

According to the World Health Organization, an estimated 304 000 people in South Africa fell ill with tuberculosis and 56 000 died from the disease in 2021.

## 56 000 TB deaths in SA in 2021, estimates WHO

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In 2021 an estimated 304 000 people in South Africa fell ill with tuberculosis and 56 000 died from the disease, according to new World Health Organization (WHO) figures released on Thursday. The figures were released together with the latest edition of the WHO's annual Global Tuberculosis Report

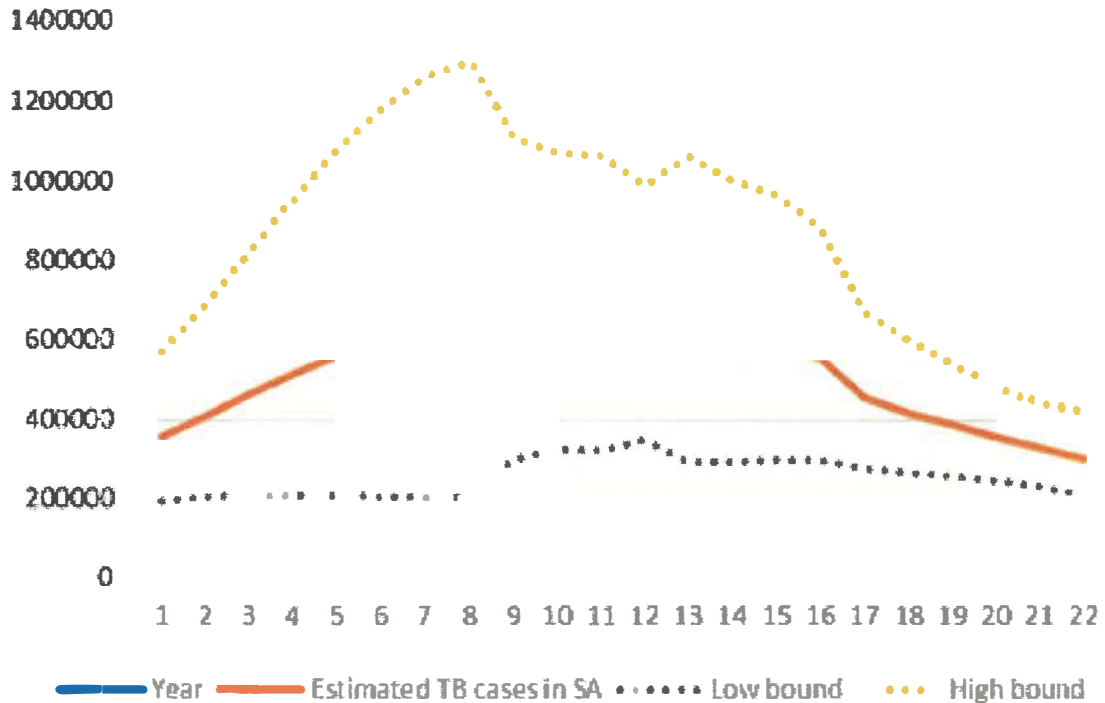
Professor Kogie Naidoo, Deputy Director of the Centre for the AIDS Programme of Research in South Africa (CAPRISA), says the new WHO estimates should serve as a wake-up call for South Africa.

"We need to pay attention, not just [to] our numbers, but what this means towards ending TB in our lifetime for TB elimination. It's a wake-up call for all of us to recognise that we're not going to meet our aspirational goals of a 90% reduction in TB deaths by 2030," she told Spotlight.

## **304 000 TB cases in 2021**

The estimate that 304 000 people fell ill with TB in South Africa in 2021 is somewhat lower than may have been expected based on estimates in previous years. There is, however, significant uncertainty about the true number - the WHO indicates a confidence interval of 207 000 to 421 000. The 304 000 estimate is, however, roughly in line with estimates (<https://pubmed.ncbi.nlm.nih.gov.ezproxy.uct.ac.za/35872098/>) from Thembisa TB, a recently developed TB version of South Africa's leading HIV model.

## Estimated TB cases in SA



Graph by Spotlight, based on data released by the World Health Organization on 28 October 2022.

*The solid line indicates the WHO point estimate for TB cases by year. The dotted lines indicate the upper and lower bounds of the confidence interval.*

Of those who fell ill with TB in 2021, the WHO estimates that 163 000 – more than half – were people living with HIV. (You can find these and other key numbers on the WHO’s data dashboard ([https://worldhealthorg.shinyapps.io/tb\\_profiles/?\\_inputs\\_&entity\\_type=%22country%22&lan=%22EN%22&iso2=%22ZA%22](https://worldhealthorg.shinyapps.io/tb_profiles/?_inputs_&entity_type=%22country%22&lan=%22EN%22&iso2=%22ZA%22)) for South Africa.)

Naidoo suggests focusing on the number of new TB cases per 100 000 and notes that this number is coming down. “In 2019, it was 615 per 100 000. In 2020, we had a bit of a wider estimate of between 554 and 562 per 100 000, and now it is 513 per 100 000,” she says.

But she cautions against getting too excited too soon and said we must keep an eye on the numbers in the coming years. “While I feel optimistic that this is a downward trend, my concern is that we have to keep a close watch on the numbers given that TB evolves differently from other respiratory infections,” she says.

South Africa remains on the WHO’s list of high TB burden countries.

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“The WHO estimated TB incidence signals that South Africa is still in the process of recovering TB services following the devastating impact of COVID-19,” says Dr Priashni Subrayen, Technical Director for TB at the Aurum Institute. “Although gains have been made in 2021 compared to 2020, we are still far from achieving the End TB targets and accelerated efforts and funding is required to get us on track.” (The End TB Targets are part of the WHO’s End TB Strategy.)

***The WHO estimates that in 2021 TB treatment coverage in South Africa remained sub-optimal at 57%.  
PHOTO: GCIS***

## **56 000 TB deaths in 2021**

The WHO estimates that 56 000 people died of TB in South Africa in 2021 – 33 000 were living with HIV and 23 000 were not.

For comparison, the Thembisa model estimates that there were around 52 000 HIV-related deaths in the country in 2021. The comparison is not straightforward, given the significant overlap between HIV and TB deaths.

In 2021, the top infectious disease killer in South Africa by some margin was COVID-19. Estimates by the South African Medical Research Council (SAMRC) show that there were around 203 000 excess natural deaths in the country in 2021. If 80%

of that was caused by COVID-19, then about 162 000 deaths were due to SARS-CoV-2 – much more than TB and HIV combined.



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It, however, seems plausible that TB will again overtake COVID-19 in 2022. According to the SAMRC, excess natural deaths for the year are currently at around 48 000 – which suggest COVID-19 deaths for 2022 may well end up below 50 000. There are no indications that we will see a similarly steep drop in TB deaths.

Naidoo says that TB mortality figures estimated by the WHO have been stable for the past two years, with no dramatic increase or decrease, which is not a good sign for how well TB programmes are working. “If you’re going to be static [in mortality rates], it means that the programme is not maturing. That we’re actually not making progress, we are on a holding pattern,” she says. “And that whatever evidence is available for addressing mortality hasn’t been implemented, or we’re not aggressive enough in pursuing the sickest patients being admitted to hospital for a diagnosis of TB and to start on anti-TB treatment.”

## Treatment coverage

The WHO estimates that in 2021 TB treatment coverage in South Africa remained sub-optimal at 57% (range 41% to 83%). The WHO defines treatment coverage as notified TB cases divided by estimated new TB cases.

According to the WHO, there were 181 864 notified TB cases in South Africa in 2021. If the estimate of 304 000 TB cases is correct, it means around 122 000 people who fell ill with TB in 2021 were not diagnosed.

Subrayen stresses that based on these estimates, it means that about 43% of TB cases are not being detected, which is an increase on the previous year. “The worsening TB case detection gap, Subrayen says, “is indicative of the vast number of untreated TB or missed patients which remain a priority for the TB programme as they continue to fuel the TB pandemic within communities.”

Naidoo says that there are gaps in the TB treatment cascade and these gaps need to be closed in order to improve treatment coverage. She suggests using SMS to notify patients who have been tested for TB when their result is ready and to go to

the clinic to get the result. She also suggests focusing on TB testing and treatment among pregnant women.

***The worsening TB case detection gap is indicative of the vast number of untreated TB or missed patients which remain a priority for the TB programme as they continue to fuel the TB pandemic within communities. - Subrayen***

## Higher MDR-TB estimates

The WHO estimates that in 2021, 21 000 people in South Africa fell ill with Multi Drug-Resistant or Rifampicin Resistant TB (MDR/RR-TB). This number is also relatively uncertain - the confidence interval is 13 000 to 29 000.

The 21 000 estimate is higher than in previous years when the figure was typically around 14 000. It is possible that the change might not reflect an actual uptick in MDR/RR-TB cases, but instead could be due to the WHO changing its methodology for how MDR/RR TB incidence is calculated. (There is some discussion of this in a technical document (<https://www.who.int/publications/m/item/methods-used-by-who-to-estimate-the-global-burden-of-tb-disease-2022>) provided by the WHO.)

Naidoo notes the uptick but also points out that the estimates have been jumping around. "To what extent this uptick is accurate, of course, is a guess... I think that globally, we've been seeing an increase in drug-resistant TB, those are the trends, and South Africa will be no different," she says. "But again, what this means is a bit difficult to interpret. But it's telling us that we're doing a better job within the programme of enhancing access to diagnostics, identifying patients with DR-TB, offering them services, and so on."

For Subrayen, the increase in MDR/RR-TB isn't all that surprising given the estimates of how many TB cases go undetected (as highlighted earlier) and that according to the WHO estimates only 62% of all the notified TB cases in 2021 received a rapid molecular test which allows for DR-TB detection.

"These findings highlight the need for us to strengthen bacteriological confirmation with rapid diagnostics for clinically or X-ray-diagnosed TB patients to avoid missing the appropriate diagnosis of drug-resistant TB. And again, also highlighting the need to increase TB case-finding efforts in general," she says.

## The global picture

The WHO estimates that in 2021, about 10.6 million people fell ill with TB globally. According to the WHO's press release on the report, this is a 4.5% increase from 2020. Of those who fell ill, 6 million were men, 3.4 million were women, and 1.2 million were children.

A concerning trend noted in the press release is that globally, between 2020 and 2021, the TB incidence rate increased by 3.6%.

1.6 million people around the world are estimated to have died of TB in 2021, with 1.4 million deaths being among people who do not have HIV and 187 000 deaths among those living with HIV. "This represents an increase from best estimates of 1.5 million in 2020," the report states.

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