

# Antimicrobial resistance - a threat to modern health

[Antimicrobial resistance](#) is one of the top 10 global public health threats facing humanity, according to the World Health Organisation (WHO). This is off the back of an already challenged global healthcare system, with multinationals desperately searching for a cure to one of the most impactful pandemics to date, all while dealing with the existing challenge of multidrug-resistant pathogens in [secondary infections in some Covid-19 patients](#).



Dr Bha Ndungane-Tlakula, country medical director, Pfizer South Africa

According to the United Nations report, [No time to wait: Securing the future from drug-resistant infections](#), alarming levels of antimicrobial resistance have been reported in countries of all income levels, including in some member countries of the Organisation for Economic Cooperation and Development (OECD). It states that these reports indicate that as much as 35% of common human infections are already resistant to currently available medicines, and in some low-and middle-income countries (LMICs), resistance rates are as high as 80% to 90% for some antibiotic-bacterium combinations.

Antimicrobial resistance (AMR) occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines. This complicates the treatment of infections and increases the risk of disease spreading, severe illness and death. Following drug resistance, antibiotics and other antimicrobial agents become ineffective and infections become increasingly difficult or impossible to treat.

Research by the WHO suggests that the principal drivers of antimicrobial resistance include the inappropriate use of antimicrobials; lack of access to clean water, sanitation and hygiene; poor infection prevention and control in healthcare facilities; poor access to quality, affordable medicines, vaccines and diagnostics; lack of awareness and knowledge; and lack of enforcement of legislation.

"Antimicrobials - including antibiotics, antivirals, antifungals and antiparasitics - are medicines used to prevent and treat infections, with microorganisms that develop AMR often referred to as superbugs. Overall, we need antimicrobials to treat infections, and it's important that we emphasise the responsible use thereof," says Dr Bha Ndungane-Tlakula, country medical director at Pfizer South Africa.

The United Nations cautions that if no action is taken to address the potentially disastrous drug-resistance crisis, as many as 10-million deaths each year could be attributed to AMR by 2050, with economic damages being comparable to that of the 2008/2009 global financial crisis.

"These [statistics](#) are evidence that more needs to be done to spread education and awareness of the challenges faced and determine what society can do to mitigate the risks of contracting such diseases," says Ndungane-Tlakula.

## **Call for global surveillance**

Apart from global public awareness campaigns, the improvement in sanitation and prevention of the spread of infection, additional measures should include a reduction in the inappropriate use of antimicrobials in agriculture and its subsequent dissemination into the environment.

Additionally, there should be a strong call to improve global surveillance of drug resistance and microbial consumption, and the promotion of new and rapid diagnostic support. It is [reported](#) that as many as 27-million new patients each year in the United States are prescribed antibiotics unnecessarily due to misdiagnosis.

"Overall, prevention is most certainly better than a cure, and the adoption of healthy daily habits will provide some of the strongest defences against infectious diseases. These include: keeping immunizations up-to-date, regular hand washing, the careful preparation and handling of food, the use of antibiotics only for bacterial infections, healthy lifestyle habits including eating well, exercising and avoiding substance use, and staying alert when travelling to areas where the risks of contracting diseases may be higher," says Ndungane-Tlakula.

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