

REPORT OF THE EIGHTH MEETING OF THE
GLOBAL COLLABORATION FOR DEVELOPMENT
OF PESTICIDES FOR PUBLIC HEALTH

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**World Health
Organization**

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1. INTRODUCTION

The eighth meeting of the Global Collaboration for Development of Pesticides for Public Health was held at the headquarters of the World Health Organization (WHO) in Geneva, Switzerland, on 20–21 February 2012. The theme of the meeting was surveillance and management of dengue vectors.

Dr Hiroki Nakatani, WHO Assistant Director-General, HIV/AIDS, Tuberculosis, Malaria and Neglected Tropical Diseases, opened the meeting by referring to neglected tropical diseases as medically diverse yet sharing common features because all are strongly associated with poverty, all flourish in impoverished environments and all thrive best in tropical areas, where they tend to co-exist. Control of neglected tropical diseases has become a show case for goodwill by offering health to the poorest of the poor in the many countries where these diseases are endemic and which collectively kill about half a million people every year. Neglected tropical diseases are a challenge to achieving United Nations Millennium Development Goal 6 (combating HIV/AIDS, malaria and other diseases) and are closely linked with goal 1 (eradicating extreme poverty and hunger) and other goals for universal education, empowerment of women and safe drinking-water. A meeting held in London, United Kingdom, on 30 January 2012, on uniting to combat neglected tropical diseases was inspired by the WHO roadmap on accelerating work to overcome these diseases.¹ The world is now alerted to the importance of neglected tropical diseases, and donors are committed to accelerating work to eliminate or eventually eradicate them. WHO has produced overwhelming evidence to show that many of the 17 neglected tropical diseases in the roadmap, which affect more than 1 billion people worldwide, can be controlled and, in many cases, eliminated or even eradicated.

Dengue, one of the 17 diseases targeted in the roadmap, can be controlled provided that surveillance, data reporting, cross-border information exchange, case management and hospital

¹ *Accelerating work to overcome the global impact of neglected tropical diseases: a roadmap for implementation*. Geneva, World Health Organization, 2012 (WHO/HTM/NTD/2012.1).

care are significantly improved and sustainable vector control measures are implemented through principles of integrated vector and disease management.

The conclusions and recommendations of the meeting would be taken to the back-to-back WHO Consultation on dengue prevention and control (22–24 February 2012) in order to refine WHO's strategy for dengue control. Prevention and control of the disease require long-term political and financial commitment and the full engagement of countries.

In his opening remarks, Dr Lorenzo Savioli, Director, WHO Department of Control of Neglected Tropical Diseases, referred to dengue control as one of the Organization's priorities. Dengue affects millions of people worldwide and is endemic in more than 100 countries. In 2010, all six WHO regions recorded cases of the disease, and indigenous outbreaks were reported for the first time in the European Region. WHO estimates that more than 50 million cases of dengue occur annually.

Dr Morteza Zaim, Coordinator, WHO Vector Ecology and Management, introduced the objectives of the meeting as follows:

- To review the evidence on effective dengue vector control interventions (both during outbreaks and as sustained control interventions in endemic countries).

- To gather more evidence on innovative technologies in the pipeline.

- To review the integrated vector management (IVM) approach to dengue management, including integrated vector and case surveillance.

- To recognize the role of vector control in an integrated programme before and after the introduction of a dengue vaccine.

- To identify and acknowledge the role of partners in dengue control.

The meeting was convened in plenary sessions (Annex 1) and attended by representatives of industry, national and government supported agencies and national programmes, the Bill & Melinda Gates Foundation, regional and international

organizations, universities and research institutions, WHO temporary advisers and members of the WHO Secretariat (Annex 2). Dr Ronald Rosenberg was appointed as the Chairman and Dr Paul Reiter as the Rapporteur of the meeting.

2. DENGUE AS AN EXPANDING PUBLIC HEALTH PROBLEM

Dr Ronald Rosenberg, Associate Director for Science, United States Centers for Disease Control and Prevention, gave the keynote speech of the meeting. About one billion people are at significant risk of dengue virus infection and more than 50 million people are infected annually. There is a sense that both the range and the intensity of transmission continue to increase, although verification is difficult. Conditions that favour transmission – urbanization, lack of adequate water supply and climate change – are increasing. The most common vectors of dengue (*Aedes aegypti* and *Aedes albopictus*) are widely distributed mosquitoes that have adapted to human domestication. The discovery, after 75 years, of persistent dengue transmission in Florida, suggests that areas of even developed countries can be at risk. During 2010, more than 20 000 dengue cases were confirmed in Puerto Rico – estimated as representing more than 100 000 unreported cases out of a population of just 4 million – as part of an apparent El Niño-related surge of cases in Asia and Latin America.

A confounding factor in dengue transmission – and a particular complication in vaccine development – is that the disease is caused by four closely related but distinct viruses, often referred to as serotypes 1–4. Immunity to one virus does not protect an individual or a population against epidemic infection with

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