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Tuberculosis and HIV responses threatened by COVID-19

As the first cases of COVID-19 affect Nigeria's health-care workers, will the country's HIV and tuberculosis responses weather the pandemic? Paul Adepoju reports.

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For **WHO's COVID-19 dashboard** see https://experience.arcgis.com/experience/685d0ace521648f8a5beeeee1b9125cd

For **WHO's 2020 tuberculosis focus** see https://www.who.int/news-room/detail/24-03-2020-new-who-recommendations-to-prevent-tuberculosis-aim-to-save-millions-of-lives

March 24, 2020, was World Tuberculosis Day 2020, but this year tuberculosis was overshadowed by the COVID-19 pandemic. By the end of that week, COVID-19 had already exceeded 600 000 confirmed cases and about 30 000 deaths worldwide. Before the emergence of COVID-19 as a public health emergency of international concern, coinfection with tuberculosis was probably the priority for HIV/AIDS control efforts in Africa.

"Tuberculosis is an issue throughout the world. But in Africa, the tuberculosis epidemic is driven by HIV, and HIV-tuberculosis coinfection has clear impact on mortality", said Matteo Zignol (WHO Global Tuberculosis Programme).

The immune status that makes people with HIV vulnerable to tuberculosis could also make them susceptible to coronavirus infection. COVID-19 is already affecting control measures for tuberculosis and HIV, while WHO and UNAIDS are compiling data and evidence to guide recommendations for the management of COVID-19 in the context of HIV-tuberculosis coinfection.

To flatten the curve of the COVID-19 pandemic, governments across the world are shutting cities down and restricting movements; they are also encouraging residents to stay indoors. But capacities of health-care facilities are being stretched, and there are increasing demands for more hospital materials such as personal protective equipment (PPE) and ventilators. With a large proportion of resources committed to stemming the spread of COVID-19, services across all sectors are affected

Tereza Kasaeva (Director of the WHO Global Tuberculosis Programme) told *The Lancet HIV* that WHO wants to ensure that the response to the COVID-19 pandemic does not affect the continuity of essential services for people affected by tuberculosis. The organisation is aiming to maximise joint support to tackle both diseases.

For 2020, WHO's tuberculosis focus is to scale up access to tuberculosis treatment by deploying a number of strategies targeting risk groups, such as close contacts of a known case and individuals with underlying health conditions, and risk factors, such as HIV infection. WHO also recently recommended shorter tuberculosis prevention regimens with a 1 month daily regimen of rifapentine and isoniazid.

WHO wants to assist national tuberculosis programmes and health personnel to maintain continuity of essential services during the COVID-19 pandemic, through innovative people-centred approaches and maximising joint support to tackle both diseases, but this may not be a realistic aim.

Kasaeva told *The Lancet HIV* that the supply and transportation of tuberculosis drugs may be disrupted by flight cancellations and imposed travel restrictions. "Flights are being cancelled and airlines are closing down. This is going to be a big issue for drug supply and is a concern for WHO. Countries should not run out of stock of tuberculosis drugs because patients must have access to treatment. They need to complete the treatment because if they don't, the worst outcome is drug resistance which is a great threat to the global tuerculosis control."

Nigeria has a substantial tuberculosis disease burden, and the gap between estimated and reported cases of the disease is also large. 5 days after the first case of COVID-19 was confirmed in Ibadan, one of Nigeria's major cities, health-care workers already had heightened concern about personal safety.

Friday March 27 was the last working day before a city-wide shutdown of Ibadan went into effect on Sunday, but the impacts of COVID-19 on the health sector were already being felt. Over the weekend, Jess Otegbayo, head of University College Hospital Ibadan and Oluwabunmi Olapade-Olaopa, provost of University of Ibadan's College of Medicine, tested positive for COVID-19.

Health officials working in Nigeria's primary health centres expressed worry about the paucity of protective materials such as hand sanitisers, making it impossible for them to provide regular health-care services to patients including those who might have tuberculosis.

Before the advent of COVID-19, the primary health centre at Iyana Church in Ibadan was serving as an active tuberculosis sample collection centre, from where samples are taken to a central government laboratory for testing. But since the confirmation of cases of COVID-19 in Ibadan, Wale Adeosun, the tuberculosis officer at the health centre, said he had not been touching the samples. "We have 25 samples that ought to be processed. But they will be discarded because no one wants to touch them in this season of coronavirus. When everything returns to normal, the patients will bring fresh samples for tuberculosis testing", Adeosun told *The Lancet HIV*.

Health workers are reluctant to handle samples for tuberculosis testing because of similarities in the symptoms of tuberculosis and COVID-19—coughing, fever, and difficulty in breathing.

"They both attack the lungs and are both transmitted mainly by close contacts. But they are quite different. tuberculosis is a chronic disease with patients coughing for a minimum of 2 weeks but COVID-19 has a rapid onset. Simple differential diagnosis by

well trained service providers will be able to distinguish them", Zignol said.

But health-care professionals in Nigeria are not taking chances. "We lack the resources to protect everyone before getting the opportunity to figure out what a patient may likely have which is why we are taking extreme measures", Matron Oni Aluko (head of the Iyana Church health centre) told *The Lancet HIV*.

At Oyo state's central tuberculosis screening and treatment centre, the Jericho Chest Hospital, nurses and support staff shared similar concerns. Although the hospital has been designated a quarantine facility for patients with confirmed COVID-19, health workers interacting with people with suspected tuberculosis who might actually have COVID-19 were yet to be properly trained on the viral disease.

Unlike the health centre at Iyana Church, Ibadan North East Local Government has a tuberculosis clinic within its secretariat in Ibadan. The clinic is popular in the metropolis. Aside from screening for new cases, the clinic provides treatment. On one of the shelves in the office section of the clinic, dozens of boxes containing drugs for patients with tuberculosis being managed at the clinic were arranged, and each box had the name of the patient written on it with a blue marker.

"All of these patients ought to have come today to receive their drugs but they've not shown up to do so. Eight of them are coinfected with HIV and I am very worried about their safety and health status", Bankole Adewumi, an officer at the facility, told *The Lancet HIV*.

As disappointing as the development was, Adewumi said it was not surprising. Patients with tuberculosis can suffer discrimination if others think they are infected with COVID-19. "This is a wrong time to be coughing and commuting via the public transportation system. Presently it is embarrassing but as COVID-19 persists and new cases are recorded, the situation might become particularly dangerous for our patients as people may become more restless, aggressive and impatient about ending the outbreak", he added.

Adewumi revealed that the centre handles up to 50 patients daily, but on the day that *The Lancet HIV* visited, only one person showed up to receive drugs that will last only a couple of weeks. "We are scared that the health conditions of our patients will deteriorate during this period because, even though the government asked us to still continue to run the clinic during the shutdown, many of our patients rely on public transportation to commute to the clinic", he said. One of the available options is to give patients sufficient doses of their drugs to last for months. But the unanticipated nature of COVID-19 onset did not allow for adequate restocking of the drug store to accommodate such logistical changes.

Individuals living with tuberculosis and HIV coinfection are not the only ones that will be affected; the broader HIV control mechanisms in African countries implementing lockdowns and struggling with fragile health systems are also likely to be compromised.

Onyekachi Onumara (Senior Programme Officer at Rural Health Foundation) said that in Nigeria the "major blow will be on prevention because field staff who engage in peer sessions have to rejig strategies". Health workers caring for people living with HIV are being asked to give antiretroviral drugs that will last for 3 months. Funds for HIV intervention initiatives could also be depleted as a result of previously unincluded expenses such as procurement of sanitisers and PPE for field staff.

"The panic will also see ad-hoc staff pull out of programmes for fear. The lockdown is the biggest blow to fieldwork as prevention services and field testings may be halted", Onumara told *The Lancet HIV*.

Whereas the Nigerian government said its top priority is to stem the spread of COVID-19 and to ensure that HIV and tuberculosis clinics remain open, UNAIDS proposed implementing differentiated service delivery for HIV. UNAIDS proposals include multimonth dispensing, community antiretroviral distribution, and self-testing to empower clients, to limit unnecessary exposures to COVID-19 at clinics and to reduce pressure on facility-based health-care systems.

Acknowledging that heath systems will be stretched in some places, UNAIDS calls governments not to relax tuberculosis diagnosis and treatment. "Messaging needs to be clarified, so that people with tuberculois symptoms including prolonged fever and cough do not avoid health facilities or delay assessment due to COVID", said Shannon Hader (UNAIDS Deputy Executive Director). Hospital visits need to be minimised to reduce exposure for COVID-19 and to reserve them for people requiring hospitalisation. UNAIDS also encouraged countries to consider multimonth scripting and virtual communication platforms to assist patients.

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"UNAIDS is working with people living with HIV and key population networks to understand needs for information, COVID-19 prevention supports, and HIV service continuity needs to help respond", Hader told *The Lancet HIV*. "But what is also needed is an intensity of COVID testing, surveillance, and prevention services concentrated in some of the highest risk settings from slums to informal settlements to settings of incarceration, if the most vulnerable people are to be protected. Empowerment of communities of people living with HIV and tuberculosis across these responses is essential as is resilience of health systems."

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