

Prevalence of *M. tuberculosis* in sputum among clinic attendees compared with the surrounding community in rural South Africa: implications for finding the missing millions

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Introduction	Methods	Results															
<ul style="list-style-type: none"> Active TB case finding efforts are typically directed towards symptomatic people attending health facilities Aim: to compare TB prevalence among <ul style="list-style-type: none"> adults attending primary healthcare facilities (PHCs) vs. adults in the same community 	<table border="1"> <thead> <tr> <th></th> <th>PHC</th> <th>Community</th> </tr> </thead> <tbody> <tr> <td>Setting</td> <td colspan="2">AHRI demographic surveillance area (DSA), Umkhayakude district, South Africa</td> </tr> <tr> <td>Study design</td> <td>Cross-sectional survey in 2 clinics</td> <td>Community-wide multimorbidity survey</td> </tr> <tr> <td>Participants</td> <td>Random sample of adult clinic patients</td> <td>Adult DSA residents attending mobile clinics</td> </tr> <tr> <td>Procedures</td> <td>Questionnaire, sputum specimen from all</td> <td>Questionnaire, chest radiograph from all and sputum specimen if symptomatic or pregnant</td> </tr> </tbody> </table>		PHC	Community	Setting	AHRI demographic surveillance area (DSA), Umkhayakude district, South Africa		Study design	Cross-sectional survey in 2 clinics	Community-wide multimorbidity survey	Participants	Random sample of adult clinic patients	Adult DSA residents attending mobile clinics	Procedures	Questionnaire, sputum specimen from all	Questionnaire, chest radiograph from all and sputum specimen if symptomatic or pregnant	<ul style="list-style-type: none"> Prevalence of sputum culture confirmed <i>Mtb</i> among: <ul style="list-style-type: none"> clinic attendees: 1.0% [95% CI 0.6–1.5%] community members: 0.6% [95% CI 0.4–0.7%] Estimates remained the same when weighted for non-response. Further details shown in attached figure and tables
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TB case finding based on symptom screening and limited to health facilities will miss many people with active disease.

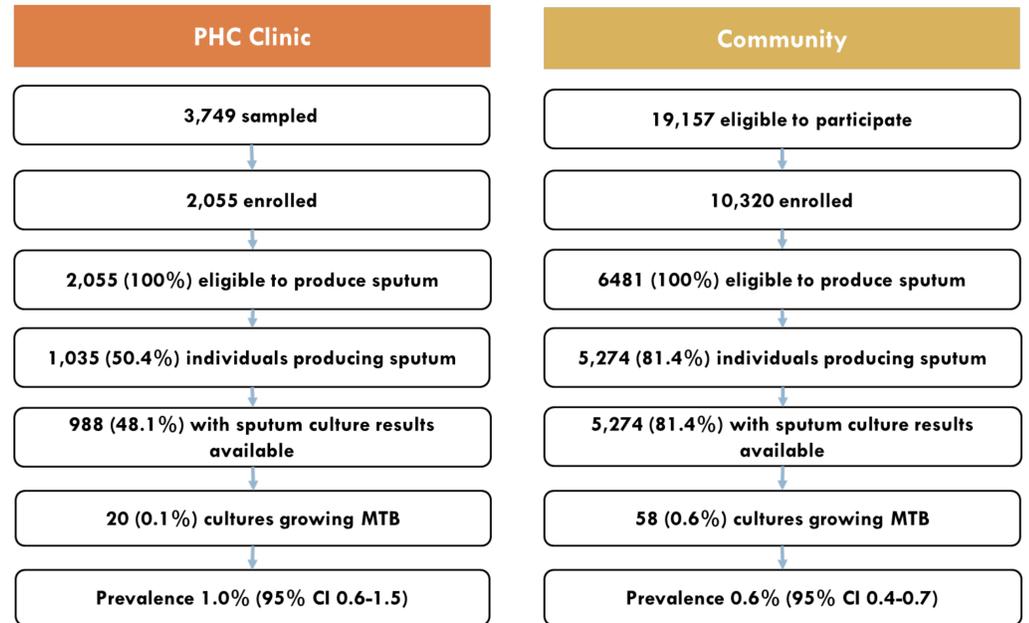


Fig 1. Summary of enrolment cascade for both studies

Characteristics of enrolled participants by study		
	PHC Clinic (N = 2055)	Community (N = 10320)
Age, median (IQR)	36 (28 - 48)	38 (23 - 58)
Female: N (%)	1580 (76.9)	7049 (68.3)
Previously treated for TB: N (%)	509 (24.8)	2414 (23.4)
HIV status [†] : N (%)		
Negative	536 (26.1)*	7151 (69.3)
Positive	1479 (72.0)*	3105 (30.1)
On ART	1463 (99.0)*	2714 (87.4)
≥1 TB symptom: N (%)	131 (6.4)	1091 (10.6)
Cough	83 (4.0)	717 (7.0)
Loss of weight	72 (3.5)	281 (2.7)
Night sweats	67 (3.3)	75 (0.7)
Fever	39 (1.9)	18 (0.2)
CAD4TB score > 25: N (%)	-	5491 (53.2)
Pregnant: N (%)	Not recorded	328 (3.2)

*self-report and clinical record review; [†]40 (1.9%) with missing/unknown HIV status in the facility-based survey

Characteristics of participants with positive tests for <i>Mtb</i> by study		
	MGIT positive only	
	PHC Clinic (N = 20)	Community (N = 58)
Age, median (IQR)	37 (32 - 46)	48 (30 - 64)
Male: N (%)	9 (45.0)	28 (48.0)
TB treatment history		
On treatment	2 (10.0)	4 (6.9)
Previously treated	5 (25.0)	6 (10.3)
No history	13 (65.0)	48 (82.2)
HIV status, N (%)		
Negative	5 (25.0)*	31 (53.4)
Positive	15 (75.0)*	26 (44.8)
On ART	15 (100.0)*	21 (80.8)
≥1 TB symptom: N (%)	6 (30.0)	13 (22.4)
TB resistance profile, N (%)		
Rifampicin monoresistance	1 (5.0)	2 (3.4)
Multidrug resistance	4 (25.0)	9 (15.5)

*self-report and clinical record review

Discussion

- Prevalence of *Mtb* in sputum was higher than community, but the absolute difference was small and CIs overlap.
- Work towards understanding the relative contribution of asymptomatic people to TB transmission is ongoing.
- Limitations: both surveys relied on a single sputum specimen.