



## DIRECTOR-GENERAL STATEMENT

When the first antibiotics were introduced in the 1940s, they were hailed as “wonder drugs”, the miracles of modern medicine. And rightly so. Widespread infections that killed many millions of people every year could now be cured. Major diseases, like syphilis, gonorrhoea, leprosy, and tuberculosis, lost much of their sting. The risk of death from something so common as strep throat or a child’s scratched knee virtually vanished.

The powerful impact of these medicines sparked a revolution in the discovery of new drugs. The human condition took a dramatic turn for the better, with significant jumps in life expectancy.

The message on this World Health Day is loud and clear. The world is on the brink of losing these miracle cures.

The emergence and spread of drug-resistant pathogens has accelerated. More and more essential medicines are failing. The therapeutic arsenal is shrinking. The speed with which these drugs are being lost far outpaces the development of replacement drugs. In fact, the R&D pipeline for new antimicrobials has practically run dry.

The implications are equally clear. In the absence of urgent corrective and protective actions, the world is heading towards a post-antibiotic era, in which many common infections will no longer have a cure and, once again, kill unabated. The implications go beyond a resurgence of deadly infections to threaten many other life-saving and life-prolonging interventions, like cancer treatments, sophisticated surgical operations, and organ transplantations. With hospitals now the hotbeds for highly-resistant pathogens, such procedures become hazardous.

While hospital “superbugs” make the biggest headlines, these especially deadly pathogens are just the extreme expression of a much broader, and more disturbing picture.

The development of resistance is a natural biological process that will occur, sooner or later, with every drug. The use of any antimicrobial for any infection, in any dose, and over any time period, forces microbes to either adapt or die in a phenomenon known as “selective pressure”. The microbes which adapt and survive carry genes for resistance, which can be passed on from one person to another and rapidly spread around the world.

This natural process has been vastly accelerated and amplified by a number of human practices, behaviours, and policy failures. Collectively, the world has failed to handle these fragile cures with appropriate care. We have assumed that miracle cures will last forever, with older drugs eventually failing only to be replaced by newer, better and more powerful ones. This is not at all the trend we are seeing.

Faulty practices and flawed assumptions have clearly made the inevitable development of drug resistance happen much sooner, rather than later. For some diseases, like malaria, our options are very limited as we have only a single class of effective drugs -- artemisinin-based combination therapies -- with which to treat more than 200 million falciparum cases each year. Although new drugs are under development, especially through the Medicines for Malaria Venture, a public-private partnership, early signals of artemisinin-resistance have already been detected.

Similarly, gains in reducing child deaths due to diarrhoea and respiratory infections are at risk. And, while TB deaths are declining, in just the past year nearly half a million people developed multidrug-resistant TB, and a third of them died as a result. These are just a few of the stark warnings that must be heeded.

The responsibility for turning this situation around is entirely in our hands. Irrational and inappropriate use of antimicrobials is by far the biggest driver of drug resistance. This includes overuse, when drugs are dispensed too liberally, sometimes to “be on the safe side”, sometimes in response to patient demand, but often for doctors and pharmacists to make more money.

This includes underuse, especially when economic hardship encourages patients to stop treatment as soon as they feel better, rather than complete the treatment course needed to fully kill the pathogen. This includes misuse, when drugs are given for the wrong disease, usually in the absence of a diagnostic test.

In many countries, this includes a failure to keep substandard products off the market, to ensure that antimicrobials are dispensed only by a licensed prescriber, and to stop over-the-counter sales of individual pills.

And this includes the massive routine use of antimicrobials, to promote growth and for prophylaxis, in the industrialized production of food. In several parts of the world, more than 50% in tonnage of all antimicrobial production is used in food-producing animals. In addition, veterinarians in some countries earn at least 40% of their income from the sale of drugs, creating a strong disincentive to limit their use. The problem arises when drugs used for food production are medically important for human health, as evidence shows that pathogens that have developed resistance to drugs in animals can be transmitted to humans.

On this World Health Day, WHO is issuing a policy package to get everyone, especially governments and their drug regulatory systems, on the right track, with the right measures, quickly. Governments can make progress, working with health workers, pharmacists, civil society, patients, and industry. We all can plan and coordinate our response. We can expand surveillance efforts. We can improve drug regulatory and supply systems. We can foster improved use of medicines for human and animal health. We can actively prevent and control infections in health services and beyond. And, we must stimulate a robust pipeline for new antimicrobials, diagnostics and vaccines.

Drug resistance costs vast amounts of money, and affects vast numbers of lives. The trends are clear and ominous. No action today means no cure tomorrow. At a time of multiple calamities in the world, we cannot allow the loss of essential medicines – essential cures for many millions of people – to become the next global crisis.

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**For more information, go to:**

**<http://www.who.int/world-health-day/2011>**

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