

Public Health Institutes of the World

IANPHI

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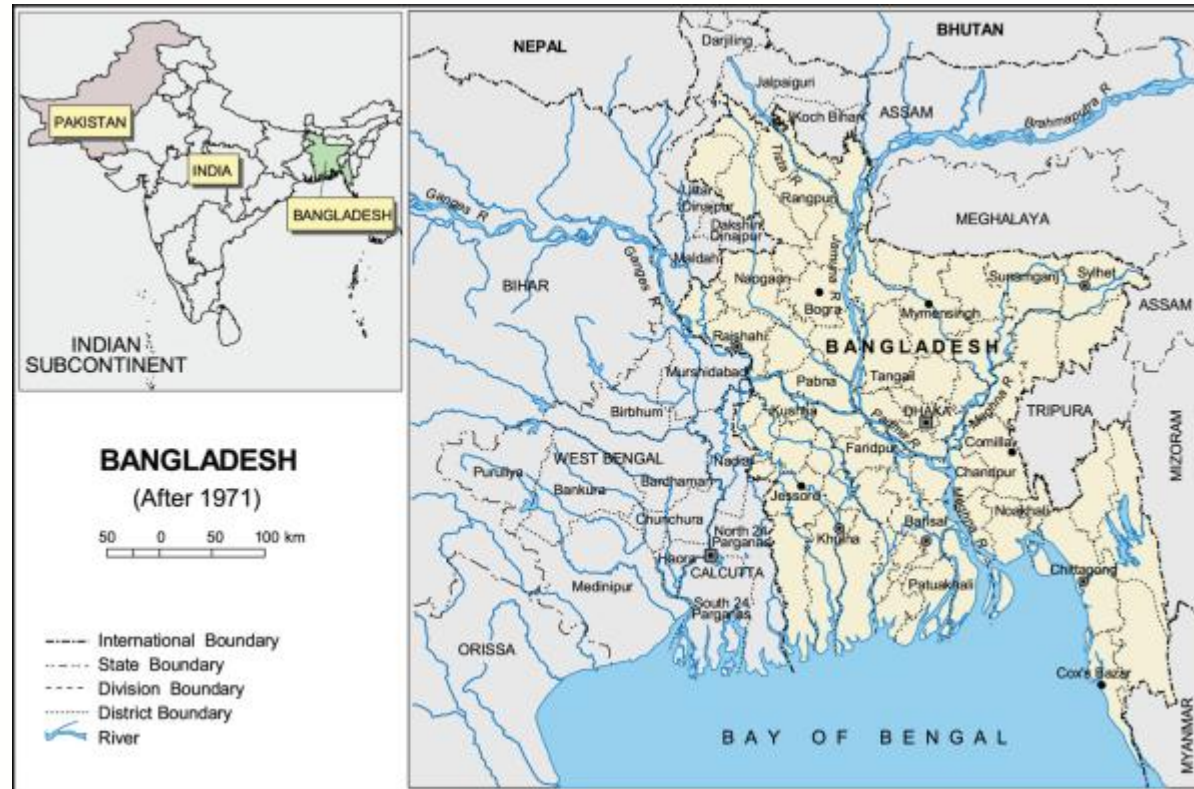
NATIONAL INSTITUTE FOR HEALTH AND WELFARE

Introduction

- “The end of infectious diseases” was a popular idea in the 1970s
- Infectious diseases are still important in the 21st century due to:
 - Emergence of new infections
 - Re-emergence of old infections
 - Increase in drug-resistant infections

Bangladesh

- Highest population density apart from the city states
- Low income country
- Limited access for population to modern health care



Current surveillances

- Web based priority communicable disease surveillance
- Sentinel surveillance
- Population based surveillance
- Event-based surveillance
- Surveillance through outbreak investigations

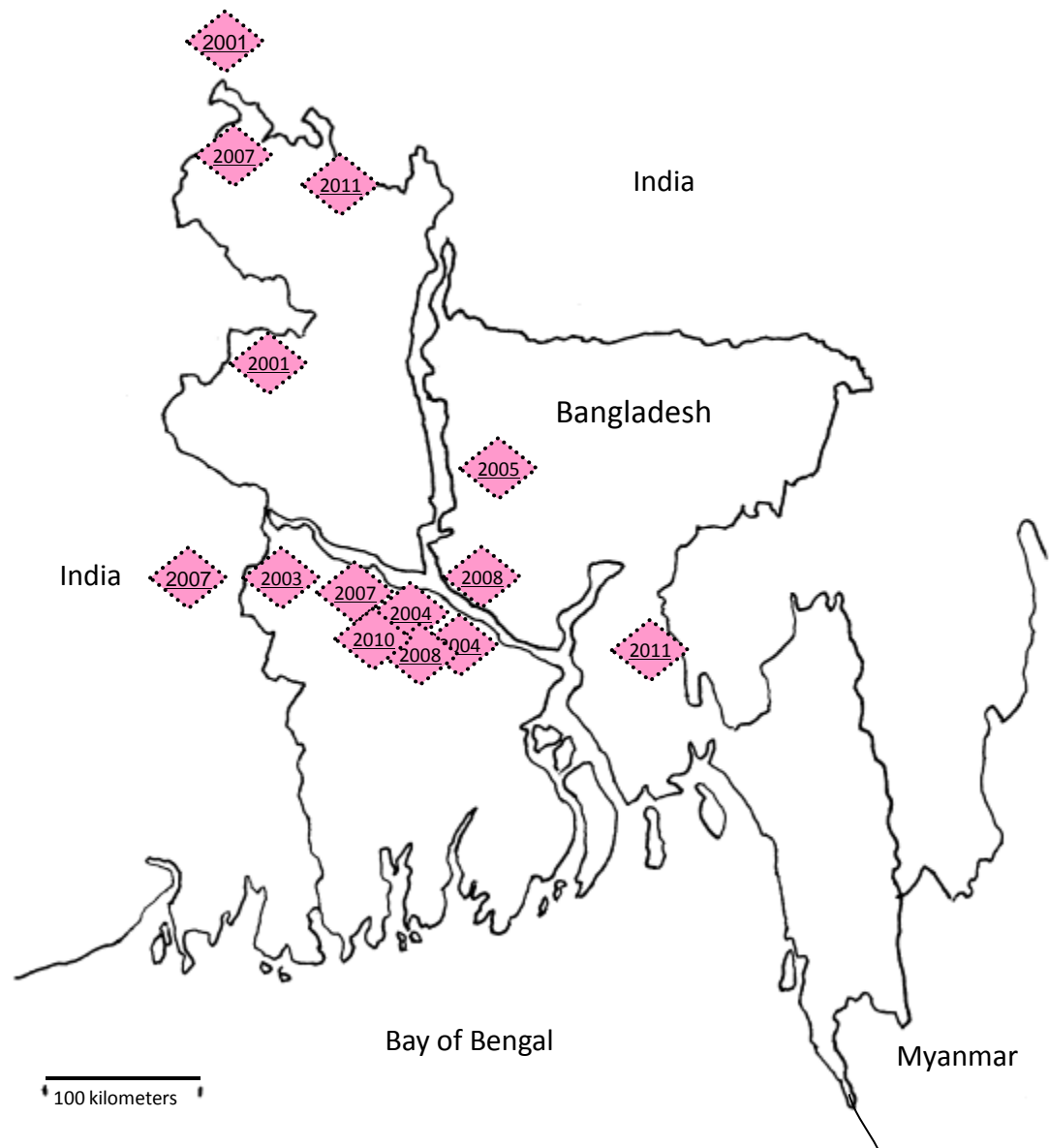
Priority communicable disease surveillance

- Covers all 64 districts
- Web based
- Weekly reporting
- Expanding to 464 sub-districts with support from IANPHI

Sentinel surveillance

- Influenza surveillance
 - Hospital based influenza surveillance, IEDCR/ICDDR,B collaborative
 - National Influenza Surveillance, Bangladesh, Government funded
- Nipah surveillance – IEDCR/ICDDR,B collaborative
- Acute meningo-encephalitis surveillance – IEDCR/ICDDR,B/CDC/WHO
- Salmonella surveillance – IANPHI supported

2001	Siliguri Meherpur	66 cases 49 deaths 13 cases 9 deaths
2002	No cases	
2003	Naogaon	12 cases 8 deaths
2004	Rajbari Faridpur	31 cases 23 deaths 36 cases 27 deaths
2005	Tangail	12 cases 11 deaths
2006	No cases	
2007	Thakurgaon Kushtia Pabna, Natore, Naogaon Nadia	7 cases 3 deaths 8 cases 5 deaths 3 cases 1 death 5 cases 5 deaths
2008	Manikgonj Rajbari	4 cases 4 deaths 7 cases 5 deaths
2009	Rangpur , Gaibandha, Rajbari, Niphamari	4 cases 1death
2010	Faridpur, Rajbairi, Gopalganj ,Kurigram	19 cases 17 deaths
2011	Lalmonirhat, Dinajpur, Rangpur, Nilpahmari, Rajbari. Comilla	39 cases 36 deaths
Total		266 cases 205 deaths, CFR 77%



Population based surveillance

- Surveillance for influenza and other respiratory illness in an urban area – ICDDR,B and IEDCR collaborative activity
- Intensive active surveillance
- Detected mild paediatric cases of avian influenza H5N1



Event based surveillance

- Media surveillance
 - Contracted out to a professional agency
 - 10 newspapers
 - 8 TV channels
 - Monitored everyday
 - Evaluation ongoing
- Reports from formal and informal sources

Surveillance through outbreak investigations

- Rapid Response Teams at different tiers
- Multidisciplinary teams
 - Epidemiologists
 - Clinicians
 - Veterinarians
 - Anthropologists

Anthrax

Nipah encephalitis

Chikungunya

Pesticide poisoning

Pandemic H1N1 2009

Puffer fish poisoning

Toxic plant ingestion

Mass psychogenic illness

Diarrhoea outbreaks

Laboratory network

- IEDCR – BSL 3 laboratory
- ICDDR,B – BSL 3 laboratory
- Institute of Public Health
- CDC, Atlanta
- And beyond.....



Strength of collaboration

- Between government institutions
- Government-Nongovernment
- Regional
- International



Successful surveillance

- Detected mild pediatric cases of avian influenza infection in human
- Estimated burden of Japanese encephalitis based on surveillance data
- Estimated burden of influenza
- Monitoring progression of 2009 H1N1 influenza pandemic
- Nipah cases detected every year and detection of risk factors
- Detected first case of Chikungunya fever

Sustainability

- Guiding principles
 - Epidemiology road map
 - International health regulations
- Advocacy for inclusion of surveillance in Health and Population Sector Program
- Dissemination of surveillance findings with policy makers
- Involvement of stakeholders
- Goal: Integrated Disease Surveillance