



TiBa

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KENYA UNVEILS COMPREHENSIVE NATIONAL STRATEGIC PLAN FOR TUBERCULOSIS, LEPROSY, AND LUNG HEALTH 2023/24-2027/28



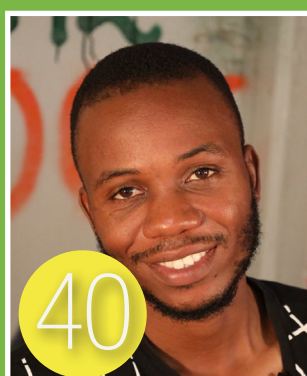
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MINISTRY OF HEALTH



WORLD TB DAY

MARCH 24, 2024



YES!

WE CAN



End TB in Kenya

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Word from the Principal Secretary

A Year of Progress and Commitment in the Introducing New Tools Project

In this edition, we reflect on the progress and accomplishments realized through our collective efforts in the Introducing New Tools Project (iNTP) since its introduction.

Since its inception on July 7, 2022, iNTP has been a collaborative endeavor that brought together the Ministry of Health through the National TB Program, the United States Agency for International Development (USAID), and implementing partners through Centre for Health Solutions – Kenya (CHS) and Infectious Disease Detection and Surveillance (IDDS). This collaboration has fortified TB care in Kenya and propelled us closer to our shared vision of Ending TB by 2030.

As we celebrate the past achievements, the impact of iNTP is distinctive. The adoption of advanced diagnostics, treatments, and digital health technologies and interventions has not only advanced our targets for detecting and treating TB as a country, but has also aligned seamlessly with our commitments from the 2018 United Nations General Assembly.

The successful rollout of iNTP, made possible through USAID funding and implemented by CHS through projects like Ezesha_99DOTs, Tibulims, and Diagnostics in collaboration with the National Program, signifies our commitment to scaling up programmatic efforts. I am delighted that we have introduced cutting-edge TB screening, diagnostic equipment, preventive and treatment therapies, and patient-centered monitoring aids across health centers in 33 counties.

Notable achievements include the implementation of the 3RH regimen, benefiting over 13,000 individuals for TB preventative therapy, the deployment of portable digital chest X-ray equipment with software aiding TB detection, and the adoption of IGRA machines to enhance TB infection detection. The integration of digital adherence technology, such as the use of medication sleeves for 5,000 TB patients, and the introduction of the TIBULIMS connectivity solution for TB diagnostic equipment, represent pivotal steps in our journey towards optimizing TB prevention efforts.



My sincere appreciation goes out to our invaluable development partners, especially USAID for their unwavering support throughout this transformative journey. The dedication of our healthcare workers, the success of capacity building initiatives, and our focus on patient screening and prevention have jointly elevated the quality of TB care provided.

Going forward, sustained capacity building of healthcare workers and continued efforts in Active Case Finding through screening and prevention remain essential. These endeavors will not only sustain the achieved quality of care but also further optimize our gains in the realm of TB prevention and management.

I am glad that Kenya, one of the 11 countries recognized globally for iNTP, is poised to fulfill the World Health Organization's goal of eradicating TB by 2030. The unwavering political will and support demonstrated by our leaders and communities underscore our commitment to this noble cause.

I commend everyone involved in the successful implementation of iNTP. Let us keep the fire burning and continue this collaborative journey, leveraging innovation, and displaying unwavering dedication as we work towards realizing a TB-free Kenya.

A handwritten signature in blue ink, which appears to read 'Mary Muthoni Muriuki'. The signature is fluid and cursive, enclosed within a light blue oval outline.

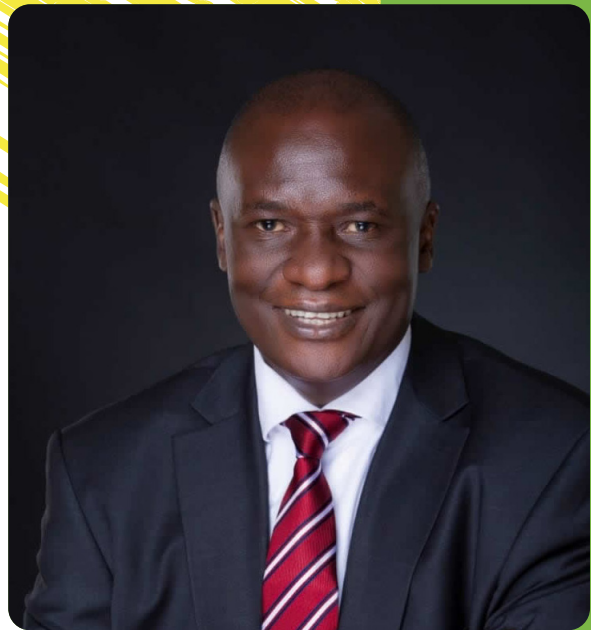
Mary Muthoni Muriuki, CBS

Principal Secretary

State Department for Public Health and Professional Standards,

Ministry of Health

Word from the Ag. Director General



In the latest edition of TiBa, our official newsletter for the Division of National Tuberculosis Leprosy and Lung Disease Program, we delve into narratives of finding the missing pieces in our fight against TB in the country. I'm thrilled to share the highlights of the 13th edition, which places a spotlight on our mission to locate those with TB, enhance diagnosis and ensure comprehensive treatment for all TB clients.

Our mission is a puzzle with missing pieces. Each piece represents a life affected by TB, and our biggest task is to find every missing piece. This edition underscores the urgency of this mission.

The stories echo the Ministry of Health's commitment to seeking out every individual with TB and leave no one behind. From bustling urban centers to communities in villages, the Ministry is mobilizing resources and strengthening its strategies to reach every corner of the country, emphasizing that no one should slip through the cracks of our healthcare system.

Improving TB diagnosis takes center stage in this edition. We explore some innovative approaches, cutting-edge technologies, multi-sectoral engagement and community involvement in streamlining and enhancing our diagnostic capabilities. Early and accurate diagnosis is not just a goal; it is a promise the National TB Program and supporting partners are determined to fulfill.

It is also our duty to treat all our TB clients. We share heartening stories of individuals who have triumphed over TB, illustrating the transformative power of comprehensive and compassionate care. Every person, irrespective of their background or circumstances, deserves access to effective treatment, and the Ministry of Health is unwavering in making Universal Health Coverage a reality.

The 13th TiBa newsletter is call to action for all of us, a call to compassion, and a call to ensure that no one remains invisible in the fight against TB. Let's find the missing pieces, improve diagnosis, and treat all with the care and dignity they deserve.

Together, we can and we will complete the puzzle and move closer to a TB-free Kenya.

Dr. Patrick Amoth, EBS

Ag. Director General for Health

Ministry of Health

Word from the Head of Division of National Tuberculosis Leprosy and Lung Disease Program



Tuberculosis (TB), an age-old adversary, continues to persist as a global health challenge. It stands as the second leading cause of death by a single infectious agent, casting its long shadow of illness and suffering across the world. In 2022, a staggering 10.6 million people fell victim to TB globally, resulting in 1.3 million untimely deaths. These statistics are more than mere numbers; they reflect the urgent need for collective action to combat this relentless foe.

As a nation, Kenya has shouldered its share of the burden of this ancient disease. The quest for control and eventual eradication of TB is not merely an aspiration; it is a fervent commitment. Our journey has been marked by both achievements and challenges, but each step forward is a testament to our unwavering dedication.

In 2022, drug-susceptible TB (DSTB) cases surged by 16.7% compared to the previous year. This surge was the result of our intensified efforts in actively seeking out TB cases through the Active Case Finding (ACF) strategy. The Ministry of Health, through the National TB Program, ventured into health facilities and communities, bringing TB out of the shadows.

Our approach extends beyond traditional strategies as we embrace innovation, including AI-enabled digital chest X-rays and WHO-recommended rapid molecular diagnostic platforms. These innovations have allowed us to confront the challenge head-on, yet we still fell short of identifying all the estimated incident cases. At least 30% of those afflicted with TB were either missed or not notified, serving as a stark reminder that our battle is far from over.

Our commitment to ensuring optimal HIV and TB treatment

regimens remains unwavering. The intersection of these two diseases is of critical concern in Kenya, with HIV-associated-TB case detection estimated at 50% in the last year. It's a challenging journey for those carrying the dual burden of HIV and TB, as evidenced by the stark contrast in TB case fatality rates: 11% for PLHIV compared to 5% for those without HIV.

Drug-resistant TB (DRTB) remains a formidable foe. Our efforts in DRTB management have been directed towards high-risk groups, particularly those previously treated for TB. Our goal is to streamline Adverse Drug Reaction (ADR) reporting and improve DRTB case notification among children through concerted efforts.

While our interventions have led to an 86% Treatment Success Rate (TSR) for all forms of TB in the 2021 cohort, disparities emerge when viewed through the lens of HIV status. HIV-coinfected DRTB patients faced a lower TSR of 71%, contrasting with the 87% TSR for HIV-negative patients. It serves as a stark reminder that our battle must be multifaceted, addressing the unique needs of each patient group.

In our pursuit of TB prevention, we have embraced WHO's recommendations, targeting populations at risk, including people living with HIV, household contacts of pulmonary TB patients, and other vulnerable groups. Our reach expanded as we reported 20% coverage for index TB patients, whose contacts were screened for TB, marking significant progress in our quest to find and treat missing TB cases.

In 2022, leprosy cases posed a new challenge. While the number of notified cases increased by 6%, the number of counties reporting these cases declined. This calls for us to delve deeper into our case-finding initiatives.

Cont'd on pg 7

2022 in summary

Our journey, filled with challenges, has also seen the light of innovation. Quality improvement, emerged as a beacon to address the inefficiency of ACF activities, currently implemented in ten counties. The Kenya Innovation Challenge (KIC) TB Fund, a Global Fund-supported initiative, has emerged as a powerful tool in finding persons with TB.

Public-private collaborations have been pivotal in strengthening our resolve. These collaborations facilitate engagement with the private sector, amplifying our fight against TB. Our approach, outlined in the PPM Action Plan 2021-2023, outlines our goals and objectives to scale up our current PPM initiatives.

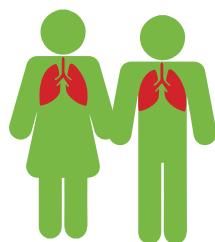
Access to TB diagnostic and screening services saw expansion through strategic placement of diagnostic tools. These tools, including Ultra cartridges, Truenat, Chest X-ray/CAD4TB, Quantiferon tests, LF LAM, and TB-LAMP, formed the cornerstone of our efforts.

Amidst our triumphs, we have not lost sight of advocacy, communication, community engagement and human rights issues inherent in the TB response. As a Program, we strive to implement rights and gender-sensitive policies and interventions. Advocacy efforts have not only brought awareness but also fostered innovation and community engagement.

The fight against TB in Kenya is a story of resilience, progress, and unwavering commitment. We have faced challenges head-on, embraced innovation, and forged partnerships to tackle this persistent foe. While there is still much work to be done, our determination remains unshaken. Together, we strive for a future where TB is no longer a looming threat, but a conquered adversary.

Dr. Immaculate Kathure

Ag. Head, National TB Program



90,560

Drug-sensitive tuberculosis (DSTB) cases, where 8.3% were previously treated



45%

Aged 25 – 44 Years

45% of the cases notified in 2022 were 25 – 44 years.

69%

Males among 25 – 44

Among the 25 – 44 age groups, 69% of the notified cases were males



6,252 Cases

Males 3,266

Females 2,986

0-4

5-14

4,072 Cases

Males 2,046

Females 2,026



13,493 Cases

Males 8,029

Females 5,464

15-24

25-34

20,630 Cases

Males 13,831

Females 6,799



20,538 Cases

Males 14,476

Females 5,882

35-44

45+

25,586 Cases

Males 17,514

Females 8,315



86%

TSR

The country experienced an increase in Treatment success rate from 84% in 2020. Majority of the counties posted an increase in this indicator.

76%

Cure Rate

The country experienced an increase in Cure rate from 71.3% in 2020. Majority of the counties posted an increase in this indicator

6%

Death Rate

The country had a decline in death rate from 7.1%.

5%

LTFU Rate

The country had a decline in Lost to Follow up rate from 5.4% in 2020

3%

Not Evaluated

The country experienced an increase in Not Evaluated rate from 2.2% in 2020

Drug-Resistant Tuberculosis (DR-TB)

11%

Death Rate

The country experienced an increase in death rate from 12% in 2018.

81%

TSR

1%

Not Evaluated

The country experienced a decline in from 3% in 2019

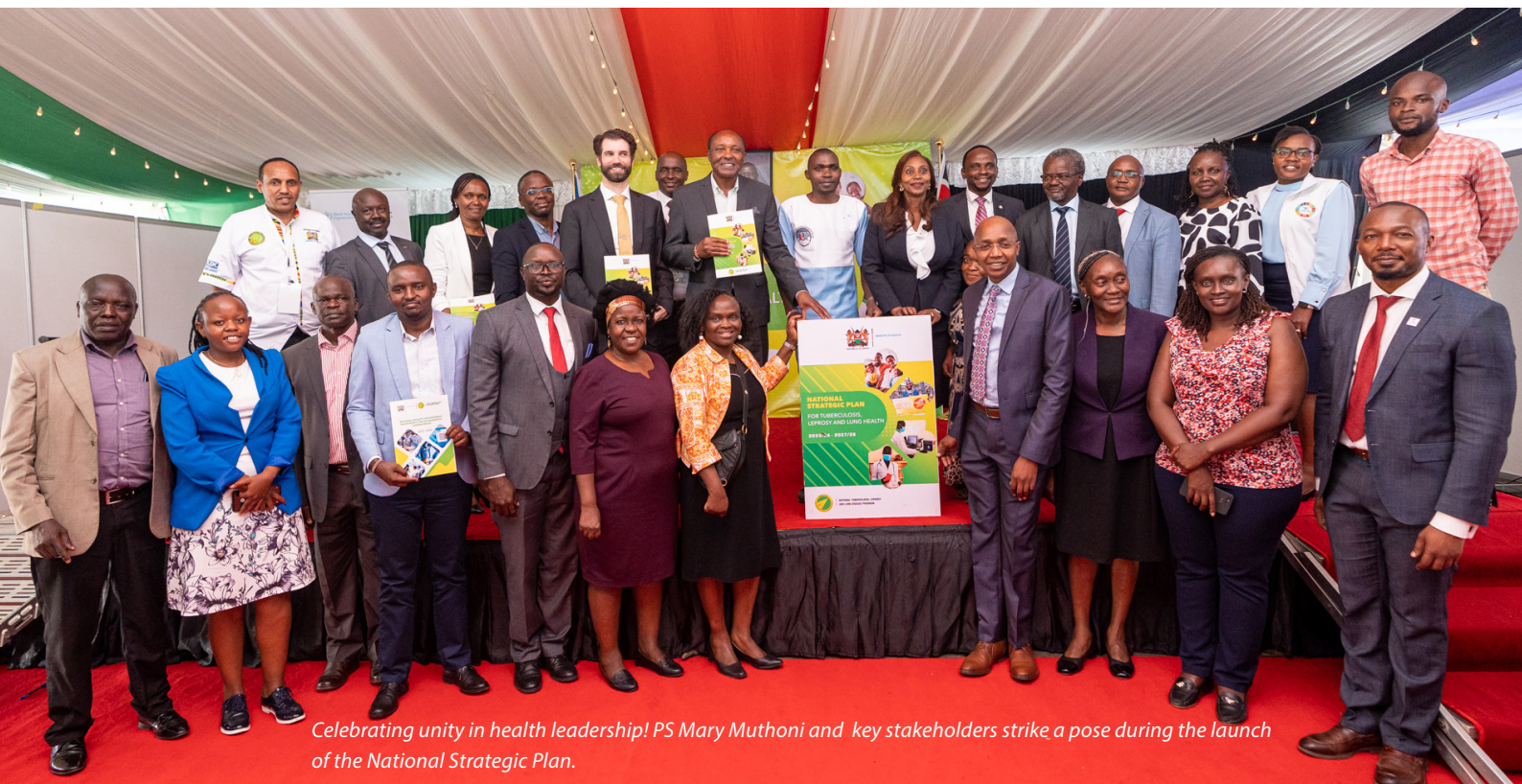
4%

LTFU Rate

The Lost to Follow up rate remained 4% as was reported in 2019.

67%

Cure rate



Celebrating unity in health leadership! PS Mary Muthoni and key stakeholders strike a pose during the launch of the National Strategic Plan.

KENYA UNVEILS COMPREHENSIVE NATIONAL STRATEGIC PLAN FOR TUBERCULOSIS, LEPROSY, AND LUNG HEALTH 2023/24-2027/28

In a significant move to address the rising challenges posed by Tuberculosis (TB) and Leprosy, the Ministry of Health, through the National Tuberculosis Leprosy and Lung Disease Program, has launched the National Strategic Plan (NSP) for Tuberculosis, Leprosy, and Lung Health 2023/24-2027/28.

The NSP, anchored on six key pillars, aims to optimize patient-centric TB interventions, adopt new technologies, leverage universal health coverage (UHC) and community systems, tailor interventions to sub-national epidemics, focus on communities, human rights, and gender, and foster multi-sectoral engagement for effective TB control.

Principal Secretary of the State Department for Public Health and Professional Standards, Mary Muthoni Muriuki, highlighted the NSP's role as a guiding document for TB program managers, partners, stakeholders, and donors.

"The plan provides a clear roadmap towards achieving key strategic objectives and approaches, aligning with the global goal to end TB by 2030," she noted.

Among its priorities, the NSP emphasizes actively screening contacts of TB patients, especially children and individuals living with HIV, and healthcare workers. The plan envisions a substantial increase in TB preventive treatment coverage, from 32 percent in 2021 to 80 percent by 2028, targeting over 681,000 at-risk individuals.

On drug-resistant TB (DR TB), the NSP aims to increase treatment coverage from 63 percent to 80 percent and multi-drug resistance TB case detection rate from 69 percent to 80 percent by 2028. It also calls for strengthening integrated TB/HIV and other co-morbidities services at sub-national levels.

For leprosy interventions, the plan targets a reduction in multibacillary leprosy cases among new cases from 95 percent to below 25 percent by 2028.

Despite a commendable increase in case detection rates, PS Muthoni acknowledged misdiagnosis as a challenge in achieving the TB elimination goal. In 2022, Kenya reported 90,851 TB cases, including 756 drug-resistant cases.

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John Kuehnle, USAID HPN Director, Dr. Abdourahmane Diallo, WHO Country Representative, PS Mary Muthoni, Ministry of Health, Dr Joseph Lenai, Director ; Directorate of Primary Health Care and Dr Immaculate Kathure, Ag. Head of Program; NTP

Dr. Abdourahmane Diallo, WHO Country Representative, commended Kenya's progress, noting a 38 percent reduction in TB incidence and a 54 percent reduction in TB deaths compared to the baseline year of 2015.

The launch also featured the unveiling of advancements in pediatric TB diagnostic algorithms, the pediatric TB shorter-term treatment regimen, the National TB Laboratory Operational Plan, and the National Quality Management Framework for TB diagnostic laboratories.

Speaking during the event, USAID HPN's Director John Kuehnle highlighted the importance of the NSP in eliminating TB, building on improved case detection and treatment outcomes. Stop TB Partnership Kenya representative, Everlyne Kibuchi, praised previous strategic plans for achieving milestones and successful engagement with political leadership.

The NSP, developed through a multisectoral consultative process, aims to build on past achievements, address challenges, and incorporate new developments and evidence to accelerate progress towards ending TB by 2030. It serves as a vital advocacy tool for resource mobilization across sectors, including the private sector, to meet the needs of the people.

The launch underscores the government's commitment to a comprehensive and coordinated response to combat TB and Leprosy in Kenya. The plan incorporates a people-centered approach, emphasizing inclusivity and community involvement in policy design and implementation.

The NSP, developed through a multisectoral consultative process, aims to build on past achievements, address challenges, and incorporate new developments and evidence to accelerate progress towards ending TB by 2030



PS Mary Muthoni, Ministry of Health,



Dr Immaculate Kathure, Ag. Head of Program; NTP



Dr. Abdourahmane Diallo, WHO Country Representative, Kenya, delivers an impactful speech at the National Tuberculosis Strategic Plan launch.



In a powerful moment of solidarity, key stakeholders come together, symbolizing a collective vow to combat TB, etching hope onto the canvas of the future.



USAID Kenya HPN Director John Kuehnle addresses the audience during the launch.



Dr. Abraham Katana, Chief of HIV Care and Treatment for CDC-Kenya, discusses the intersection of HIV and TB in the strategic plan.



PS Mary Muthoni, Dr. Joseph Lenai, and Dr. Immaculate Kathure, stand united with Nairobi's top-performing students, celebrating the intersection of talent and TB awareness at the NSP launch.



Evaline Kibuchi, Chief National Coordinator of Stop TB Partnership Kenya, articulates the partnership's commitment to eradicating TB in Kenya.



Dr. Maurice Maina, TB Lead at USAID Kenya and East Africa, and Dr. Paul Wekesa, CEO of the Centre for Health Solutions-Kenya during the launch of the NSP. In their focused gaze, echoes the commitment to pioneering solutions and steering the course towards a TB-free Kenya





Parklands Arya Girls High School students with placards of call to actions towards the fight against TB during the launch.



From right: Catherine Kithinji, NTLD-P, Dr Lorraine Mugambi Nyaboga, CoP - USAID TB ARC II join hands in reaffirming End TB commitments



Dr. Perez Auma, NTLD-P, County TB Coordinators representatives and a stakeholder joined the end TB affirmation during the launch



Stakeholders raise one finger of affirmation in accelerating their efforts in the fight against TB during NSP launch.



Drusila Nyaboke, NTLD-P and Daniel Ndugire, Stop TB Partnership - Kenya joined by other stakeholders to advocate for TB treatment for a healthy life.



Christine Mwamsidu, AMREF and Josphat Mutua, NTLD-P were not left behind.



Dr Sam Muga, USAID TB ARC II DCoP, hypes up the participants with electrifying exercises.



Benson Ulo, AMREF Kenya voices the need to support those battling TB and end stigma



Janet Mbetera registering the launch participants



Wendy Nkirote and Adano Godana, NTLD-P calling for a collective responsibility in the fight against TB.



All Saints Cathedral Primary School, Moi Forces Primary School, Kamukunji, and Parklands Arya Girls Secondary School teachers reaffirms the schools support in the fight against TB.



Sukari Presbyterian Academy, the national champions of the 2023 Kenya National Music Festival in class 1043H, showcase their performance themed around TB.

Unleashing Vibrant Visions: The Youth Leading the Charge Against TB in Kenya

By Mbetera Felix | NTLD-Kenya

**As young advocates
grow, they become well-
informed and engaged in
advocacy and awareness
campaigns**

In a world filled with rhythm and artistry, where music weaves stories and creativity knows no bounds, the fight against Tuberculosis (TB) finds a new voice – one that's youthful, passionate, and unyielding.

Kenya's younger generation is redefining the narrative of TB, illuminating a path toward a healthier future with their boundless enthusiasm, unwavering determination, and artistic expression.

The stage for this transformative movement was set during the recently concluded Kenya National Music Festival. It was a remarkable campaign, one that sought to raise awareness about TB while harnessing the creative talents of the nation's students in the battle against the disease.

The National TB Program, in collaboration with Amref Health Africa's Global Fund TB Project, orchestrated this

Cont'd on pg 13



Elizabeth Mueni, Nairobi County TB Coordinator, Samson Musau, from Amref Health Africa, and Mutua Josphat from NTP observing as PS. Richard Belio Kipsang, presents an award to Sigalagla Technical Institute for being the top best in the TB-themed category.

initiative, bringing together students and learners from across the country. Prior to the grand competition, over 300 adjudicators were trained in TB awareness in February this year. Music composers joined the effort, crafting an “END TB!” piece for both secondary and higher learning institutions. The result was a mesmerizing fusion of passion and talent, with victorious schools like Sukari Primary School, Bunyore Girls and Mbale Boys High Schools and Sigalagala Technical Institute making history.

According to Musau Samson, Amref Africa School Health focal person, the initiative serves as a dynamic and interactive way to share information about TB with the younger generation. “The learners are more than just participants. They are armed with TB knowledge and are torchbearers of change who go beyond social norms to create ripples of awareness that extend far beyond their immediate circles” he says.

The National TB Program envisions that the youth, recognizing the lingering gaps in TB prevention and control and the stubborn stigma that hinders intervention efforts, will usher in a cultural shift. By equipping them with a comprehensive understanding of TB causes, symptoms, treatment, and prevention, the insights will cascade down to their families, schools, and communities. This will spark



Dr. Richard Belio Kipsang, Principal Secretary of the State Department for Basic Education, Ministry of Education, delivering his opening remarks at the Kenya National Music Festival National Gala at Nakuru High, Nakuru County.

Cont'd on pg 14



Bunyore Girls, securing the second position at the Kenya National Festival with their TB-themed original composition, captivating the audience with their performance.

curiosity and encourage dialogue in communities, helping dispel misconceptions and reinvigorate action with a fresh perspective in the fight against TB.

Moreover, integrating TB-related activities into their artistic endeavours consolidates the power of innovation in shaping TB control programs. These creative young minds, according to Elizabeth Mueni, Nairobi County TB Leprosy and Lung Disease Coordinator, will become catalysts for life-changing solutions in awareness creation and community engagement.

"The festivals demonstrated that health education and culture can seamlessly blend, debunking the notion that health messages must rely solely on conventional means," she opines. "This integration paves the way for collaborative efforts that involve various stakeholders, from healthcare organizations to public health experts and artists, all harmonizing to amplify TB control messages and measures across the country."

Mueni adds that the program will nurture future leaders and TB champions, ensuring sustainability. As the young advocates grow, they will become well-informed and engaged individuals who will play a pivotal role in advocacy and awareness campaigns.

"Our aim is to bring them into the fold early, instill a sense of commitment and ownership in their hearts and leave a lasting impact on policies and initiatives in the TB arena."



Mbale Boys High School showcasing their triumphant performance of the winning TB-themed music set piece for high school students during the gala.



Samson Musau from Amref Health Africa capturing a moment with some of the students who participated in a TB-themed choral performance.

Status of National Tuberculosis Epidemic and Response

Quarter One 2023

Drug susceptible TB



24, 526
Number of TB cases
Notified



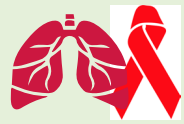
88.7%
Treatment success rate
(All forms- cohort of 2022)



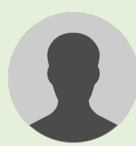
15.8%
Pediatric proportion



63.1%
Previously treated
(DSTB) with DST results



97.4%
Proportion of DSTB with
known HIV status



4.4%
Lost to Follow Up
(cohort of 2022)



94.5%
Proportions on ART

Drug resistant TB

MDR



PDR



RR



**Monoresistant
TB**



Pre XDR



**Grand
Total**



Leprosy

11

Number of Leprosy
Cases reported

TB Prevention Therapy

11, 047

Children <5 initiated
on TPT(contacts
of bacteriologically
confirmed cases



Sun-Baked Ambitions: Transforming TB Fortunes in Turkana



Community members in Turkana County actively participating in TB screening during an outreach event, a dedicated effort to locate and support individuals who may be missing TB services and care

By John Gitau | NTLD-Kenya



Dr Job Okemwa, Turkana County TB, Leprosy and Lung Health Coordinator, providing invaluable technical assistance, ensuring quality support in the ongoing battle against TB.

In the unforgiving terrain of Turkana, where both mental and physical resilience are continuously tested, the relentless winds carry stories of the devastating impact of tuberculosis, threatening the well-being of unsuspecting communities. Amidst poverty and isolation, Turkana's 71,000 square kilometers ranks among the high-burden counties for TB in Kenya. However, against formidable odds, Turkana has risen above the challenges, launching a spirited crusade against the TB epidemic. Dr Okemwa, the County TB Coordinator, reflects on the remarkable progress made in recent years.

"Case notifications have increased from 2,000 in 2018 to 3,062 cases last year alone," he proudly shares.

During his nearly five-year tenure, Dr Okemwa has not only overseen a reduction in the loss to follow-up rates, from 11% to 7%, but also witnessed an increase in cure rates, from 48% to 62%. While celebrating these modest achievements, he is well aware of the substantial efforts required to address the gaps in TB treatment and care. He acknowledges that the vastness of Turkana inspired an integrated approach, highlighting the invaluable interventions made by Imarisha Jamii and World Relief in the referral system.

Cont'd on pg 15

Imarisha Jamii has supported 52 health facilities in sample referral in Turkana, and World Relief has taken charge of all the private facilities in Lodwar. Yet, there remains a significant deficit, with only 82 out of the 278 centers having access to a sample referral system. In the remote corners of the county, the turnaround time for samples is 24 hours for facilities with GeneXpert machines and 72 hours for those without.

With additional support from partners and the government, Okemwa remains confident that a turning point is within reach. He actively participates in advocacy meetings for continuous funding for TB activities. Concurrently, outreach activities in the county have gained momentum, uncovering undiagnosed cases, as explained by Mr. Dennis Erot, an implementing officer for World Relief in the county.

"In a recent outreach conducted in an informal settlement called 'California,' we screened and identified 35 TB cases out of a population of 445 individuals. In April, with support from AMREF and NTP, we found 10 unidentified cases in a local secondary school," he reports.

Dr Okemwa supports this, citing an outreach conducted in March involving seven schools that revealed 27 undiagnosed cases, including one DRTB case that has since been enrolled in treatment.

"I can assure you that we've been identifying at least 20 TB cases in our outreaches. The only challenge is traversing the vast region," he explains.

World Relief has embarked on monthly data collection activities, targeting high-burden villages while engaging Community Health Volunteers (CHVs) to reach these populations. Mr. Erot is vocal about bringing more partners on board to support these outreach activities, emphasizing the appeal of an integrated approach for various components, including malnutrition and immunization. He believes that screening would provide valuable insights, particularly regarding TB diagnosis in children.

World Relief has also extended its TB activities to prison networks, including Lodwar GK Prison, which currently houses 760 inmates. They have trained four inmates to conduct TB surveillance and refer any inmate showing symptoms to the facility's clinician. In an effort to combat TB-related stigma, they have organized radio talk shows on both local and vernacular stations, featuring clinicians who deliver TB messages to dispel misconceptions.

At health facilities, particularly AIC Kalokol, Clinical Officer Dennis Otieno is enthusiastic about launching Active Case Finding (ACF) and proudly reports a daily average of four new TB cases diagnosed at the facility. He aspires for this initiative to lead to the tracking of persons missing TB services and the discovery of new ones.

"Our target is to ultimately have 15% to 20% of respiratory tract infections going into our TB presumptive registers for testing," he adds.

To enhance these efforts, he calls for refresher trainings to build staff capacity and address potential gaps in ACF training. Dr Okemwa believes that renewed training activities, in addition to mentorships and on-the-job training provided by the County and Sub-County Coordinators, would be highly beneficial. They have also engaged in virtual meetings every other week to bridge any training gaps. Ms. Lorna Ooro, a clinician from St. Patrick's Dispensary in Turkana Central, highlights the weekly visits by mentors from the county to supervise and impart new information. She notes that in their first Quality Improvement (QI) Project for ACF, their initial goal of increasing the screening of presumptive cases from 2.9% to 15% has already reached 11%. The progress, while steady, has been productive.

Malnutrition remains a critical challenge, with patients often defaulting on treatment due to hunger and starvation. This reflects a significant challenge in Kenya's fight against TB.

"According to data from 2022, 87% of our TB clients in the county are suffering from malnutrition. 51% are acutely malnourished, while 36% have moderate malnutrition," Okemwa emphasizes.

Mr. Otieno mentions that several patients have been placed under nutritional assessment, and eligible individuals are enrolled in the nutritional program to mitigate this burden. However, resources to sustain this program have been limited.

Despite the hurdles, Turkana continues to make significant strides in eliminating TB, particularly with the "Kimormor - One Health" approach. By partnering with the Department of Veterinary Services, they have deployed healthcare workers to provide TB services, including screening, to pastoralists seeking cattle vaccination at designated locations. Dr Okemwa is optimistic that this project will lead to the identification of even more TB cases.

As we reflect on the current efforts, it is crucial to recognize the progress made by the team and its partners in working toward a TB-free future. With ongoing vigilance, research, and concerted efforts, the lessons drawn from Turkana will undoubtedly contribute to enhancing TB interventions in the county.

Okemwa proclaims, "Partners should not abandon initiatives or plans to support TB and other health-related interventions in the county due to operational costs. Let them join us and shift their focus to change the implementation approach and strategy for TB programming. We will triumph! We are on a solid path to achieving our TB objectives."

"According to data from 2022, 87% of our TB clients in the county are suffering from malnutrition. 51% are acutely malnourished, while 36% have moderate malnutrition"

Nicholas Wambugu: Triumph Over Tuberculosis

By John Gitau and Mbetera Felix | DNTLD-P

In the bustling neighbourhood of Soweto, located in Kahawa West, Kenya, 30-year-old Nicholas Wambugu's story unfolds - a tale of resilience in the face of a daunting health challenge. At first glance, Nicholas appears vibrant, yet the scars on his hands and feet reveal a silent battle he's been fighting for years.

Nicholas was diagnosed with a form of tuberculosis known as Extra Pulmonary TB (EPTB), and in his case, it had manifested as Skin TB. EPTB is a rare condition where tuberculosis affects organs other than the lungs. Skin TB, even rarer, had taken its toll on Nicholas, leaving him with skin lesions that marked the surface of his journey to recovery.

Peninah Makena, Roysambu Sub County TB and Leprosy Coordinator, recalls how Nicholas's case was unlike any they had seen at Kahawa West Health Centre. EPTB, being difficult to diagnose, often requires invasive procedures. It was sheer luck that they detected it.

For Nicholas, life had taken unexpected turns. Orphaned at a young age, he found solace in alcohol, a common escape for many in Soweto. It was amidst his struggles with alcoholism that the first signs of TB appeared. Mild coughing episodes crept into his life, but he brushed them aside, more focused on his battles with addiction.

Eventually, Nicholas decided to seek medical help at Kahawa West Health Center, and that's when he tested positive for TB. He embarked on treatment journey, but his fragile grip on recovery slipped during what seemed like a harmless house party. One drink turned into many, leading to ten months of defaulting on his TB treatment. He ran away from home to live with a friend in Ngong'. He could not stomach the pressure from his sister to seek medical help.

The grip of alcoholism had weakened his resolve to stay on track. His eating habits suffered. He subsisted primarily on water and milk, further deteriorating his health. Nicholas's journey hit its lowest point when he collapsed while waiting for medical attention at the hospital, a stark reminder of how TB and addiction were tearing his life apart. His situation got dire, compelling him to return home.

His family and friends, including his devoted sister, watched helplessly as Nicholas's health deteriorated. The emotional and financial strain was immense, but Nicholas remained defiant in the face of pleas to continue treatment.

As fate would have it, Nicholas made his way back to the Health Center, driven by a troubling set of symptoms that had become an unwelcome companion in his life; coughing that refused to relent, unexplained weight loss, relentless night sweats that drenched his sleep, and persistent chest



Peninah Makena, Roysambu Sub County TB and Leprosy Coordinator and Nicholas during the interview

pains. But there was more to this complex narrative. Nicholas, also bore the burden of multiple skin lesions. Yet, a cruel twist of fate awaited him at the facility – a shortage of cartridges for the vital GeneXpert test. In the face of this challenging predicament, Makena, the SCTLC, took matters into her capable hands. Without hesitation, she initiated Nicholas onto the TB treatment regimen, an act of hope in the midst of uncertainty. Two weeks later, when the results finally arrived, they unveiled the truth they had anticipated – a positive confirmation of TB.

The following six weeks witnessed significant progress. Nicholas's weight increased from a mere 45 to 52 kilograms, and the night sweats subsided. A new lease of life awaited him as he turned his back on alcohol, committing to his treatment and healing journey.

"Without my doctor's persistence, I would not be alive today!!!" he exclaims while heaping praise on his doctor.

"Look at my hands and feet! A testament to why I cannot veer into the destructive path I once followed. TB is curable. Stick to treatment and you'll get back to leading a normal healthy life." He proclaims.

Nicholas has become an advocate for his own health and is determined to help others on similar paths. He encourages patients to accept their diagnosis, adhere to treatment, and follow their clinicians' guidance. His sister is now part of his journey, attending regular check-ups to prevent further spread and ensure proper ventilation at home.

Nicholas's story highlights the importance of early diagnosis and adherence to TB treatment. It also underscores the critical role healthcare professionals play in identifying and treating rare forms of TB like Skin TB. Nicholas's resilience serves as an inspiration, proving that TB is curable, and with the right treatment and determination, individuals can regain their health and lead normal, fulfilling lives.



By James Marcomic
DNTLD-P

Linking Drug-Resistant Tuberculosis Surveillance Data to Public Health Action

The National TB program has been leading the way in advocating for the utilization of data and its application in the pursuit of establishing policy guidelines and direction. This is the gist and mantra for Data Demand and Information Use (DDIU), which strives to discern prospects and limitations in facilitating efficient and strategic data gathering, analysis, accessibility, and utilization; this approach initiates with an evaluation aimed at aiding stakeholders, policymakers, and monitoring and evaluation (M&E) experts in pinpointing avenues for intervention in Data Collection, Analysis, Availability, and Usage. Once particular requirements are pinpointed, the core tools of DDIU can be employed to invigorate the demand for data and bolster capacity development, thereby fostering decision-making based on evidence.

In this regard, the program has consistently taken up this challenge to ensure every decision, innovation and intervention is anchored in this phenomenon. Deliberate efforts have been imbued to the data management system spanning from the community to the national and, by extension, to the international level. This is to bolster and ignite data utilization at the facility and national level to manage patients and make sagacious decisions geared toward the invigoration of the programmatic management of the patients. Albeit there are opportunities for improvement at the facility, county and national regarding honing the health care workers in data utilization and commodity security, the program has endeavoured to conduct data for decision-making (D4D) workshops to apprise and edify the HCWs skills in data-related matters.

Therefore, this article will try to unmask meticulously how the program has eruditely linked Tuberculosis surveillance data to public health action that has seen exponential programmatic shifts in patient management.

Methodically, data was abstracted from the TIBU system (an electronic web-based system which anchors nationwide data), policies, guidelines, jobs aids and standard operating procedures from the National TB, leprosy, and Lung Diseases Program (NTLDP) website, data performance reviews, newsletters, data quality audit reports and annual reports using data abstraction form containing the following variables: Policies and guidelines developed, tracking of trends and patterns, data used for a national strategic plan development, cure rate, treatment success rate, loss to follow up and death rate.

The Program has a robust DRTB surveillance data collection system which has enabled the development of policies and programmatic management of drug-resistant TB guidelines, tracking DRTB trends and patterns to detect, investigate and respond to outbreaks. Equally, developing the National Strategic Plan on TB, Leprosy and Lung Health, 2023 - 2028, identifying the DRTB 'hot spots' to allocate resources, targeted healthcare training, risk communication, community engagement, screening, and tailored patient management.

The success of resource mobilization efforts is evident in the notable reduction of catastrophic costs, the implementation of personalized drug regimens, the introduction of innovative projects (introducing new tools project), spatial analysis for equipment placement, and adherence to drugs; 95% for all DR TB patients recruited and treatment success rates of 90%. These initiatives have significantly impacted public health outcomes. Notably, the program has witnessed an increase in the DRTB cure rate, rising from 56% in 2019 to 67% in 2022.

Additionally, there has been an improvement in the treatment success rate, which has increased from 77% in 2019 to 81% in 2021. Moreover, the program has effectively reduced the mortality rate from 13% in 2019 to 11% in 2022, along with a decrease in the rate of patients lost to follow-up, which has reduced from 5% to 4%.

In conclusion, DRTB Surveillance data has changed the DRTB landscape through policy formulation, evidence-based guideline development, hotspot identification, new diagnostic and treatment monitoring tools, and individualized regimen formulation. Robust data collection systems and intervention measures for patients and healthcare workers could improve DRTB patient management and outcomes.

Expanding the Use of Digital X-Ray Machines in Diagnosis of TB at Community Outreaches to Increase TB Notifications



By Onesmus Muema, Project Officer Communities Health Africa Trust (CHAT), a sub-recipient for Global Fund TB through PR2 Amref Kenya.

Background

The diagnosis of TB and other lung-related diseases has been made easy through the use of improved technology. For the last two decades, health care workers, both at the public and private facilities have been waiting for patients to visit the facilities for services. This gives substantial results to diagnosis of TB. However, there is quite a high number of TB cases at the community level that are not diagnosed and thus high chances of transmission. Again, community members have different medical conditions which they are not sure of the root cause either due to ignorance, poverty or long distances to the nearest facilities. Majority of the cases go unnoticed for a long period sometimes leading to complications or demise of a client.

TB Diagnosis

There are different methods used in diagnosis of TB and other lung diseases. Use of microscopy at the lab level, clinical diagnosis and use of x-ray machines. To increase TB notification both at the facility and community level, there is need to consider the use of portable digital x-ray machines in each county. The use of digital X-ray machines in the

diagnosis of tuberculosis (TB) during outreach programs can significantly enhance the efficiency and effectiveness of TB screening and detection. The government should invest more in digital portable X-rays. Here's how digital X-ray machines can be utilized in TB diagnosis during outreaches:

- **Portability and Ease of Use:** Digital X-ray machines designed for mobile or portable use can be easily transported to outreach locations, such as remote areas or underserved communities. These machines are compact, lightweight, and require minimal setup, making them ideal for on-site TB screening.
- **Rapid Imaging and Results:** Digital X-ray machines offer quick and real-time imaging capabilities. They produce high-resolution images that can be immediately reviewed by medical professionals, enabling prompt diagnosis during outreach programs. This speed can be crucial for identifying TB cases and initiating timely treatment.
- **Image Storage and Transmission:** Digital X-ray machines store images electronically, eliminating

the need for physical films. The digital images can be securely stored, archived, and easily transmitted to remote diagnostic centres or expert radiologists for further analysis, consultation, or second opinions. This feature is particularly valuable during outreach efforts where access to specialized healthcare professionals may be limited.

Where is the Gap

There are few portable X-ray machines in Kenya that are used in outreaches across the country. For a country to benefit from the machine, there is a long process of requesting for the services from the national government where it has to be confirmed its availability. At times, due to commitments in other counties, there is a delay in provision of services for the targeted area. Movement of the X-ray machine across counties might lead to delays and thus continued spread of TB at the community level.

Justification

By leveraging the advantages of digital X-ray machines, TB diagnosis during outreaches can be expedited, accurate, and seamlessly connected to the wider healthcare system, contributing to early detection, improved patient care, and effective TB control efforts. The national government through the outreach department, have been conducting outreaches in the hard-to-reach areas and vulnerable communities in partnership with county governments. This has proved to yield for every outreach conducted.

To give a case study, in the month of August 2023, the National TB Program in partnership with Laikipia County Government-MOH, CHAT(Communities Health Africa Trust-CBO, SR of GTB)and community mobilizers conducted outreach in Laikipia county -Laikipia West sub-county targeting four vulnerable communities; Kinamba Sosian, Island(Container), Location Slum and Mwazi Flower farm.

For the four days the team was able to screen 614 clients and out of that number 48 clients, were diagnosed with TB through digital x-ray film presentation and bacteriologically confirmed.

Location	Target population	Total number Screened		Total number of Sputum collected		Total No. of Bacteriologically confirmed		Total # Bac+ initiated on treatment		Total number (Bac+ & Xray) started on treatment	
		M	F	M	F	M	F	M	F	M	F
SOSSIAN	4,000	50	55	10	9	1	0	1	0	3	4
ISLAND	3,309	35	75	11	12	0	2	0	2	6	11
RUMURUTI	33,420	78	37	11	8	0	1	0	1	6	6
MWANZI	600	104	180	20	11	0	0	0	0	8	4

Majority of the cases go unnoticed for a long period sometimes leading to complicated conditions or demise of a client.



A client receiving chest x-ray services during a community outreach



Clients waiting to receive services during the outreach at Mwazi farm in Rumuruti.

PQE APPROACH TO FIND THE MISSING PEOPLE WITH TB IN HOMA-BAY COUNTY

IMPACT OF FACILITY-BASED PROGRAM QUALITY AND EFFICIENCY IN ACTIVE TB CASE FINDING

By Caroli Migwambo,
CTLC Homabay County



Strength and Resilience: Ian, a High School Student at Homa Bay County PQE Performance review and peer learning session for pilot facilities.

TB Program has been implementing Facility based active case-finding strategy to accelerate case detection efforts and identify all the missing people with TB disease. Subsequently, key lessons were learnt during implementation and the program premised on them to incorporate the quality improvement concept. NTLD-P developed Program Quality and Efficiency (PQE) implementation handbook and quality improvement framework that guided the counties in this new approach.

The PQE pilot began in mid-2022 where pilot facilities did data abstraction and analysed their performance across the ACF care cascade. This new approach enabled the facility quality improvement teams (QITs) to narrow down to a particular problem affecting their case finding, root causes and change ideas that improved their performance in TB case identification.

Homa-Bay County is one of the ten counties that have piloted PQE strategy to address the gaps encountered in

TB case finding in the health facilities. Capacity building was done to county TOTs, mentors and coaches to support the PQE implementation. The pilot phase focused on 25 high-volume facilities where 125 healthcare workers were trained to spearhead the implementation of this strategy.

In order to sustain the intervention of PQE, the National Government County Government of Homa Bay together with implementing partners are supporting regular facility-based PQE performance review meetings, mentorship, and coaching sessions. The NTLD-P has also conducted integrated technical assistance to strengthen skills transfer and progressive implementation of the PQE strategy.

The implementation of the PQE strategy in Homa Bay County has resulted in improved TB case detection during the first half-year implementation in 2023 by 26% compared to the same period last year. It is therefore evident that PQE is an effective strategy in quality improvement practice and should be

sustained in TB programming.

During a recent county best practice conference in Homa Bay, one PQE facility, Asumbi Mission Hospital, presented a poster abstract that emerged the best item in a very competitive ranking. This underscored the vital role that PQE plays in turning around TB program indicators.



Homabay Team celebrating best performance in PQE



National Team offering Technical Assistance and PQE mentorship in Homabay County



Improving TB Screening Rate through PQE Approach; A Case of Asumbi Mission Hospital, Rangwe Sub-County, Homabay County



Authors: Chacha F¹, Omunyollo A¹,
Co-Authors: Kisukwa C², Migwambo C², Muiruri Z³,
Affiliation: Asumbi Mission Hospital¹, MOH Homabay county², Komesha TB Program³

Problem statement/ Background

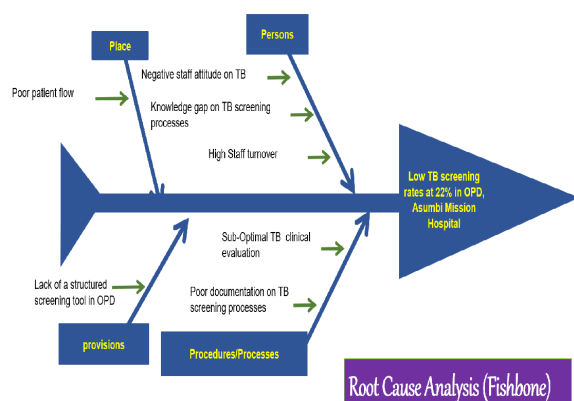
- The WHO recommends TB screening for all clients (100%) visiting health facilities.
- Discrepancies exist between TB screening rates in the source registers (MOH 204A&B) and DHIS data (from MOH Registers 705A&B). Notably, Asumbi Mission Hospital's OPD department documented a low 22% TB screening rate from July to September 2022

Project Objective

- To increase the TB screening rate from 22% to 90% in Asumbi Mission Hospital Outpatient Department from October to December 2022

Methodology

- Data abstraction done by the PQE team comparing TB screening status in MOH 204A&B, MOH705A&B, and the patient encounter forms (OPD card)
- RCA conducted using Brainstorming & Fish Bone analysis
- Change Ideas generated and prioritized using the decision matrix
- Project executed using the PDSA model and monitored using a run chart for 12 weeks

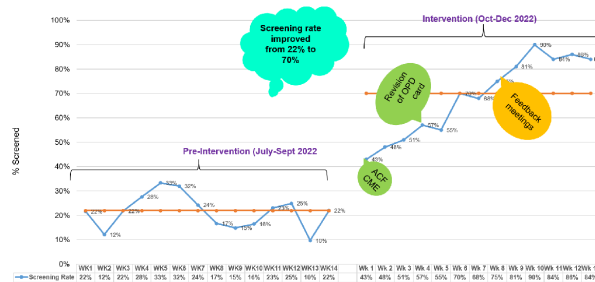


Change Ideas Tested

- Monthly CMEs on TB ACF
- Redesigning of the OPD card to enable clinicians to document the findings of the TB clinical evaluation outcomes
- Tracking of the number of patients going through the TB screening
- Monthly TB screening and clinical evaluation feedback meetings with the relevant teams

Results

Screening Rates (Before and During PQE intervention period)



ACF Performance			
	Baseline	PQE Project	Change
Workload	4424	4346	
Screening	3757 (85%)	3868 (89%)	+5%
RTIs	294	325	
Presumptives	77 (26%)	132 (41%)	+15%
Investigated	77 (100%)	111 (84%)	-16%
Bact Confirmed	1 (11%)	2 (17%)	+6%
Clinical Dx	8 (89%)	10 (83%)	-6%
Total Identified TB cases	9	12	
Linked to treatment	9 (100%)	12 (100%)	

Conclusion and recommendations

- Guided documentation on TB clinical evaluation outcomes is a good initiative towards improving TB screening
- Data driven Continuous Medical Education (CME) strategies enhances tuberculosis (TB) process and outcome indicators.

Acknowledgement

- Ministry of Health Homabay County
- Quality Improvement team asumbi mission hospital
- Implementing Partners (Komesha TB, LVCT & Amref Health Africa)



The Impact of CAD4TB Computer-Aided X-ray in Detecting Tuberculosis at Kalobeyei Refugee Settlement, Kenya.



By Fredrick Chepkwony Snr Clinician, TB/HIV project officer IGAD-TB project
Dr. Okemwa Job- Turkana County TB and leprosy coordinator
Joseph Chebii- Turkana west subcounty TB and leprosy coordinator
Geoffrey Omondi; Radiographer

Introduction:

Tuberculosis (TB) remains a significant public health concern in refugee camps worldwide due to overcrowded living conditions and limited access to healthcare. This publication explores the impact of CAD4TB computer-aided x-ray technology on detecting TB cases within the refugee population, focusing specifically on the situation at Kalobeyei Refugee Settlement in Kenya. With an alarming increase in notified TB cases doubling from previous numbers, implementing advanced diagnostic tools can revolutionize early detection efforts and improve treatment outcomes.

Impact of CAD4TB Technology:

CAD4TB computer-aided diagnosis is a state-of-the-art tool that assists radiologists by analysing chest x-rays for potential signs of tuberculosis. By employing machine learning algorithms trained on large datasets, this technology enhances accuracy and speed while reducing human error during interpretation. Implementing CAD4TB systems within medical

facilities enables efficient screening processes among crowded populations like those residing in refugee camps.

Improved Detection Rates:

The introduction of CAD4TB has significantly impacted case detection rates at Kalobeyei Refugee Settlement's healthcare centre. Early trials have demonstrated promising results with increased sensitivity and specificity compared to conventional methods alone. Radiology departments equipped with this innovative software showed remarkable improvements both qualitatively and quantitatively regarding identifying pulmonary abnormalities indicative of

“ CAD-assisted analysis accelerates radiological interpretations considerably as it automatically highlights suspicious areas requiring close evaluation without human oversight.

tuberculosis infection.

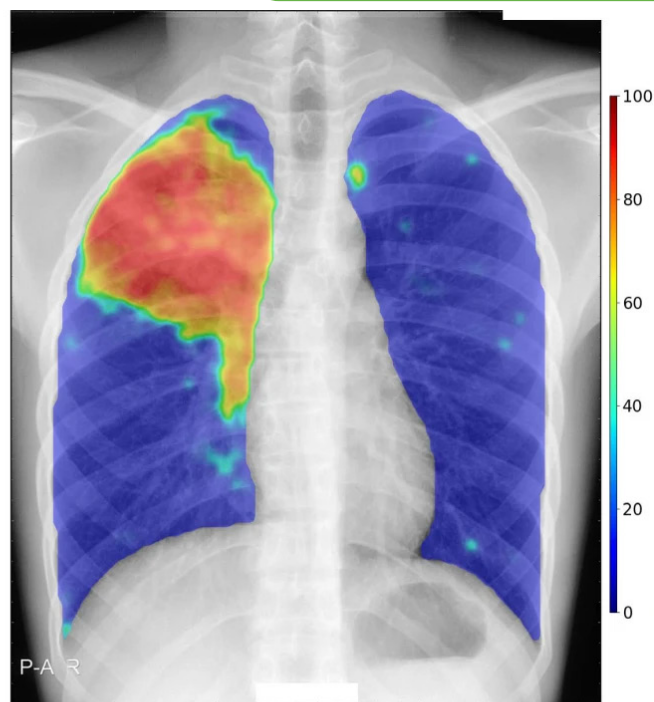
Enhanced Accuracy:

Leveraging artificial intelligence algorithms combined with expert knowledge facilitates precise identification even amidst suboptimal imaging conditions frequently encountered within resource-limited settings like refugee settlements. Consequently, accurate screening leads to rational use of GeneXpert cartridges and faster diagnosis helping to prevent misdiagnoses or delayed treatments that could lead to further transmission or exacerbation among individuals affected by TB.

Reduced Diagnostic Time:

CAD-assisted analysis accelerates radiological interpretations considerably as it automatically highlights suspicious areas requiring close evaluation without human oversight. Consequently, busy healthcare facilities in refugee camps can significantly reduce the time required for TB screening. This rapid analysis expedites intervention measures such as diagnosis and treatment initiation before individuals

Cont'd on pg 23



a **b**
Sample output from CAD4TB v6. (a) The original radiograph, (b) The radiograph with abnormality heatmap overlay. The final composite CAD4TB score for this subject was 91.7 (0 = normal, 100 = most abnormal) and the Xpert test was positive.

Source: <https://www.nature.com/articles/s41598-020-62148-y/figures/2>

with active infections further spread the disease within the camp.

Challenges and Recommendations:

Implementing CAD4TB technology comes with inherent challenges. Limited number of the equipment considering the high costs, and expert training requirements hinder its widespread adoption across all health centres within Kalobeyei Refugee Settlement and Kakuma camp. However, collaborations between other non governmental organizations, the county and other local authorities are instrumental in surmounting these obstacles by providing financial support for infrastructure development along with technical expertise.

Conclusion:

The introduction of CAD4TB computer-aided x-ray diagnosis systems has demonstrated a profound impact on detecting tuberculosis cases at Kalobeyei Refugee Settlement's healthcare centre in Kenya. The enhanced accuracy, improved

detection rates, reduced diagnostic times offered by this innovative tool have transformed TB diagnostics in Kalobeyei settlement and its neighboring host community villages via providing screening to the vulnerable populations living in overcrowded settings in the refugee camps. To ensure sustainable implementation of this technology throughout various healthcare facilities serving refugees globally requires continuous collaboration among stakeholders while addressing hurdles related to cost-effectiveness and resource availability.

“ CAD-assisted analysis accelerates radiological interpretations considerably as it automatically highlights suspicious areas requiring close evaluation without human oversight.



Inspiring Diagnosis and Recovery through Targeted Screening Using Digital CAD4TB



(From Right) Mr. Charles Mureithi, USAID TB ARC II upper eastern regional officer, Duncan Barkebo and Kirogine dispensary clinicians during the interview at the facility.

By Dorcas Kurui - DNTLD-P

In the pursuit of uncovering the remarkable benefits of targeted screening using digital CAD4TB in Imenti South, Meru County, we encounter the touching story of Charles Mureithi, a resilient 54-year-old father of two who is a small-scale farmer in Imenti South sub-county. Charles's ordeal began in January 2023, when he noticed a decline in his strength accompanied by painful leg joints while working on his farm. He found himself struggling to work with his strength gradually waning. Climbing steep paths became a daunting challenge as he faced the distressing misery of walking backwards due to the loss of strength. "I became so thin and weak that I felt like I was being blown away by the wind" he narrates.

Hoping to find relief, he turned to over-the-counter painkillers, but alas, three months passed without any sign of improvement. His health deteriorated, and the loss of appetite led to a significant weight loss. It was then that his brother urged him to seek further medical attention at a public medical facility.

In search of answers, Charles visited Kirogine dispensary in Imenti West, where he was warmly received by a

compassionate healthcare provider. Describing his symptoms in detail, the clinician in charge directed him to a National TB Program and USAID TB ARC II supported CAD4TB screening outreach that was under way in the facility. The x-ray indicated a score of >60 suggestive of TB. He was requested to produce a sputum sample for testing. The following day, the results came in confirming TB diagnosis. "Despite being diagnosed with TB, I was happy that my suffering was coming to an end because I knew I will receive appropriate medication," he says.

Counseled by the clinician in charge about the importance of adhering to the treatment plan until completion, he adopted proactive measures, using his phone to set reminders for medication, ensuring he never missed a dose. With the guidance and support of healthcare providers at the facility, Charles commenced his TB treatment immediately, which was on 23rd of March 2023. With every passing day, he embraced the treatment with unwavering resolve, knowing that adherence was key to his recovery.

A week after beginning his treatment, Charles noticed encouraging

improvements. He regained his appetite, and found himself able to engage in occasional work without experiencing fatigue. "I began noticing improvements after taking the TB regimen for one week. At the beginning of his treatment, Charles weighed 45.9 Kgs and he now weighs 53.5 Kgs. "I can now eat well and this allows me to work efficiently without fatigue," he says. These positive changes further solidified his resolve to complete the treatment successfully and achieve full recovery. Through his journey, he has gained valuable insights, leading him to share a message of hope with others experiencing TB-like symptoms and are reluctant to go for screening. "Anyone with TB symptoms such as coughing, weight loss, loss of appetite, and night sweats should seek medical attention which is free of charge at a public hospital for early detection and treatment." He advocates. He is just one among the many individuals who benefited from screening outreach which was made possible by the ministry of Health through the National TB Program and its partners.

Charles Mureithi's journey of resilience, driven by targeted screening using digital CXR, is a testament to the power of perseverance and proactive healthcare. It demonstrates the transformative potential of early detection and dedicated healthcare support. Charles's story underscores the transformative impact of advanced screening techniques and the unwavering dedication of stakeholders involved in the fight against TB championed by the Ministry of Health. As we forge forward in our commitment to eradicate TB, let us draw inspiration from Charles's resilience and embrace the vision of a healthier future. Together, we can strengthen our fight against TB.

Biannual Review Meeting held on 24th to 28th July, 2023, in Mombasa County. The forum enabled sub-recipients to voice concerns, share challenges, and receive updates and feedback from Amref Health Africa, DNTLD-P and other stakeholders.



In collaboration with Amref Health Africa, the Program participated during the Kenya Clinical Officers Association's 25th annual scientific conference in Kisumu County.



Naivasha Medical Center: Enhancing TB Services through Program Quality and Efficiency

By Mary Njeri Njuguna. PQE Lead, Naivasha Medical Centre, AIC Kijabe Hospital. Laboratory technologist Bachelor in medical laboratory

According to the World Health Organization (WHO), Kenya is one of the 30 high burden countries for TB/HIV, highlighting the urgency of addressing this issue (WHO Global TB report, 2021). To combat this persistent threat, the Division of National Tuberculosis Leprosy and Lung Disease program, in partnership with other organizations, introduced a groundbreaking initiative known as Program Quality and Efficiency (PQE). The primary objective of PQE is to bolster government oversight in the early detection of TB through active case finding (ACF) within healthcare facilities.

The need for such a program is evident from the findings of the TB prevalence survey, which revealed that a staggering three-quarters of individuals displaying TB symptoms go unnoticed. In light of this alarming statistic, the facility-based PQE initiative on ACF emerges as a crucial step forward in identifying TB cases early, especially among those showing signs and symptoms of the disease.

So, how did this transformative journey unfold?

The first milestone in this endeavor was a comprehensive five-day training program on PQE, which took place in the serene town of Naivasha. This training session aimed to equip healthcare professionals and staff with the knowledge and skills required to effectively implement the program. It was a significant step towards building a team of experts capable of leading the charge in TB detection.

Following the training, a thorough

survey was conducted at healthcare facilities. The objective was to assess the efficiency of TB screening within these institutions. To do this, data was gathered retrospectively, capturing the number of patients visiting the facility and, critically, how many of them were screened for TB.

In addition to quantitative data, observations were made regarding the 'how,' 'when,' 'where,' and 'who' aspects of TB screening. These observations provided valuable insights into the real-world implementation of PQE, ensuring that the program was not only theoretical but also practical and effective.

Data Collection

Data collected in year 2022 retro for Q1 and Q2 And Q3 and Q4 after PQE

Indicator as documented (source document)	Pre PQE		PQE Period	
	Q2	Q3	Q4	
Q1				
Facility workload (MOH-717)	9589	10472	7008	9858
Number of patients screened for TB	1620 (17%)	2961 (28%)	4448 (63%)	6995 (71%)
No with respiratory diseases – (MOH 705a & 705b)	25	44	64	71
No of presumptive cases (Presumptive register)	No documentation	53	68	72
No of presumptive TB investigated for TB (Presumptive DSTB and DRTB register)	No documentation	53	61	67
No. of TB cases diagnosed	3	5	6	6
	0	2	1	3

Before PQE's intervention, a concerning observation emerged. Among the patients visiting healthcare facilities, only clients at the Comprehensive Care Clinics (CCCs) were routinely screened for TB. This fortunate group of individuals had their TB screening conveniently integrated into their healthcare cards, a practice championed by the Kenya Electronic Medical Record (KEMR). This screening ensured that TB was on the radar at every patient encounter with a clinician.

However, the story was quite different for those outside the CCC umbrella. Out of the six Service Delivery Points (SDPs), only patients displaying typical TB signs and symptoms received the necessary evaluation. It was clinical officers who bore the responsibility of conducting these screenings, and not all presumptive TB cases found their way into the official presumptive register.

But where there's a problem, there are also solutions. The PQE-trained personnel took the initiative to establish a PQE committee within the healthcare facility.

This committee became a catalyst for change, organizing training sessions and Continuous Medical Education (CME) opportunities for the entire staff, delivered by both internal and external PQE-trained facilitators.

The transformation didn't stop there. The PQE committee decided to expand TB screening beyond the CCCs, reaching into other critical areas of the healthcare system, including Inpatient Departments (IPD), Maternal and Child Health (MCH) clinics, laboratories, radiology (XRAY), HIV testing and counseling services (HTS), tuberculosis assessment and support (TAS), pharmacies, and special clinics.

Furthermore, the PQE committee took a meticulous approach to ensure that all documentation was completed accurately and consistently. This not only improved the quality of care but also facilitated data collection and reporting.

The dedication and impact of the PQE committee extended beyond the healthcare facility's walls. With the support of UTJ (USAID Tujenge Jamii), a TB screening stamp was introduced, streamlining the screening process and ensuring that every patient had the opportunity to be screened.

Regular monthly meetings of the PQE committee, with support from World Vision Kenya, have cemented the success of Active Case Finding (ACF) within the facility. World Vision Kenya has also played a pivotal role by providing a link desk assistant, further enhancing the facility's ACF efforts.

Indicator		Q1	Q2
Facility workload (MOH- 717)		10438	11840
Number of patients screened for TB		8660 (83%)	11088 (94%)
No with respiratory diseases – (MOH 705a & 705b)		77	215
No of presumptive cases (Presumptive DSTB and DRTB register)		55	65
No of presumptive TB investigated for TB (Pre-sumptive DSTB and DRTB register)		42	59
No. of TB cases diagnosed	Bacteriologically confirmed	4	6
	Clinically diagnosed	2	5

In the ever-evolving landscape of healthcare in Kenya, a promising change is taking shape. It's a story of progress and empowerment, and it revolves around the introduction of the Program Quality and Efficiency (PQE) initiative. In just a few short months, this program has made a significant impact on healthcare facilities and, more importantly, on the lives of the people they serve.

Following the implementation of PQE for Active Case Finding (ACF) at a particular healthcare facility, a survey was conducted three months later to gauge the results. The findings were nothing short of remarkable and demonstrated how a proactive approach to healthcare can bring about transformative change:

Knowledge Empowerment: An astounding 98% of the facility's staff had acquired in-depth knowledge on 'who' should be screened, 'when' it should be done, 'how' the screening process should take place, and 'where' within the facility it should be conducted.

Client-Centric Approach: A resounding 80% of the staff could now confidently demonstrate proper TB screening techniques to clients. This reflects a newfound commitment to delivering the best possible care to the patients who rely on the facility's services.

Comprehensive TB Screening: An impressive 96% of patients visiting the facility were screened for TB, a significant increase from previous rates. This shift ensures that more individuals with presumptive TB cases are identified promptly.

Staff Expertise: An astonishing 98% of the facility's staff were capable of identifying presumptive TB cases, showcasing a remarkable improvement in their expertise.

Problem-Solving Prowess: The PQE committee displayed its ability to identify issues and gaps, articulate problem statements, analyze problems, and propose effective solutions. This not only enhanced the facility's overall performance but also fostered a culture of continuous improvement.

In conclusion, it's evident that PQE has emerged as a pivotal force in enhancing Active Case Finding and promoting the early detection of TB. Through the commitment of healthcare professionals, the introduction of PQE, and the continuous drive for improvement, Kenya's healthcare system has taken a significant step toward achieving its goal of better health for all.

The importance of training and sensitization for healthcare staff in PQE cannot be overstated. It forms the foundation for support and the provision of effective Active Case Finding in the context of TB. Furthermore, the provision of various screening tools, documents, and support during PQE meetings has further propelled the cause of Active Case Finding.

As Kenya continues its journey toward improved healthcare, the PQE initiative serves as a shining example of what can be achieved through dedication, knowledge empowerment, and collaboration. It's not just about the numbers; it's about the lives that have been positively impacted, thanks to a more comprehensive and efficient approach to TB screening. With PQE at the helm, the future of healthcare in Kenya is indeed a brighter one.

Public Private Mix: The Power of Merging Forces in Combating TB



Mr. Geoffrey Mueni, USAID TB ARC II PPM Coordinator, Meru County, Mr. Erastus Mukaria and Miss Kelly Murango during an interview at TB clinic in Sand pro Growers in Timau, Meru County

By Dorcas Kurui- DNTLD-P

The battle against tuberculosis (TB) is a colossal undertaking, one that necessitates the unification of both public and private sectors, working in harmony towards the shared vision of a TB-free world. The Ministry of Health has crafted an action plan for Public-Private Mix (PPM), designed to elevate the involvement, active participation, and oversight of private healthcare providers in the realms of TB diagnosis, treatment, and reporting. This approach is gaining ground and transforming the landscape of TB control, enhancing accessibility to care therefore contributing significantly to the fight against TB.

In our quest to comprehend why this innovative strategy is necessary in the fight against TB, we embarked on a journey to Sandpro Growers in Timau, Meru County—a selection made with careful consideration of specific criteria. This flourishing flower farm is home to hundreds of diligent workers, but

the nature of their work environment heightens the risk of TB transmission. Our arrival was met with warm greetings, courtesy of Miss Kelly Murango, a dedicated clinician at the TB clinic nestled within the farm's premises. Joining us in this endeavour was Mr. Cetric Mwachi, the Assistant Human Resource Manager of Sandpro Growers.

As employees partake in their regular health assessments, the clinicians stand ready to identify and address TB cases at an early stage. The availability of Information, Education, and Communication (IEC) materials, coupled with reporting tools from the National TB Program with support from USAID TB ARC II, has enhanced the visibility of TB services. Notably, case reporting is streamlined through online platforms. Miss Murango, our guide through this journey, shared that they've recorded five presumptive cases since January 2023, with two of them testing positive for TB.

One of these two individuals is Mr. Erastus Mukaria, a forty-two-year-old father of three, whom we had the privilege of meeting at the TB clinic. Mr Makaria is employed in manual labor at Sandpro Growers, Nanyuki. He shared with us the harrowing ordeal that began in April 2023 when he started experiencing excruciating chest pain upon coughing, accompanied by night sweats and a distressing loss of weight. At first, he attributed his symptoms to the chilly season, seeking relief through over-the-counter medications. Yet, his suffering persisted for a month. It was during this time that he sustained a chest injury in line of duty at Sandpro. Seeking treatment for this injury at the clinic marked a turning point in his journey.

As Mr. Mukaria conveyed his symptoms to the clinician, the careful assessment rendered his case presumptive for TB. Subsequently, his blood and sputum samples were collected for testing, and he was referred to Nanyuki Referral Hospital for a chest x-ray. The results left no room for doubt; Mr. Makaria had tested positive for TB. "I was not surprised by the results because I had endured a great deal of pain. All I wanted was to recover." He recounted.

Following his diagnosis and counselling, Mr Makaria commenced his treatment, and he has since experienced substantial improvement. "I no longer cough excessively, and I feel stronger," he reported. Concerned for the well-being of his colleagues, he has encouraged them to undergo testing for their safety and that of those around them. Gratitude wells up in him as he commends the Ministry of Health for the foresight in establishing TB clinics at his workplace. Without this initiative, his diagnosis might have remained elusive, and he would have unknowingly continued to pose a risk of TB transmission to many colleagues and friends. Today, he is well on the path to recovery and has regained lost weight, now weighing 54 kgs, up from a frail 49 kgs.



Mr. Erastus Mukaria during his work routine at Sand pro Growers in Timau, Meru County

Mr Makaria's story is but one among many that highlight the transformative potential of the PPM strategy. Sandpro Growers, a responsible corporate entity, has actively engaged with traditional healthcare facilities such as Timau Sub-County Hospital for blood and sputum analysis, and they rely on Nanyuki Teaching and Referral Hospital for chest x-rays. In a remarkable display of commitment to their employees' well-being, Sandpro Growers even facilitates transportation for patients referred for screening or further testing, ensuring that financial constraints do not hinder access to care.

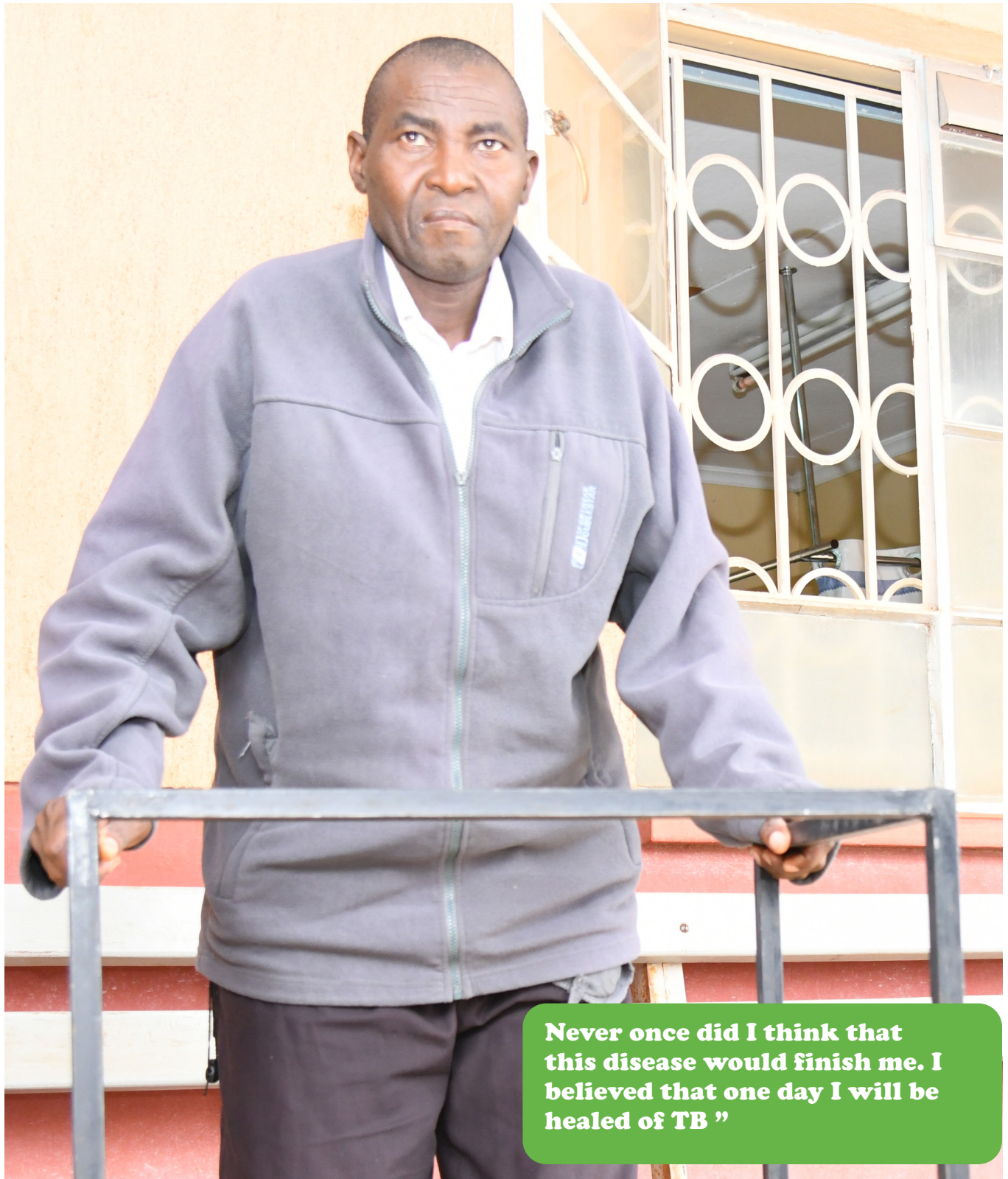
Mr Cetric Mwachi, the Assistant Human Resource Manager of Sandpro Growers, emphasizes that the establishment of TB clinics within corporate premises addresses the issue of inconvenience. "Employees often find it challenging to seek medical attention due to time constraints resulting from their work and family responsibilities. By bringing healthcare directly to their workplace, TB clinics remove this barrier, allowing early diagnosis and treatment without disrupting their daily routines," he notes. Mwachi recognizes that investing in employees' health is not only a matter of corporate social responsibility but also good for business. A healthier workforce translates into heightened productivity and reduced absenteeism, fostering economic growth and stability.

In addition to providing medical services, the management at Sandpro Growers grants TB patients a two-week leave to allow for rest during the intensive stage of treatment before returning to work. "In cases where patients still exhibit weakness after the initial two weeks, the clinician may recommend an extension of the leave period," Mr Mwachi added.

Sandpro Growers is just among several private sector entities that the National TB Program and USAID TB ARC II have engaged through the TB work place model. The embracing of this strategic approach showcase the efficacy of PPM in addressing challenges and gaps in TB care within the private sector. By involving the private sector in the national TB program, PPM can broaden the coverage and enhance the quality of TB services. Furthermore, this collaboration enables PPM to leverage the resources, expertise, and innovation of the private sector to optimize the efficiency and effectiveness of TB services. Indeed, Public-Private Mix is a game-changer, especially in regions where geographical and financial barriers can hinder individuals from accessing healthcare in a timely manner.

Given the remarkable outcomes achieved in terms of case detection, treatment success, and patient satisfaction, the establishment of TB clinics within corporate settings is undoubtedly a key strategy in realizing the goals of the End TB Strategy and Universal Health Coverage. As Kenya continues its relentless journey towards TB control and eventual eradication, the emergence of corporate TB clinics stands as a testament to the Ministry of Health's commitment to innovation and progress in the battle against TB.

Resilience in the Face of Adversity: Cosmas Mutua's Journey from Paralysis to Hope



Never once did I think that this disease would finish me. I believed that one day I will be healed of TB ”



By Emily Bade, Peter Irungu and Mbetera Felix

Cosmas Mutua, a diligent farmer in the heart of Makueni County, once tended to his fields with boundless energy, ensuring his family thrived under his care. Life was a symphony of simplicity and hard work until a seemingly ordinary Monday afternoon, the 7th of September in the year 2022, when his world took an unexpected turn.

At 56, Cosmas found himself grappling with a sudden, searing back pain that robbed him of movement, rendering him paralyzed. The pain, uninvited and relentless, became a silent intruder, forcing him into the confines of his bed until the family rallied to transport him to the hospital.

Wote General Hospital became the initial stop on his journey of uncertainty. Two months slipped by in a haze of medical tests and inconclusive results. The pain persisted, and Cosmas found himself confined to a bed, a prisoner of an ailment that remained elusive. Frustrated but undeterred, he was eventually transferred to Machakos Level 5 hospital.

It was within the walls of Machakos that the mystery unravelled. An MRI test revealed the true culprit - Spinal Tuberculosis. The diagnosis, though sobering, brought a sense of clarity, opening the door to the right course of treatment. Cosmas' lifeline became a year-long regimen of anti-tuberculosis medication, a bridge to healing.

Once a vibrant farmer, Cosmas now leaned on a wheelchair, supported by the unwavering strength of his family. Every movement, once taken for granted, now required assistance. Yet, within this new reality, hope emerged. Last month marked a turning point as Cosmas began to feel stirrings of life in his legs, acquiring steel rods that doubled as walking aids.

The recovery journey was slow but marked by a steadfast adherence to the medication schedule. Cosmas, disciplined and resolute, ensured his medicine was taken religiously at 8 pm, aligning his dinner time to support the healing process. With each passing day, the pain ebbed away, replaced by a resurgence of strength.

Cosmas' mental fortitude shone through as he embraced his illness as a facet of life. Stress was a stranger to him, thanks to the unwavering support of his wife, a constant companion throughout the journey. He approached his condition with a resilience that mirrored the optimism he held for a brighter future.

"I have never been stressed. My wife has been there for me and has walked this journey with me. Being sick is human nature and I accepted that getting this disease was part of life. Never once did I think that this disease would finish me. I believed that one day I will be healed of this disease."

As he completes his one-year drug dose, Cosmas looks forward to the next phase of his recovery: therapy to regain the full use of his legs. The once-pervasive pain is now a distant memory, and life pulses back into his limbs. He expresses gratitude for the skilled doctors who accompanied him on this arduous journey.

Cosmas Mutua's story serves as a beacon of hope and a testament to the importance of early diagnosis, treatment adherence, and maintaining a positive outlook during the recovery process. In the face of adversity, he stood resilient, cultivating strength from within the depths of his spirit.

Early TB Screening Saves a Trucker Driver and his Family: Story of Suleiman Swaleh.



By Otieno Arnold, Communication Officer - North Star Alliance.

Swaleh Suleiman a 35-year older truck driver from the Bondeni area in Mvita sub-county in Mombasa County, was clinically diagnosed with TB in February 2023.

When Swaleh is not on the road to deliver supplies, you will find him hanging around one of the truckers' hotspots in Ganjoni area, Mvita Sub County. Swaleh, a husband and a father of two had been to many towns in and outside Kenya. Testing positive for TB was the least of his worries in life as he used to hear about TB from other people but never believed it existed.

During one of the routine screening activities organized by NorthStar Alliance, Swaleh was screened for TB with mild symptoms manifesting. This put his health and those that he interacts with at risk.

"I had never imagined in my life that I could test positive for TB. To make it worse, infect my whole family. At

first, I was in denial and every time my father had to force me to take the drugs. I was depressed and blamed myself for putting my family in such a difficult situation, especially my child," he narrates.

Swaleh and the family were initiated into TB treatment at Ganjoni Dispensary. The road to recovery was challenging, but the family remained resilient. They diligently adhered to the treatment and sputum follow-up appointments in months 2, 5, and 6, showing unwavering commitment to their treatment.

When his employer learnt that he had tested TB positive, he was laid off. Swaleh had to survive with the support of friends and family. "In the beginning, the journey was so difficult, I faced discrimination and stigma, and I was laid off from work. This made it more difficult to support my young family and so had to seek help and support

from my family and friends to survive," Swaleh said.

After 6 months of unbending adherence, and support from the SCTLC, Mr Ahmed, TB clinician, Mr Makau, Tibika Champion, Rachael Mueni and his parents, Swaleh and the family were declared TB-free.

"Now that we are all cured, it feels great. I now have to be more careful to avoid re-infection and also open and willing to educate others on TB."

According to Henry Mwazighe, Project Coordinator, North Star, Swaleh's story demonstrates the power of innovative, community-driven approaches to TB identification and treatment. It underscores the importance of swift action in addressing TB, not only for the infected individual but also for the people associated with them.

"The Tibika Jikinga Project's success in finding Swaleh and his family

demonstrates the value of proactive, community-based TB control strategies. It is a crucial lesson on the necessity of early detection and treatment of tuberculosis, particularly in high-risk populations,” adds Ahmed, Mvita SCTLG.

Swaleh's remarkable journey is a testament to the impact of the Tibika Jikingo Project and its ability to transform lives. As we celebrate Swaleh's triumph over TB, we must also acknowledge the crucial role played by the “Tibika” champions and healthcare workers and their commitment to eradicating TB.

North Star Alliance in June 2019 received a grant to implement a project dubbed Tibika Jikingo Project under the Kenya Innovation Challenge TB Fund (KIC-TB) funded by Global Fund as a sub-recipient of Amref Kenya.

The Tibika Jikingo Project implements

well-tailored interventions to find missing persons with Tuberculosis in Mombasa County. Tibika Jikingo aims to identify missing persons with Tuberculosis among the target group of; (i) Key Populations (Sex Workers, MSMs and PWIDS), (ii) Corridor Communities and (iii) Truck drivers. The project identifies, screens and treats TB cases and refers for laboratory investigations, monitors treatment adherence, and sends refill reminders.

“ Now that we are all cured, it feels great. I now have to be more careful to avoid re-infection and also open and willing to educate others on TB.”



Practicability of Alcohol Vendors in Adherence Among TB Patients

By Muyela Javan (program Assistant NEPHAK) Supported by : Paul Wekunda - SCTLG Sabatia, Doreen Kikuyu-CHP, Domitila Dindi - Human right and Olive Lidiema - PO NEPHAK

Alcoholism remains a serious risk factor for TB infection, progression of TB disease, treatment interruption and death. While more than 68% TB patients in Vihiga County practice harmful alcohol consumption with adverse consequences, it has been challenging to come up with a cost effective and sustainable intervention that will help improve adherence among patients on TB treatment.

Cohort of eight TB patients who are alcoholic were identified and prospectively considered for one month in two alcohol dens which were identified purposively. The vendors in the two alcohol dens were taken through basic TB prevention and treatment education while TB patients were educated on the importance of adherence and additive effect alcohol has on their therapy. Each patient was allocated a pack of drugs and vendors were asked to provide directly observed treatment. A community health volunteer visited weekly to ensure compliance. Descriptive analysis was conducted while additional data was captured qualitatively.

All the 8 patients were male between 30 and 48 years. All patients satisfactorily adhered to their medication. Qualitatively, the patients reported satisfaction in the model of medication while more than a half-reported reduction in alcohol intake. Besides, the alcohol vendors perceived being important in TB prevention and control.

Alcohol vendors provide a rare opportunity in disseminating TB prevention and control messages as well as improving adherence among patients on TB treatment. There is urgent need to map them, educate and support them in this venture.



Moses's Journey from Darkness to Light: A Triumph over Tuberculosis

A story from Daraja Mbili (Sub Recipient supported by Amref Health Africa-Global Fund Project)

In the heart of Kisii County, Bomachoge Borabu Constituency, resides a remarkable young man named Moses. At the tender age of 23, he has already demonstrated immense resilience and courage, emerging as a true champion in the fight against tuberculosis (TB). His story is a testament to the life-changing impact of the TB program and the vital role it plays in saving lives.

In 2018, Moses found himself battling a relentless chest ailment that cast a dark shadow over his aspirations. His dreams of pursuing an education were thwarted as he struggled with persistent symptoms - including cough, chest pain, weight loss, and night sweats. Like many others in his community, he initially turned to traditional herbal remedies in search

of relief. However, as time passed, and his condition deteriorated, it became abundantly clear that this was not a battle that traditional medicine could conquer.

The turning point in Moses's life came during a community gathering where a local champion passionately shared insights on TB and the available services for those affected. It was here that Moses seized the opportunity to take control of his health. He underwent a free screening that led to a diagnosis of smear-positive TB in 2019. Without hesitation, he embarked on a six-month medication regimen, guided by a dedicated team of medical professionals. His determination and adherence to treatment led to a remarkable recovery, allowing him to complete his high school education

and even secure employment in Nairobi in 2020.

Yet, life's challenges had more tests in store for Moses. The strains of work in Nairobi triggered a recurrence of TB symptoms, mirroring his earlier ordeal. Returning home, he discovered a lifeline in a church event where a community health promoter announced a screening event at Sengera Mission Hospital. Moses's sample was tested, leading to a grim diagnosis of Multi-Drug Resistant TB (MDR-TB). The news was disheartening, and spelt an arduous 18-month treatment journey, a daunting prospect for a family already struggling to put food on the table.

However, in his darkest hour, Moses found unwavering support from the healthcare team. They assured him of consistent care and monthly assistance, rekindling his hope. He embraced the treatment regimen with unwavering dedication, and his family received comprehensive education on TB, hygiene, and nutrition. His determination to overcome MDR-TB was unwavering.

In 2021, a ray of hope shone upon Moses's life when officers from Amref Health Africa visited his home. They not only engaged with his family but also extended an invitation to join the Sub Recipient-Daraja Mbili vision as a community champion. Moses eagerly accepted, receiving training to become a social mobilizer and adeptly using tools like I monitor ATM. Today, he stands as a symbol of triumph, a beacon of hope in his community.

Moses is now thriving, actively participating in the community's TB awareness efforts. He's set to take center stage in planned media activities that will be broadcasted on local channels. His journey from a young man plagued by TB to a thriving advocate and mobilizer underscores the profound importance of programs that support TB patients. Moses's story reminds us that with the right support, education, and unwavering determination, TB can be defeated, and lives can be transformed.

Improving Adherence to TB Treatment through Technology



In Kenya, where TB incidence rates remain alarming high with 133,000 estimated to have fallen ill with TB in 2021 (WHO Global TB Report, 2022), Amref Health Africa in partnership with the Global Fund is contributing to the charge against this formidable disease. Collaborating closely with the Ministry of Health, Division of National Tuberculosis, Leprosy, and Lung Disease Program (DNTLD-P), these vital efforts are spread across all 47 counties of Kenya and implemented through the sub recipients (SRs). As part of Amref's implementation strategies, bi-annual review meetings are organized by programs to enable regular assessment, transparency, adaptation, and learning.

Notably, these meetings go beyond mere review. They serve as an opportunity for Amref Health Africa to impart knowledge and build the capacity of SRs in various aspects of project implementation. This capacity-building aspect ensures that all stakeholders are equipped to substantially impact the fight against TB.

This year, Global Fund TB team held the Biannual Review Meeting on 24th to 28th July, 2023. The meeting provided a forum for sub-recipients to voice concerns, share challenges, and receive updates and feedback from Amref Health Africa, DNTLD-P

and other stakeholders. The meeting was attended by a diverse group of stakeholders, including 34 Sub recipients from various regions of Kenya, Amref staff, Division of National Tuberculosis, Leprosy, and Lung Disease Program (DNTLD-P), Division of Community Health (DCH), Kenya Medical Supplies Authority (KEMSA), National Laboratory Services, MOH-Kenya Revenue Authority, and a representative from the Kenya Coordinating Mechanism (KCM).

Underpinning the meeting was the theme, "Expediting Interventions Towards a Strong Finish!", ushering the grant into its last year of implementation in the current cycle. The objectives of this gathering were threefold:

Discuss Progress: The first objective was to review the progress of programmatic activities and assess financial performance. This critical evaluation ensures that resources are allocated effectively and maximises the impact.

Knowledge Sharing: The second objective centred on sharing knowledge experiences and identifying gaps that can help accelerate the implementation of activities. Collaborative learning is a key driver of progress in the fight against TB.

Future Planning: The third objective revolved around charting the path forward. Participants discussed the next steps required to achieve their objectives in the grant, thereby ensuring a strong finish to the Global Fund's grant cycle 6.

Our rigorous evaluation process at these meetings has contributed to remarkable achievements. According to the DNTLD-P reports, within the period of January to June 2023, from the 51,441 people notified with TB, the Community Health promoters contributed to 5,750 (11.2%) of the patients. A total of 17,775 contacts of people with TB were initiated on Tuberculosis preventive therapy to prevent progression of latent TB to active TB disease. The private sector contributed to 19.1% of people notified with TB.

As we continue to expedite interventions, share knowledge, and plan for the future, we draw closer to the ultimate goal of TB elimination in Kenya. Enhanced collaboration, resources and implementation need to be put in place to achieve 95% reduction of TB incidence rate, 95% decline of deaths due to TB and ensure no affected families face catastrophic costs due to tuberculosis by 2035, in line with the end TB strategy.

ENHANCING VISIBILITY FOR TB SERVICES IN THE PRIVATE AND FAITH BASED FACILITIES FOR DEMAND CREATION

By John Mungai - Amref Health Africa

Amref Health Africa in Kenya through the support of the Global Fund is working with Sub recipient organizations to support and build the capacity of the private providers to offer TB services in an effort to find missing people with TB. This intervention is implemented in all the 47 counties. The project is working with the engaged facilities to put up posters to show availability of TB services. This is geared towards enhancing visibility of TB services for demand creation. This initiative is being implemented in 20 counties with the highest burden of TB and is currently complete in 9 counties. The 20 counties include; Nairobi, Kiambu, Kilifi, Kitui, Machakos, Makueni, Meru, Mombasa, Muranga, Bomet, Homa Bay, Kakamega, Kericho, Kisii, Kisumu, Migori, Nakuru, Siaya, Uasin Gishu and Turkana. The initiative is also implemented by 3 subrecipient organizations included; Respiratory Society of Kenya (ReSoK), NEPHAK and World Relief.



Uhai Neema Hospital Receives A sign post showing availability of TB services in the Facility



TB Services Sign Post Strategically Displayed in Emmafra Medical Clinic, Kangundo, Machakos County

TWO MILLION PEOPLE SCREENED FOR TB IN THE PRIVATE HEALTH FACILITIES

By John Mungai - Amref Health Africa



Group Photo During an Onsite Data verification and Mentorship visit in Siloam Hospital, Kericho County

Amref Health Africa in Kenya through the Global Fund is supporting the private facilities including; Private hospitals, Faith Based Organizations, Chemists and Laboratories and radiology centres to strengthen provision of TB services and find the missing persons with TB. Through this Project, over 1,700 private health facilities have been engaged and are offering TB services. More than 1,000 Health Care Workers from Private health facilities have been trained on TB diagnosis and treatment. To address the challenges of lack of access to laboratory services which is one of the major hindrances to TB diagnosis in the private facilities, motor riders have been recruited, trained and supported to transport samples from private hospitals to laboratories offering modern molecular TB diagnostic tests like GeneXpert. A total of 2,658,752 people has been assessed for TB in the past 1 year and among them, 68,448 tested and 7781 diagnosed for TB. Ongoing technical support is ongoing to strengthen this initiatives to ensure more people are reached.

Dr Neimah Barasa: Leading the Charge Against Tuberculosis in Nakuru County



By Boaz Ouma, USAID TB ARC II

My name is Dr. Neimah Barasa, the County TB, Leprosy and Lung Disease Coordinator, Nakuru County. I am in charge of our county efforts to battle Tuberculosis (TB). Since the COVID-19 outbreak, we have witnessed a considerable increase in TB cases in the county. The numbers have risen, but so has our will to address the health crisis.

To strengthen our fight against TB, we have taken a multifaceted approach, with community-based activities playing a critical role. Our devoted community health promoters hold regular community health talks to raise TB awareness, create demand for its services at the facility level and promote TB treatment adherence. We also work together with the Ministry of Education, conducting similar health talks, and screening students for TB in schools.

We work with local radio stations and use social media platforms to reach a larger audience with TB information. Within the Nakuru County health department, our communications staff works tirelessly to design posters and materials to ensure proper TB information dissemination.

Stigmatization has historically been a problem, but our community health promoters have made tremendous progress in eliminating it.

Nakuru County is lucky to have significant assistance from our partners and the local Department of Health at the facility level. We constantly train our healthcare team, bringing them up to date on the most recent tuberculosis recommendations and methods.

We've also realized the value of incorporating the private sector, because tuberculosis may impact everyone, regardless of socioeconomic level. In fact, the private sector accounts for over 48% of our patients. This insight has prompted to rollout the TB workplace model in the county. With the support of the National TB Program and USAID TB ARC II activity, we are engaging workplaces like flower farms and manufacturing companies in TB active case finding interventions by conducting regular sensitisation and screening exercises. We have also partnered with chemists and radiology centers, allowing us to widen our reach and increase case identification.

To track our performance, we have also

joined the National TB Program Quality Efficiency (PQE) initiative, a pilot program that examines the quality of our work. It guarantees that we make correct diagnoses, avoid missing cases, and keep accurate patient records. This program provides essential direction and holds us accountable for providing excellent care. PQE is now being implemented in five of our sub-counties, with plans to expand it to all eleven sub-counties soon. We expect that this program will result in an increase in the number of TB cases diagnosed and treated.

However, our success is not solely due to our tactics; it is also due to the dedication of our employees. Their enthusiasm and dedication are the bedrocks of our patients' recovery journeys. When a patient is in our care for six months or more, the staff's approach and attitude can make or break the situation.

On treatment success rate, we do have defaulters, like in many other areas, though Nakuru County has managed to keep their numbers reasonably low. We trace patients who miss appointments and ensure they return to care with the support of community health promoters. When patients leave the county, we work with other hospitals to keep their therapy going. We also sensitise our patients on the importance of adhering to treatment before initiating them on treatment. The same is repeated when they come for clinic review and drug refills.

Our effort have resulted in an improvement of quality TB services and indicators. According to the 2023 first-quarter data, we had 1,017 patients under care, and by the mid of the second quarter, we had approximately 936 individuals. We believe that our numbers will continue to grow as we expand our outreach efforts.

In the previous year, our cure rate was roughly 79%, with a 88% treatment success rate. We are certain that our cure rates will improve in the next years as a result of the ongoing efforts and enhanced diagnostics. As Nakuru County, we're committed to lowering the TB burden and providing high-quality of care to our patients.



Strengthening TB Care in Kenya through Roll Out of WHO-Approved Tools for TB Screening, Diagnosis, and Prevention

By USAID TB ARC II

27 year old Francis Singili, a father of two and is a pump attendant at Majengo Mapya area, Jomvu, Mombasa County.

In August last year, 2022, he started coughing profusely, accompanied by chest pains and night sweats. For one week, he ignored the symptoms thinking he had contracted a flu that would heal without any treatment like it had happened to him before.

‘When the symptoms persisted for one week, I first went to the nearest local chemist and bought over the counter medicine. After two weeks of being on this medication, the symptoms had not yet alleviated. This prompted me to seek further medical attention at a nearby private facility,’ Francis shares.

Francis adds, ‘‘At the private facility I was diagnosed with pneumonia and put on treatment right away. I took the pneumonia medicines for one month, where in the first two weeks of being on treatment, I felt better but began deteriorating again.’’

Francis went back to the private facility for a recheck up and was requested to continue with the pneumonia with the assurance that he would get better with time

‘‘The more I continued taking the pneumonia medication, the more sick I became. It got to a point even working became a struggle. Most of the time while at work, I had a hard time serving customers because of the constant coughing and general body fatigue. My chest felt compressed because of the pain. I pushed myself to work as I was the only family breadwinner, ‘’ Francis nostalgically recalls.

At home his wife seeing his condition get worse, she urged him to seek treatment in the nearest public health facility, Jomvu Model Health Centre.

‘‘ When we presented at the facility with my wife, the healthcare workers received us well. Though the queue at triage point and the consultation room were long, I was prioritized to get see as a result of the frequent coughing, to avoid spreading what I was ailing from to other clients in the queue,’’ Francis recalls.

Upon explaining to the clinicians the signs and symptoms he was experiencing, Francis was requested to go for a chest X-ray at facility with the help of a linkage assistant.

‘‘Inside the X-ray room, the radiographer took an image of my chest. He referred me back to the clinician who explained to us, my lungs had cavities suggestive of TB but he would only ascertain this through a sputum test at the laboratory. The clinician referred me to the laboratory for a TB test,’’ Francis shares.

At the laboratory, Francis was given a sputum mug and explained how to produce a suitable sputum for testing. One hour after providing the sputum, the results were out.

‘‘The results indicated I had tested positive for TB. I was shocked and confused because I did not know how I was going to handle the matter. It was abrupt and I could not fathom how I had contracted TB. I thought I was going to die. The clinician however counselled and consoled me that I would get cured if I started and completed TB treatment. He reassured me that we would walk the journey to recovery together by among others enrolling me to a digital platform to assist in adhering to treatment,’’ Francis shares.

The enrolment to the digital adherence platform involved inputting Francis biodata into the adherence platform, which was installed on his phone, and demonstrating to him how to pick the drugs from the fixed-dose combination medication sleeve. Just like other patients enrolled into the platform in Mombasa and Nairobi Counties, Francis reported his medication intake daily by sending a toll-free SMS message using a code found on the customized packaging.

His ousehold contacts, the wife and children were also tested for TB the following day. None of them tested positive for active TB disease. They were put on TB preventive therapy to prevent them from developing active TB. They have all since completed treatment and are progressing on well.

‘‘ I am grateful to everyone who has supported us in this journey. Were it

the availability of healthcare workers and the equipment’s at Jomvu Model Health Centre that diagnosed what I was ailing from, myself and family would be long gone now, as I have come to know TB kills if left untreated and a person with the active disease like I had spreads to close contacts through among others coughing,’’ Francis shares.

He adds, ‘‘We are alive because of the access to the free testing, treatment and treatment monitoring services received here. I recommend similar services to every health facility so as to end this disease.’’

Francis is among thousands of TB patients who are beneficiaries of the Introducing New TB Tools Project (INTP) in Kenya.

In June 2022, with support from USAID and Stop TB Partnership – Kenya, the Ministry of Health National TB Program in collaboration with its partners including Centre for Health Solutions – Kenya USAID TB ARC II activity began implementing INTP to strengthen TB care in the country.

This included the roll out of the following WHO-approved tools for TB screening, diagnosis, and prevention;

- Eight digital chest X-ray equipment kits with accompanying software for the computer-aided detection of TB
- 38 portable and battery-powered Truenat machines for molecular TB testing that can be easily used in hard-to reach areas where reliable electricity supply is not reliable
- Digital Adherence Technology using medication sleeve
- Two interferon-gamma release assay (IGRA) machines to aid in the detection of TB infection
- Treatment courses for TB preventative therapy: the 3RH regimen to benefit 13,000 persons
- Connectivity solution for all TB diagnostic equipment known as TIBULIMS.



Engaging Work Places in Active TB Case Finding: Simba Apparel, Mombasa

By USAID TB ARC II

In the industrious Export Processing Zone in Changamwe, Mombasa County, lies Simba Apparel, a textile company providing a source of livelihood to thousands of workers, and clothing to thousands of people in USA and Europe.

To safe guard the lives of the thousands of the workers here majority of whom are family bread winners from the killer yet treatable and curable TB disease, the National TB Program in collaboration with Mombasa County and Centre for Health Solutions – Kenya USAID TB ARC II activity began engaging the company in October 2022 to starting active TB case finding through the TB workplace model.

“Active TB bacteria thrives in crowded places like such companies where we have many people working closely to each other. If we have one worker with the active TB disease that is not diagnosed and treated, this person has the potential of spreading the disease to 15 other workers when he/she coughs, sneezes, and or sings with uncovered mouth. These workers also have contacts at the household level, hence the risk of spreading the disease there is also very high,” Cosmas Mwamburi, Mombasa County TB Coordinator shares.

He adds, “ Due to the tight work schedule, majority of these workers have no time to seek health services outside the companies. They often rely on the services provided at the company health facility. This among others is one of the reasons we began engaging these workplaces to provide TB services. Taking services to where they are required most.”

The process began with the sensitisation of the Mombasa County health management team on the work place TB model.

“We were sensitized on the importance of implementing the model in our County which is among the high burden TB counties in Kenya and how the model would help find the missing TB cases in the workplaces as well as prevent TB disease there,” Mwamburi shares.

The next step was mapping of the workplaces to be engaged, sensitisation of their management on the model, and capacity strengthening of the company health facility staff on provision of TB active case finding services.

“Before the engagement, we were not actively doing TB case finding due to knowledge gaps and lack on TB recording and reporting tools,” Sharon Kananu, Simba Apparel health facility clinician shares.

Through the TB workplace engagement model, the facility staff have been empowered with knowledge and skills on TB screening, presumptive clients linkage to testing and diagnosis sites, and TB patients management and support.

“Every patient who comes here, I screen them for TB, for the presumptives, I request a sputum from them that is sent to nearest testing site. In case the results turn positive, I link the patient to the diagnosis site where they are initiated on treatment. I do a follow to ensure they adhere and complete treatment,” Kananu shares.

44 year old Katu Mwazi, who works at Simba Apparel as a proper textile stitching checker is among the



Fatuma Katana, a worker at Simba Apparel in Mombasa County. She is one of the beneficiaries of the TB work place engagement model rolled out in the company by the National TB Program in collaboration with USAID TB ARC II to provide TB services.

beneficiaries of the adoption the TB workplace model at the company.

“When I presented at the health clinic here with a persistent cough and loss of appetite, the healthcare worker cross examined me and requested me to produce a sputum for testing to confirm what was ailing me. A day after, she called me and told me the results indicated I had TB. Though the news of the having TB shocked me as I thought I was going to die, she counseled me with the reassurance that if I started treatment and adhered to it I would be cured,” Katu shares.

Katu was referred to the facility where the test was done and confirmed to her to have TB for treatment initiation since the Simba Apparel health clinic doesn't have a MAF number to initiate

patients on treatment.

“At the facility where I was referred, I was counselled again on the importance of adhering to treatment as well as initiated on treatment immediately. They also explained how to prevent spreading the disease to others by covering my mouth with a clean hand chief or elbow when coughing, talking, and or singing,” Katu says.

Katu has since completed treatment and is progressing on well. She is now a TB champion in the company, educating colleagues on the signs and symptoms of TB; a cough of any duration, night sweats, chest pain, loss of appetite and or unintended weight, and urging those with these signs and symptoms to visit the health facility for screening and testing.

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Nancy Gacheri, Centre for Health Solutions – Kenya, USAID TB ARC II Coast Region, Work Place TB Model Coordinator shares that through the engagement, they also conduct regular screening in the workplaces using the digital chest x-ray machines to find the missing cases among the population that doesn't present in the health facilities

"Since we began engagement in October 2022, we have engaged 18 workplaces (Formal and Informal)/ Learning institutions in Mombasa County. Screening is done on daily basis in workplaces with clinics and report monthly on Active Case Finding. We also carry out targeted outreaches in the workplaces without clinics. Through this initiative we have been able to screen 19833 people for TB, 704 presumptive cases identified, 546 tested for TB and 90 patients diagnosed with TB. All the diagnosed TB patients were initiated on treatment," Nancy says.

Kelvin Muema, Simba Apparel human resource officer advocates for the roll out of the model in other workplaces.

"I urge every workplace to adopt this model, as it does not only benefit the employee but also the employer. Through the model, you are able to screen, diagnosis and prevent TB in workplaces hence have a healthy workforce reducing absenteeism from work and low productivity due to disease burden," Kelvin

He adds, " For the workers who are found to have the disease, we support them throughout the treatment journey by offering them a paid sick leave till they are energetic to work and even when back to work, we relieve them from heavy duties till they have fully recovered."

He concludes, "As a result of this engagement, we nowadays conducted regular TB health talks among the staff to raise awareness on the disease, create demand on its services, treatment completion as well as reduce myths and stigma on the disease. Together we can end TB."

USAID TB ARC II in collaboration with the National TB Program is implementing the same model in high volume workplaces in Meru, Laikipia, Machakos, Kajiado, Nakuru, Kericho and Kisumu counties.



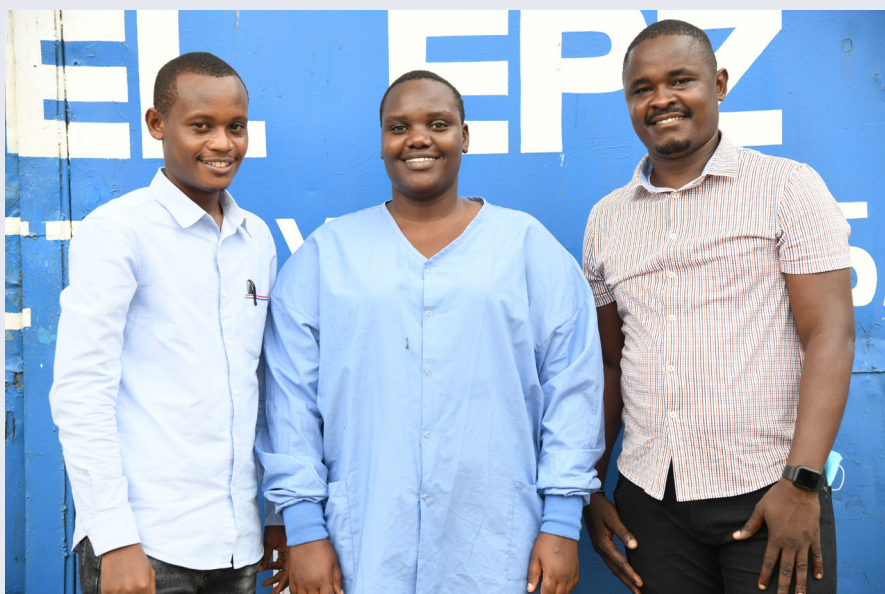
Nancy Gacheri - USAID TB ARC II Coast region TB work place model coordinator providing TB technical support to Sharon Kananu (on the left) and Joyce Mutemi (on the right) the health workers at Simba Apparel health clinic.



(From left) Joyce Mutemi, Kelvin Muema, Delilah Kebo and Collins Omondi some of the Simba Apparel workers supporting the provision of quality TB services in the company.



Kelvin Muema, the human resource officer at Simba Apparel sensitising a worker at the company on the importance of going for TB screening



(From left) Kelvin Muema, Stacey Jekemioi and Collins Omondi pose for a photo during the interview. The three are champions of the TB work place model at Simba Apparel where they hold leadership positions.

The Epitome of Endurance and Resilience

Joseph Ganda's Encounter with MDR -TB



By Martin Wanjala | KCCB Komesha TB

In 2014, Joseph Ooko Ganda, a 49-year-old father of three boys and two girls, was a resident of Nairobi's Kasarani Estate. His occupation at the time was that of a tour operator, and his wife managed a cafeteria within the same vicinity. During this period, Mr. Ganda began to manifest symptoms that included shivering and an elevation in his body temperature as he went about his routine daily activities. Notably, throughout his entire upbringing, he had never encountered a significant illness necessitating hospitalization or rendering him bedridden. Consequently, he regarded these symptoms as inconsequential at the time.

As the days progressed, he started feeling unusual tiredness, loss of appetite and developed a swelling in his throat that began to worry him. All this time, he would self-medicate from a nearby chemist. He became less productive at work as his health deteriorated, and forced him to seek medical attention at a medical clinic in Eastleigh. After the preliminary investigations, he was referred to Kijabe Hospital for a chest X-ray, where he was diagnosed with tuberculosis.

His health continued to regress, and he was unable to go to work, leaving his wife to provide for the family. In light of circumstances, he elected to move with his family to his upcountry residence where it'd be easier to manage the illness while reducing the stress with running his cafeteria business.

Ganda got a transfer to St. Paul's Mission Hospital in Homabay County, where he continued with treatment for

six months and completed his treatment. Boniface, a Clinician at the hospital, said Ganda's adherence to treatment was very good. "I took tuberculosis as any other disease, and I never believed in the myths and followed the instructions for my medication," said Ganda.

Based on his commitment and adherence to treatment, he was enlisted as a Community Health Volunteer (CHV), currently known as Community Health Promoter (CHP), to provide peer-to-peer support to TB patients. Through various capacity-building sessions supported by the USAID Komesha TB program, Ganda gained a lot of knowledge and experience. He was later recruited as a TB Link assistant with a mandate to act as the liaison between the community and St. Paul's Mission Hospital.

A year later (July 2015), Ganda had a relapse that, manifested with symptoms similar to the first TB episode. This would turn out to a subsequent diagnosis of a Multi-drug Resistance TB Bacilli (MDR-TB), which had devastating effects on him. Ganda says "Thanks to the current treatment for drug-resistant TB, which eliminated the injectable TB medications, I had to endure the pain of daily injections for a period of two months." At this time, his condition had worsened, and he could hardly walk but only support himself with crutches.

Boniface Okudoi, the Directly Observed treatment (DOT) clinician to Ganda, noted the mutating bacilli that was not responding to the 2nd line treatment. Thinking that Ganda's poor response to TB treatment could be a result of an



Siaya County Health Management Team led by the County Director of Health during a USAID Komesha TB-supported benchmarking visit at Homabay County MDR-TB Isolation facility.

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immunosuppressive illness, the clinician ordered an HIV test, but the results were negative. Nevertheless, he continued with treatment for two years until he completed it, ensuring recovery and return to normal activities. Afterwards, all was well, and Ganda went about his regular duties as a TB link assistant and would participate in Mass TB screening in informal settlements and health talks at the facility and households in the community where he was known as “Daktari Ganda.”

Community members would refer him to households with ailing members.” I will never forget helping a lady and a boy who were bedridden and abandoned by their families at Shauri Yako and Sofia informal settlements in Homabay County. They were later admitted to St. Paul’s Mission Hospital, diagnosed with TB, and started on treatment.

In 2021, Ganda started again experiencing chest pains and loss of appetite. This time, frustration was setting in, and he wondered what the cause was, yet he adhered to treatment. It reached a point where he quarreled with the clinical team why the drugs were not working, and still, his HIV status was negative. Juliet, a clinician and the TB Focal person at the facility, explained to him about multi-drug resistant TB, and a culture test was done. He was transitioned from the injection treatment to oral medication (Bedaquiline-based regimen) which he took 12 pills for the first two weeks, and later, the tablets were reduced to two.

Ganda got cured in November 2022. He attributes his successful treatment journey to a strong social support system with treatment information from a caring clinical team at St. Paul’s Mission Hospital, emotional support and companionship from his family and empathetic church members who kept visiting him and prayed for him as well as his friends who would send him money for upkeep.

Zacheus Muiruri, the Program Officer at USAID Komesha TB Program – Homabay County, says “Joseph Ganda has been instrumental to the program both at the community and the facility. Ganda has a persuasive power to encourage the community to seek TB screening services and the zeal to encourage other TB patients to adhere to TB treatment. From these attributes, the program officer was convinced that Ganda was the best person to be engaged as the TB link assistant at St. Paul’s Mission Hospital”.

“ I will never forget helping a lady and a boy who were bedridden and abandoned by their families at Shauri Yako and Sofia informal settlements in Homabay County.

Through the collaboration with the National TB Program and County Health Management teams, the USAID Komesha TB program implemented by the Kenya Conference of Catholic Bishops (KCCB) notified 22 cases (Jan 2020 to Aug 2023) of drug-resistant TB (DR-TB) and ensured quality treatment as a result achieving a cure rate of 89%. The program also reached 3,775 healthcare providers with various forms of capacity building in efforts to find, treat, cure TB and sustain the gains in the nine counties of implementation, namely Bungoma, Busia, Homabay, Kakamega, Kisii, Kisumu, Migori, Siaya, and Vihiga.

Komesha TB is Swahili for " End TB". A USAID funded Program run by the Kenya Conference of Catholic Bishops, Kenya

This program is funded by USAID and implemented by the Kenya Conference of Catholic Bishops (KCCB) implementing TB activities through 143 health facilities in nine counties of;

- Kisumu
- Homabay
- Migori
- Kisii
- Siaya
- Vihiga
- Kakamega
- Bungoma, and
- Busia

These facilities are a mix of faith-based facilities and private facilities. The USAID Komesha TB program also engages churches, mosques, schools, and the media with an all-around implementation approach.





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