

Over the past decade, governments and private funders have worked tirelessly to increase access to drugs in developing countries, particularly for malaria, HIV, and tuberculosis. These efforts have saved many lives, but are not sufficient. The global health community must turn its attention to ensuring both broad access to drugs *and* lasting effectiveness of treatment.

Drug resistance has reversed or slowed gains against childhood diarrhea and pneumonia, dramatically increased the costs of fighting tuberculosis and malaria, and threatened the effort to effectively treat people living with HIV/AIDS. In some cases, resistance is occurring almost as quickly as new drugs are appearing on the market. And if the first treatment doesn't work, alternative ones are almost always more costly, harder to use, have worse side effects, and require greater medical oversight. The problem demands a systematic global response.

A SNAPSHOT OF THE PROBLEM

Although it is clear that drug resistance is on the rise, the full extent of the problem remains a mystery. There is no global system for monitoring and tracking which drugs are losing effectiveness, how fast germs are building resistance, or how resistant strains are spreading. Still, the limited data we have are compelling and clearly demonstrate the social and economic costs of increased drug resistance.

Resistant strains of malaria, for example, are now widespread after decades of effective treatment with quinolone-based drugs. In East and Central Africa, where 110 million people are exposed to malaria, more than half of all cases involve a strain that is resistant to one or more drugs. Even artemisinin-based combination therapies, the newest and most effective malaria drugs, are confronting resistant pathogens.

Drug-resistant tuberculosis is a particular public health concern. About 20 percent of TB cases involve a strain that is resistant to at least one drug and nearly half a million cases are resistant to multiple drugs. It costs only \$20 to cure a person with normal TB. Treatment of drug-resistant strains, however, can cost \$3,500 per course – 175 times more.

“Superbugs” such as methicillin-resistant *Staphylococcus aureus* (MRSA) are also increasing health care costs globally. To treat a single MRSA patient can cost as much as \$60,000 in the United States, and the number of infections is growing. From 1974 to 2004, MRSA prevalence increased from roughly 2 percent to more than 50 percent of staph infections in many U.S. hospitals.

Drug resistance costs lives. Children are particularly vulnerable to infectious diseases. When drug resistance slows or prevents effective treatment, they are more likely to suffer long-term damage or die. The most common childhood diseases in developing countries – malaria, pneumonia, other respiratory infections, and diarrhea – are not cured by many of the older antibiotics and other drugs that are regularly available in poor countries.

TAKING ACTION AGAINST DRUG RESISTANCE

There is no simple solution to containing drug resistance. However, there are achievable steps that the health community, governments, donors, and drug makers can take to slow the spread of drug resistance and, in the process, make better use of health resources and save lives.

In summer 2010, the Center for Global Development will release a pivotal report from its expert Drug Resistance Working Group highlighting the urgency for investment in this mounting global crisis and outlining concrete steps that the international community can take to combat drug resistance. If we act now to protect the medicines we have, we will also ensure these drugs save lives in future generations.