

# News in focus



ANADOLU AGENCY VIA GETTY

A bombed hospital in Volnovakha in Ukraine's Donetsk region.

## SURGE OF HIV, TUBERCULOSIS AND COVID FEARED AMID WAR IN UKRAINE

Infectious diseases are likely to spread as Russia's invasion displaces people and disrupts health services.

By Leslie Roberts

**A**dding to the brutal, immediate effects of Russia's invasion, the Ukrainian people are facing an onslaught of infectious diseases. Some threats – such as the spread of COVID-19 – are immediate, as people huddle in basements, subway stations and temporary shelters to protect themselves from bombardments. Without adequate water and sanitation, cases of diarrhoeal diseases are certain to rise. The risk of polio and measles outbreaks is high. And as health facilities and roads are reduced

to rubble, access to diagnostic services and treatments for tuberculosis (TB) and HIV/AIDS is being interrupted, which will add to the already sky-high burden.

"I am very, very worried for Ukraine. First and foremost, that this may lead to a long-term conflict that will completely destroy the health system," says Lucica Ditiu, a Romanian physician and the executive director of the Stop TB Partnership in Geneva, Switzerland. The crisis comes atop the devastation wreaked by the COVID-19 pandemic, during which access to immunizations and essential health services plunged.

When Russia invaded on 24 February, Ukraine was coming out of the worst of its Omicron wave, which had peaked that month. COVID-19 testing has fallen there since the conflict began, which means undetected transmission is probably significant, Tedros Adhanom Ghebreyesus, director-general of the World Health Organization (WHO), said at a 2 March press briefing. Across the country, COVID-19 vaccination rates are dangerously low – about 65% in Kyiv, but as low as 20% in some oblasts, or regions, said Jarno Habicht, the head of the WHO's Ukraine office – increasing the risk of severe disease and death. (In the United

## News in focus

Kingdom, 73% of the population is vaccinated.) A longstanding mistrust of vaccines among the population has hindered immunization efforts for other vaccine-preventable diseases, such as measles and polio, as well.

### Challenges intensify

Ukraine was already grappling with an outbreak of vaccine-derived polio: there were two cases with paralysis in the country's west last year, the most recent in December. Poliovirus was also isolated from 19 healthy contacts. (Because the poliovirus paralyzes one in about 200 of the people it infects, the outbreak is much larger than case numbers alone would suggest.) The conflict has interrupted a 3-week campaign to vaccinate nearly 140,000 children, launched on 1 February; it has also hit polio surveillance, so the virus might be spreading undetected, warns the Global Polio Eradication Initiative, based in Geneva.

Measles is also an issue. Because it is so contagious, "measles is one of the first concerns in any humanitarian crisis", says James Goodson, a measles specialist at the US Centers for Disease Control and Prevention (CDC). Ukraine had a large outbreak that started in 2017 and continued until 2020, with more than 115,000 cases. By 2020, reported national coverage with two doses of measles-containing vaccine was up to 82%, according to the CDC – a big improvement but still not high enough to prevent deadly outbreaks. More worrisome, vaccine coverage was less than 50% in some oblasts, such as Kharkiv, where huge numbers of people are fleeing the conflict.

"As people come in, we have to really scale up surveillance in surrounding countries for polio, measles, and also for COVID to make

sure we prevent them," said Heather Papowitz, WHO's incident manager for Ukraine, at the briefing. "Looking at providing vaccines for measles, polio and COVID is paramount."

### Tuberculosis troubles

Ukraine has one of the world's highest burdens of multidrug-resistant (MDR) TB. An estimated 32,000 people there develop active TB each year, and about one-third of all new cases are drug resistant. Twenty-two per cent of people in Ukraine with TB are infected with HIV, and TB is the leading cause of death among those living with HIV. A disease worsened by crowding and poverty, TB is caused by *Mycobacterium tuberculosis*. It slowly destroys the lungs, and spreads through respiratory droplets.

Drug-resistant TB arises when people don't adhere to their arduous regimen of daily drugs. "If you have TB or HIV, no one has time to get their treatment and run with it, they barely have time to get their kids and run," says Papowitz.

"Any interruption of treatment will lead to drug-resistant TB, including MDR TB," Ditiu says. "After 5 years without treatment, 50% of people with pulmonary TB can die. Meanwhile, you infect many others around you." And if you interrupt treatment for MDR TB, she says, "it is possible to develop extremely drug-resistant TB, where there are few drugs that work". Diagnosis and treatment of TB had already plunged by about 30% during the COVID-19 pandemic in 2020 and 2021, leading to increased transmission.

Access to HIV/AIDS treatment is also in jeopardy in Ukraine, which has the second highest burden of the disease in Eastern Europe. About 1% of the population is infected, but that number is much higher in at-risk groups: 7.5% in

men who have sex with men, and almost 21% in people who inject drugs. "You should not interrupt treatment. Given the nature of HIV, which brings AIDS and death, medicine is lifesaving," says Raman Hailevich, the country director for the Joint United Nations Programme on HIV/AIDS (UNAIDS).

Antiretroviral therapy (ART) can keep HIV under control and immune defences strong to protect against opportunistic infections, such as TB; prevent those at risk from contracting HIV; and prevent mother-to-child transmission. If taken consistently, ART can suppress the viral load to such low levels that the person cannot transmit the virus.

### Regional crisis

"Ukraine was challenged before the war in providing antiretroviral therapy, and the war has magnified those challenges," says Hailevich, who left Kyiv on 4 March. In Ukraine, an estimated 260,000 people were living with HIV at the end of 2020. Of those, just 69% knew their status, 57% were receiving ART and 53% had achieved viral suppression, according to UNAIDS. The organization's latest global goal is 95% for each of those metrics by 2025.

The country had been making progress, but "this war can put us ten years back again", says Valeriia Rachynska, at the All Ukrainian Network of People Living with HIV/AIDS. Amid the indiscriminate shelling, people might not be able to pick up their medicines. "And even if you make it to a medical facility, it has to be stocked with drugs," says Hailevich.

People fleeing to safety might have a one-month supply of drugs, or two weeks' worth, or less, Rachynska says. Those who can't relocate to a safe place, and those in Russian-occupied territories, are the most vulnerable, she adds.

Compounding the problem, Ukraine was expecting a big shipment from India of antiretroviral drugs in early March. The US President's Emergency Plan for AIDS Relief initiative is now mobilizing to fly emergency supplies to a warehouse in Poland; from there, it will truck them to Ukrainian medical facilities.

Opioid substitution therapy (OST), such as methadone, could be out of reach for former injecting drug users, many of whom are living with HIV. Although the country has supplies to last until October, says Hailevich, "if you are in Kharkiv or Mariupol or in territory controlled by the Russians, it is highly unlikely you will get it, as Russia does not approve of OST".

Rachynska's network, which has relocated its offices from Kyiv to western Ukraine, is telling its clients not to be afraid to disclose their HIV status when they cross into other European countries – but instead to go to hospitals and ask for their drugs. "Everything that is happening in Ukraine is also affecting the other countries [where people are fleeing]," said WHO's Papowitz at the briefing, "so it's a real regional crisis."



People flee by train from Lviv, the largest city in western Ukraine, as Russia's attack continues.