

Research suggests mining in Africa is spreading TB

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(PhysOrg.com) -- Mining for gold, diamonds, and precious minerals is dangerous work, but in sub-Saharan Africa the activity could be driving an entire continent's tuberculosis epidemic, a new Oxford-led study has found.

Researchers at Oxford and Brown universities, the University of California, San Francisco and the London School of Hygiene and Tropical Medicine estimate that the [mining](#) industry in Africa may be implicated in as many as 760,000 new cases of [tuberculosis](#) each year, due to factors such as silica dust in mines, crowded working and living conditions, and the spread of HIV.

Men travelling from afar to work in mines, such as from Botswana to

South Africa, are at the greatest risk of getting tuberculosis. But their wives, children, and friends are also at high risk when miners travel back and forth to work, often many times a year.

This means that even if mining clinics successfully diagnose tuberculosis in miners and start treatment appropriately, the message is often not relayed back to doctors who work at the miners' hometowns. The authors suggest that this disruption of treatment poses a major threat of developing a drug-resistant form of tuberculosis.

The report, published in the [American Journal of Public Health](#), concludes that mining companies and governments must work together to achieve 'similar levels of risk to those observed in Western mines', especially since mines in Africa are owned by the same companies.

To do this, the researchers indicate that healthcare programmes should emphasise continuity of care as miners travel across borders and they should routinely screen miners in order to detect tuberculosis at an early stage. They also highlight the need to improve poor working conditions and reduce the miners' exposure to silica dust.

'Improving living and healthcare conditions for miners may be necessary not only for the miners, but for controlling tuberculosis epidemics throughout sub-Saharan Africa,' said Dr David Stuckler, from the Department of Sociology at the University of Oxford.

Tuberculosis has been on the rise in sub-Saharan Africa over the past 20 years with a doubling of the yearly annual incidence from 173 to 351 per 100,000 population between 1990 and 2007.

Largely these rises are the result of the growing HIV epidemic, but the data shows that HIV is only one of several factors involved in the spread of TB in the region.

Miners are also known to spread tuberculosis to their families and communities. Nearly half of workers in large mining countries like South Africa are foreign and routinely travel across large distances. Yet the extent to which all of these risks of tuberculosis are contributing to Africa's overall tuberculosis epidemic has not been studied until now.

Provided by Oxford University

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