

# A regional response to tuberculosis amid COVID-19 in southern Africa: Towards eliminating silicosis and ending tuberculosis by 2030

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## BACKGROUND

Tuberculosis (TB), caused by *Mycobacterium tuberculosis* (MTB), is one of the oldest known communicable diseases, dating back more than three million years.<sup>1</sup> It has always been associated with high morbidity and mortality rates and is one of the top 10 causes of deaths, and the leading cause of death from a single infectious agent, currently ranked above HIV/AIDS.<sup>1</sup> TB is responsible for 1.5 million deaths globally per year, including 251 000 in people with HIV.<sup>2</sup> Approximately 24% of the global cases of TB in 2018 were from the World Health Organization (WHO) Africa region – ranked second after south-east Asia at 44%.<sup>2</sup> Over the centuries, TB was known by many different names, such as *phthisis* in Greece, *schachepheth* in biblical times, the king's evil in England and France, and white plague in the 18th century. Later, TB was called 'captain of all these men of death' because of its epidemic proportions in Europe and North America, being the cause of one in four deaths.<sup>1</sup> Hippocrates described *phthisis* as a fatal disease, especially for young adults.

Currently, of the 10 million new cases in a year, about 5.7 million are men, 3.2 million are women, and 1.1 million are children.<sup>2</sup> Many studies provide evidence that TB mostly affects adults in their most productive years.<sup>1,2</sup> Tuberculosis does not respect age, race, nationality, borders, or health status; the key qualifying criterion for a person to contract TB is breathing, the route of transmission.

Exposure to silica-containing dust can result in silicosis which is a risk factor for tuberculosis.<sup>3</sup> Despite compelling evidence that silicosis increases the risk of contracting TB, little effort has been made to curb exposure to silica-containing dust in most workplaces. Unlike coronavirus disease 2019 (COVID-19), there are effective TB prevention, treatment and vaccination programmes for children. Bacillus Calmette-Guérin (BCG) vaccine that protects against the severe form of TB in children is also suspected to contribute to the protection of children against COVID-19.<sup>2,4</sup>

COVID-19 is a highly infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). As of 21 September 2020, there were 31 243 024 confirmed cases in the world, 965 097 deaths and 22 835 563 recoveries.<sup>5</sup> In Africa, the number of confirmed cases stood at 1 405 783; there were 33 917 reported deaths and 1 152 155 recoveries.<sup>5</sup> The global and Africa region COVID-19 death rates were 4% and 2.4%, respectively.<sup>6</sup> Africa has reported a higher recovery rate than other countries, although the southern African region is a hub for both COVID-19 and TB.

## IMPACT OF COVID-19 PANDEMIC ON TB INTERVENTIONS IN THE WORKPLACE

The overwhelming response to COVID-19 led to TB care interventions being sidelined in most countries. There were huge COVID-19 awareness interventions, research, development of guidelines on quarantine and isolation, and provisions of personal protective equipment (PPE). Many governments activated their disaster management laws, resulting in massive screening and closures of borders. Consequently, many countries' resources for addressing TB and occupational lung diseases were diverted to COVID-19.

The Stop TB Partnership estimated that, as of 28 August 2020, the percentages of TB cases and deaths in all the Global Fund TB-, malaria-, and HIV-eligible countries in the Africa region were higher than that of COVID-19 (Table 1). Chopra et al. (2020)<sup>7</sup> noted that any interventions that focus on COVID-19 while overlooking TB challenges will be detrimental in the future. A three-month lockdown can lead to a 25% decline in TB detection, which can result in a 13% global increase in TB death rates.<sup>8</sup> Preliminary reports from countries severely affected by COVID-19 show a sharp decline in TB notifications, interruptions in services, and diminished quality of service provision.<sup>9</sup> This will be a catastrophe for TB interventions and progress, and the TB mortality rate will regress. The world could register an additional 1.4 million deaths, at least, as a result of the COVID-19 pandemic and then we could be back to the TB death rate experienced in 2012.<sup>8,10</sup> This estimated number will be worse if the silica dust reduction interventions aimed at curbing silicosis in the workplace are disrupted as a result of the pandemic. This will indeed waste all the investments that member states have made towards ending TB.

## REGIONAL RESPONSE TO TB

In response to global and regional targets, the Southern Africa Development Community (SADC) member states are intensifying their fights against TB, although the momentum has been decelerated by the COVID-19 pandemic. The efforts are in response to targets set in the African Union (AU) Catalytic Framework to end AIDS, TB and Malaria by 2030,<sup>13</sup> the SADC protocol on health,<sup>14</sup> the SADC protocol on employment and labour,<sup>15</sup> and the SADC Declaration on TB in the Mining Sector.<sup>16</sup> The interventions further contribute to the achievement of Goal 3 of the Sustainable Development Goals on good health and wellbeing;<sup>17</sup> the ILO/WHO Global Programme for the Elimination of Silicosis (GPES) by 2030; the United Nations High-Level Meeting declaration to end TB, through implementing primary prevention

**Table 1. TB and COVID-19 cases and deaths from Global Fund-eligible countries,<sup>11</sup> as of 28 August 2020<sup>12</sup>**

	Disease	Cases (n)	Deaths (n)	Death rate (%)
<b>Globally</b>	COVID-19	7 438 464	171 791	2.3
	Tuberculosis	5 762 987	934 306	16.2
<b>WHO Africa region</b>	COVID-19	1 028 374	21 236	2.1
	Tuberculosis	1 618 596	401 921	24.8

in high-risk occupations, by reducing silica dust exposure in mining, construction and other dusty workplaces;<sup>18</sup> and the WHO's End TB Strategy.<sup>19</sup> There are concerted efforts geared towards tackling TB and COVID-19 in the region by the SADC member states, the World Bank (WB), the Global Fund (GF), the African Union Development Agency-New Partnership for Africa's Development (AUDA-NEPAD), the East, Central and Southern Africa Health Community (ECSA-HC), and other partners.

The collaborations are implementing a network of major regional projects, such as the Southern African TB and Health Systems Support (SATBHSS) project, and the TB in the Mining Sector (TIMS) project. These projects are linked with other regional and in-country projects under the SADC. The projects have been implemented by means of a regional multi-sectoral approach, involving ministries responsible for health, mines and labour; the private sector; civil society organisations; organised labour; and academic institutions. The initiative will collaborate with the Global Fund Regional Laboratory Strengthening TB project to strengthen occupational hygiene analysis laboratories, thereby leveraging on economies of scales while guaranteeing international quality management systems of the newly established laboratories.

To maintain momentum on the progress made in the fight against TB amidst the COVID-19 pandemic, the SATBHSS project has been expanded to support COVID-19 response activities.<sup>20</sup> The Regional Advisory Mechanism (RCM) for TB in the mining sector has also recently finalised the development of phase III of the project for the period 2021–2023. The third phase of the project will focus on the regional coordination of TB in the mining sector.

## RESOURCES FOR UPDATES ON PROJECT ACTIVITIES

**Website:** <http://www.satbhss.org/>

**Twitter:** [https://twitter.com/SATBHSS\\_Project](https://twitter.com/SATBHSS_Project)

**Facebook:** <https://www.facebook.com/SATBHSS/>

**YouTube:** <https://www.youtube.com/channel/UCpfa6BVEg8WhTDIgYDLwfAg>

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