Transforming Public Health Systems for Improved Global Health

**The need**
Shortcomings in national public health systems often go unnoticed until a country is faced with a crisis. A SARS outbreak, a natural disaster, or an imminent influenza pandemic can expose vulnerabilities in a nation’s public health system and test national readiness to respond.

Public health systems in low-resource countries bear the added burden of limited funding, human resources, and physical infrastructure while also combating endemic conditions such as AIDS, malaria, TB, and diarrheal disease plus neglected tropical diseases and emerging threats such as Ebola virus and avian influenza.

Addressing these challenges requires a core set of functions that are the cornerstone of public health practice. Key among these are:

- **Population health assessment**—collect and study data on vital statistics and on factors in the community that contribute to or threaten health
- **Disease surveillance and health protection**—systematically collect and analyze health data, often requiring laboratory diagnosis, leading to action to prevent and control disease
- **Research**—study diseases and interventions in laboratories and communities to inform policies and programs
- **Outbreak control**—detect, investigate, control, and prevent disease outbreaks that threaten a country’s population and have potential to spread across borders

**The NPHI solution**
A proven way for countries to carry out core public health functions is by consolidating and organizing public health expertise and infrastructure within a “national public health institute” (NPHI).

An NPHI is a government agency or closely linked group of agencies that provides science-based leadership and coordination for a country’s public health activities. Many countries, mostly in higher-resource regions, already have some form of NPHI. Examples include the U.S. CDC, China CDC, National Public Health Institute of Finland, Chile’s Instituto de Salud Publica, and South Africa’s National Institute for Communicable Diseases.

**IANPHI: empowering NPHIs for stronger global health**
In 2006, the International Association of National Public Health Institutes (IANPHI) was established as the first effort to link NPHIs globally, strengthen existing NPHIs, and create new ones. IANPHI’s members include the NPHIs of more than 60 countries.
With funds and expertise from countries, members, and partners, IANPHI focuses on establishing and enhancing NPHIs in low-resource nations, with emphasis on the public health functions most critical to improved and sustained health outcomes. Strong and well-supported NPHIs:

- Increase national capacity to mount a decisive and coordinated response to a public health emergency
- Increase workforce quality and quantity and boost a country’s ability to turn program funding into services and ultimately into improved health outcomes
- Improve capacity to absorb donor funds, coordinate donor activities, and manage and evaluate program activities
- Provide visible national leadership for public health, with the ability to set policies and allocate resources based on a country’s own priorities
- Create a clear public health career path for scientists and enhance public health expertise and workforce management to reduce “brain drain”

**NPHI development projects**

By 2012, IANPHI will partner with nine low-resource countries to develop their NPHIs. Although the scope of the projects will vary, all will share some key areas of support:

- Build human capacity and provide a career path for public health professionals through a mentorship program and training in strategic leadership and management
- Build laboratory capacity through investments in human resources and scientific infrastructure
- Build surveillance capacity by creating and developing linked and coordinated surveillance systems resulting in accurate reporting of disease rates
- Leverage expertise and resources through a peer-assistance model that connects low- and higher-resourced countries and institutes

Current project sites include Bangladesh (partnering with the country’s Institute of Epidemiology, Disease Control and Research), Ethiopia (assisted by RIVM, the Dutch NPHI), Ghana (assisted by CUH2A and the U.S. CDC), Guinea-Bissau and Mozambique (assisted by Fiocruz, Brazil’s NPHI), and Tanzania (assisted by THL, Finland’s NPHI).

Through these collaborative projects, the countries will be able to transform scattered and underfunded public health functions into coordinated and comprehensive public health systems.

For example, Guinea-Bissau’s NPHI development project unites the country’s central reference laboratory, school of public health, health research institute, and national field epidemiology project into a single organizational structure within the Ministry of Health. This new entity, funded in part through IANPHI, the Brazilian government, and others, will allow the country to realize its vision for a well-organized, substantive, and sustainable public health system.

IANPHI is also exploring NPHI development projects in Morocco, Rwanda, and Vietnam.

**NPHI advocacy**

IANPHI advocates for development and support of public health systems by facilitating alliances and collective action among all NPHIs and with strategic partners such as WHO. IANPHI also develops partnerships to ensure that NPHIs are linked to related global efforts focused on disease surveillance, health systems strengthening, and health metrics.

**IANPHI support and governance**

IANPHI received initial support from the Rockefeller Foundation, and The Bill & Melinda Gates Foundation is providing multi-year implementation support. The organization is governed by a President, Vice-President, and Executive Board, and managed by a Secretariat co-located in Europe and the United States.

IANPHI’s President is Dr. Jeffrey Koplan, Director of Emory University’s Global Health Institute and former Director of the U.S. CDC. Its Vice-President is Dr. Pekka Puska, Director General of Finland’s National Public Health Institute, KTL. IANPHI’s Executive Board includes the directors of Brazil’s Fiocruz, China CDC, Ethiopian Health and Nutrition Research Institute, Morocco’s Institut Pasteur, RIVM of the Netherlands, Norwegian Institute of Public Health, and Thailand’s National Institute of Health.