The Centers for Disease Control and Prevention (CDC) in Kenya (CDC-Kenya) saves lives and advances science and technology in Kenya and East Africa, particularly where current solutions are lacking. Once tools are shown to be effective, CDC-Kenya evaluates ways to improve their delivery and address obstacles. CDC-Kenya then helps translate research findings into policy recommendations alongside the Government of Kenya, World Health Organization, and other partners.

Through the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), CDC-Kenya supports the an effective, efficient HIV program that contributes directly to saving the lives of men, women and children through high quality HIV treatment services and a comprehensive combination prevention strategy. Using a data-driven approach, this strategy is tailored to the unique characteristics of the local epidemic for maximum health impact.

CDC-Kenya also works closely with the government of Kenya to improve and expand HIV/counseling and testing, TB/HIV integrated service delivery, blood safety, and early infant diagnosis. Health system strengthening support includes building country capacity in the areas of workforce development, quality laboratory systems, epidemiology, surveillance, health information systems, and program monitoring and evaluation to assess impact and make rapid course corrections to keep pace with changes in the local epidemic.

Tuberculosis
CDC-Kenya conducted a tuberculosis prevalence survey in Nyanza Province that offered testing and treatment referral to 28,000 people and diagnosed 133 persons with active pulmonary tuberculosis. CDC-Kenya’s tuberculosis laboratory processed over 40,000 samples for this study and has been upgraded to a bio safety level 3 laboratory facility to increase Kenya’s TB diagnostic capabilities. The recently concluded adolescent TB cohort study followed 5004 participants and the ongoing infant TB cohort study is following almost 3000 infants. A Phase IIB vaccine trial among infants is currently in progress. In addition, CDC-Kenya (Kisumu) was selected as a Tuberculosis Drug Trials Consortium (TBTC) site.

Neglected Tropical Diseases: Schistosomiasis
CDC and the Kenya Medical Research Institute (KEMRI) have been collaborating to conduct a comparison of school-based mass drug administration (MDA) delivery strategies for control of Schistosoma mansoni infections in Western Kenya in areas with 10-24% prevalence.

Kenya at a Glance
Population: 43,013,0001
Per capita income: $1,5702
Life expectancy at birth women/men: 59 /56 yrs 2

1 Kenya 2011 National Census
2 CIA Factbook, 2012

Top 10 Causes of Death in Kenya

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HIV</td>
<td>18%</td>
</tr>
<tr>
<td>2</td>
<td>Lower Respiratory Infections</td>
<td>11%</td>
</tr>
<tr>
<td>3</td>
<td>Malaria</td>
<td>8%</td>
</tr>
<tr>
<td>4</td>
<td>Diarrheal Diseases</td>
<td>6%</td>
</tr>
<tr>
<td>5</td>
<td>Cancer</td>
<td>5%</td>
</tr>
<tr>
<td>6</td>
<td>Protein-Energy Malnutrition</td>
<td>5%</td>
</tr>
<tr>
<td>7</td>
<td>Stroke</td>
<td>4%</td>
</tr>
<tr>
<td>8</td>
<td>Tuberculosis</td>
<td>4%</td>
</tr>
<tr>
<td>9</td>
<td>Sepsis</td>
<td>3%</td>
</tr>
<tr>
<td>10</td>
<td>Preterm Birth Complications</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: GBD Compare [http://viz.healthmetricsandevaluation.org/gbd-compare/], 2010
Impact in Kenya

- 220,000 people part of a health and demographic surveillance system that collects health and demographic information every four months.
- 5,424 public health officials from 20 countries participated in infection control, epidemiology, laboratory, pandemic preparedness, and rapid response training and exercises.
- 317,596 men, women and children received antiretroviral treatment
- 207,370 houses sprayed and 1,257,941 people protected from malaria in three target districts as part of the President’s Malaria Initiative
- 188,000 people are under surveillance for respiratory, jaundice, febrile, and diarrheal conditions
- 27 laboratories were enrolled in a stepwise laboratory accreditation process to ensure laboratories attain international standards between 2010 and 2012. Additionally, CDC has supported training in Laboratory Quality Systems Management for more than 1,300 participants.

Malaria
CDC-Kenya is part of the President’s Malaria Initiative and works with KEMRI, the Ministry of Health, and other partners to conduct research and develop evidence-based policy and programs that reduce the burden of malaria in Kenya. Research focuses on vaccine and antimalarial drug efficacy, preventing malaria in pregnancy, reducing transmission, and measuring the percentage of people who have malaria. CDC-Kenya and partners are currently conducting a phase III malaria vaccine trial in western Kenya, where each person receives an average of 150-300 infective mosquito bites per year. Studies strengthen the country’s capacity to do research and provide a structure that will be in place long after the studies have ended. Research is supported by the KEMRI/CDC malaria laboratory, which also provides technical support to district hospitals.

Non-communicable Diseases
CDC is working with the Kenya MOH and WHO country office to implement the WHO STEPS NCD Risk Factor Survey. Data from this survey will provide updated country-level estimates of key NCD risk factors such as tobacco use, alcohol consumption, diet, level of physical activity, BMI, etc.

Global Disease Detection
CDC-Kenya contains a Global Disease Detection (GDD) regional center that supports efforts to protect the public’s health by developing and strengthening Kenya’s ability to rapidly detect and respond to disease outbreaks and emerging infectious diseases. GDD brings together CDC-wide expertise in emerging infectious disease detection and response, field epidemiology and laboratory methods, pandemic influenza preparedness and response, and zoonotic diseases. Over the past five years, GDD-Kenya has leveraged these individual programs for emerging infectious diseases to share strengths and harmonize efforts in Kenya and the surrounding region.

Refugee Health
CDC-Kenya works with the United Nations High Commissioner for Refugees and other partners to reduce morbidity and mortality among refugees by responding to outbreaks and tracking health risks among refugees in Dadaab and Kakuma refugee camps and other camps throughout the region.

CDC-Kenya works extensively with the International Organization for Migration to oversee the quality of the medical screening of U.S. bound refugees and prevent importation of disease into the United States.

Demographic Surveillance System
CDC-Kenya and Kenya Medical Research Institute (KEMRI) conduct a Health and Demographic Surveillance System (HDSS) that monitors health and demographic information of over 220,000 people in Nyanza province. Community workers conduct house-to-house interviews using personal digital assistants (PDAs) which improve the quality of data collected, reduce data entry errors, and save paper, cost, and time. Surveillance data are used to revise government policy and plan public health interventions across a broad range of illnesses and issues. A new initiative focuses on the impact of HIV and HIV-related services in the HDSS community.

Safe Water
CDC-Kenya and partners bundled and distributed proven health interventions to community groups in rural Kenyan villages to find out if bundling WaterGuard, soap, insecticide treated bednets, a micronutrient supplement, and albendazole for deworming was more effective in reducing diarrhea, malaria, anemia, and intestinal diseases than offering the interventions separately. Researchers surveyed 1,500 households every two weeks to evaluate the impact of using this integrative model and are currently reviewing the data.