CDC in Bangladesh

Staff

CDC office (physical presence)
4 U.S. Assignees

At a Glance

Population: 166,208,712
Per capita income: $2,100
Life expectancy at birth women/men: 68/72 yrs
Infant mortality rate: 45/1000 live births

Source: Central Intelligence Agency, The World Factbook, 2014

Top 10 Causes of Death

1. Cancer 13%
2. Lower Respiratory Infections 7%
3. Chronic Obstructive Pulmonary Disease 7%
4. Ischemic Heart Disease 6%
5. Stroke 5%
6. Preterm Birth Complications 4%
7. Tuberculosis 3%
8. Neonatal Encephalopathy 3%
9. Diabetes 3%
10. Cirrhosis 3%

Source: GBD Compare (http://viz.healthmetricsandevaluation.org/gbd-compare/), 2010

The Centers for Disease Control and Prevention (CDC) has been collaborating with icddr,b (formerly known as the International Centre for Diarrheal Disease Research, Bangladesh) over the last 40 years—most recently to strengthen the country's capacity to detect emerging infectious diseases in human and animal populations and to provide training and other interventions to host country partners. A CDC medical epidemiologist led icddr,b's Centre for Communicable Diseases (known as the Programme on Infectious Diseases and Vaccine Sciences before 2012) from 2002-2013 and two CDC epidemiologists currently serve as senior CDC technical advisors to icddr,b. A strong collaboration between CDC and the Institute of Epidemiology Disease Control and Research (IEDCR) within the Bangladesh Ministry of Health and Family Welfare (MOHFW) has further strengthened the country's ability to detect and respond to disease threats. In 2012, CDC designated Bangladesh as a CDC Global Disease Detection Center for enhancing global health security for rapid detection and response to emerging and reemerging infectious diseases.

Influenza

CDC and ICDDR,B, in partnership with IEDCR, conduct surveillance for emergent and zoonotic strains of influenza and for severe respiratory disease and influenza-like illness in the general population and in hospitals across Bangladesh. In addition, they participate in outbreak investigations of respiratory illness and conduct research studies on seasonal and avian influenza and other respiratory viruses (e.g., estimating disease burden and mortality through enhanced surveillance, assessing pharmacy dispensing practices for respiratory illness, developing and evaluating novel surveillance and diagnostic methods for respiratory diseases, evaluating the effectiveness of intervention programs, and estimating disease burden in high risk populations). Since 2007, CDC has provided resources, training, and technical support to laboratories at IEDCR and ICDDR,B to strengthen diagnostics capacity for influenza and other respiratory pathogens.

Emerging Infections and Vaccine Preventable Diseases

CDC works collaboratively with ICDDR,B and MOHFW to conduct public health research to learn more about the transmission and burden of select pathogens that cause diseases, such as encephalitis, rotavirus, polio, and viral hepatitis. Additionally, CDC assignees assist government staff on effective outbreak investigation techniques and guide them on how to effectively respond to public health threats. Study results inform Bangladesh policy makers and help them reach decisions about introducing vaccines and other interventions to most effectively reduce burden of disease in the country.

Tuberculosis

CDC works collaboratively with ICDDR,B and Bangladesh's National Tuberculosis Programme to better characterize the transmission and treatment of TB and drug-resistant TB in Bangladesh. Research activities, focused on improving prevention and treatment efforts, currently include ongoing surveillance of drug-resistant TB at 14 sites across the country, an investigation of hospital-acquired TB transmission, and evaluations of two TB program activities: hospital-based TB infection control and a new nationwide model for community-based treatment of multi-drug-resistant TB.

Zoonoses/One Health

CDC works with ICDDR,B and MOHFW to develop and evaluate strategies to mitigate risk of animal-to-human transmission of influenza through surveillance for new strains of influenza in swine and swine herders, poultry workers, live bird markets, and nomadic waterfowl. CDC also works with partners to improve the safety of slaughtering and backyard poultry-raising practices in villages. Since 2007, CDC has provided support for Nipah virus (a rapidly fatal encephalitis in humans, carried by fruit bats) surveillance at six hospitals in Bangladesh. In addition, CDC supports the government of Bangladesh in investigating and responding to outbreaks of anthrax, avian influenza, rabies and Japanese encephalitis.

CDC is working with ICDDR,B , MOHFW, Bangladesh's Ministry of Fisheries and Livestock, Bangladesh's Ministry of the Environment, and other One Health Bangladesh partners (including scientists, veterinarians, physicians) to institutionalize a One Health framework for preventing, detecting, and responding to diseases at the animal-human-environmental interface. Examples of such diseases include avian influenza, Japanese encephalitis, Nipah virus, and anthrax.

Impact in Bangladesh

- 28 acute disease outbreak investigations in collaboration with the government of Bangladesh in 2013.
- 24 national influenza surveillance sites at district and tertiary care hospitals established within Bangladesh since 2009.
- 16 sites for avian influenza surveillance among poultry workers established within Dhaka City Live Bird Markets in 2012.
- 1,305 public health professionals received short course trainings since 2011.

Capacity Building

CDC works in close collaboration with ICDDR,B and MOHFW to train public health personnel and to develop the capacity of local junior scientists to become independent health science researchers. CDC supported the establishment of the Bangladesh Field Epidemiology Training Program (FETP) in 2013 (see section below) and provides support for two ICDDR,B staff who are seconded to IEDCR to assist with the management of outbreak investigations. At ICDDR,B , approximately 35 Bangladeshi scientists are currently working on CDC-supported projects. CDC also supports the Centre for Communicable Diseases' Training Support Group at ICDDR,B , which conducted 59 training courses in 2013 on a wide variety of topics that included scientific writing, statistical analysis, clinical epidemiology, training of rapid response teams, and FETP courses.

Field Epidemiology Training Program (FETP)

CDC is the key partner in establishing the FETP in Bangladesh in 2013 at the MOHFW in partnership with other public health institutions in Bangladesh. The FETP is modeled after CDC's Epidemic Intelligence Service. The FETP is building sustainable capacity to detect and respond to health threats and is developing epidemiologic expertise within the MOHFW, including building expertise in detecting outbreaks locally and preventing their further spread. The two-year, intensive, hands-on training program will strengthen Bangladesh's public health workforce through multidisciplinary training in disease surveillance, outbreak investigation, public health research, program evaluation, communication, and other areas of epidemiology through a mix of 20% classroom-based instruction and 80% mentored, in-service work. After completion of the FETP, graduates will be able to apply the skills they gain in their daily work for the MOHFW by enhancing Bangladesh's epidemiologic capacity and informing data-driven public health policies and programs. The first cohort is expected to graduate at the end of 2015.

For more information please contact Centers for Disease Control and Prevention:
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