

Monitoring and Evaluation Tools





MONITORING AND EVALUATION

Under the cooperative agreements made between the U.S. Centers for Disease Control and Prevention's (CDC) Influenza Division and its partner countries, the Division supports the monitoring and evaluation (M&E) of activities associated with international Influenza program implementation. The purpose of M&E in this context is to:

- Demonstrate accountability for the resources used by programs to key stakeholders; CDC and the countries which receive funding.
- Document each country's capability and capacity for influenza surveillance, diagnostics and pandemic preparedness in order to:
 - identify program strengths and opportunities for improvement.
 - provide a mechanism to measure progress toward defined objectives and thereby demonstrate meaningful improvement in public health function over time.
- Guide ongoing investment in influenza surveillance, diagnostics and pandemic preparedness globally.
- Inform strategic and programmatic planning for countries and target technical assistance provided by CDC.
- Standardize and systematize practices.
- Identify good practices that can be shared between countries.

The Influenza Division has developed three tools which are described below. Countries participate voluntarily in these assessments.

National Inventory of Core Capabilities for Pandemic Influenza Preparedness and Response

Purpose: The National Inventory of Core Capabilities for Pandemic Influenza Preparedness and Response (National Inventory) is a comprehensive tool by which countries can systematically and quantitatively measure their capability and capacity to respond to an influenza pandemic.

Structure and content: The National Inventory covers 12 distinct domains, defined as 'core capabilities' and each capability is assigned a composite score based on the quality, coverage and timeliness of four related indicators. For example, the core capability of 'Infection Control' is measured by determining performance in the following indicators (i) standards of infection control by level of health-care system (ii) integration of infection control training for staff (iii) availability of logistical resources for infection control and (iv) level of institutionalization of infection control efforts. The end-points for the core capabilities are not identical which allows for variation in public health priorities across countries with differing resource constraints. For a copy of the National Inventory, please visit www.cdc.gov/flu/international/tools.htm.

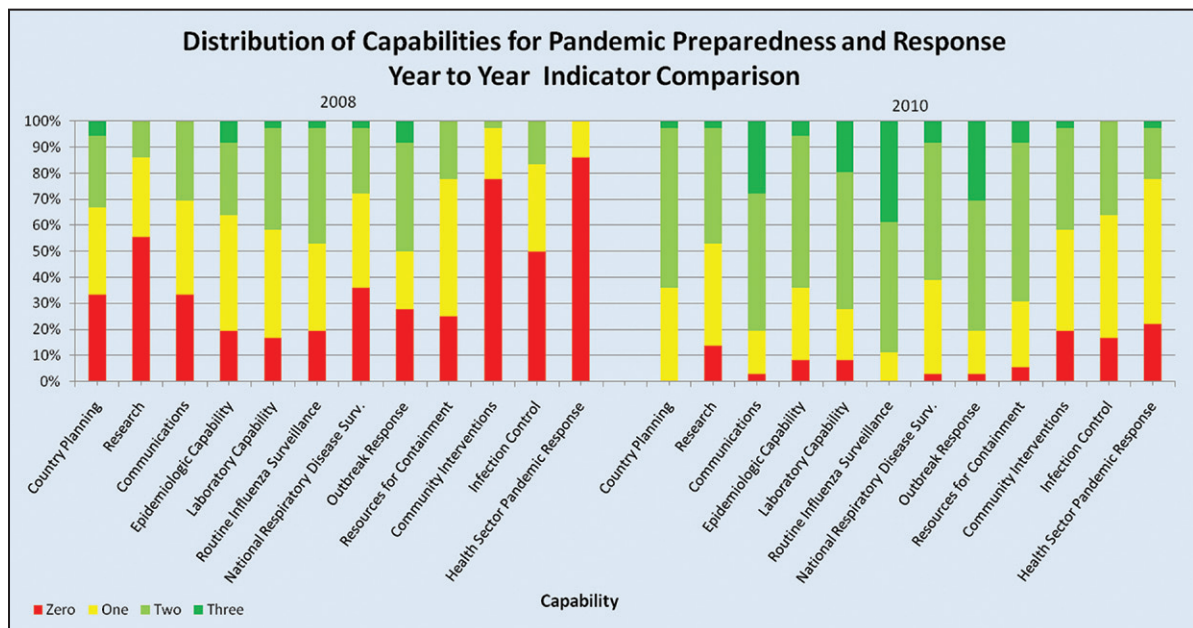
Implementation: Between May and October of 2008, 40 countries completed baseline self-assessments, facilitated by CDC staff. A further 12 countries participated in late 2009 and early 2010 to establish baselines. As of November 2010, 36 countries of the initial 40 countries which participated had repeated the tool after an approximate two year interval, allowing for comparing baseline and subsequent scores. From 2012 onwards, a new round of data collection will take place.

Outcomes: Comparison of data collected and analyzed for the 36 countries completing self-assessments between 2008 (baseline) and 2010 revealed the following:

- Total (aggregate) scores for the tool moved in a positive direction indicating an overall improvement in pandemic preparedness for each country over the period.
- Looking at all countries in aggregate, all 12 core capabilities showed statistically significant improvement from baseline.
- Examining each indicator in aggregate, 47 of 50 indicators showed statistically significant progress from 2008 to 2010.

Further to this:

- The assessments in 2008 helped countries to identify and target areas for preparedness improvement which in turn strengthened their ability to respond to the 2009 H1N1 pandemic.
- At the same time, the 2009 outbreak offered an enormous opportunity for countries to test their pandemic response with the outcomes captured when they repeated the tool in 2010.
- Identifying areas for Influenza improvement is also enhancing capacity-building for other infectious diseases as well as encouraging compliance with International Health Regulations 2005 (IHR).
- Using the tool to document progress is helping countries advocate for continued support.



International Influenza Laboratory Capacity Review Tool

Purpose: The International Influenza Laboratory Capacity Review Tool (IILCRT) is designed for assessing the capability and capacity of an influenza laboratory to perform influenza diagnostics.

Structure and content: The IILCRT is a series of questions divided into nine sections for assessing laboratories across a wide variety of influenza laboratory functions including, general laboratory functions, virology and molecular biology techniques, availability and maintenance of equipment, specimen handling, collection and reporting, staff training, laboratory safety and methods for quality assurance and quality control. The results from these sections form the basis for creating laboratory capacity summary reports and recommendations for countries. The structure and content of the tool was updated in 2011 for clarity and to include additional questions. For a copy of the tool, please visit www.cdc.gov/flu/international/tools.htm.

Implementation: Between September 2009 and October 2010, national laboratories in 33 countries completed baseline assessments, facilitated by staff from CDC and the Association of Public Health Laboratories (APHL). National laboratories in four additional countries have been assessed in FY 2011 with a further 6 countries assessed at baseline undergoing repeat assessments in the same period. From FY 2012 laboratories will be assessed using the updated version of the IILCRT.

Outcomes: The tool serves to highlight overall laboratory strengths while recommendations are provided by reviewers where opportunities for improvement present themselves. For example, a training needs assessment based on the first 26 laboratories reviewed, identified, six country laboratories in the Africa region which do not perform virus isolation; all of which expressed interest and readiness to receive technical assistance in these methods. Likewise, across all regions, many countries have received specific recommendations for improving the biosafety of their laboratories. As a consequence, APHL, CDC, the National Institute for Communicable Diseases in South Africa, the National Institute of Health in Thailand and the WHO Collaborating Centers for Reference and Research on Influenza in Melbourne and China delivered the first course on “Improving Influenza Laboratory Management Practices”, in Johannesburg in 2011.

Analytic Framework: During FY 2011, CDC and APHL further developed the IILCRT by adding a quantitative component to the analysis of data collected through the assessments. A quantitative analysis of the data can be presented visually allowing quick identification of the status of an influenza laboratory's capacity. It can also provide a standardized approach to tracking changes in laboratory capacity over time. Approximately 150 questions have been selected for analyzing laboratory capacity across eight categories which have been identified as critical to the functioning of a national influenza laboratory. The eight categories for analysis include: National Influenza Center (NIC) Criteria, Laboratory Management, Biosafety, Quality Assurance and Quality Control, Molecular Biology, Virology, Specimen Handling, Collection, and Reporting and Equipment. Each selected question has been assigned one point. The points are aggregated by category and converted to a percentage performance measure. Beginning in 2012, each laboratory will receive a summary report of the quantitative analysis in addition to the full report. Data collected in 2009 through to 2011 will be analyzed retrospectively using the new analytic framework.

International Influenza Surveillance Assessment Tool

Purpose: The International Influenza Surveillance Assessment Tool (IISAT) is designed to standardize and systematize the review of national surveillance systems. The tool helps CDC and partners to clarify the objectives and structure of their surveillance systems, such that recommendations and technical assistance can be targeted to meet system goals such as, conducting data quality checks and establishing built-in laboratory and epidemiologic data integration.

Structure and content: The IISAT consists of six checklists covering national, central and sentinel site levels and covers all ILI and SARI related surveillance. For example, it includes a review of data management, analysis and reporting procedures. The tool uses a standard format for creating surveillance capacity summary reports where recommendations for countries can be provided. For a copy of the tool, please visit www.cdc.gov/flu/international/tools.htm.

Implementation: Between March and September 2010, the IISAT was piloted in three countries by CDC staff, with an additional seven reviews completed that year. A further eight countries have undergone surveillance reviews during FY 2011. In FY 2011, CDC's Influenza Division entered into a cooperative agreement with the Council of State and Territorial Epidemiologists (CSTE) who have provided epidemiologists to assist with conducting reviews in partner countries and will continue through FY 2012.

Outcomes: Reviews in pilot countries in 2010 were used to refine and finalize the tool. The tool has served to highlight overall surveillance strengths and challenges with recommendations for improvement provided to the 18 countries reviewed to date, nine of which took place in FY 2011. Recommendations have included: weekly and quarterly analysis of risk factor data, dissemination of data to stakeholders, and better coordination between national staff and sites.



Covers of three monitoring and evaluation tools used for International Influenza Programs. From left to right: The International Influenza Surveillance Assessment Tool, the International Influenza Laboratory Capacity Review, and the National Inventory of Core Capabilities for Pandemic Influenza Preparedness and Response.