

COVID-19 diagnostics—not at the expense of other diseases



The 2020 COVID-19 pandemic shows no signs of abating, with WHO reporting 4.9 million cases and 322 000 deaths globally as of May 21, 2020. What also shows no sign of abating is the ferocious reactive response to the pandemic—academic institutions, pharmaceutical companies, and governments alike have turned almost their whole focus to COVID-19 research, causing many health-care experts to fear that the management of other deadly diseases has been relegated to a much lower priority. The intense focus on COVID-19 might hinder the efforts and undo progress made in controlling other infectious diseases. Thousands of people died during Liberia's 2014–16 Ebola virus crisis from other preventable diseases because they were unable to get care, and a similar scenario might result from the COVID-19 pandemic. Madhukar Pai (McGill International TB Centre, Montreal, QC, Canada) is worried about what he terms as the “covidisation” of everything, highlighting how a narrow framework that focuses solely on health crises can be harmful to other areas of health and health-care agendas. “We are already seeing massive setbacks to tuberculosis, AIDS, and malaria care in many settings, because all the attention and resources are diverted to COVID-19”, he told *The Lancet Microbe*.

Other major infectious diseases are still highly prevalent, with millions of cases and hundreds of thousands of deaths reported for malaria, HIV/AIDS, and tuberculosis in 2018, mainly in low-income countries. In their World Health Statistics 2020 report, WHO highlights that the decreases in incidence of HIV, tuberculosis, and malaria infections between 2000 and 2018 are insufficient to achieve the 2030 Sustainable Development Goals of ending the epidemics of these diseases, and COVID-19 risks further destabilising these targets.

Resources and funding have been almost completely diverted away

from these diseases towards COVID-19 research, indirectly increasing the risks of these diseases occurring and going untreated. Another concerning direct negative effect of focusing on COVID-19 is a shift towards production of COVID-19 diagnostic tests and a resultant decrease in tests for HIV, malaria, and tuberculosis. As Pai commented “All diagnostic companies are directing their attention and production capacity to COVID-19 tests, [which] might come at the cost of diagnostics for other conditions”.

An even more insidious diversion of resources is through the diagnostic repurposing of existing tests and platforms to test for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The US Food and Drug Administration has to date issued 76 Emergency Use Authorizations for in-vitro diagnostics for SARS-CoV-2. These tests include some platforms commonly used for diagnosing other infectious diseases that have now been repurposed to test for SARS-CoV-2—eg, Roche's cobas 6800/8800 system used to diagnose HIV and hepatitis C, and Cepheid's GeneXpert Xpress used to detect tuberculosis and HIV. Additionally, an ongoing UK clinical trial (NCT04326387) is investigating the use of DRW's SAMBA II device—currently used to identify HIV—to test for COVID-19.

Separate cartridge-based SARS-CoV-2 assays are used on these systems. However, as Nazir Ismail (National Institute for Communicable Diseases, Johannesburg, South Africa) points out, “Some of the platforms overlap with testing [for SARS-CoV-2] eg, Xpert for tuberculosis, and similarly the Roche platforms used for HIV viral loads”. The overlap means that while tests are running on these systems for COVID-19, they are not running for the diseases they were previously testing for, which affect many of the poorest countries. Pai stresses that Xpert

MTB/RIF is a critical test for tuberculosis that is widely used in many high-burden countries. He commented “We are worried that Cepheid will produce less of this tuberculosis cartridge, since they are dealing with a massive demand for their Xpress SARS-CoV-2 cartridge. We don't want to see only COVID-19 testing happening, because tuberculosis has not gone anywhere.”

Echoing Pai, WHO highlighted in their 2020 report that although treatment coverage for tuberculosis reached 69% globally in 2018, gaps in detection meant that nearly 3 million incident cases went undiagnosed or unreported. The worry now is that repurposing testing systems for COVID-19 could mean that even more cases of HIV, tuberculosis, and other diseases go undiagnosed. Norbert Ndjeka (Drug-Resistant TB, TB & HIV, Pretoria, South Africa) has already noted a large decrease in case finding for drug-resistant tuberculosis in South Africa during the first quarter of 2020 compared with the first quarter of 2019. Ismail points out that the situation might be even worse outside of South Africa: “For many other African settings where tuberculosis testing capacity is limited, re-direction of the infrastructure for COVID-19 will likely have knock-on effects on tuberculosis testing and drug-resistant tuberculosis diagnosis. The same situation will likely be true for HIV”.

Diagnostic companies and country governments should not forget their global health obligations. As Eliud Wandwalo (The Global Fund, Geneva, Switzerland) comments: “This is not a choice between fighting one infectious disease or the other: we must both fight COVID-19 and continue lifesaving HIV, tuberculosis, and malaria programmes, or more people will die”.

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For more on **prevalences of COVID-19, tuberculosis, malaria, and HIV/AIDS** see www.who.int/

For more on **other deaths occurring during pandemics** see <https://www.businessinsider.com/other-infectious-disease-spread-amidst-efforts-stop-covid-19-2020-4?r=US&IR=T>

For **WHO's World Health Statistics 2020 report** see <https://apps.who.int/iris/bitstream/handle/10665/332070/9789240005105-eng.pdf?ua=1>

For more on the **diversion of resources for diagnostic testing** see <https://www.theguardian.com/world/2020/may/01/demand-for-coronavirus-tests-raises-concerns-over-hiv-and-malaria>

For more on the **US FDA's Emergency Use Authorizations of COVID-19 diagnostics** see <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations#covid19jvd>