Tuberculosis (TB) is now the foremost infectious disease killer globally.

In 2017, WHO estimated that about 22,000 TB patients went undetected in Zambia.

The majority of the ‘missing’ cases are found in the large peri-urban slums, informal settlements, and shanty towns in the large cities of TB-endemic countries.

An untreated TB patient may on average infect between 10 and 15 others prior to presentation to a health care facility.

Active case-finding (ACF) in the community is one of the strategies to find the ‘missing’ people with TB.

Challenge TB procured a containerized mobile digital X-ray with a laboratory.

Challenge TB conducted ACF activities in Kitwe and Ndola Districts (Copperbelt Province) and Kabwe District (Central Province).

Challenge TB worked in collaboration with provincial and district offices using local radiology, laboratory, clinical, and public health staff as well as community health workers to conduct ACF activities.

Demand creation activities included radio programs, public announcements, and drama performances.

Digital X-ray was used as primary screening tool to identify presumptive TB cases (CAD4TB score ≥ 50) who were eligible for Xpert testing.

The eligibility for Xpert testing also included clients with CAD4TB score < 50 but with clinical symptoms suggestive of TB.

Conducted orientation of staff, including community volunteers, in the ACF process.

3,738 people were registered and screened for TB symptoms.
612 (16%) were presumptive TB cases.
538 (88%) of presumptives were tested using GeneXpert.
57 (11%) were bacteriologically confirmed TB and were notified and promptly initiated on TB treatment.
17 (3%) were clinically diagnosed with TB despite normal CAD4TB scores.
2,876 (77%) clients accepted HIV testing of whom 51 (2%) tested positive and were initiated on ART.
19 (33%) patients were TB/HIV co-infected
One patient had rifampicin-resistant TB (RR-TB) and was initiated on the shorter treatment regimen at Ndola Teaching Hospital².

Combined TB Case Notification through ACF
(March 2018 - 10 days/March 2019 - 10 days/May 2019 - 11 days)

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LESSONS LEARNED

- More data is needed to determine cut-off point for CAD4TB score that will not miss TB cases. The RR-TB case found in this activity had a CAD4TB score of 58 and could have been missed if a higher score was used.
- Orientation in ACF activities for all staff and other stakeholders may contribute to effective implementation of the intervention.
- Intensified training and supervision in sputum collection and requesting an early morning sample for clients who experience difficulties to produce sputum on-the-spot may produce better quality specimens.
- Interpretation of images on-site or through remote support by an experienced Radiologist can improve service provision especially for problematic cases where the chest X-ray was positive but Xpert negative.
- Use of an electronic information system will reduce data management issues and facilitate patient/result tracking.
- Community TB IPC should be included when conducting ACF activities to ensure the prevention of TB transmission.

CONCLUSIONS

- There are significant numbers of undiagnosed TB cases in poor urban communities.
- Targeted ACF exercises in densely populated communities at high risk of TB can contribute to finding missing TB cases.
- The activities found 74 patients infected with TB going about their business in the community and infecting others.
- Although conducting ACF activities may appear costly, these numbers may advocate for the long-term benefits of such strategies.