

## DISEASE SURVEILLANCE NETWORKS INITIATIVE

### STRATEGY OVERVIEW

The last few decades have witnessed the rapid emergence of new infectious diseases with pandemic potential—HIV/AIDS, Ebola, SARS, highly pathogenic avian influenza, and now H1N1 influenza (Swine Flu). These diseases threaten not only the health, but also the livelihoods, of the world's poorest people.

The emergence of pandemic diseases is driven by a multitude of factors that facilitate their swift spread beyond localized regions, where they become exponentially more difficult to contain. Early detection and containment by effective disease surveillance networks is critical to arresting pandemics in their early stages.

Weak capacity in the field for early detection of outbreaks, fragile health systems, inadequate regional response structures, and inefficient global coordination have curtailed effective responses to outbreaks and pandemics and have undermined efforts to build resilience to threats to the health and livelihoods of poor or vulnerable people.

The Rockefeller Foundation's Disease Surveillance Networks Initiative (DSN) supports transnational and inter-disciplinary networks to strengthen national, regional, and global disease surveillance and response systems. The DSN initiative aims to mitigate the impact of disease outbreaks by focusing on three primary change levers.

### CHANGE LEVERS

- **Building individual and institutional capacity to conduct disease surveillance and response efficiently and effectively.** Weak capacity in the field for early detection of outbreaks, fragile health systems, and inadequate regional response structures seriously hampers the ability of institutions to respond effectively to outbreaks. Working with the Mekong Basin Disease Surveillance Network (MBDS), the Foundation seeks to strengthen systems in six countries (Cambodia, China's Yunnan Province, Lao PDR, Myanmar, Thailand, and Vietnam) and to promote regional collaboration on disease surveillance and response. The initiative promotes the development of the network, fosters cross-border collaboration, and supports efforts to train and more effectively deploy human resources to promote rapid and coordinated disease surveillance and response. DSN has also translated promising approaches from the Mekong to existing and nascent networks in Eastern and Southern Africa.
- **Building bridges between disease surveillance networks and international agencies to increase the effectiveness of global response systems.** While health institutions are generally national in scope and operate within the mandates of country level governments, diseases and pandemics spread rapidly beyond national borders. Countries often lack the adequate trans-border or regional structures to detect and manage outbreaks in an open, transparent manner. The Foundation supports collaboration and learning across regional surveillance networks and with global institutions, helping regional networks in the Mekong Basin, East Africa, and the Middle East share

information, technologies, new methods, and best practices across regions and develop novel approaches that enhance the quality of disease surveillance worldwide. This support includes investment in CHORDS (Connecting Health Organizations for Regional Disease Surveillance), a collaboration between regional networks across the world (including the Mekong region, Eastern and Southern Africa, South Asia, the Middle East, and Latin America) and intergovernmental partners, and the Global Health Diplomacy Dialogue Series, which builds bridges between global institutions and regional surveillance networks by bringing together diplomats, regional and global health specialists, and academics to improve negotiation processes for better health.

- **Building connections between animal health, human health, and environmental health through the “One Health” approach.** Of the new diseases that have struck since 1980, most are zoonotic diseases, that is, diseases that strike both humans and animals, including Ebola virus, monkey pox, West Nile virus, SARS, and HIV/AIDS. Such diseases affect public health, animal health, food supply, economics, and ecological sustainability. Interdisciplinary collaboration is needed to understand zoonoses, and institutional collaboration between animal, human, and environmental health institutions are required to respond effectively. Working to support this One Health concept, the Foundation strengthens leadership, capacity, and coordinated action in human and veterinary health, along with district and cross-border training in disaster and epi-zoonotic planning and management.

## **KEY OUTCOMES**

### **Outcome Area 1 - Networks**

Trans-boundary disease surveillance networks in Southeast Asia, and in Eastern and Southern Africa are formed, sustained and evolve to enable disease surveillance practitioners to collaborate, share information, and learn how to more effectively address disease threats.

### **Outcome Area 2 – Capacity**

Disease surveillance practitioners and their institutions strengthen and apply and distribute technical and communication skills in disease surveillance to more effectively address disease threats.

### **Outcome Area 3 – Tools**

Disease surveillance practitioners have increased access to, and use improved tools and methods to effectively and efficiently monitor, share and report information, and to respond to disease threats.

### **Outcome Area 4 – Trans-disciplinary Leadership in One Health**

Policy makers, human health and veterinary practitioners take a trans-disciplinary approach to policy and practice in animal and human health emphasizing the “One Health” principles at global, regional and local levels.

## **IMPACT - Our vision of success**

In the longer term the Foundation expects to contribute to more resilient national, regional and global surveillance and response systems that are able to detect and respond more quickly to disease outbreaks, thereby protecting the lives of more people in Southeast Asia and Eastern and Southern Africa against the threats of disease. Poor and vulnerable people, especially those living in border areas, will be more resilient to the health and livelihoods threats of emerging diseases. They will have increased access to information from health and veterinary officers, who are able to respond more rapidly and in a more coordinated manner to disease threats. Health officials will have increased access to information and knowledge of disease outbreak investigation and response, and will be more informed of their national level disease surveillance, public and animal health policies and practices. Greater collaboration will exist across national borders in Southeast Asia and Eastern and Southern Africa to identify, communicate and respond to outbreaks.