment success on individual demographics. This helps to predict the likelihood of treatment success for all patients.

"We assigned individuals into quintiles according to this variable, and displayed treatment success by intervention group and quintile," Rathausser said.

With quintiles which refer to any of five equal groups into which a population can be divided according to the distribution of values of a particular variable, patients are analyzed to determine their outcomes. Through Keheala, not more than 6% of patients had poor treatment outcomes, regardless of quintile.

Keheala also addresses the non-medical drivers of TB which include stigma, lack of information, motivation and support. Patients and clinicians now have the tools they need to overcome the social drivers of non-adherence.

During a data dissemination meeting on the digital solution with the DNTLD-P Technical Officers, Mr. Rathausser noted that patients get reminders, information on TB and follow up calls enabling them get treatment on time. In addition, with the support that Keheala offers, clinicians are able to get updates on their patients sooner as opposed to waiting for them to return to the clinic for a month or so to

know if they are not taking their pills well

"The reminders are key in helping non-compliant patients not to miss treatment even after missing one day," he adds.

According to Patrick Wanyoko, Keheala's Head of Africa Business and Partnerships, Keheala's intervention provides a number of benefits including increased knowledge about TB and other infectious diseases, improved health, increased pro-sociality, improved attitudes towards medical professionals, improved economic outcomes, and increased empowerment.

"Patients and clinicians offer timely and constant feedback through interaction with our platform leading to quick and informed decisions," he says. "This has increased clinicians' enjoyment and efficiency leading to, eased congestion in health centres and increased trust among patients," he adds.

The scalability and sustainability of Keheala can save health providers money which can be channeled to other program areas and counties while improving the quality of life and health outcomes for TB patients. The platform is 99% compatible with all mobile basic feature phones and smart devices thus offering opportunities to improve treatment rates and decrease morbidity, mortality, transmission of TB, and MDR-TB.



# Empowering Tunza franchise facilities to find missing tuberculosis cases

By Diana Kagwiria | TB ARC II

It's the fourth day of an integrated tuberculosis (TB) curriculum training and Mr Gitonga Ndii is eager to put into practice the knowledge gained from the training. He is seated attentively in one of the West Wind Hotel's conference room in Meru. Mr Gitonga is the proprietor and nurse-in-charge at Kathathani Medical Centre, Kathathani Market, Chuka Sub County, Tharaka Nithi County. The clinic is part of the Tunza Family Health Network, a franchise of more than 400 private health service providers across the country supported by PS Kenya, a sub-awardee of the USAID funded Tuberculosis Accelerated Response and Care activity (TB ARC II) implemented by Centre for Health Solutions – Kenya (CHS). Tunza's main objective is to enable private providers to offer friendly, quick and affordable quality health services to the community.

Kathathani Medical Centre has been in operational for the last 10 years offering services on maternal and child welfare, family planning, laboratory, cervical cancer, among other. However, his facility did not previously offer TB services, he says, "I was not confident to talk about TB to my clients with the little knowledge I had on TB from my college study. This is the first training I have attended on TB since I left college many years ago, I actually thought TB is a non-issue hence paid little attention to it."

TB remains a global threat to public health and is the leading cause of death (1.6 million deaths in 2017) by a single infectious agent. It is estimated that 10 million people developed TB disease in 2017 but only 6.4 million (61%) sought care. The 'missing' millions make up the majority of the 1.6 million people who died from TB in 2017 due to lack of care. (World Health Organisation, Global tuberculosis report 2018). Kenya is among the WHO high TB burden countries.

## Why private sector?

According to the Kenya Tuberculosis Prevalence Survey, 2016, 16% of participants who had respiratory

***"I initiated TB service provision immediately after the TB training. The county team has been very supportive..."***

symptoms, sought prior care from private providers. The Patient Pathway Survey analysis showed that 42% of people presumed to have TB sought initial care at the private sector (formal and informal). Despite the above figures, private health facilities only contribute 15% TB case notifications.

Lack of knowledge and capacity for TB diagnostic, weak and ill-defined referrals networks leading to lost opportunities, and delay and poor documentation are some of the barriers to private sector's contribution to effective TB service provision.

To promote tuberculosis service provision by private health providers and linkages with the public sector to find the missing cases, PS Kenya with support from TB ARC II is currently implementing TB services in private facilities through the Tunza network. 65 Tunza facilities from priority counties of Nairobi, Mombasa, Kisumu, Nakuru, Meru, Embu, Tharaka Nithi and Isiolo underwent a five-day integrated TB curriculum training. The training was conducted by the National TB Program and the respective county TB, leprosy and lung disease teams. It involved the use of power point presentations, interactive learning, discussions and demonstrations.

By the end of the training, Mr Gitonga and other providers could comfortably describe the components of active case finding; laboratory methods used in the diagnosis and control of TB and leprosy; the preferred treatment regimen for all forms of TB, leprosy and other lung diseases; describe TB treatment adherence strategies as well as list adverse reactions to drugs used to treat TB disease; infection prevention, control, advocacy and communication; commodity management, nutrition, monitoring and evaluation among others.

## Training output

During a follow-up visit to Kathathani Medical Centre two months after the training, we met an elated Mr Gitonga attending to his clients. His first words to us were, "TB services are now available here; I have sensitised all the staff on TB screening, and we are now empowered to offer TB services."

"I initiated TB service provision immediately after the TB training. The county team has been very supportive. I received presumptive register and sputum collection tools and I am linked to Chuka Level 5 Hospital for GeneXpert services", he continued as he gladly showed us his tools of trade.

After participating in the integrated TB training, he saw that there was a need for TB services and was motivated and equipped to offer TB services. He uses his own resources to transport sputum samples and collect results. The facility also receives TB drugs on behalf of clients on treatment hence has TB4 register.

The knowledge gained from the training is helping Mr Gitonga to confidently educate his community about TB during *barazas* and church meetings. His vision is to see Kathathani Medical Centre upgraded to a diagnosis and treatment site to increase access of TB services. He recommends support for outreach activities in the community to actively seek out missing persons with TB.

Capacity building, continuous mentorship and support supervision and access to TB commodities is a motivation and builds self-efficacy among private healthcare providers to engage in finding the missing persons with TB.



**Dr Elizabeth Onyango,**  
**Head DNTLD-P**



**Tell us about yourself. Who is Dr Elizabeth Onyango?**

Dr. Elizabeth Onyango-Okoth is happily married and is blessed with two wonderful children. Currently, I head the Division of National Tuberculosis Leprosy and Lung Disease Program. I am also a public health specialist. I am born again and God-fearing (...laughs...). What more do you need to know about me apart from that?

**How does getting saved defines you as being a born again leader? As the program's head?**

I espouse Christian values. I know my background and principles as a Christian enable me to focus on bigger picture. That is to look at humanity from the eyes of the Lord Jesus Christ. The core mandate of Christians is to love your neighbour as you love yourself. By loving your neighbour, you will tend to do things that add more value to their lives. As I took charge of the National TB Program, I realized that there are so many issues regarding TB that we need to deal with caringly as leaders.

TB affects mostly the vulnerable people. The poor who may not even know that they have the disease. So, we have to empower these communities to take charge of their health and prevent themselves from getting TB infection and disease. For those who get the disease, as health care workers and as leaders, we should ensure that they are identified early and put on treatment and follow-ups made to ensure that they get completely healed. We have also to look at the community's social surrounding, their psychosocial issues and financial security. TB costs a lot of money to treat and is time-consuming to treat

**How has your journey to being the head of the Division of National TB Leprosy and Lung Disease (DNTLD) been? You can start by telling us how you started being a Public Health Specialist? How have you grown to be the head of the program?**

As a child, sometimes you are not sure of what you want to become. At one time, I wanted to become a policewoman. At another point, I wanted to become a lawyer. In high school, I was still not aware of what I wanted to be until our school started a mentorship program.

Successful career people were brought in to give us career talks. They would tell us about what they were doing, how they got there and how exciting it was. Two of those experiences are still memorable to me. I was inspired by Professor Gladys Opinya, who is an accomplished professor in pedodontics (paediatric dentistry). The other person who came to talk to us was Dr. Sally Kosgei. She gave us her ideas about being in public service. The ideas resonated well with us because then, Dr. Sally was a High Commissioner of Kenya in the United Kingdom and later rose through the ranks to become the Permanent Secretary to the Cabinet and Head of Public Service. By the end of the fourth form, I knew I wanted to take up dentistry, but when I got to college, uncertainty struck again because deep in my heart I wanted to pursue a degree in business, my dad wanted me to be a lawyer. I had secured a placement to study Bachelor of Dental Surgery (BDS) at the University of Nairobi. I inquired about the possibility of changing to Bachelor of Commerce but I was informed that I was late.

One of my lecturers advised me to complete the BDS course and then later pursue whatever I wanted to. In the course of the training, my interest in community health developed which helped chart my career path in public health. I later did my Master in Public Health at the University of Nairobi and upon completion, I was posted to Siaya as a District Medical Officer of Health, where I served for almost 5 years before moving to Kisumu West District in the same capacity. I managed to complete and graduate with an MBA in Strategic Management from the University of Nairobi in 2016.

I joined the National TB Program in November 2016 and served as a TB/HIV and TB/Diabetes Coordinator. I was so excited with what I was doing. Head of programs appointments are done by the Ministry's leadership and I'm humbled to having been appointed to head the TB Program from July 2019. Expectations are high and I'm delighted to have been given this chance and challenge to serve which I'm doing with all dedication and professionalism that it deserves.

**What are your key goals for the DNTLD?**

One of my key goals is to ensure we end TB in this nation. TB was not an issue sometime back but has recently become a public health concern. We have made commendable strides in TB prevention and control but still, more needs to be done. My goal is to ensure that we end TB, bring to end deaths that are associated with this disease and that no family suffers financial hardship because of TB. These are in line with the End TB Strategy. My rallying call is that we need to find people with TB wherever we can find them, treat them as per the set standards and ensure they are completely healed.

**How do you intend to achieve the above goals?**

TB is not a one-man show. For us to end TB, first of all, we need to come up with practical strategies that are going to work. Also, we have to ensure that a multi-sectoral engagement is embedded in those strategies. We should engage everybody including but not limited to community members, civil society, political wing, other ministries, and stakeholders. This is critical to lobby for the allocation of adequate resources to combat TB. A sizeable proportion of TB patients end up in private facilities and yet most of our private facilities don't have the diagnostic capacity. One of the strategies to mitigate this is to enhance public-private-mix (PPM) or engagement. This will enable us to find the missing TB cases from the private sector, effectively diagnose the cases, treat them and make a follow-up. Therefore, my focus is to make certain that there is an effective engagement of all stakeholders in the fight against TB.

**Good leadership is Key to DNTLD. What do you intend to do to ensure the 2019-2023 National strategic plan is implemented fully?**

Currently, we are implementing the 2019 – 2023 strategic plan. We have identified some of our key priorities, and therefore, we know what we should focus on. We coordinate the efforts of the different players to ensure that we are working in concert to find the missing people with TB. Finding the 40% missing cases

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is no mean feat but we are equal to the task. In addition, we want all patients put on treatment to receive the highest quality of care. This involves building the capacity of health care workers both at national and county levels, be they in public or private sector or faith-based organizations. The target is to safeguard the successful treatment of patients and insulate them from TB treatment-related complications. Latent TB Management is another key area of focus towards the realization of the 2019-2023 strategic plan. Most TB cases spring up from latent TB infection. We are developing a comprehensive latent TB infection management policy that will guide in the identification and management of people with latent TB infection. This is currently happening to contacts under five years of age and people living with HIV, but there are opportunities to expand to other populations who are at high risk of getting TB disease. Although our NSP is fully costed, it is not fully funded, thus we are putting in measures for resource mobilization which is key in delivering on the commitments of the strategic plan. We are calling upon all stakeholders to assist in reducing the TB funding gap.

## What are some of the progress we have made as a country in ending TB in Kenya?

The progress we have made is commendable. The government of Kenya has progressively increased funding to fight TB and all our first-line anti TB medicines are purchased by the government.

Active case finding is happening in most of our health facilities. Patients are currently thoroughly being screened for TB. And those who are found to be presumptive are tested. We have also expanded the use of diagnostic tests, especially the use of GeneXpert tests which has the dual ability to detect TB and resistance pattern to rifampicin. Health workers have been employed to support the laboratory system across the country through the support of the Global Fund.

Our program has case-based surveillance data for patients enabled by the TIBU System. The system has assisted us to carry out a number of operations like online

payment of cash to patients, facilitation of county coordinators and we are able to monitor our data and indicators in real-time.

Some of the progress also includes the enhanced Public Private Mix collaboration. We have a strong and very robust civil society that advocates for TB patient rights and other human rights issues through the guidance of STOP -TB Partnership Kenya.

To note, the country had its first post-independence TB Prevalence Survey 2015/16 which gave us an indication on the burden of TB in the country and how to accelerate efforts on ending the disease. Numerous community-level activities have been done to find missing people with TB, link them to facilities for further management; trace TB treatment interrupters, and contacts of people with TB.

TB health has also been incorporated into the curriculum for primary schools and TB awareness increased. We have seen an increase in the dissemination of TB messages in public spaces, especially in the public sector transport.

Last, but not least, strong partnerships have been built with other organizations. And the TB program in prison is doing quite well. We thank God for that and we have a lot and I can assure you that our scorecard is impressive.

## What are some of the bottlenecks we face as a country towards ending TB?

Everybody will keep on telling you that we don't have resources. Yes, that can be a factor, resources are never adequate as we say our NSP is fully costed but not fully funded so there are gaps that exist. Sometimes we experience stock-outs of commodities, some even beyond our control. For instance, there was a time when there was a shortage of a key component required in manufacturing one of the drugs.

It's our desire that all our facilities should be able to provide tests that can identify the TB bacteria and determine the resistance pattern. Unfortunately, this is not the current situation as only 4% of our TB treatment sites offer this kind of test. Again, TB health-seeking behaviour is

still suboptimal which could possibly be associated with stigma and discrimination, and low TB awareness. These may cause delays in seeking TB services, leading to poor outcomes. TB treatment though still free, patients continue to experience some costs related to accessing comprehensive services and completing the treatment, for instance, transport costs, other medications and investigations, and coexisting comorbidities.

## What should the program do to ensure that we end TB by 2035?

As program, we have a roadmap to end TB and we know what we should do. What we now need is to accelerate our efforts, engage higher gears and be dynamic in adopting new strategies, processes, technologies and tools that work. We have to increase our current levels of energy and efficiently use the resources at our disposal. We should constantly sniff for opportunities, learning best practices across the world and contextualize to align with our priorities.

## What are some of the challenges you face as the head of the DNTLD and how do you manage them?

Well, so far I may not talk of much challenges. The challenges that I am now grappling with are the activities that we have not implemented. And if we fail to complete those activities, then we may not meet our objectives and targets. So for me, it is how to assist the team to deliver on our mandate and carry out the activities that we have planned to do within the specified period. Currently, this is my challenge.

## How would you like to be remembered as the head of the DNTLD?

Whenever I hear someone has died because of TB and not because of any other reason my heart aches. Whenever I hear that we have failed maybe to provide a service that would have saved a life then my heart aches. This is something I am very determined to change and let me be remembered as the one who gave her all to ensure that we end TB in this country.

## Who is your role model and why?

My role model is Jesus Christ. I derive

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# Public Private Mix:

## Ending TB requires collaborative efforts

*PPM is considered to be an effective way to benefit from the strengths of both sectors in addressing issues that neither could manage adequately on its own*

**By Mbetera Felix - DNTLDP**

Engaging the private sector is key in ending TB in Kenya. This was evident at The Nairobi Women's Hospital - Adams branch and Coptic Hospital along Ngong road, where a team of experts from the National TB Program, USAID funded TB ARC II activity and Nairobi County TB coordinators undertook a technical assistance (TA) exercise.

According to Dr Elizabeth Onyango, Head, Division of National Tuberculosis Leprosy and Lung Disease (DNTLD), the Ministry of Health recognizes private-sector's contributions to TB care and treatment and has developed supportive policies and strategies.

"Private Partnership Mix enables the TB program to be notified of TB cases which is vital in ensuring missing people with TB are identified and put on treatment as soon as possible," Dr Onyango said.

Her sentiments were echoed by Dr. Felix Wanjala, Nairobi Women's Hospital CEO who stated that all TB patients deserve better quality care for their own health and to reduce infection in communities.

"There are still gaps in managing TB in the country and we encourage more collaborations with the TB program in order to address these gaps," Dr Wanjala added.

The 2019-2023 National Strategic Plan identifies the importance private hospitals play in rapidly identifying presumptive TB cases, to accurately diagnose active TB and putting in place support systems for patients to start and complete treatment.

Through regular technical assistance, the TB program has an opportunity to share knowledge, skills and empower TB managers and coordinators in both public and private health facilities at the national and county levels. This improves finding missing people with TB, early diagnosis, correct prescription and appropriate continuation of treatment.

### **Collaborative Efforts**

Public- Private Mix is considered to be an effective way to benefit from the strengths of the public and private sectors in addressing issues that neither could manage adequately on its own.

Government institutions are increasingly partnering with the private sector. This has been seen as a way of mitigating risk and enhancing performance as well. The DNTLD can also benefit a lot through PPM mix thus providing better service delivery through improved operational efficiency as a result of collaborated efforts in fighting TB in the country. This can easily be enhanced through

the use innovations and technology in both sectors. The program for example, with limited funding for the national and county governments, can extract long-term value-for-money in the use of GeneXpert machines in private hospitals. This can be through appropriate risk transfer to the private health facilities. It is prudent for the program through donor support to also incentivize the private facilities for maximum support.

Private facilities should also be encouraged to appreciate the limited public sector capacities in fighting TB and supplement where possible. This could promote skills transfer, learning and the growth of the sectors, and even making service delivery very competitive particularly in counties. With time, both public and private health facilities could further be exposed to best practices that are geared towards ending TB in the country.

### **Areas to improve on Public Private Mix**

It is, however, not all rosy with PPM due to competing interests. A number of risks are linked to PPM, the major one being procurement. There is a need to streamline government procurement processes and enhance transparency. TB commodities and services should be based on public interest and not private financial gains. The program should ensure there is value for money and the greater costs involved should be justifiable and beneficial to patients.

Most private facilities pay key attention to returns of their investments. This outlines key challenges as medication cost has to be borne by the customers. Whereas government can also subsidize some of the expenditure, there needs to be a clear mechanism on how the execution will benefit all and reduce catastrophic costs among TB patients. Sadly, most private health facilities, despite the incentives will only do what they are paid for as they are not charity institutions.

Local politics could also play a huge role in destabilizing PPM due to political interests especially when politicians want to gain mileage at the expense of TB patients. Most private health facilities wouldn't also want to bear risk that might be instigated by the government thus calling for greater control on government propelled innovations. This has proven to be problematic as government would not easily let go some innovations or projects to bear criticism by citizens on the quality of services being offered in these facilities.

A serene concept of PPM, therefore, requires a clear regulatory framework to ensure a well-coordinated TB response is implemented and sustained.





Regional Green Light Committee (rGLC) joint mission in Vihiga County



Dr Joyce Onsongo-WHO, Winnie Obiero, Catherine Sayo, Salma Anzemo and Eunitor Ngoda, CHVs, Mbale Rural Hospital, Vihiga County



Delegates from Mauritius following proceedings during the ECSA Meeting at the Radisson Blu Hotel - Nairobi



Technical Assistance: DNTLD-P team at The Nairobi Women's Hospital



Delegates from Angola following proceedings during the ECSA Meeting



Dr Brenda and Dr. Wachira (TB ARC II) at the Kenyatta Hospital TB Clinic during the Technical Assistance



## 5<sup>th</sup> Kenya International Scientific Lung Health conference



Cabinet Secretary - Ministry of Health, Cicily Kariuki and other delegates during the official opening of conference



Prof. Chris Gilpin (TB Specialist), Wandia and Dr. L. Mugambi (TB ARC II), Mr. Olodi and Dr. Irungu (DNTLD-P)



Saurabh Gadgil of Glenmark explaining to a client how nebzmart works



Some of the participants during the conference



Mr. Misoi from DNTLD-P registering during the conference



DNTLD-P and NTRL representatives during the conference



Dr Nyale - Chair, Lung Health Conference



Dr Chakaya Chest Physician and former TB Union President



Dr Oluoch, Chest Physician, The Nairobi Hospital



Dr Diana Marangu - Lecturer UON Pediatrics Dpt.





## GLC: Assessing programmatic management of Drug-Resistant Tuberculosis in Kenya

By Mbetera Felix | DNTLD-P

The Regional Green Light Committee (rGLC) joint mission carried out an assessment on the programmatic management of Drug-Resistant Tuberculosis (DR TB) in Kenya. The two-week mission which started on 8th October 2019 was supported by the Global Fund and the World Health Organization (WHO) Kenya Office. It was led by Dr. Norbet Ndjeka, Director Drug-Resistant TB, TB and HIV from South Africa and Mr Kenneth Musisi, Supranational Reference Lab Manager from Uganda. The two consultants who were contracted by WHO were supported by a team of technical officers from the Division of National Tuberculosis Leprosy and Lung Disease. Some of the facilities visited include Nakuru County referral Hospital, Ukwala sub-county and Ambira sub-county hospitals, Mbale Rural Training Centre, KEMRI lab Kisumu, National Reference lab and KEMSA offices in Nairobi.

The mission reviewed the implementation of the previous missions' recommendations, assessed the National laboratory capacity, sample referral system and the Drug Susceptible Tuberculosis expansion, built capacity on forecasting and quantification of laboratory commodities. In addition, it assessed pharmacovigilance and Active TB drug-safety monitoring and management (aDSM), drug procurement and supply chain management system for DR-TB drugs, progress towards transitioning to the new oral regimens and offered technical assistance on operational research for a modified shorter term regimen for MDR/RR TB.

Following the 2018 WHO rapid communication, and 2019 WHO guidelines on the management of MDR TB, Kenya initiated internal discussions on transition plans. The Ministry of Health made a decision to transition to the new injection free regimens following internal and expert reviews as well as patients' and stakeholders' engagement. The country has developed a transition plan for the rollout of the new regimens.

The rGLC was established by WHO and partners in 2000 to address the obstacles to implementing DR-TB management programmatically. It reviews and debates the merit of available scientific evidence, programmatic information and professional experience. Through this activity, the GLC continually updates and refines its own and WHO's understanding and perspective on measures to control DR-TB. The GLC is also an advisory body for the Stop TB Partnership (STP). It offers technical assistance to Kenya annually and provides its expertise to individuals, donor agencies, bilateral organizations, international organizations, ministries of health and national TB programs.



Dr Irungu and Dr Ndjeka interacting with MDR patient at Mbale Rural hospital



Dr Onsongo during an interview with Kisia, MDR patient in Vihiga county.



GeneXpert super-user Nakuru County Referral Hospital during the GLC mission





## Training of Trainers on Drug-Resistant Tuberculosis

By Mbetera Felix | DNTLD-P

The Division of National Tuberculosis Leprosy and Lung Disease in collaboration with the International Union Against Tuberculosis and Lung Disease (The Union) organized a comprehensive course on the clinical and operational management in susceptible and Drug-Resistant Tuberculosis (DR-TB) in Kenya. The training was sponsored by Johnson and Johnson.

The course which was undertaken at the Radisson Blu hotel between 30<sup>th</sup> July and 1<sup>st</sup> August, 2019 in Nairobi, Kenya, was aimed at building a pool of clinicians with advanced knowledge in TB and DR-TB management and an advanced trainer of trainers for health care workers in the basic management unit and in referral hospitals of DR-TB treatment centres in Kenya.

The five-day training was led by Prof. José A. Caminero from the expanded Multi-DR-TB Program and TB Department of The Union, and a host of local facilitators. Key areas covered included the findings of the DR-TB gap analysis conducted in Kenya, biological characteristics and condition of mycobacterium TB growth, definitions

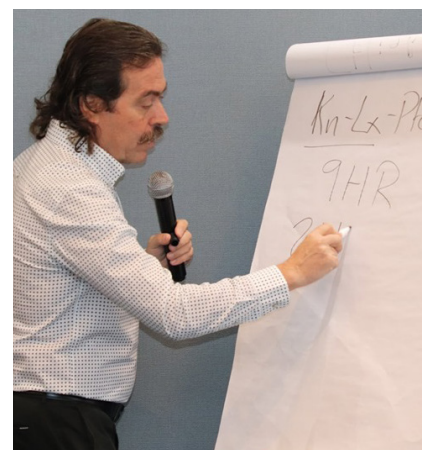
and basic concepts in TB and DR-TB, and conventional procedures in the diagnosis of TB.

Approaches to the diagnosis of DR-TB, initial treatment of TB, treatment of MDR-TB according to patterns of resistance, TB and MDR, extensively(X)DR-TB/HIV in special situations, treatment regimens and protocols in Kenya, rationale use and adverse reactions of first- and second-line drugs in the MDR/XDR-TB treatment are other key areas the experts were taken through.

According to Dr. Irungu Karuga, DR-TB coordinator for the National TB Program, the trainers of trainers experienced the benefits of a good training by learning from the best.

“Dr Caminero is one of the best chest physicians we have in the DR-TB field and our local experts learnt from the best,” Irungu said.

“It is in the best interest of the TB program to regularly train our experts on DR-TB patient management. We hope that the experts will effectively and efficiently learn new and relevant skills and train more health care workers,” Irungu added.



Pro. Caminero during the DRTB Training

MDR-TB is caused by TB bacteria that is resistant to at least rifampicin and isoniazid which are the two most potent TB drugs while XDR-TB is a rare type of MDR-TB that is resistant to rifampicin, isoniazid and any fluoroquinolone and at least one of the three injectable second-line drugs like amikacin, kanamycin, or capreomycin.

The TB Program and The Union will be conducting a yearly updated five-day course on advanced clinical and operational susceptible and DR-TB from 2020 to 2023 for all the facilitators involved in the ToTs project and for new possible relevant clinicians.

# Tuberculosis and Civil Liberties:

## Patients' rights are integral part of TB response

By Mbetera Felix | DNTLD-P

**A**mref Health Africa in Kenya in collaboration with the Ministry of Health through the Division of National Tuberculosis Leprosy and Lung Disease (DNTLD) and KELIN conducted sensitization of lawyers on the links between TB, law and human rights. The sensitization was aimed at empowering lawyers with the right information to be able to deal with TB-related cases in their respective work stations.

DNTLD recognizes that policies and practices which explicitly address human rights are integral part of national TB responses. To this end, the division has started initiatives in partnership with other key stakeholders to empower lawyers to offer pro bono services and champion for the rights of TB patients through litigation and legal advisory services.

There are ethical dilemmas and iniquities when dealing with TB. Through the training, the lawyers will be in a position to identify risks, needs and demands of those affected by TB. According to Dr Elizabeth Onyango, Head DNTLD, most TB patients need support in the course of their treatment.

"There is need to work with the legal fraternity to enlighten both patients and the community on their rights as well as go beyond treatment to reduce stigma," Dr Onyango said.

The sensitization workshops are part of the Global Fund TB 2018-2021 grant activity that are aimed at building capacity among health care workers, patients and all key stakeholders.

According to the 2017 Legal Environment Assessments for Tuberculosis report, TB related human rights issues have not received as much attention as in the fight against HIV and AIDS. TB affects mostly the vulnerable or marginalized. Some of those who face significant challenges when accessing TB care include people living with HIV (PLHIV), those who use drugs, mobile populations, rural and urban poor, miners, prisoners, women and children.

Mrs. Wendy Nkirote, the TB coordinator in charge of public private mix and human rights issues notes that human rights challenges remain rooted in the social and economic disparities faced by these communities.

"The challenges are also perpetuated and execrated by policies and practices that violate human rights, hinder the achievement of gender equality, restrict access to essential medication and generally discourage health-seeking behavior," she says.

"In some cases, laws that aim to protect and promote human rights are in place but not fully implemented. Due to these deficiencies among others in law and practice, people affected by TB suffer from the disease and from its impact on their enjoyment of other human rights. Most TB patients are pushed into poverty due to loss of employment as a result of the disease or the catastrophic cost they may incur before and during treatment" she adds.



### Having TB is not a crime: Patients' Rights


Ethical and legal issues around TB still pose a big challenge not only in Kenya but worldwide. Already, TB has surpassed HIV as the top infectious killer disease in the world while multidrug-resistant TB continues to be a global threat. Some TB patients experience infringements of their rights before and during treatment. Some lack access to basic and effective TB management services, some face stigma and discrimination in their areas of work while others are put into isolation to complete their medication. It is evident that innovative approaches are needed to address socio-economic, ethical and legal factors driving the TB epidemic in the country.

Just like all Kenyans, TB patients are also entitled to basic rights which are universal, interdependent and non-negotiable. The National TB program strives to ensure that all TB patients' rights are protected and adhered to by the state and none-state actors.

The right to health which is implicated in the TB response is guaranteed in the Kenyan Constitution under Article 43 (1) (a), which states that every person has the right to the highest attainable standard of health which includes the right to health care services, including reproductive health care. TB patients, thus, have rights to confidentiality, privacy, information, dignity, choice, access, comfort, continuity, opinion and safety among others. But, all these rights ought to be put into context based on underlying health determinants.

The enforcement of laws on TB is not an easy act to balance. As a society, we have to consider not only the patients' rights but also public health considerations that are aimed at protecting the public. For example, patients who refuse medication might be put into isolation to prevent TB transmission which is for the public good. The government has, for example, ensured that major health facilities in all 47 counties have isolation wards for involuntary isolation which is considered as a last resort. In addition, lawyers and patients need to understand that the balancing of public interest and civil liberties is paramount in TB response and control.





***TB patients have rights to confidentiality, privacy, information, dignity, choice, access, comfort, continuity, opinion and safety among others. But all these rights ought to be put into context based on underlying health determinants.***

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# CHS partners with The UNION to capacity-build The National TB Program and AMREF Teams

By Diana Kagwiria - TB ARC II

Centre for Health Solutions – Kenya through the USAID Kenya funded Tuberculosis Accelerated Response and Care II activity (TB ARC II) in partnership with the International Union Against Tuberculosis and Lung Disease (The UNION) conducted a one week training on the *Principles of TB and Prevention: Translating Knowledge into Action* for 33 program officers from the Ministry of Health – National Tuberculosis, Leprosy and Lung Disease Program and two program officers from AMREF Health Africa from June 30 to July 6, 2019 at Voyager Beach Resort, Mombasa, Kenya.

Among the participants were three international observers from the Malawi, Zambia and Mozambique National TB Programs, who were interested in replicating this in-country training in their respective countries.

The training was aimed at familiarising the participants with TB epidemiology both globally and in Kenya, the roles and responsibilities of the National TB Program with focus on data driven technical assistance, strengthening recording and reporting in TB control, and how data can be used to strengthen TB patient and program performance at all levels of health services as well as learn the basics of data-driven support supervision and technical assistance.

Speaking at the training, the former Head of the National TB program, Dr Maureen Kamene, noted that the training was a good learning opportunity for the participants to strengthen their technical expertise.

“From this training you will now be able to know more about what TB is and gain technical knowledge to review and query TB data for action,” said Dr Kamene.

TB ARC II Chief of Party, Dr Brenda Mungai, noted that the training was important in equipping the participants with skills and knowledge to achieve the END TB strategy indicators, focusing on case detection, drug sensitive TB coverage, Isoniazid Preventive Therapy (IPT) for under 5 years, and to find the missing cases.

“To achieve the END TB strategy and find the missing cases, there is a need for a high-quality training on use of data to guide planning, supervision and programming at sub-national level. A practical and impactful training that also helps identify local areas and populations to be priorities for interventions hence Principles of Management in Tuberculosis Care and Prevention training in Kenya,” Dr Brenda said.

This was the 10<sup>th</sup> training of The UNION's Tuberculosis Care and Prevention training in Kenya. The past trainings which have involved County and Sub County Coordinators from the various

**This was the 10<sup>th</sup> training of The UNION's Tuberculosis Care and Prevention training in Kenya. The past trainings which have involved County and Sub County Coordinators from the various counties have been sustainable and cost efficient, with the engagement of local trainers drawn from the counties.**

counties have been sustainable and cost efficient, with the engagement of local trainers drawn from the counties.

“Today, we are really proud that with little resources we have been able to train over 300 TB Coordinators at the County and Sub County level since the inception of this training in 2016,” Dr Paul Wekesa, Chief Executive Officer, CHS, said.

County and Sub-County TB coordinators are key in the use of subnational data for local planning and programming at county level. They ensure quality of care for patients, act as the link between health care workers, patients and national level, visit facilities monthly, and use the TIBU surveillance system for supervision and data collection.

Kenya remains a high burden TB country, with TB being the 4th cause of death among infectious diseases. TB ARC II activity is working with the National TB program to reduce this burden by partnering with The Union, an international scientific organisation, and leader in the field of TB since 1920. The Union has developed a tailor-made, innovative training based on the International ‘*Principles in TB Care and Prevention: Translating Knowledge to Action*’ course which has run for over 20 years. The training which targets county TB staff was informed by evidence from the TB prevalence survey of 2017 and capacity gaps of TB staff. The national-level TB team received this tailor-made training to strengthen their stewardship role in policy development and technical assistance in the country.





## Bringing together TB/HIV partners

By Diana Kagwiria - TB ARC II

On September 30, 2019, Centre for Health Solutions – Kenya (CHS) through its USAID funded Tuberculosis Accelerated Response and Care II activity (TB ARC II) in collaboration with the Division of National Tuberculosis Leprosy and Lung Disease Program and NASCOP brought together Kenyan TB/HIV partners for a one-day meeting to discuss TB/HIV support progress for PEPFAR implementing partners. The theme of the meeting was, “Optimising the quality of care for TB, and TB/HIV patients in the climate of diminishing donor funds”.

Speaking in the meeting, Dr Lorraine Mugambi, Deputy Chief of Party, TB ARC II said that the key purpose of the forum was to bring together TB/HIV implementing partners funded by various partners like CDC and USAID to rally them together to ensure all activities at the county level are in line with the strategic initiatives of the National TB Program.

“The role of TB ARC II is to coordinate the partners, to ensure these forums take place on a quarterly basis to engage the TB Program and to identify key areas of focus so that this becomes a key agenda within the various forums,” Dr Lorraine said.

Dr Maurice Maina, HIV Specialist USAID-Kenya and Agreement Officer for TB ARC II, noted that Kenya’s TB/HIV targets have increased significantly and urged the implementing partners to work more closely with National and County Governments.

“With the diminishing donor funds, we have to make use of the local systems. We have to work with the County Governments and engage private, civil and local organisations in taking up some of the activities we are doing. The *Journey to Self-Reliance* ensures a country is able to support itself using National, County and local systems,” Dr Maina said.

While assuring the partners that TB/HIV remains a key priority in PEPFAR programming, Dr Herman Weyenga, TB/HIV technical

advisor, CDC Kenya, called on the partners to work on programs that cut across the entire TB/HIV cascade. He also pointed on the need for patient centred programs that will ensure the patient is not forgotten even with the diminishing funds.

“Though we are working in a challenging time, we should understand we have our brothers and sisters who have TB out there and they need our support. When designing our programs, we should not forget these persons,” Dr Herman said.

Echoing Dr Maina’s and Dr Herman’s sentiments, Dr Elizabeth Onyango, DNTLD-Program Head, pointed out the need to relook at multi-sectoral accountability framework, which emphasizes on mobilization of TB/HIV resources and finding of the missing persons with TB.

Through TB ARC II activity, CHS has been mandated by USAID to bring together and coordinate the TB/HIV implementing partners and stakeholders in order to identify key areas of focus for the TB program. This is aimed at strengthening TB/HIV implementing partners to scale up and optimize their support within the counties towards addressing the key implementation challenges at the county level.

Since January 2016, coordination efforts through TB ARC and TB ARC II activities, has seen an increase in the number of the people living with HIV being initiated on Isonized Preventive Therapy and incidences being reported in the DHIS system. This engagement of the TB/HIV implementing partners has also seen the strengthening of the TB sample networking systems at the county level. Additionally there has been an improvement on the level of effort being put in place to improve the quality of care of patients. TB patients are now receiving a lot of support at the county level especially those who are co-infected with HIV.

# 2019 - 2023 National Strategic Plan (NSP) in summary



By DNTLD Team

The National Strategic Plan (NSP) for Tuberculosis, Leprosy and Lung Diseases 2019 - 2023 represents an evolution in the Government of Kenya's response to these scourges. New data acquired over the years is driving a targeted and prioritized approach. The NSP reflects a patient-centred approach to planning and evidence-based prioritization of resource allocation to close the gaps along the patient pathway to quality care. In addition, the NSP is operationalized through a partnership framework aligned to each stakeholder's comparative advantage. The activities embodied under the NSP addresses systemic and root causes of the gaps along the patient pathway, suggesting the complementary roles of county and central governments, departments across the Ministry of Health, partners and other sectors.

The NSP lays out the strategic and technical direction for the elimination of TB and leprosy nationally. It presents the full aspiration of the country, including outcome and impact targets that align with international goals, and the full portfolio of activities needed to reach these goals. It also assumes a fully

funded NSP. In acknowledgement of likely funding gaps, an evidence-based optimization of resource allocation is captured alongside alternative impact targets given reduced funding scenarios like the 2018 - 2019 funding levels from domestic and international sources and the 2018 - 2019 funding plus 25 percent.

Tuberculosis is the leading infectious killer disease in Kenya. A 2015/2016 prevalence survey revealed that the burden of TB in Kenya was 426 cases per 100,000 population – suggesting there was more than twice as much TB as previously estimated. This was a wake-up call for the country. After five years of declining case notifications, the results of the prevalence survey prompted intensified efforts to understand where people with TB were being missed by the system and to mount innovative responses. In both 2017 and 2018, TB case notifications increased by more than ten percent, respectively, over the previous year. Still, nearly half of all estimated TB cases were not diagnosed, notified and or treated in 2018. Among children with TB, nearly two-thirds were not diagnosed; and nearly 80 percent of people with drug-resistant TB were missed.

Kenya is a low endemic country for leprosy and has achieved and sustained national elimination status for several years. However, there are still six high burden counties that accounted for 73 percent of notified cases from 2014-2016. The majority of these cases were multi-bacillary, some had grade 2 disabilities, and included children under 15 years of age, signifying continuing recent community-based transmission of infection. The NSP reflects a focus on earlier identification of people with leprosy and quality care.

Further, respiratory illness is the leading reason for healthcare seeking in Kenya. It accounts for a considerable burden of morbidity and mortality in all age groups with ten percent of self – reported reasons among patients seeking outpatient services complain of respiratory symptoms, this is the most frequent complaint. This translates to an annual eight million outpatient visits from respiratory symptoms among health facilities that report on the routine health management information system, DHIS2. Among the respiratory diseases, the most frequently occurring that result in significant morbidity and mortality are lower respiratory infections, drug susceptible TB, drug susceptible HIV/AIDS – TB and chronic obstructive pulmonary disease.

The NSP also provides the framework for a multi – sector partnership for Kenya to overcome tuberculosis (TB) and leprosy as public health and social challenges. It outlines the goals, objectives, strategic interventions and activities over a five-year period, considered within the Kenyan Health Sector vision and mission for the period 2014 –2030. National and county governments, civil society actors, private sector, development partners and other stakeholders collaborated in its development.



# Fostering international partnerships to end TB by 2030 for improved quality of lives for Kenyans

***Carrying out of TB mitigation initiatives require colossal amounts of funds and international development partners help fill in the gaps as they also augment this with requisite technical support.***

GOK  
Global fund  
USAID  
TB Reach

**\$65,553,910**  
Budget Required  
2018-2019

**\$39,278,050**  
Funding Gap  
2018-2019

By David Kimani - Nakuru County Press

At the global stage, sustainable development goal No. 17 recognizes and epitomizes the need for fostering and strengthening partnership(s) towards realizing socio-economic growth whose ramifications have a wider reach and are long-lasting.

Kenya's development model is also fashioned through this perspective. It recognizes the need to bring together state and non-state actors for the creation of partnerships in the context of devolution so as to ensure improvements in provision of health services.

Kenya aspires to be a middle income, industrialized nation achieving high quality of lives for its people by 2030. By this time, the world has committed to better humanity and the planet through putting the sustainable development goals (SDGs) into effect.

By 2030, the World Health Organization (WHO) member states have committed to end Tuberculosis (TB). This commitment is closely linked to the third SDG on good health and wellbeing.

This implies that there is an inextricable thread that ties the fight against TB with national and global development agendas such as Vision 2030 and Agenda 2030 respectively. Kenya will not deliver its promise for Vision 2030 without an all-inclusive strategy for stopping the spread of TB, a lethal disease, affecting mostly the young productive age groups (15- 44 year-old).

If this is the case, then the Government of Kenya is on the right track. Through its Division of National Tuberculosis, Leprosy and Lung Disease Program (DNTLD-P), the government has made commendable strides in its commitment as a member state of the WHO to ending TB by 2030.

Already, the National Strategic Plan (NSP) for TB, Leprosy and Lung Health 2019 – 2023 is in place. Its vision is to make Kenya a TB free nation, at the same time lessening the burden of Lung Diseases.

Although the NSP is anchored on an international treaty ratified by Kenya, thus forming an integral part of the nation's legal framework, the government cannot win the fight against TB alone as we have seen without a doubt, international partnerships are vital in sustainability of efforts in this cause.

This is the reason why in the implementation of its strategy, the DNTLD-P has adopted a multi-sectoral approach, thereby involving international and local partners in a framework that aligns them to their comparative advantage in the execution process.

The implication here is that that international partners such as WHO, Global Fund, PEPFAR, USAID, and MSF among others form a critical part in the matrix of partnership(s) geared towards eradication of TB scourge in Kenya.

This echoes the sentiments of the WHO Country Representative in Kenya, Dr Rudi

Eggers during the World TB Day 2019, commemorated at Thika stadium. He urged state and non-state actors at all levels to take a lead in the fight against epidemic TB which he equated to the fight against terrorism as TB is currently the leading infectious killer disease in Kenya.

'The United Nations High Level Meeting on Tuberculosis, which brought together world leaders, policymakers and civil society organizations in September 2018, made it possible for all stakeholders to realize that urgent global action is needed in the face of a global epidemic. In the African Region, tuberculosis is a major development challenge as it causes untold human suffering and threatens to undermine efforts to achieve the 2030 Agenda for Sustainable Development,' said the WHO Country Representative in Kenya.

Therefore, the benefits of international partnerships in TB intervention measures such as funding for prevention, diagnosis, treatment and containment of drug resistant TB cannot be gainsaid.

Carrying out of TB mitigation initiatives require colossal amounts of funds and international development partners help fill in the gaps as they also augment this with requisite technical support.

For instance, in September 2015, Kenya and the Global Fund signed seven grants worth a total of US\$333 million to expand interventions for TB among other diseases. In addition to this investment, the Kenyan government allocated an additional US\$54 million as part of its domestic financing contribution. This equation in funds mobilization clearly indicates that government efforts need to be augmented with those of the international partners.

Even though the government is required to provide for free tests and treatment for TB, patients are still yet to access these benefits fully due to a number of factors, the most notable one being constrained resources. In a way, this is an impediment to the attainment of Universal Health Care (UHC) which has been adopted as one of his excellency President Uhuru Kenyatta's big four agenda.

The UHC commitment aspires that by 2022, all persons in Kenya will be able to use the essential services they need for their health and wellbeing through a single unified benefit package, without

the risk of financial catastrophe. This is a challenge as it is still expensive for TB patients to access quality treatment and care.

Besides, impeding the UHC, this factor also places obstacles in the journey that Kenya is undertaking together with other WHO member states towards eradication of TB by 2030. This is not to say that constrained resources is an insurmountable variable. With a robust international partnership, the obstacle can be triumphed.

Accurate and efficacious diagnostic tests for TB play an important role in the fight to end the disease. In some cases, the prevalence of TB has been exacerbated by ineffective tests. For instance, the first post-independence TB survey conducted in Kenya between 2015 and 2016 indicates that nearly 50% of the TB cases weren't diagnosed.

So if this is the first time such survey was being conducted, it implies that the undertaking is rigorous and expensive, hence the need to bring on board international partners to increase frequency of surveillance for up-to-date data so as to enable accuracy in mitigation measures.

New testing methods for TB such as GeneXpert are available, but their uptake is slow. Thus hindering people from accessing some of the highest standards of Medicare available to them, yet it is their social economic right as espoused by UHC commitment. By initiating programs that attract the support of international partners both the national and the 47 county governments in Kenya will be able to avail quality services to TB patients.

In order to win the war against TB, and build on the achievement that it has made so far, the government of Kenya needs to raise the current level of investment in treatment and care of TB patients.

Additionally, there is an urgent need for the government to coalesce international partnerships that will help reduce the burden of TB treatment on patients. As international collaborations are established within the health stakeholders, efforts should be made to bring on board others from sectors such as urban planning. Congestion in public spaces has been established as one of the factors that increases prevalence of TB, thus we need to plan our public spaces in a way that eliminates this.





## Global Fund Regional TB Laboratory Strengthening Project for ECSA

Delegates from twenty-one countries in the East, Central and Southern Africa – Health Community converged at the Radisson Blu to introduce Global Fund Regional TB Laboratory Strengthening Project to new countries and develop an agreed work plan for the implementing countries. The three (3) day meeting was organized by the Ministry of Health through the Division of National TB Leprosy and Lung Disease Program in collaboration with the East, Central and Southern Africa – Health Community (ECSA-HC).

ECSA-HC in collaboration with the Ministry of Health of Uganda through the Uganda Supranational TB Reference Laboratory (SRL) was awarded a Global Fund grant of USD 4,500,000 to support the Uganda SRL and other countries to improve TB Diagnosis in the ECSA Region from July 2019 to June 2022. This was as a result of the successful implementation of the first phase of the ECSA Regional TB Laboratory strengthening project from November 2015 to June 2019.

The three (3) year Global Fund grant will support National TB Reference Laboratories (NRLs) in twenty-one countries to improve TB diagnosis. These countries include; Kenya, Uganda, Tanzania, Botswana, Burundi, Eritrea, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Sudan, Swaziland, Zambia and Zimbabwe with expansion to Angola, Ethiopia and Liberia in this second phase. ECSA-HC is the Principal Recipient (PR) facilitating and coordinating the project while the Uganda SRL is the Sub-Recipient (SR). ECSA-HC has the responsibility to oversee the implementation of the project by the SR and is also responsible for managing the financial, procurement and monitoring and evaluation aspects of the project.

The project aims to strengthen the inter-state regional network of NRLs for improved TB management in the ECSA region, improve Laboratory service provision for quality assured phenotypic first and second line Drug susceptibility testing accessible to needy people of the ECSA region, enhance the impact of rapid WHO recommended diagnostics in the region as well as consolidate capacity of NRLs to undertake epidemiological/national level- disease monitoring surveys such as DRS and TB disease prevalence.



## DQA: Strengthening systems for better health outcomes

The Division of National Tuberculosis Leprosy and Lung Disease Program (DNTLD-P) undertook Data Quality Assessment (DQA) in 37 Control Zones in 25 selected Counties. The exercise was aimed at ensuring integrity and quality of program data. DNTLD-P experienced data loss and disruption of its electronic reporting system (TIBU) which affected routine program work for weeks towards the end of 2018. The program managed to restore the system and recover lost data supported by partners.

DQA is the process of evaluating data in order to determine whether it meets the quality required. It allows the program to rapidly assess the quality of data reported thus supporting data management and reporting systems from facilities, Sub-Counties, Counties and the National grid. The aspects of data quality assessed include accuracy, reliability, completeness and timeliness.

The exercise was supported by TB ARCII activity which is funded by the USAID. The counties sampled include Baringo, Nakuru, Pokot, Turkana, Uasin Gishu, Kiambu, Nyeri, Bungoma, Busia, Kisumu, Siaya, Homa Bay, Mombasa, Lamu, Tana River, Kitui, Machakos, Makueni, Kajiado, Tharaka Nithi, Isiolo, Migori, Bomet and Garissa.

Continued from Pg. 14

a lot of inspiration from Him. He teaches me, He rebukes me, He directs and comforts me. He had it all, yet he gave all his life. He lived like a poor man, yet he is eternally rich. He was identified with the poor and downtrodden and led by example.

## How does your normal routine look like?

My normal routine depends on where I am. If I am in Nairobi where my station is then I have to wake up at 4 am, pray and read my bible for 30-40 minutes. I exercise at the gym from 5.30 am - 6.45 am, be at the office by 7.20 am, pray and attend scheduled and sometimes ad-hoc meetings. I later respond to emails, memos, letters, attend to office visitors and staff issues, and go through scientific journals. I leave the office any time between 5.00 pm and 9.00 pm. The routine might change as the job entails frequent travels out of Nairobi.

## How do you balance work, life, and family?

I stay with my family, my husband and my daughter. My son is in college, he, however, comes back home on Fridays or Saturdays. I can say we are a very tight and united family. We just love each other. We do most of our stuff together. Saturdays when there are no church activities I'm involved in, I stay with family, shop, make my hair and basically rest. On Sundays, we go to church as a family and after lunch rest then later attend bible study group, and visit if scheduled. If not, I watch TV, listen to music and basically rest. I make it a priority to attend all my children's school functions. On some selected weekends I go up country to visit my parents and my parents in law. I come from a big family and I am in constant communication with my siblings though we rarely meet. I'm naturally introverted and I have had my close friends for years and we occasionally meet for a good laugh, lunch, dinners and holidays. I'm also involved in church ministries and of mention are women's ministry and welcome ministry

## What are some of your hobbies?

I love reading. Some years back when I had the time and I wish I could have time, I used to play golf. I read a lot of books and journals. Especially Christian literature and Christian motivational books from authors like TD Jakes, Joyce Meyer and Joel Osteen. I also read most of Jeffrey Archer's books including the Clifton Chronicles.

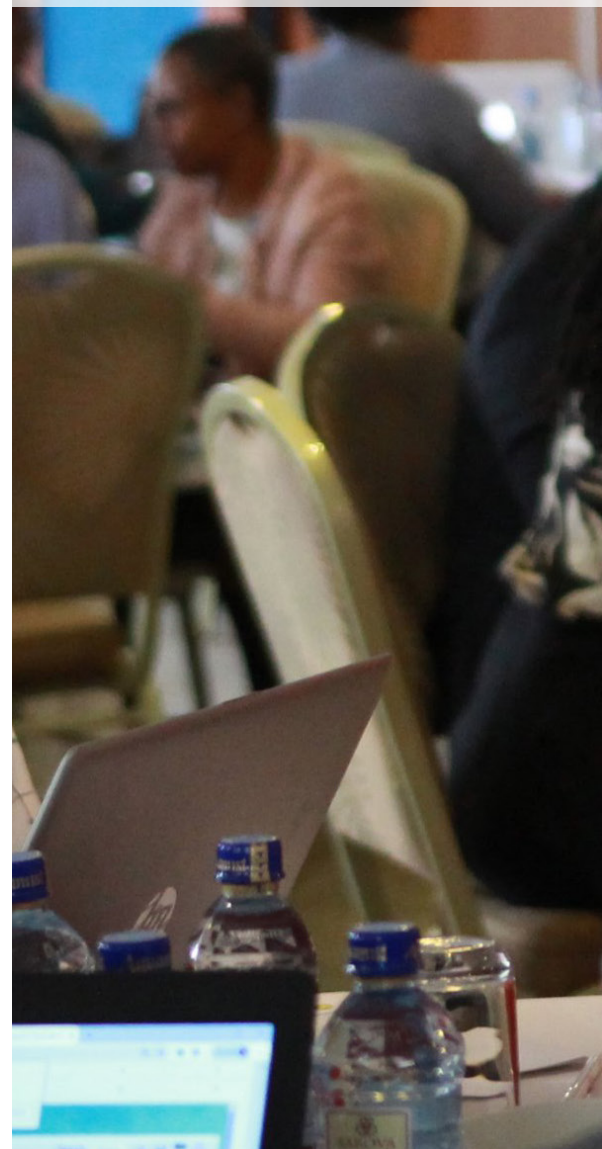
## Where do you see yourself five years from now?

In the bible, we are reminded that in his heart a man plans his course but the Lord determines his steps. This is the mantra that I live by every day and that the Lord will determine my steps. I believe that everyday should make me a better person than I was yesterday so in five years I hope to be a better person than I am today, but let God lead me to where he wants me to be.

## Any advice for the TB coordinators at the National and County level?

I believe that the work that they are doing is great and they have what it takes to succeed. They should believe in themselves, combine with passion and determination and God will reward them in His own way. The driving force should not be, you know, the tangible things that we see, that everyone else expects you to have but let your satisfaction come from within, bestowed by the Almighty. Let us exceed the limitations of our dreams and remember that together we can end TB.

**I believe that the work that they (TB coordinators at the National and County level) are doing is great, but let it be combined with passion and determination, and this will be rewarded in their own way. The driving force should not be, you know, the physical things that we see, that everyone else expects you to have but let your satisfaction come from within.**





# Tuberculosis Quarterly Report - Q3 2019

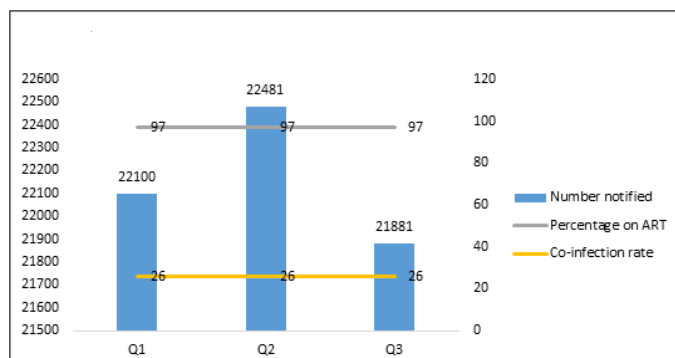


Figure 1: TB Case notification per quarter with HIV co-infection rate and ART uptake

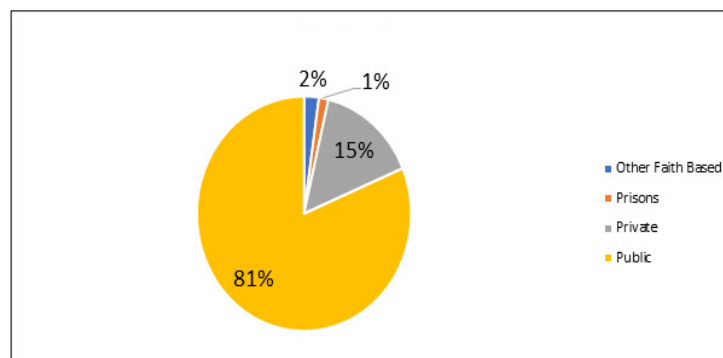


Figure 2: TB case Notification by sector Q3 2019

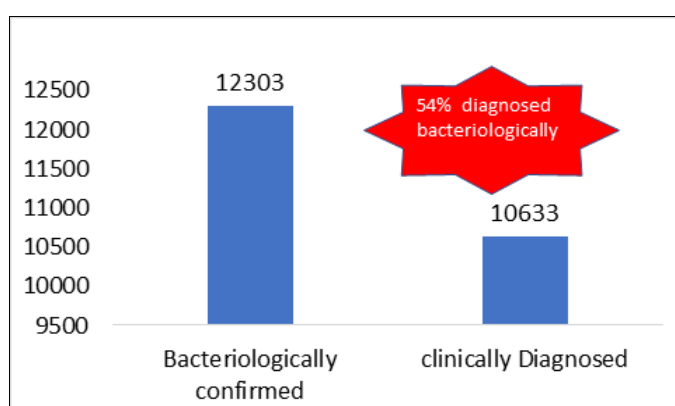


Figure 3: TB Notification by Diagnosis Method

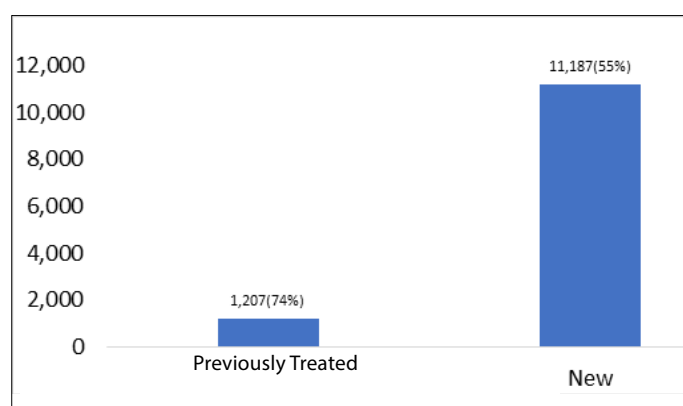


Figure 4: DST by type of patient

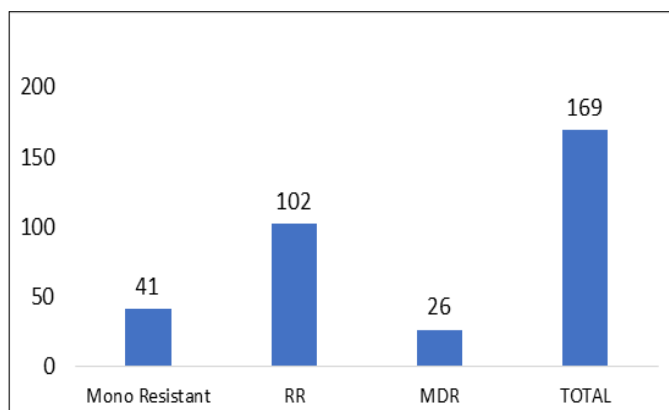


Figure 5: DR TB case Notification Q3 2019 by Resistant Pattern

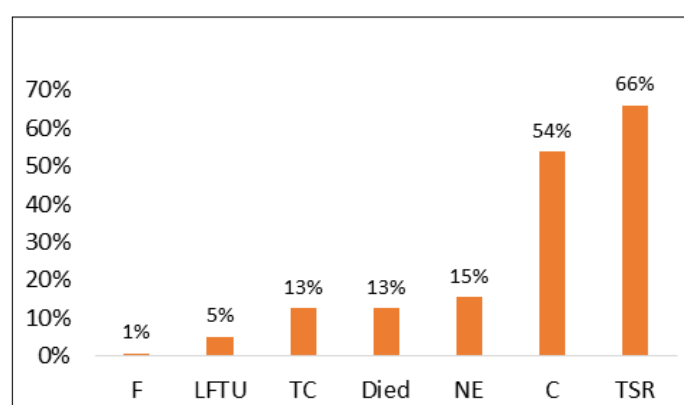


Figure 6: MDR/RR treatment outcomes

## Treatment outcomes 2018 Q3 cohort

Cured	Died	Failure	LTFU	TC	NE
8939	1623	109	1454	11390	1712
35%	6%	0%	6%	45%	7%

## Review of Drug Resistant Tuberculosis Guidelines

The Division of National Tuberculosis Leprosy and Lung Disease and other key stakeholders are developing drug resistance TB (DR TB) guidelines aimed at improving care and treatment for DR TB patients. This follows the new WHO 2019 guidelines for the treatment of DR TB introducing new non-injectable regimens which have less side effects hence much safer and effective compared to the former regimens. The new regimens will avoid TB related deaths, reduce treatment failure and relapses, thus leading to better cure rate.

DR TB is more difficult to treat than drug-susceptible TB and very expensive to patients and the country to manage. Unfortunately, Kenya has recorded an increase in DR TB cases thus threatening national and global progress towards eliminating TB by 2030.

The review of the DR TB guidelines has been informed by scientific evidence. Other key areas of focus include the review of the standard operating procedures and job aids for health care workers. In addition, recording and reporting tools as well as DR TB information packages for patients and the general public will be updated.

The process is being supported by the Clinton Health Access Initiative and other experts from the TB Program, NASCOP, KEMRI, NTRL, County Governments, Centre for Health Solutions – Kenya (USAID - TB ARC II), Stop TB Partnership - Kenya, CDC, AMPATH, former DR-TB patients and TB patient advocates.



Dr. Wachira (TB ARC II) engaging the community engagement and advocacy team



Dr. Irundgu (DNTLD-P) making a presentation

## Technical Assistance towards finding missing cases

The Division of National Tuberculosis Leprosy and Lung Disease (DNTLD) provided technical assistance to nine Sub-Counties in Nairobi. The one-week exercise saw a team of experts from DNTLD, TB ARC II and other partners engage Sub-County TB coordinators and managers in a number of selected health facilities in Nairobi County. The Sub-Counties included Starehe, Kasarani, Langata, Westlands, Makadara, Embakasi, Kamakunji, Roysambu, and Dagoreti.

According Dr Elizabeth Onyango, Head of the DNTLD, health care workers play a critical role in improving access and quality of health care for Kenyans.

“Health care workers are key in preventing and fighting TB and providing essential services to TB patients, their contacts and communities. The technical assistance is good for on job training,” Dr Onyango said.

She was part of the team that visited the Chandaria Health Centre in Dagoreti Sub-County.

The exercise was aimed at sharing expertise, information, transfer working knowledge with the Sub-County teams, identifying gaps in TB management in the county and build the capacity of the health facilities visited so as to improve on finding missing people with TB and identify ways of providing quality care for TB patients.



Dr. Macharia conducting on job training during the TA



National Tuberculosis Reference Lab specialists engaging lab technologists at Coptic Hospital, Ngong Road.

**The editor welcomes articles from readers and other stakeholders**





DNTLD-P and TB ARC II team handing over medical equipment to Kenyatta National Hospital

## Equipping Health Facilities

The Division of National Tuberculosis Leprosy and Lung Disease has handed over medical equipment to Kenyatta National Hospital (KNH) during a Technical Assistance debriefing meeting.

The pieces of equipment which were bought under the current Global Fund TB programming support include an Electrocardiography (ECG) Machine, Audiometer, Beam Balance for paediatrics and a length-board.

During the handing over which took place on 5<sup>th</sup> September 2019, Dr Paul Ekwom Etau, Director of Medical Services at KNH, thanked the TB Program, partners and the TA team for supporting the hospital. He further called for regular TAs that will be helpful in finding missing people with TB and provide better quality care for TB patients.

"It is important that you came today. We will critically look at the gaps identified and the issues raised by the program," Dr Etau said.

According to Dr Brenda Mungai, Chief of Party, Center for Health Solutions, TB remains a disease of major national and global public health concern in spite of the efforts in place to combat it.

"The equipment handed over today will significantly strengthen the fight against TB in Nairobi County," Dr Brenda said.

Dr Brenda also called for the sensitization and screening of all health care workers at the KNH on a regular basis.

The TB program, TB ARC II and other partners conducted technical assistance in nine selected Sub-Counties in Nairobi County. The exercise was aimed at sharing expertise with the sub-county teams, to identify gaps in TB management in the county and build the capacity of the health facilities visited.



Kapsabet County Referral Hospital officials receiving medical equipment from DNTD-P team.

## Kapsabet County Referral Hospital Receives Specialized Medical Equipment

Patients at Kapsabet County Referral Hospital will now have access to more specialized medical services hence reducing medical referrals.

The hospital received an Audiometer, a machine used for evaluating hearing acuity and an Electrocardiogram (ECG) machine used to diagnose abnormalities of the heart, such as heart chamber enlargement and abnormal electrical conduction. The equipment were delivered to the hospital by the County TB Coordinator Sammy Rop.

The Hospital Medical Superintendent, Dr. Daniel Kemboi said the equipment from the National Tuberculosis and Lung Disease Division will transform service delivery at the county's referral hospital.

The County Director of Health Administration, Planning and Operations Dr. Philemon Bureti said that the residents of Nandi can now get quality healthcare services right in Kapsabet without worrying about extra costs of transporting our loved ones out of the County for specialised treatment.

Other equipment received this year from the National Tuberculosis and Lung Disease Division are LED Microscopes distributed to Lolminigai, Kilibwoni, Koyo, Kemeloi, Kapkangani, Setek and Chemelil/PotoPoto health facilities. Mosoriot Sub County Hospital received a GeneXpert machine. Also received were laptops distributed to all Sub-County lab coordinators in Nandi.



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