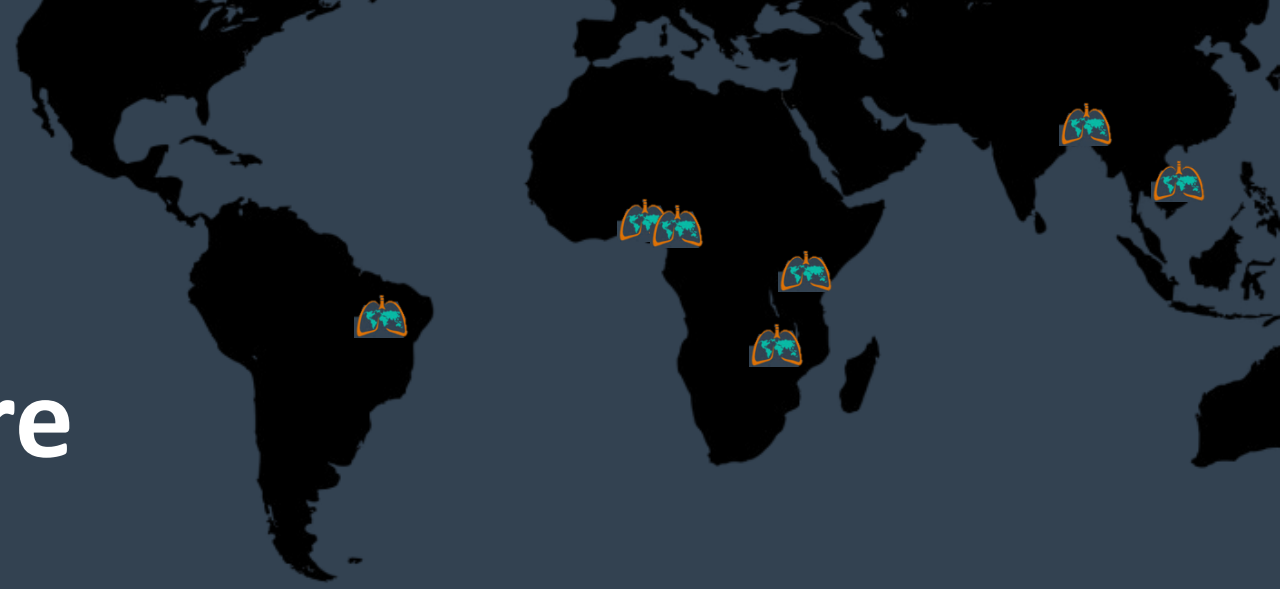
Pooled Testing for TB – Evidence Gaps and Future Priorities



Jacob Creswell, Stop TB Partnership

ASLM LabCoP Webinar | 16 April 2026

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Current WHO Recommendations

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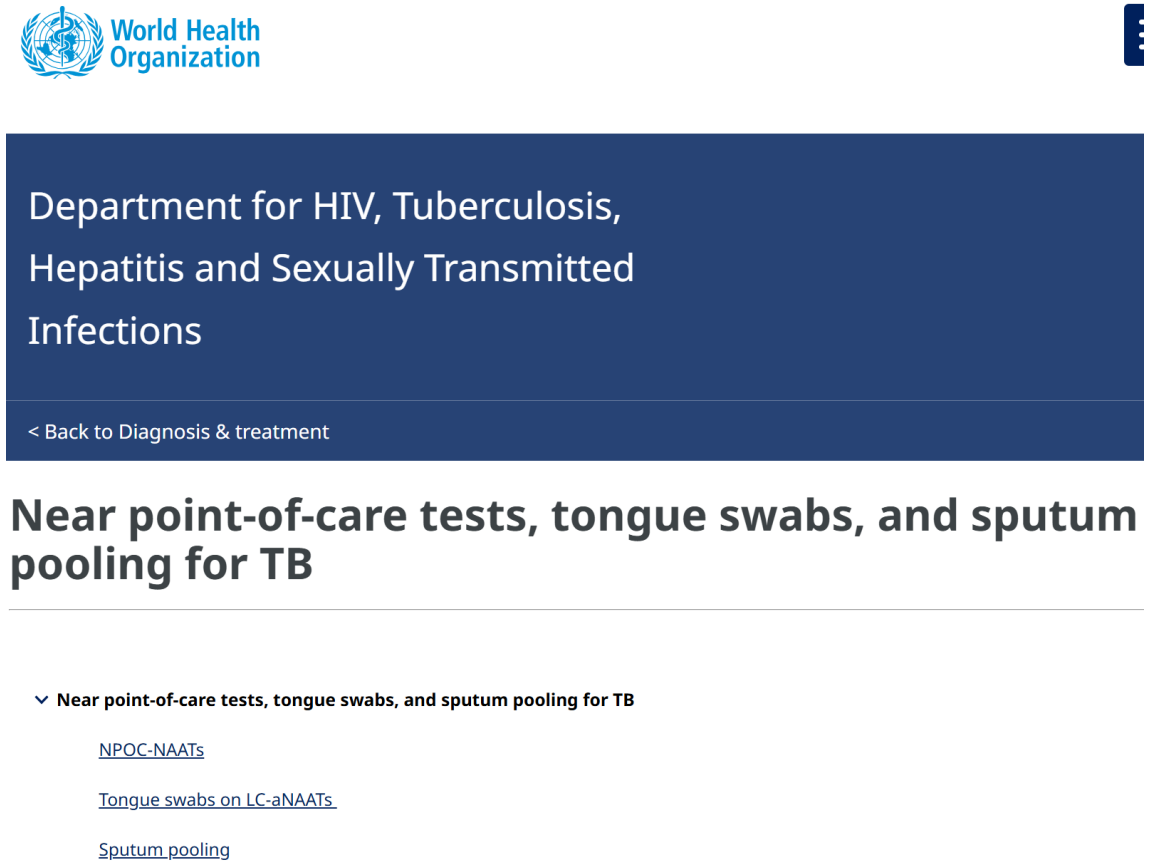
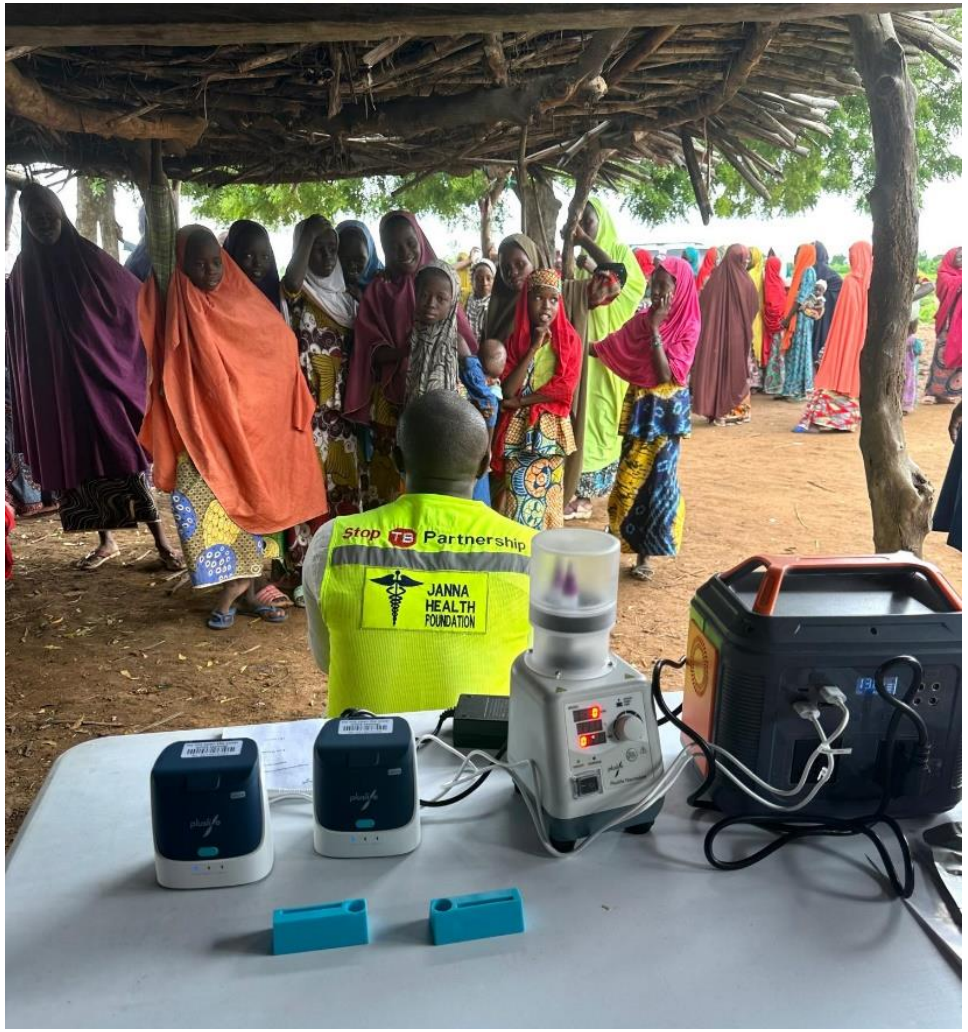
- 2026 WHO recommendations are conditional
- Proposes pools from 2-4 samples
- Only includes data from Xpert testing
- Adults and adolescents included
- Doesn’t include PLHIV (limited evidence), children (insufficient evidence), or individuals at increased risk of drug resistance

‘When resources are limited’



Future Work Needed

- Pooling is disease and system agnostic – use with other platforms (Pluslife)
- Already underway as part of TB REACH-supported work in Cameroon (groups of three) and will be included in Start4All Phase 2
- Early results look promising, dilution with swab tests may be less of an issue
- Some work with Truenat pooled testing as well underway



Future Work Needed

- Pools of more than 4: in practice and in a few studies, this is being been done
  - At low positivity rates, could pools of 5, 6 or have sufficient sensitivity?
- Pooling in different populations
  - Should not make a difference for specific populations – but rather for bacterial load in those populations.

Future Work Needed

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- Pooled testing efficiency depends on positivity rates
- AI for CXR provides an abnormality score that increases conveys a likelihood of TB.
- Could using AI help decision making for deciding if people need individual or pooled testing?
- Initial modelling is promising and will be tested prospectively in Start4All Phase 2

RESEARCH Open Access

Expanding molecular diagnostic coverage for tuberculosis by combining computer-aided chest radiography and sputum specimen pooling: a modeling study from four high-burden countries

Andrew James Codlin[1,2†], Luan Nguyen Quang Vo[1,2†], Tushar Garg[3], Sayera Banu[4], Shahriar Ahmed[4],

Future Work Needed

- Everyone who has a positive test for TB should get an initial rapid DST (Xpert/Truenat)
  - In many settings RIF resistance is very low.
  - For people with positive Pluslife results, is pooled testing for RIF resistance feasible?
- Math is clear – how does this work in practice?
  - Documenting gains in access to molecular tests the real world, how transport systems are employed, what changes are needed to drive larger numbers of people with presumptive TB?
  - How to integrate with NPOC tests?

Future Work Needed

- Documenting pooling processes in lab
  - Who makes decisions, what resources are needed, how to lab techs work with pooled testing?
- Both NPOC and pooled testing saw drop-offs in performance with very low and trace Ultra semiquantitative results
- What does this mean for different screening populations?
- For ACF? Primary care level? How do yield patient characteristics matter for bacillary load?

The Start4All Partnership

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For more information, see our online Acknowledgements page:
www.lstmed.ac.uk/start4all/acknowledgements

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