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CHALLENGE TB

TECHNICAL HIGHLIGHT



Implementing TB Activities In Emergency Settings: The South Sudan Experience

Mingkaman IDP camp, South Sudan
Photo credit: WHO/C. Haskew 2016

PROJECT CONTEXT

The World Health Organization (WHO) estimates an annual incidence of all forms of tuberculosis (TB) in South Sudan at 146 per 100,000 population. South Sudan has had consistent annual case increases of about 20% during the last five years with treatment success rates (TSR) stagnating between 75 – 80% over the same period. TB is a major cause of morbidity and mortality in complex emergencies. The incidence and mortality of TB are thought to increase during times of conflict, although notification rates tend to decrease with rising conflict intensity. Armed conflict disrupts health service delivery, diverts resources and contributes to delayed diagnosis and self-treatment (i.e., treatment without biomedical diagnosis and management, possibly using traditional medicines or inadequate anti-TB medicines), leading to increased TB transmission. Because TB treatment is lengthy, it is vulnerable to interruption in such settings, raising concerns over the potential emergence of drug resistance.

Following the 2013 crisis in South Sudan, there was massive displacement of the population who either sought refuge in protection of civilians (PoCs), internally displaced peoples' (IDP) camps or refugee camps. Juba PoC and Mingkaman IDP were among the emergency settings that emerged to accommodate displaced populations. The July 2016 crisis displaced more than 2 million people either internally as IDPs or externally as refugees (BBC media 2017). Currently, the internally displaced population totals about 100,000 in the Mingkaman IDP and 95,000 in the Juba PoC. These two emergency settings presented a hotspot for tuberculosis transmission, as many displaced people lived together in crowded tents and without adequate ventilation, especially in Juba PoC.

In 2014, when the USAID-funded, Management Sciences for Health-led Challenge TB (CTB) project was launched, there were inadequate TB diagnostic services, knowledge gap and low staff capacity, poor referral linkages, no contact investigation, poor case detection rate (CDR) and frequent stock outs of TB medications and supplies.

DECEMBER 2017

SOUTH SUDAN

PROJECT OPERATIONS

The CTB project in year one and two covered a wide geographical area, including three of the 10 states of South Sudan, the greater Equatoria states and provided external quality assessment (EQA) support nationwide. Following the July 2016 crisis and the widespread insecurity, the project geographical area was reduced to focus on Juba City with continued support to the emergency site of Mingkaman IDP camp and Juba PoC.

CTB trained HHP conducting contact investigation in Mingkaman IDP



PROJECT IMPLEMENTATION

BUILDING CAPACITY

(TRAINING, ON THE JOB TRAINING)

To address knowledge gap among health workers, CTB supported training and mentorship of health workers and home health promoters (HHPs). The HHPs are community volunteers trained in TB basic and contact investigation and are tasked with conducting health education, tracing the contacts of bacteriologically confirmed TB cases, and tracing TB patients who are lost to follow up. The CTB project also trained health care workers on TB/ HIV co-management and TB infection control in health facilities. Health care providers were also trained in supply chain management to ensure accurate supply forecasting and reduce stock-outs of essential TB commodities.

CONTACT INVESTIGATION

Contact investigation (CI) was initiated in both Juba PoC and Mingkaman IDP to diagnose active TB among the contacts staying with bacteriologically confirmed smear positive TB patients in the two emergency settings.

CTB procured and distributed bicycles to HHPs in Mingkaman to facilitate contact tracing



CTB trained HHP referring a contact for diagnosis in Juba PoC



The approach entailed a household visit to a bacteriologically confirmed index TB case by trained TB HHPs who screen close contacts of the index case for active TB using WHO screening forms and refer presumptive contacts for diagnosis in a TB diagnostic health facility. This approach was recommended by the Ministry of Health to spearhead the newly launched community health system, known as Boma Health Initiative (BHI).

Steps taken in piloting contact investigation included:

- Adapting CI practices in the context of South Sudan
- Health worker orientation on mapping bacteriologically confirmed index TB cases and assigning HHPs to do CI
- Training TB home health promoters on how to conduct a contact investigation
- Monitoring and evaluation of CI activities

- On the job training and mentorship of HHPs
- Developed and printed TB health education flip chart for HHPs to use when teaching health education

SCALING UP LABORATORY SERVICES

The CTB project trained eight (M8:F0) lab personnel on smear microscopy and laboratory personnel from the two emergency settings on the use of LED microscopy and external quality assessment (EQA). CTB procured and deployed three LED microscopes to Juba and Bentiu PoCs and Mingkaman IDP, and supported the NTP to prepare and coordinate delivery of reagents to the mentioned facilities.

RECORDING AND REPORTING

CTB provided on-the-job training and mentorship of health care workers

on how to record and report case finding, sputum conversion and treatment outcome.

CTB mentored lab personnel on sputum smear preparation



CTB Principal advisor mentoring lab technician on how to record and report in the TB lab register in Juba PoC



RESULTS AND ACHIEVEMENTS

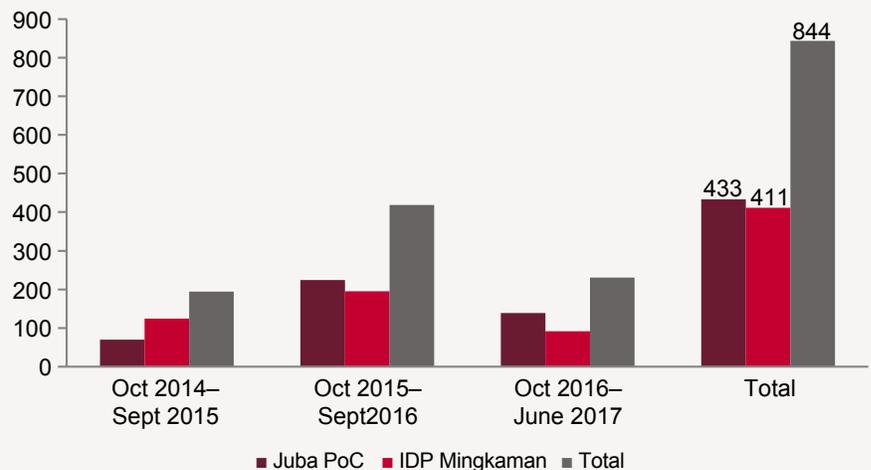
HUMAN RESOURCES DEVELOPMENT

A total of 103 (M81:F22) health care workers (cadres included clinical officers, nurses, midwives, pharmacist, lab technicians and a doctor) and 215 (M170:F45) HHPs were trained in Juba PoC and Mingkaman IDP camp. Challenge TB, together with NTP, continued to provide onsite mentorship and supportive supervision. To improve data quality, CTB in collaboration with NTP supported the review of treatment guidelines, recording and reporting tools, standard operating procedures (SOPs) and produced TB/HIV health education flip charts that were distributed to facilities in Juba PoC and Mingkaman IDP.

CASE NOTIFICATION

Through CTB support, quality TB services are more accessible to

FIGURE 1: TB case notification in Mingkaman IDP camp and Juba PoC, October 2014-June 2017



the displaced population in the Juba PoC site and Mingkaman IDP camp. Between October 2014-June 2017 (Figure 1), 433 TB cases were notified in Juba and 411 TB cases were notified in Mingkaman. This

represents prevalence of 456 and 411 per 100,000 populations in Juba PoC and Mingkaman IDP (estimated 95,000-person population in Juba PC and 100,000-person population in Mingkaman IDP).

EXTERNAL QUALITY ASSESSMENT (EQA)

In South Sudan, the EQA network started in 2012 with the aim of ensuring AFB microscopy results are accurate and reliable. The EQA is part of the lab quality improvement strategy stipulated in the national strategic planning documents. Until 2014, EQA was performed in only 12 laboratories with a number of irregularities due to insufficient trained

laboratory technicians on EQA slide randomization. Because of the need to expand EQA in the country, CTB factored indicators on EQA into its annual work plan and started collecting and reporting on EQA data in October 2014. In year 2 and 3, CTB decentralized EQA activities by training 34 lab technicians and 29 county focal persons from the greater equatorial states on EQA.

TABLE 2: EQA results for Juba PoC

	Q3, 2015	Q4, 2015	Q1, 2016
Total number of smears done	89	220	235
Total number of positive smears	06	19	33
Number of scanty smears	00	00	00
Total number of Follow-ups during	02	07	28
Positive among follow-ups	00	01	00
Scanty among follow-ups	00	00	00
Slide positivity rate	6.7%	8.6%	14%*

As illustrated in TABLE 2, there was no major error detected.

* This high positivity rate is mostly as a result of the Juba Teaching Hospital, which is the main national referral center. Most cases referred to this center are highly suspected TB cases

WAY FORWARD

CTB as a global project ends in 2019. Despite challenges of operating in emergency settings, the South Sudan Challenge TB project has been able to support improvements in case notification, slide positivity rate and data quality. Unfortunately, the CTB project in South Sudan prematurely ended in 2017. Projects working on the humanitarian and emergency side are enhancing their efforts to alleviate

the sufferings of the South Sudanese. It is ironic, however, that the only USAID supported mechanism for TB in South Sudan is pulling out prematurely when it is much needed to support the Boma Health Initiative. CTB stresses the urgency for more programs like this to continue delivering much-needed quality TB care services in emergency settings.

Acknowledgements

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