



 IAS 2021



What can we learn from a male-centered tuberculosis response? Insights from Eastern Cape, South Africa

Men and HIV in sub-Saharan Africa: Men as patients, peers in service delivery and healthcare providers

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Global Burden of TB Rests Upon Men

- 1998: WHO Global TB Report shows data that men have higher burden of TB compared to women
- 2013: WHO Global TB Report finally says men have a higher burden of TB compared to women
- 2019: ~10 million fell ill with TB disease and 1.4 million died
 - **Adult men** accounted for **56%** of people that developed TB globally
 - **Adult women** accounted for **32%** of people that developed TB globally
 - **Children** accounted for **12%** of people that developed TB globally

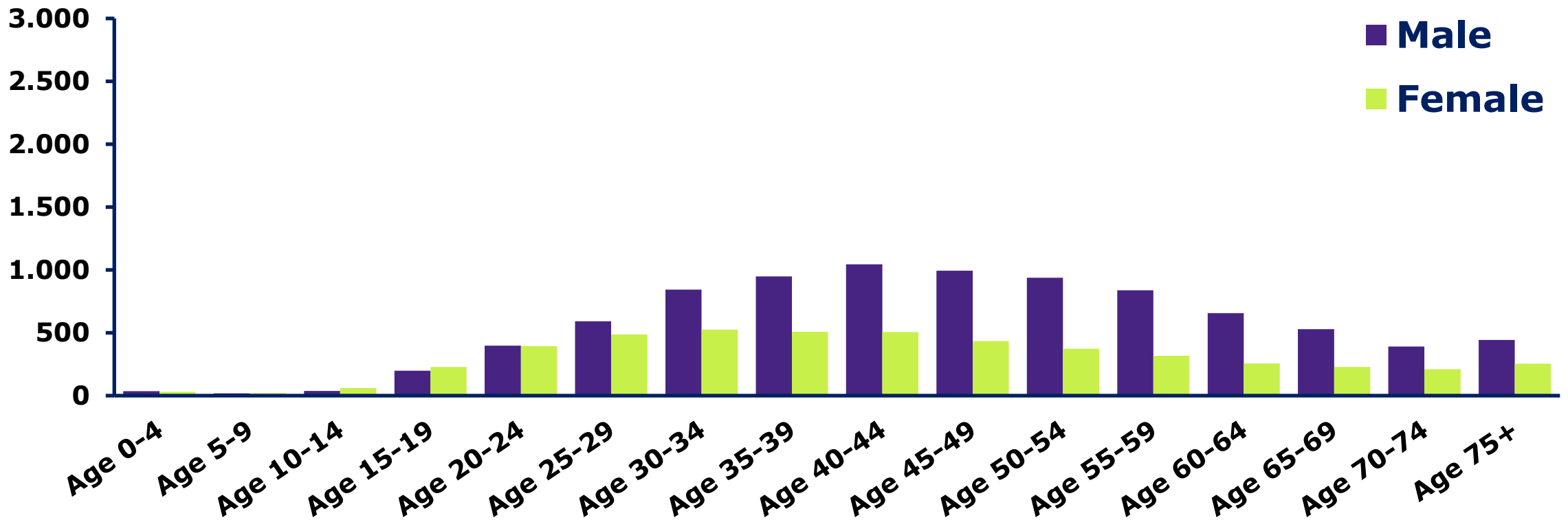
TB in South Africa

- Leading cause of death in South Africa
- Responsible for large portion of differential life expectancy between men and women (Reniers *et al.*, *PLoS One*. 2017;12(10))
 - 81% of 11.2-year life difference among those with HIV
 - 43% of 13.1-year life difference among those without HIV
- REMoxTB Study:
 - Men were 2.78 (CI: 1.59–4.84; < 0.001) more likely to have adverse treatment outcomes compared to women due to cavitation from previous TB infections (Murphy *et al.*, *BMC Med*. 2018;16(1))

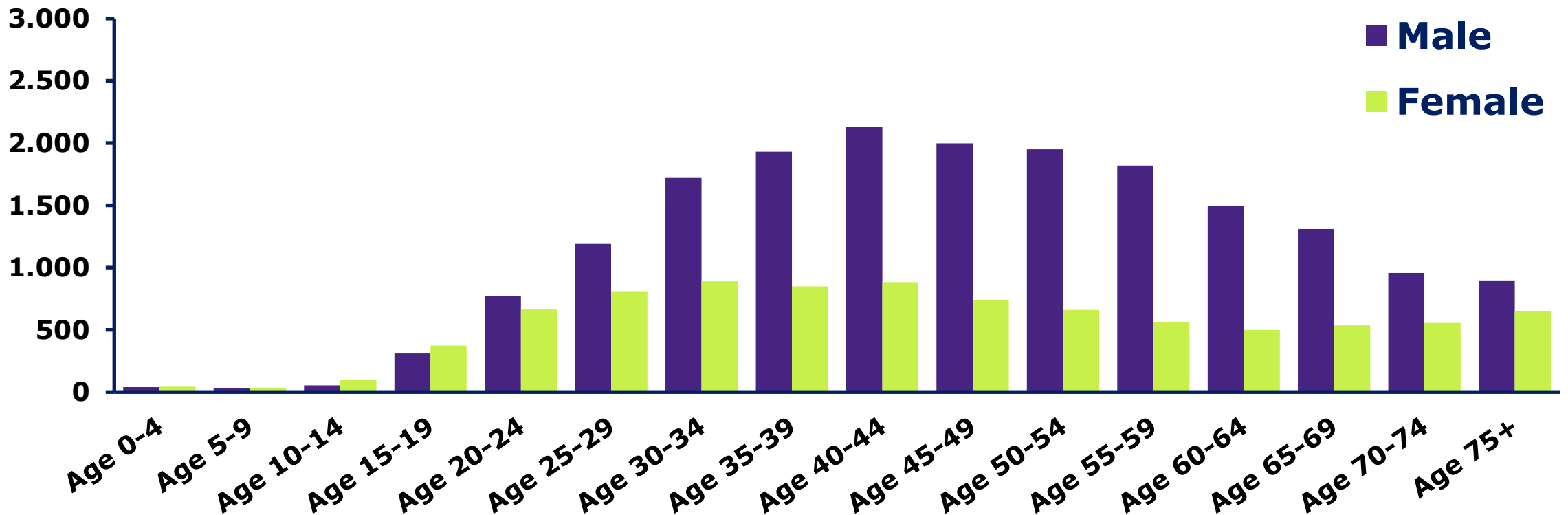
TB in South Africa

- Eden District TB Outcomes Study found that male sex was independently associated with:
 - smear non-conversion (AOR=1.68; 95% CI=1.21–2.33, $p=0.002$) (Mlotshwa *et al.*, *BMC Inf. Dis.* 2016;16(365))
- Men are more likely:
 - to be lost-to-care
 - die while engaged in treatment
- In 2017, 63% of microbiologically confirmed cases of TB were among men

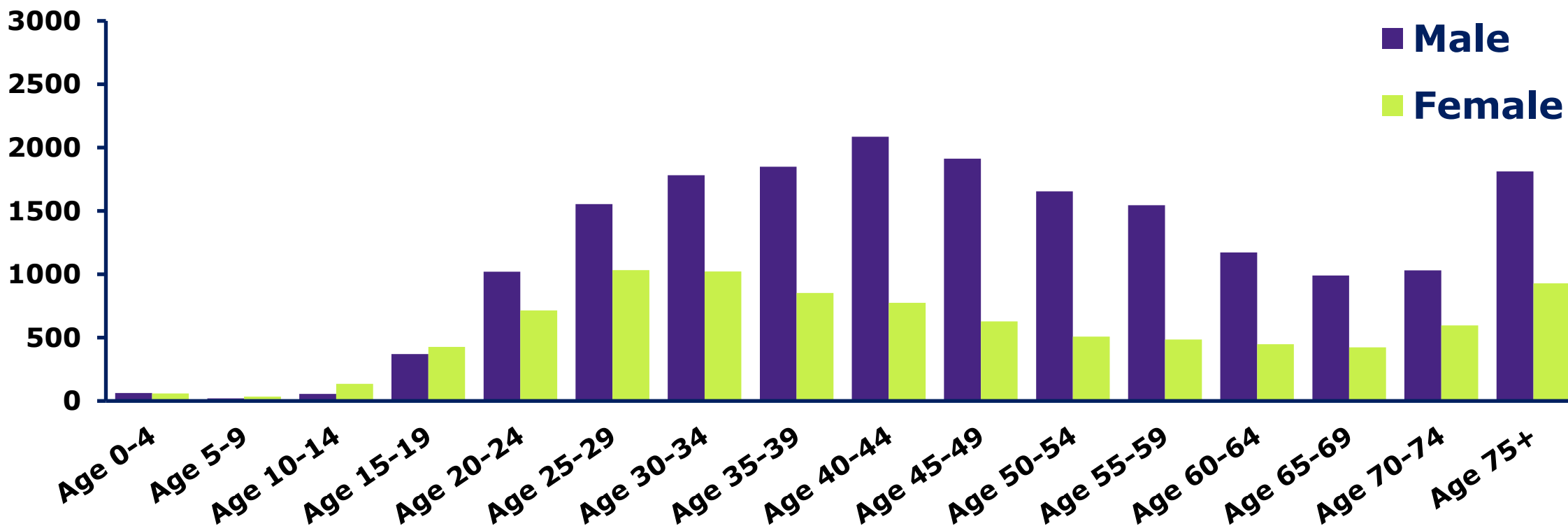
TB incidence by sex and age group – South Africa, 2017



TB incidence by sex and age group – Eastern Cape Province, 2017



TB incidence by sex and age group – Buffalo City Metro District, 2017

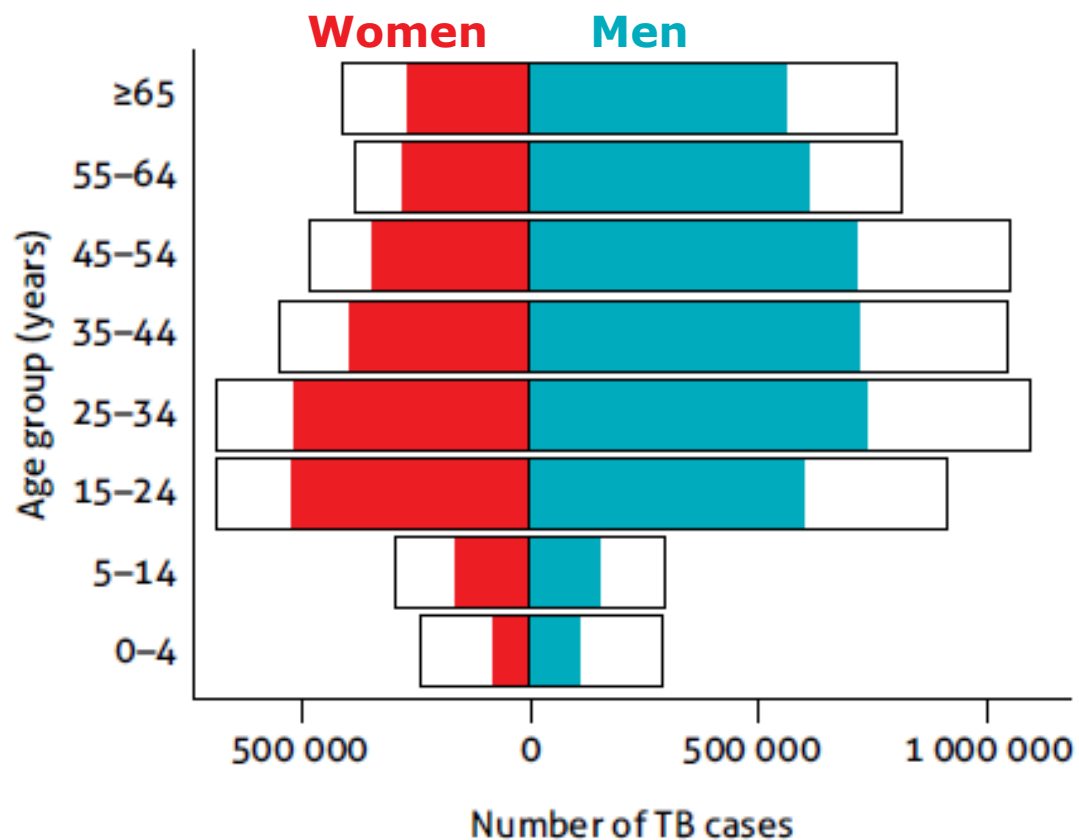


South African national TB prevalence survey - 2018

	Prevalence per 100,000	95% CI
All Ages, All Forms	732	580 - 890
Adult Pulmonary TB, Age ≥15	852	679 - 1,026
Male	1,094	835 - 1,352
Female	675	494 - 855
Age category		
15-24 years	432	232 - 632
25-34 years	902	583 - 1,221
35-44 years	1,107	703 - 1,511
45-54 years	1,063	682 - 1,443
55-64 years	845	505 - 1,186
65+ years	1,104	680 - 1,528

For every 1 case of TB in women, there are 1.62 cases in men

Global TB case notifications by age and sex – 2018



- Gaps in case detection and reporting high among men
- Men are ~70% of cases we are missing
- Women access diagnostic services more effectively than men
- Men not benefiting from gender equity or gender-transformative responses
- Need for strategies to improve access and uptake of health services among men

Given the global and South African specific gender disparities in TB prevalence, uptake of diagnostic testing, treatment initiation and outcomes, we sought to identify and implement an intervention that would address and decrease the serious disparities among men



RESEARCH ARTICLE

Adherence interventions and outcomes of tuberculosis treatment: A systematic review and meta-analysis of trials and observational studies

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Adherence interventions and outcomes of tuberculosis treatment: A systematic review and meta-analysis of trials and observational studies

- Identified 129 papers relating to TB treatment adherence
- None were male-centered interventions
- Reviewed papers after 2005 (n=76)
- Only 17 of 76 intervention papers disaggregated results by sex
 - 5 reported significantly better outcomes for women, but no effect among men compared to the control
 - 8 reported improvement among men compared to control group, but women still did better than men
 - 4 reported no improvement for either men or women compared to the control

RESEARCH ARTICLE

Adherence interventions and outcomes of tuberculosis treatment: A systematic review and meta-analysis of trials and observational studies

- **At worst:** Uneven reporting of sex-disaggregated results perpetuate gender disparities
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- **At best:** Poor reporting of sex-disaggregated results makes it difficult to identify interventions that can be adapted or optimized to improve men's TB-related outcomes

TOWARDS THE IDENTIFICATION OF PREFERENCES FOR AN INTERVENTION TO SUPPORT MEN'S ENGAGEMENT AND RETENTION IN TB CARE AND TREATMENT

Pilot study: Design and methods

- Buffalo City Metro Health District (BCM), Eastern Cape Province, South Africa
- Cross sectional, qualitative study
- Clinic-based recruitment of men engaged in the TB care cascade
 - men that successfully completed TB treatment (n=15)
 - men currently engaged in TB care and treatment (n=15)
- Guided by the Network-Individual-Resources (NIR) Model
- Developed and administered in-depth interview guides to explore men's:
 - Domain: Social network composition
 - Domain: TB testing and clinical care experiences
 - Domain: Disclosure to and support from family and friends
 - Domain: Treatment and support preferences
- Analysis used constant comparison approach informed by the NIR model

Results: Peer-to-peer support

Men described their desire and willingness to support other men during TB treatment with both mental and tangible resources:

*"I would give him words that encourage him. Or in the case that he is shy to go pick up [treatment] at the clinic, I wouldn't have a problem with going and fetching the treatment for my friend."
– 40 years, in treatment*

*"They [men] need people to understand and have someone they can talk to. When you don't have someone to talk to, it is the same as if you are locked up within yourself. I would be happy if I knew that my friend is taking this treatment and is having a problem, so I could also advise him to try this way [taking his medication with a meal etc], as far as I can help him."
– 29 years, completed treatment*

*"I would show them [men] myself as I have walked the same path [experiencing TB treatment]. It is not easy taking this treatment, but I would show the friend a living example, which is me. I have completed [treatment] in front of him and pray that I will be a better example to him since I also come from the same situation. I have swam and crossed and he also can swim across."
– 26 years, completed treatment*

Results: Engaging men in men's spaces

Many men spoke about spaces where they felt comfortable talking about men's issues and suggested that these spaces may be conducive for a conversation about TB. A common theme was that these spaces were primarily dominated by males:

"We, as men, have a lot of secrets and more especially Xhosa men, they are stubborn, I do not want to say they are clueless, yes stubborn is the word. They need a comfortable environment like when we talk about things such as HIV. This is when we are drinking alcohol, that's when people can talk openly."

– 26 years, completed treatment

"There near the [community] toilets because that's where you normally find men sitting and playing dice. You know even if you come and stop here, and since you also know me my brother, it will be easy to come and start a conversation and a lot of people will listen."

– 29 years, completed treatment

Results: Isolation and need for connectedness

Men reported feeling isolated from their families and communities during TB treatment and advocated for community awareness to reduce their isolation:

And, the fact that my girlfriend left me, and my mother started to stay with her boyfriend, I really lost focus. I left treatment where I stayed because I was now alone. So, I decided to go back on smoking again and that was my mistake.
– 26 years, in treatment

"It is embarrassing to go to the next-door neighbours and ask for food...maybe there are a lot of people who want to take their treatment, but there are things that they wish they had but don't have, so they end up not taking this treatment."
– 29 years, completed treatment

"On weekends make something like a promotion for TB. You go there with a poster and things plugged on the walls that say 'let us prevent TB' and if you already have it here are the things you will face. Try make it something fun and also have a mobile testing station..."
– 24 years, in treatment

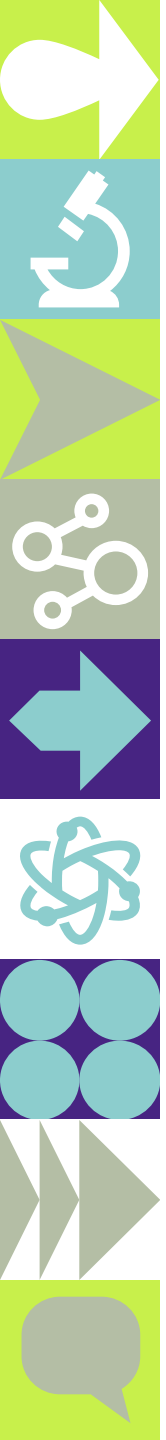
Conclusions

- Men experienced anticipated and enacted stigma
 - embarrassment to seek help
 - isolation perpetrated by family and community members
- Emphasized peer-to-peer support in order to navigate TB-related stigma and unhealthy masculinity norms
- Advocated for awareness events to educate their communities about the challenges men face when ill with TB
- Interventions should be delivered in familiar locations where men congregate
- To date, no TB treatment support interventions have included the preferred components or modes of delivery described by men in our study

Recommendation

- Global TB community must engage and consider men's voices when designing interventions to improve their TB health outcomes
- Empower men to challenge unhealthy masculinity norms that impact their health
- Men's unique challenges must be identified and addressed
- One-size-fits-all approach not working, and ignoring men's voices will sustain and worsen the epidemic for all

Current and on-going work



Project #1: Identifying Preferences for a Male-Centered Intervention to support Men's Engagement and Retention in TB Care and Treatment; NIH/NIAID (R21AI148852)

Project #2: Measuring Real-Time Influences of Mental and Tangible Resources on Men's TB Treatment Lapses and Adherence Behaviors; NIH/NIAID (R21AI163977)

Final Thoughts.....

- Men blamed for their own poor health outcomes, especially when impacted by their sense of manhood/masculinity
- Health systems and global health community:
 - Have minimized their own responsibility to respond
 - Must acknowledge unrealistic societal expectations put upon men, which...
 - Presents men with unique challenges that impact accessing and engaging care
- To reduce TB burden among men, tailored interventions must be informed by men's needs, preferences and voices

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