Public Health Surveillance and Informatics Program Office
FY 2013–2016 Strategic Plan

Health decisions and actions are guided by timely and useful information
MISSION

Advance the science and practice of public health surveillance and informatics.
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I am pleased to present the fiscal years 2013–2016 strategic plan for the Public Health Surveillance and Informatics Program Office (PHSIFO), Centers for Disease Control and Prevention (CDC). The ability of the U.S. public health enterprise to protect our nation’s health depends on having timely and reliable information about the health of the populations we serve and on our capacity to take full advantage of the spectrum of information that is potentially available to public health leaders.

The disciplines of public health surveillance—monitoring population health to inform public health policies and actions—and public health informatics—ensuring that information automation serves public health objectives—must be successfully integrated for them to realize their full potential. To this end, our mission is, simply, to advance the science and practice of public health surveillance and informatics. This mission is especially important given the

- population health objectives of the Affordable Care Act, which provide a renewed impetus to strengthen links between clinical and community health services;
- growing use of electronic health records (EHRs) and automated information sharing among clinicians, laboratories, and public health agencies, which is being accelerated by the Department of Health and Human Services incentive program to advance the meaningful use of EHRs to improve both individual and population health;
- changes in how people in the United States use telephones and the Internet to communicate with one another, which will continue to affect how we conduct population health surveys;
- National Strategy for Biosurveillance, signed by the President in July 2012, which emphasizes the importance of both domestic and global vigilance and information sharing to detect, characterize, and anticipate emergent health threats;
- rapidly expanding body of health and other information that is maintained electronically, which will require new tools to discern and display what is important and useful within these big data resources; and
- growing stresses on the public health workforce, which heighten the importance of ensuring that information automation and new surveillance tools help them do their jobs better and make their jobs easier, not harder.
The opportunities and challenges facing public health surveillance and informatics will require novel solutions involving collaboration across multiple disciplines.

This strategic plan provides the roadmap that PHSIPO will follow for fiscal years 2013–2016 and a template for planning beyond those years. We thank the many people from CDC, public health departments, public health organizations, and elsewhere who provided comments on an earlier draft. We value the interest in our mission that was apparent in the feedback we received and the commitment that many made to working with us. Many of the comments we received are reflected in the plan, the background narrative, or the appendices. Others will be considered further as we take the next step in articulating specific activities for each strategy.

We also recognize that our strategic plan must remain flexible in a rapidly changing world, where information needs, sources, and technologies continue to evolve. The opportunities and challenges facing public health surveillance and informatics will require novel solutions involving collaboration across multiple disciplines—epidemiology, program management, statistics, clinical medicine, behavioral science, informatics, information technology, and others.

Together with our partners, both internal and external to CDC, we will work toward our vision of health decisions and actions being guided by timely and useful information.

Sincerely,

James W. Buehler, MD
Director, Public Health Surveillance and Informatics Program Office
Introduction

This document is the summary of the Public Health Surveillance and Informatics Program Office (PHSIPO) Fiscal Years (FY) 2013–2016 Strategic Plan, and it identifies the strategic direction the program office will take to shape and enhance our role in public health surveillance and informatics. The comprehensive version of our strategic plan (found at http://www.cdc.gov/surveillancepractice/sp/) captures additional information about PHSIPO, including our products and services, and defines our plan's goals, objectives, and supporting strategies.

PHSIPO recognizes that people who are responsible for protecting and promoting public health need accurate, reliable, and timely information about the health of the populations they serve and the programs they manage. Our disciplines of public health surveillance and informatics connect to fulfill these needs in an environment that is increasingly shaped by technology that is expanding the automation of health information.

As we work to seize opportunities within surveillance and informatics that will help to foster improved public health decisions, we also face several challenges. These challenges include the current difficult federal budget climate, the need to better support state and local public health departments and Centers for Disease Control and Prevention (CDC) programs, multiple competing priorities, and the rapid advancement of technology. Despite these hurdles, we will focus our attention on taking full advantage of our opportunities.

SURVEILLANCE AND INFORMATICS

Public Health Surveillance

Public health surveillance is “the ongoing systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. The final link in the surveillance chain is the application of these data to prevention and control.” Ultimately, the purpose of surveillance is to provide accurate and timely data that are essential to informed decision making and action.

Public Health Informatics

“Public health informatics is the systematic application of computer science, technology, and information to public health practices, research, and learning.” Informatics provides timely and accurate information by creating and maintaining systems to facilitate communication and the transfer of information to support public health surveillance practices.

The ever-expanding information sources of public health surveillance data require a systematic approach to realize the full benefits of information reporting and retrieval. Applying this systematic approach to the coordination of information technology (IT) to advance prevention is the primary goal of public health informatics.

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1 Use of state and local public health departments in this document is meant to include state, tribal, local, and territorial public health departments.
3 Yasnoff, WA; O’Carool, PW; Koo, D; Linkins, RW; Kilbourne, EM. Public Health Informatics: Improving and Transforming Public Health in the Information Age, Journal of Public Health Management and Practice.
Public health informatics and surveillance connect within a rapidly changing environment that includes the expanding use of electronic health records (EHRs) and personal health records in clinical practice, automated information management systems in laboratories, new methods and services for exchanging health information, and new information standards. These changes hold great promise for improving personal healthcare services and population health and for strengthening information sharing and collaboration between healthcare providers and public health officials.

Integrating surveillance and informatics within PHSIPO uniquely positions us to drive improved public health decisions.

PHSIPO DEFINED

PHSIPO is responsible for managing several large, national surveillance systems: the National Notifiable Diseases Surveillance System (NNDSS), BioSense 2.0, and the Behavioral Risk Factor Surveillance System (BRFSS). In addition, we provide informatics and information technology services that support surveillance and other public health work and activities. PHSIPO also serves as CDC’s resource for addressing cross-cutting issues in surveillance and informatics practice, such as supporting public health departments and CDC programs in achieving the population health benefits of expanded uses of electronic health records.

Integrating surveillance and informatics within PHSIPO uniquely positions us to drive improved public health decisions through a streamlined approach to the timely collection and synthesis of public health data.

LEGISLATION AND FUNDING

PHSIPO’s core programs are authorized and funded through several legislative mandates and funding streams. BioSense is mandated through the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, and biosurveillance coordination is mandated through the Homeland Security Presidential Directive 21 and the Pandemic and All-Hazards Preparedness Act of 2006; both BioSense and biosurveillance coordination are funded through the CDC preparedness budget line. Other major core programs are authorized under the Public Health Service Act and are funded through the CDC Public Health Scientific Services budget line.

Several projects within PHSIPO are funded through the Affordable Care Act’s Prevention and Public Health Fund, including additional BRFSS questions regarding access to healthcare and a pilot collaboration between a public health department and a health information exchange to explore the use of data for surveillance of preventive healthcare services.
STRATEGIC PLAN OVERVIEW

In response to the current landscape facing surveillance and informatics, PHSIPO has created a strategic plan to outline our approach to capitalize on opportunities and meet anticipated challenges. This document highlights the key goals and objectives of the PHSIPO FY2013–2016 Strategic Plan. The goals and objectives that follow were created through collaboration with stakeholders internal and external to CDC.

Our strategic plan consists of vision and mission statements that are supported by core values, strategic goals, objectives, and strategies. PHSIPO’s values govern our operations and interactions with internal stakeholders, partner organizations, and those at the federal, state, and local levels.

VISION

HEALTH DECISIONS AND ACTIONS ARE GUIDED BY TIMELY AND USEFUL INFORMATION.

MISSION

ADVANCE THE SCIENCE AND PRACTICE OF PUBLIC HEALTH SURVEILLANCE AND INFORMATICS.

PHSIPO Core Value Statements

PHSIPO values the collective skillsets of all employees and is committed to workforce diversification and continual professional development.

PHSIPO provides surveillance and informatics support to internal and external partners.

PHSIPO applies novel scientific methods, services, and products to solve public health problems.

PHSIPO utilizes best science practices in surveillance and informatics.

PHSIPO’s strategic goals were designed to help sustain and improve public health surveillance and informatics. The goals are outlined below, with supporting detail provided in the following pages.

1. Strengthen the quality and utility of public health surveillance.
2. Strengthen the ability of public health departments to benefit from and manage advances in electronic health information.
3. Foster innovation, identify best practices, share knowledge, and serve as the primary resource for cross-cutting issues in public health surveillance and informatics.
4. Improve PHSIPO’s organizational capability to enhance efficiency and effectiveness.
Strategic Goal 1

Strengthen the quality and utility of public health surveillance.

Policy and other public health decision makers rely on public health surveillance to shape policies, program direction, and resource allocations. To fulfill these functions, the data must be of high quality. PHSIPO will periodically evaluate and upgrade our surveillance systems to strengthen the quality and utility of the information available to state and local public health departments, CDC programs, and other users and stakeholders.

**Objective 1.1** Redesign the National Notifiable Diseases Surveillance System to meet user needs.

**Objective 1.2** Strengthen the Behavioral Risk Factor Surveillance System to better adapt to changes in public health priorities and user needs.

**Objective 1.3** Expand the usefulness of BioSense 2.0.

**Objective 1.4** Strengthen the National Public Health Surveillance and Biosurveillance Registry for Human Health.

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Baseline</th>
<th>FY16 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesign of National Notifiable Diseases Surveillance System</td>
<td>Complete NNDSS evaluation</td>
<td>NNDSS (2.0) has the flexibility to expand readily to accommodate additional disease-specific program data</td>
</tr>
<tr>
<td>Proportion of jurisdictions (n = 63) contributing data into BioSense 2.0 to improve the national picture of population health</td>
<td>13%</td>
<td>90%</td>
</tr>
<tr>
<td>Average percentage of completed cell phone interviews out of total interviews completed to maintain population coverage in the Behavioral Risk Factor Surveillance System</td>
<td>14%</td>
<td>30%</td>
</tr>
<tr>
<td>Establish an implementation plan, informed by pilot studies, evaluations, and expert consultations, that ensures that BRFSS is sustained as a state-of-the-art surveillance system</td>
<td>Complete non-response mail and Web follow-up pilots</td>
<td>N/A(^1)</td>
</tr>
</tbody>
</table>

\(^1\) This KPI culminates with the FY2015 target “Implementation plan established.”
Strategic Goal 2

Strengthen the ability of public health departments to benefit from and manage advances in electronic health information.

Health information is becoming increasingly digitalized in electronic health records and other electronic systems. The Department of Health and Human Services Meaningful Use program is accelerating the use of EHRs, automated health information exchange, and national health information standards, with explicit objectives to improve personal healthcare and population health. PHSIPO will continue to support state and local public health departments and CDC programs in achieving the public health benefits of health information technology. Our work will include supporting the exchange of electronic health information with healthcare providers and laboratories and enabling more efficient and effective use of this information by stakeholders, including the public.

Objective 2.1 Provide support to internal and external stakeholders to increase the public health benefits of electronic health records, automated laboratory information systems, and health information exchanges.

Objective 2.2 Align informatics and IT services with national health information standards and architectures.

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Baseline</th>
<th>FY16 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of public health agencies that can receive production immunization information system meaningful use-compliant messages from certified electronic health record technology</td>
<td>9%</td>
<td>75%</td>
</tr>
<tr>
<td>Proportion of public health agencies that can receive production electronic laboratory reporting meaningful use-compliant messages from certified EHR technology</td>
<td>26%</td>
<td>79%</td>
</tr>
<tr>
<td>Proportion of public health agencies that can receive production syndromic surveillance meaningful use-compliant messages from certified EHR technology</td>
<td>2%</td>
<td>84%</td>
</tr>
<tr>
<td>Proportion of laboratory reports on reportable conditions that are received through electronic means by all states</td>
<td>54%</td>
<td>75%</td>
</tr>
<tr>
<td>Cumulative number of information exchange, processing, and delivery shared services provided in a common public health surveillance platform</td>
<td>1</td>
<td>TBD¹</td>
</tr>
<tr>
<td>Satisfaction ratings by CDC programs that use PHSIPO’s shared information exchange, processing, and delivery services</td>
<td>Establish baseline by December 2012</td>
<td>Prior year + 3%</td>
</tr>
</tbody>
</table>

¹ This measure is under development; targets are to be determined.
Strategic Goal 3

Foster innovation, identify best practices, share knowledge, and serve as the primary resource for cross-cutting issues in public health surveillance and informatics.

PHSIPO will continue to serve as a leader in identifying methods that strengthen public health surveillance and informatics through the adoption of better processes, services, and technologies. We also will facilitate collaboration to resolve cross-cutting issues in public health surveillance and informatics practice.

Objective 3.1  Strengthen scientific leadership to foster innovation in public health surveillance and informatics, inside and outside CDC.

Objective 3.2  Support the establishment of a cross-cutting vision and strategic direction for public health surveillance and informatics across state and federal partners to identify best practices in public health surveillance and informatics.

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Baseline</th>
<th>FY16 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual number of engagements using the Applied Public Health Informatics Research Cloud</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>Annual number of partners using the Applied Public Health Informatics Research Cloud</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>The number of critical cross-cutting surveillance and informatics issues addressed via recommendations by the National Public Health Surveillance and Informatics Advisory Committee to the CDC Director</td>
<td>N/A¹</td>
<td>Trend indicator, only results will be tracked</td>
</tr>
</tbody>
</table>

¹ Baseline is expected to be developed for 2013.
### Strategic Goal 4

**Improve PHSIPO’s organizational capability to enhance efficiency and effectiveness.**

PHSIPO will increase our ability to manage and improve our human and financial resources, advance our public health policy and communications functions, and increase stakeholder relations to achieve the goals of the PHSIPO strategic plan.

#### Objective 4.1
Strengthen the PHSIPO workforce hiring, training, and development opportunities.

#### Objective 4.2
Maximize use of PHSIPO financial resources.

#### Objective 4.3
Formally link health policy development and health communication science functions at all levels of the organization to achieve the goals of the PHSIPO strategic plan.

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Baseline</th>
<th>FY16 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of PHSIPO employee positive response to employee viewpoint survey question “Overall, how satisfied are you with your job?”</td>
<td>56%</td>
<td>70%</td>
</tr>
<tr>
<td>PHSIPO’s external partner site satisfaction rate&lt;sup&gt;1&lt;/sup&gt;</td>
<td>TBD, new metric</td>
<td>TBD</td>
</tr>
<tr>
<td>Procure IT services for x% of Independent Government Contract Estimate costs through creative contract solutions&lt;sup&gt;1&lt;/sup&gt;</td>
<td>N/A</td>
<td>45%</td>
</tr>
<tr>
<td>Number of major policy proposals developed in collaboration with key partners&lt;sup&gt;1&lt;/sup&gt;</td>
<td>N/A</td>
<td>TBD</td>
</tr>
<tr>
<td>Increase traffic to PHSIPO Web pages (PHSIPO Internet, PHSIPO intranet, and/or PHSIPO SharePoint) on which communication materials are available&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Establish baseline by December 2012</td>
<td>TBD</td>
</tr>
</tbody>
</table>

<sup>1</sup> This measure is under development; baseline and/or targets are to be determined.
**Moving Forward**

Identifying the vision and setting the strategic direction for PHSIPO for the next 4 years is only the beginning. We know success depends on how well we implement the plan going forward and the relationships we build and maintain to carry us through.

To shape our annual planning, we will use key performance indicators (KPIs) aligned to each of the four strategic goals to drive our performance for FY2013–FY2016. Our KPIs are supported by annual targets that will determine the key bodies of work required for us to achieve progress each fiscal year. Our annual operational plans, which are our methods of strategic implementation, will consist of activities and performance metrics and milestones that will be set and monitored quarterly.

PHSIPO will conduct ongoing assessments of our performance and review our operational and key performance indicators annually to determine to what extent we have achieved our strategic objectives and if our current course needs correcting.

PHSIPO embraces transparency and accountability in working with partners and stakeholders to meet these very important public health goals. We invite you to review our complete strategic plan for further details about the plan’s framework, supporting strategies, and KPIs. The full plan may be found at [http://www.cdc.gov/surveillancepractice/sp/](http://www.cdc.gov/surveillancepractice/sp/).
VISION

Health decisions and actions are guided by timely and useful information.