The Centers for Disease Control and Prevention (CDC) has provided technical assistance to Indonesia for more than fifty years. Short and long-term technical assistance from CDC staff has helped the Indonesian Ministry of Health (MoH) address a wide range of high-priority public health needs including communicable diseases, non-communicable diseases, injuries, and strengthening surveillance. CDC has funded cooperative agreements with the MoH since 2004.

### Top 10 Causes of Death in Indonesia

<table>
<thead>
<tr>
<th>#</th>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stroke</td>
<td>8%</td>
</tr>
<tr>
<td>2</td>
<td>Tuberculosis</td>
<td>7%</td>
</tr>
<tr>
<td>3</td>
<td>Cancer</td>
<td>6%</td>
</tr>
<tr>
<td>4</td>
<td>Road Injuries</td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>Diarrheal Diseases</td>
<td>4%</td>
</tr>
<tr>
<td>6</td>
<td>Ischemic Heart Disease</td>
<td>4%</td>
</tr>
<tr>
<td>7</td>
<td>Diabetes</td>
<td>3%</td>
</tr>
<tr>
<td>8</td>
<td>Major Depressive Disorder</td>
<td>3%</td>
</tr>
<tr>
<td>9</td>
<td>Lower Back Pain</td>
<td>3%</td>
</tr>
<tr>
<td>10</td>
<td>Lower Respiratory Infections</td>
<td>3%</td>
</tr>
</tbody>
</table>

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

### Influenza

The Influenza Division activities assist in creating the evidence-base for influenza control and prevention, including for seasonal, avian, and pandemic influenza. Through two Cooperative Agreements, CDC funded the Indonesia MoH to build capacity in influenza pandemic preparedness, including communications, infection control, rapid response, country planning including intersectoral functional exercises, virological and epidemiological influenza surveillance. Each of these was important in responding to the H1N1pdm09 pandemic. CDC funding continues to support routine influenza surveillance, the National Influenza Center laboratory and the integration of surveillance with disease program policy development. In 2011, the Indonesia MoH, in collaboration with CDC and USAID, began piloting an enhanced surveillance project to better understand the burden of seasonal and avian influenza in the East Jakarta District. In addition to establishing disease burden estimates, this project is identifying mechanisms for enhancing routine surveillance system functions.

### Malaria

Malaria causes several million infections and about 40,000 deaths each year in Indonesia. CDC has a staff person working closely with UNICEF-Indonesia to assist with evidence-based integrated malaria control. The focus includes three major interrelated programs:

- A malaria elimination effort in the province of Aceh
- Control of malaria in highly endemic eastern Indonesia via integration with routine expanded program on immunization (EPI) and maternal health
- Development of a network of Indonesian and foreign researchers supporting evidence-based malaria control

Recent achievements include integrating malaria control activities into ongoing immunization and prenatal care programs in five provinces in eastern Indonesia with funding from USAID, the Gates Foundation, the MOH, and UNICEF followed by expanding the program to all regions in the country where malaria continuously occurs (covering a population of approximately 100 million people) with support from the Global Fund and the MOH.
Vector-Borne Diseases
CDC provides technical consultation for evaluating an intervention to control the vector (disease carrying) mosquito of dengue viruses in Yogyakarta, Indonesia. A substance that inhibits the mosquito’s life cycle was used throughout the city in household water containers, the mosquito’s most productive breeding site. Data on vector populations and dengue infection rates among children under age 10 in treatment and control areas are now being analyzed. The study is the best controlled, longest, and most extensive test of vector control as the sole means of reducing dengue infection conducted in Asia, and results will influence future anti-dengue campaigns. CDC also provides reagents and training for a new state-of-the-art arbovirus diagnostic laboratory, as well as consultation to the University of Indonesia Medical School and the MoHon the epidemiology and identification of Chikungunya and Japanese encephalitis viruses.

Field Epidemiology Training Program (FETP)
In 1982 CDC helped establish an FETP in Indonesia to build sustainable capacity for detecting and responding to health threats. More than 600 residents have graduated from the program and are now assuming public health leadership positions in Indonesia and other countries in the region. In 1990 the FETP evolved into a Master’s Program at the University of Indonesia and the University of Gadjah Mada. CDC has re-engaged with the MoH to continue recent efforts supported by the Asian Development Bank to help the FETP become more field-based. CDC will place a resident advisor in-country to strengthen field assignments and to provide essential mentorship and instruction on special topics such as disaster epidemiology, spatial analysis, scientific writing, and communications.

Tobacco Control
CDC and WHO established a globally standardized surveillance system to track the tobacco epidemic and evaluate policy measures. The Global Tobacco Surveillance System is a set of standard surveys for adults and youth that a country can use to monitor, design, implement, and evaluate tobacco control interventions. Activities support the WHO MPOWER package, which includes six strategies proven to decrease smoking and save lives. In 2011 CDC supported the Indonesia Global Adult Tobacco Survey (GATS) in collaboration with the MoH, Statistics Indonesia, and the National Institute for Health Research and Development. The survey results will be released in the fall of 2012 and for the first time the data will document the scale of the tobacco problem for the entire nation. Indonesia also conducted the Global Youth Tobacco Survey (GYTS) at a subnational level and plans to conduct a national survey in 2012. The 2009 GYTS results show that 20.3% of 13-to-15-year-old students currently smoke cigarettes and 83.4% of current youth smokers want to stop smoking. CDC and its partners support the MoH and its partners in using data to impact policies and to add tobacco curriculum to the FETP.

Immunization
Since August 2012, The Global Immunization Division of CDC has seconded a medical officer to the WHO Indonesia Country Office to support country-wide immunization and vaccine preventable disease surveillance systems strengthening. This person is currently heading up the WHO EPI unit in Indonesia and manages a staff of 10 and an annual budget of approximately $2 million. Objectives include maintaining polio free status, working toward measles elimination, introducing new vaccines (such as HIB, Rubella, Japanese Encephalitis, Rotavirus, Pneumococcal, IPV, and Influenza), controlling a large Diphtheria outbreak in East Java, and improving routine immunization coverage across the country.

Indonesia at a Glance
Population: 238,181,000
Per capita income: $3720
Life expectancy at birth women/men: 74/69 yrs
Infant mortality rate: 30/1000 live births

Population Reference Bureau World Population Data Sheet, 2011

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

CDC-Atlanta
1600 Clifton Road NE, Atlanta, GA 30333
Email: cgh@cdc.gov
Web: www.cdc.gov/global

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