Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

COVID-19 worsens Zimbabwe's health crisis

Years of neglect and doctors' strikes have pushed the Zimbabwean health system to the brink. Munyaradzi Makoni reports.

When seven babies were stillborn on July 27 at Harare Central Hospital in Zimbabwe, after urgent treatment was delayed because of a nurses' strike, it captured the heart-rending health crisis in the country. But it is nothing new. Stories of chronic drug shortages and avoidable deaths have troubled the country in the past 8 years, and COVID-19 is now worsening the situation.

For more than a month, 15 000 nurses have been on strike over wages eroded by galloping inflation, and senior doctors have threatened to join them. "This has affected all health-care services…obstetric, dialysis, acute medical and surgical, and chronic HIV care", says Rashida Ferrand, director of the Zimbabwe–London School of Hygiene & Tropical Medicine Research Partnership, based at Parirenyatwa Hospital in Harare. "This of course also has affected service delivery for COVID-19—the numbers are rising in Zimbabwe and there is now rapid established community transmission." As of Aug 10, Zimbabwe has reported 4649 cases of COVID-19, but this is thought to be a large underestimate.

Ferrand, who leads the only public facility managing severe COVID-19 cases in Zimbabwe, says Parirenyatwa Hospital was refurbished with 300 beds and piped oxygen, but it turns away many patients because it only has enough staff to support the use of 30 beds. "Even in the case where patients are not turned away, the treatment delays are so long that a lot of people are either dying or being disabled because they got attention late", says Tawanda Chivese, a Zimbabwean clinical epidemiologist at Stellenbosch University Medical School (Stellenbosch, South Africa).

"The health system is on its knees", says Ferrand. Services were overstretched before the COVID-19 epidemic, but this has now worsened dramatically as health-care workers are concerned about their risk, many have been infected, and there is no clear pathway for how to manage those who are infected. In addition, the availability of personal protective equipment (PPE) is insufficient, and most community health workers are not aware of the correct infection prevention and control measures, said Ferrand. The Zimbabwe Association of Doctors for Human Rights said on July 28 that 200 health workers in Zimbabwe had so far tested positive for COVID-19.

> **"'The health system is on its knees'…"**

Parirenyatwa Hospital has PPE, but how long it will last is unknown. Much of it is donated and the supply chains are mostly erratic, says Ferrand. Nearly 400 000 doses of dexamethasone are in stock, but many other essential drugs required to manage COVID-19, such as diazepam and morphine, and equipment such as pulse oximeters and syringe pumps are in short supply. Few other facilities have piped oxygen, and instead rely on cylinders and concentrators, which risks supply disruptions, says Ferrand.

Zimbabwe has made significant efforts to prepare for COVID-19. Testing services were expanded, isolation and treatment centres were established in every district, and returning residents were quarantined, says Richard Makurumidze, a doctoral fellow at the University of Zimbabwe College of Health Sciences. "However, we cannot safely say Zimbabwe is prepared for COVID-19 because there are still a lot of gaps, limited testing capacity, poor contact-tracing systems, lack of equipment to manage cases with severe disease in isolation and treatment centres (limited intensive care unit beds and ventilators), lack of PPE, staff shortage and human resources challenges, poor management of returnees in quarantine centres, weak and porous borders, [and] corruption in COVID-19 supply tenders, among other issues."

The collateral effects of COVID-19 on other health programmes is unknown, says Makurumidze, but anecdotal reports show a huge disruption to many health services, including services for antiretroviral treatment delivery, immunisation, pregnancy and neonatal care, diabetes, hypertension, and cancer.

"The rot we are seeing in the health-care system did not start recently with the new government, but has been an ongoing issue with past administrations", says Chivese. "We have seen a gradual decay in key health infrastructure, especially after the year 2000", he says. The gains made during 1980–90, when many hospitals and clinics were built, have reversed because of underfunding of the health-care system and, to some extent, a lack of leadership, said Chivese. The neglect of the health sector has adversely affected the confidence in the system and has resulted in brain drain of a qualified and skilled workforce says Reinaldo Ortuno, head of mission at Médecins Sans Frontières Zimbabwe.

"Hospitals and clinics are now manned by student nurses, junior doctors, and other staff who have no choice as they are still under training. This has compromised quality of care and has inadvertently contributed to high morbidity and mortality rates", Ortuno says.

For any change in the foreseeable future, Zimbabwe will need external aid to address the health needs of its citizens, adds Ortuno.

Munyaradzi Makoni