

South African men are much more likely to die from TB than women—here's why

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Around the world, [men](#) are more likely to get TB and to die from it than

women.

We recently conducted [research](#) to establish the various factors that explain higher rates of TB among men in South Africa. South Africa is ranked among the top six countries contributing to [60%](#) of the global burden of TB.

Our main finding was that men are [70%](#) more likely to develop TB and die from the disease, compared to [women](#). We estimated that in 2019, 801 per 100,000 adult men developed TB while among women the rate was 478 per 100,000.

Current TB interventions focus on biomedical approaches emphasizing preventive TB medication, diagnosing TB patients and treating them with anti-TB drugs.

Our research demonstrates, however, that dealing with socioeconomic conditions and other determinants of TB is also important.

Men's access to [health facilities](#) needs to be improved and there needs to be more effort to encourage men to seek medical care.

Our math model

We used our Thembisa TB model, recently developed at the Center for Infectious Disease Epidemiology and Research at the University of Cape Town.

This [mathematical model](#) simulates the South African adult TB epidemic over time.

Because HIV is the most significant risk factor for TB and the primary driver of the epidemic, the TB model is combined with an existing

[Thembisa HIV model.](#)

Approximately 60% of individuals with active TB are also [living with HIV](#).

The model showed that between 1990 and 2019, South African men developed TB and died at consistently higher rates than women.

We estimated that in 2019 there were 1.6 times more new TB cases and 1.7 times more TB deaths in men than in women.

Our results are all the more startling because HIV is more [prevalent in women](#) than men. The expectation would then be that women should have a higher TB incidence.

Some of the risks

Other [factors](#) contributing to the high TB epidemic among men included [excessive alcohol use](#), smoking, diabetes and undernutrition.

We estimated that of the 801 per 100,000 [adult men](#) who developed TB in 2019, 51% were attributable to heavy alcohol use, 30% to smoking, and 16% to undernutrition.

The numbers for women were much lower. Of the 478 per 100,000 adult women who developed TB in 2019, 30% were attributable to heavy alcohol use, 15% to smoking, and 11% to undernutrition.

Low testing rates

We showed that lower testing rates and delays in starting TB treatment among men contributed to 7% higher mortality.

- Previous research has found that men are more likely to have [jobs](#) and it was more difficult to take time off to go to the clinic or secure treatments as it would affect their [earnings](#).
- Men were also often [older and sicker](#) when they sought [health care](#) and were more likely to stop treatment.

Our analysis showed that women benefited more from accessing HIV health care services, including HIV testing and antiretroviral therapy initiation. This significantly reduced TB incidence and mortality.

- We estimated that in 2019, mainly due to treatment for HIV, TB cases dropped by 38% in women. There was also a 52% reduction in deaths.
- In contrast, TB cases among men dropped by 18% and there was a 29% reduction in deaths.

Next steps

The higher tuberculosis incidence and mortality in men highlights the need to make [health services](#) more accessible to men and address the structural barriers to their retention in tuberculosis and HIV care. [Mobile clinics](#) could be circulated at places of work to provide testing for TB, HIV and other potential co-morbidities.

Additionally, there is a need for effective socioeconomic interventions.

- A [review of studies](#) conducted across the world has shown that [anti-smoking](#) programs driven by health practitioners and [family members](#) have achieved success rates of up to 82%.
- Self-help programs to stop [excessive alcohol consumption](#) need to be complemented by structural interventions such as increased [alcohol taxation](#) and stricter enforcement of the laws [restricting](#) the sale of alcohol.

- A recent trial conducted in India showed that providing households with food baskets to improve nutrition could [reduce TB](#) by 50%.

Although biomedical approaches have led to declines in the TB epidemic, South Africa still remains classified as a [high TB burden](#) country.

Medical treatment needs to be complemented with measures to tackle socioeconomic conditions. Only then will we make real progress in reducing the TB epidemic in South Africa.

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