

## The Growing Urgency of Antimicrobial Resistance

Since the 1940s, antimicrobial agents have substantially reduced mortality from infectious diseases. Over the past several decades, however, the extensive use, misuse, and overuse of antimicrobials in both the human and animal sectors has resulted in increased antimicrobial resistance (AMR) levels worldwide.

In 2014, the World Health Organization (WHO) published its first global report on AMR surveillance, with data provided by 114 countries. Key findings indicated that:

- ◆ Nearly 4% of new TB cases and 20% of previously treated cases are estimated to have multi-drug resistant TB (MDR-TB). Extensively drug-resistant TB (XDR TB) has been identified in 92 countries, in all regions of the world.
- ◆ Artemisinin is the medicine of last resort for treatment of falciparum malaria; suspected or confirmed artemisinin resistance has been identified in Cambodia, Myanmar, Thailand, and Vietnam.
- ◆ 10–17% of patients not having previously accessed antiretroviral therapy (ART) in Australia, Europe, Japan, and the US are infected with a virus resistant to at least one antiretroviral drug.
- ◆ High rates of resistance in bacteria that cause common infections (e.g., urinary tract infection, pneumonia) are found in all WHO regions.

URC's strategy to address AMR is in line with the U. S. Government's Global Health Security Agenda, the USAID National Action Plan, WHO's Global Action Plan, as well as with the United Nation's General Assembly's Political Declaration on Antimicrobial Resistance. URC aims to help countries develop their national action plans, improve their health surveillance systems, strengthen the evidence base, and develop new responses to this expanding global threat.



A village worker explains the importance of treatment adherence to a malaria patient in Cambodia.

*“Without urgent, coordinated action by many stakeholders, the world is headed for a post-antibiotic era, in which common infections and minor injuries which have been treatable for decades can once again kill.”*

– Dr. Keiji Fukuda, Assistant Director-General, WHO

URC programs address AMR by:

- ◆ Strengthening health systems in low- and middle-income countries to ensure multi-sectoral structures are in place to monitor and respond to emerging AMR.
- ◆ Strengthening monitoring, research, and surveillance systems and use of data for evidence-based decision making at local, regional, and national levels.
- ◆ Providing technical expertise in improving quality of health services to ensure better use of antibiotics through compliance with standard treatment guidelines, counseling for treatment adherence, and strengthening management systems to manage drug quality supply.
- ◆ Implementing effective hygiene and infection prevention measures in both community and hospital settings.
- ◆ Carrying out communication and education campaigns to raise public awareness of the dangers of substandard or fake drugs and the importance of treatment adherence.



In Cambodia, URC is working with government partners, health care facilities, and health staff to curb antimicrobial resistance.

## HOW URC ADDRESSES AMR THROUGH ITS PROGRAMS

### Multi-drug Resistant TB (MDR-TB) and Extremely Drug Resistant TB (XDR-TB)

Through the global TB CARE II Project, URC works with national TB programs and other TB control partners to develop and implement policies and guidelines for management of MDR/XDR-TB, strengthen health services at the facility and community levels, and improve counseling and vocational training for patients.

### Drug-resistant Malaria

The USAID Control and Prevention of Malaria Project (CAP-Malaria) supports the systematic control of malaria in affected border regions of Thailand, Cambodia, and Burma, aiming to contain the spread of MDR *P. falciparum* malaria in the Greater Mekong Sub-region.

### Research and Evaluation of Antimicrobial Use and Health Care Associated Infections

URC evaluated data collection and reporting activities for health care-associated infections (HAI) and antimicrobial use in 23 health care facilities in 10 U.S. states. This survey was part of a larger undertaking by the Centers for Disease Control and Prevention to determine the viability of a national HAI and antimicrobial use survey.

### Infection Prevention and Control

In countries ranging from Cambodia, South Africa, and Bangladesh to Namibia to Nicaragua, URC works with ministries of health to develop and implement infection prevention and control guidelines in health care settings.

### Policy Development and Implementation

Through the USAID Better Health Services Project in Cambodia, URC worked with the ministry of health and leading hospitals to collect data on resistance to various pathogens, plan a national strategy, and provide training laboratory staff in antibiotic susceptibility testing.