STOP TB FOCUS GROUP ON AI-BASED IMAGING FOR TB (FG-AITB) WEBINAR 8

Implementing CAD AI and Ultra-Portable X-Ray - Uganda experience from the TB REACH Wave 8 project by Prime TB

To share and learn from early implementation experiences of using ultra-portable X-ray devices and computer-aided detection (CAD) AI software in high-burden countries, Stop TB Partnership is excited to invite you to this upcoming webinar: *CAD AI and X-ray in Uganda - Clinical Validation of the CAD4TB v7 system for the detection of CXR abnormalities associated with TB.*

Wednesday 26th October (8am Washington DC, 1pm Nigeria/DRC, 2pm Geneva, 3pm Kenya/Uganda, 5.30 pm India, 6pm Bangladesh, 7pm Vietnam/Cambodia, 8pm the Philippines, 9 pm Korea)

Presentation	**Access recording below**
https://docs.google.com/presentation/d/1U9c9sDXhyvRjz8NnKBWVX4rJjQa3EA62/edit?usp=sharing&ouid=106144367183648595713&rtpof=true&sd=true	https://drive.google.com/file/d/1UO-fJ0dPVip_TXr0dbw1Ak1_GJPEZX_d/view?usp=sharing

This webinar aims to share the experiences of Uganda in implementing Portable X-Ray and CAD AI, as well as lessons learned during implementation. There will also be the opportunity for attendees to ask questions and discuss any similar issues and experiences they may have faced in their own implementation journeys.

Wider objectives of this webinar and the Focus Group on AI-based Imaging for TB are:

- To facilitate south-south learning on early experiences and exchange lessons learned on CAD AI and X-ray implementation.
- For Stop TB, NTP, implementing partners and manufacturers to understand challenges in planning and implementation and identify solutions.

BACKGROUND

To meet global demand for support in rolling out AI/CAD and digital X-ray, Stop TB launched the Focus Group on AI-based Imaging for TB (FG-AITB), the first global platform that brings together implementers of CAD AI and X-ray.

This is the 6th webinar of a series of webinars hosted by the FG-AITB to share results, challenges faced, and lessons learned from implementers of CAD/AI and X-ray from global country projects and beyond. Implementers will present their experiences in the webinar in the following thematic areas:

- Screening Algorithm involving CAD AI and X-ray

- Digital X-ray & CAD considerations
- Patient Selection
- Results
- Threshold score setting
- Xpert Saving
- Quality control
- Challenges
- Other lessons learned

Webinar 8 will focus on the implementation experience of the TB REACH (Wave 8) project by Prime TB in Uganda.

TB REACH is an initiative of the Stop TB Partnership funded by the Government of Canada, the United States Agency for International Development, the UK's Foreign Commonwealth and Development Office (FCDO), the Bill & Melinda Gates Foundation, and the National Philanthropic Trust. TB REACH was created to test innovative solutions to improve TB case detection and care delivery. Since 2010, TB REACH has supported over 13 pilot projects using CAD/AI and digital x-ray which have successfully been implemented by various partners around the globe. TB REACH projects produced significant contributions to the global fight against TB, and have inspired partners, governments, TB affected communities and other TB stakeholders to adopt and develop new TB innovation.

AGENDA (1.5 HOURS)

Facilitators: Zhi Zhen Qin (Digital Health Specialist, Stop TB Partnership)	**Time *(CEST)***
Welcome Remarks: **Dr Stavia,** Assistant Commissioner, National TB and Leprosy Program, Ministry of Health, Uganda Dr. Stavia is a public health specialist with over 15 years' experience in clinical care and programming for infectious diseases, particularly HIV and Tuberculosis. Dr. Stavia is currently the Assistant Commissioner incharge of the national TB and Leprosy program at the Ministry of Health. In her position, she oversees provision of care and treatment services for DS TB, DR TB, TB preventive therapy and Leprosy. Dr. Stavia has been very active in facilitating the roll out of digital X-ray and CAD technologies to improve TB case detection nationally. **Dr Aldo Burua,** Senior TB Case Finding Advisor, National Tuberculosis and Leprosy Program Is a Public Health Specialist with over 10 years' experience in programming of infectious diseases, particularly HIV/AIDS and Tuberculosis. Currently working with the Ministry of Health - National Tuberculosis and Leprosy Program as Senior TB Case Finding Advisor on	2:00 pm - 2:10 pm *10 mins*

secondment by the USAID Local Partner Health Services TB activity where he leads the scale up of the Active TB case finding toolkit to improve TB case detection and treatment outcomes. Dr. Aldo has also led the roll out of digital X-ray and CAD technologies to improve TB case detection nationally.	
Experience sharing Uganda Clinical Validation of the CAD4TB v7 system for the detection of CXR abnormalities associated with TB: Prime TB **Dr. Stella Zawedde-Muyanja,** Senior Operations Research Advisor, USAID LPHS-TB Is a medical doctor and public health specialist with interest in implementation research to improve provision of TB care services in Uganda. Dr. Zawedde-Muyanja currently works with the Infectious Diseases Institute as senior operations research advisor to IDI's USAID Local Partner Health Services Project (USAID LPHS-TB activity). In this role, she provides technical support for the development and conduct of various implementation research studies. In 2021, supported by the WHO STOP TB Partnership through the TB REACH Wave 8 funding mechanism and working in partnership with the NTLP, she led the research study to clinically validate a new version of computer aided diagnostic technology for the detection of abnormalities consistent with TB (CAD4TB version 7) in the Ugandan population.	2:10 - 2:55 pm *45 mins*
Q&A	2:55- 3:25 pm *30 mins*
Closing remarks	3:25 - 3:30 pm *5 mins*

INVITED PARTICIPANTS

- National TB Programmes, USAID country missions,
- Implementers of digital X-ray with / without AI (iNTP, GF, LON etc)
- Delft Imaging Systems, Fujifilm
- Stop TB, USAID Washington and IDDS

FEEDBACK FORM: HERE

Q/A Session

Q1: Brenda Mungai (Kenya) - Quick question, the calculation on Xpert saving was comparing a score of 0 or what would be practice?
A1: Answered in session by Dr. Stella

Q2: Qader Ghulam (Afghanistan) - What CAD4TB threshold do you recommend in a low HIV setting?

A2: Answered in session by Dr. Stella. Threshold score for HIV negatives was higher. Cutting off at 30 gives 90% sensitivity.

Q3: Inoussa Zabsonre (USA) asked a question in session on HIV screening, if a triangulation study calculation was done.
A3: Answered in session by Dr. Stella - Did not do a CD4L count, only done for newly diagnosed. Was not measured in this study.

Q4: Soe Htut Aung (IDDS Burma) - In the Burma context, we don't routinely ask HIV status to attendees at active case finding activities. So, we need to assume the HIV prevalence at really low rates (assuming attendees as general population). In this setting, I would like to know whether we can set a single value of threshold for all ACF activities, unless that ACF is not focusing on HIV key pop?
A4: Answered in session by Dr Stella - Noted that Uganda has a high HIV burden which is why HIV status is available. In a country with a low HIV burden country, one threshold score can be used unless implementing among key populations

Q5: Brenda Mungai (Kenya) - Did you do a costing comparison, Is so...if you used a score of 50 as "recommended" what would be the additional cost effectiveness?
A5: Answered in session by Dr. Stella

Dr. Austin Ihesie (Nigeria) added: I think the difference between the recommended CAD score from the supplier and the study findings may be dependent on a number of factors which would include - The type of screening algorithm used, the prevalence of TB in the population and the type of population (Community vs Facility-based) used by the suppliers for their data analysis. This study was focused on a facility-based population and used a symptom screen as a first test.

Brenda Added: I think what we have noted is a very very low yield for scores below 40... 2-5% Xpert positivity yield. Thanks for the interesting thought provoking study.