NSSP UPDATE

October 2016

Welcome to *NSSP Update*

NSSP Update provides monthly news about the National Syndromic Surveillance Program (NSSP). NSSP embodies collaboration, particularly in the development of its BioSense Platform, a secure cloud-based computing environment that hosts standardized, shared tools to rapidly collect, evaluate, store, and share data. *NSSP Update* will keep you in touch with the latest advancement in the platform's development.

If a colleague forwarded this issue to you, we encourage you to subscribe at this link to ensure that you receive future issues.

Shut-down of Legacy Applications: What People Are Asking

NSSP's new BioSense Platform offers tools with far more analytic capabilities than those available with the current BioSense 2.0 "legacy" application. Understandably, some practitioners are apprehensive about leaving the BioSense 2.0 data environment they use daily. That's why we want to gently nudge those system users toward the new BioSense Platform by publicizing its capabilities. We also want to work closely with sites to understand any data requirements that would NOT be met by the BioSense Platform in order to devise ways to provide the functionality needed.

Here are our responses to a couple questions we're being asked:

1. **When will CDC shut down the legacy BioSense 2.0 front-end web application and block access to phpMyAdmin?**

   CDC plans to discontinue both the BioSense 2.0 front-end web application and access to legacy phpMyAdmin in December 2016. (The specific date will be announced.) If failures related to BioSense 2.0 or phpMyAdmin occur between October and December, each one will be evaluated, but it might not always be possible to provide remedial support.

2. **Will sites have access to BioSense 2.0 legacy data via the DataMart after CDC shuts down legacy BioSense and phpMyAdmin applications?**

   CDC is converting legacy data to the BioSense Platform. Once the conversion is complete, sites will be able to use the BioSense Platform to access data. Until then, the hope is that access to a "final" copy of the MUB and the Stage 1 Archive from the legacy system will suffice. After the conversion, this copy of the MUB and the Stage 1 Archive will be archived and, most likely, not readily available.

   If this conversion process will NOT meet your needs, please contact the service desk (http://support.syndromicsurveillance.org).

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Natural and man-made disasters, evolving diseases that spread in novel ways, and environmental changes are disruptions that syndromic surveillance (SyS) may detect and monitor in nearly real-time, allowing practitioners to analyze data almost immediately.

The analysis tools and data on the NSSP BioSense Platform differ from those of other public health surveillance programs. Traditional health surveillance programs, while tried and true, employ predetermined lists of reportable topics that are neither timely nor flexible during the early stages of a public health event.

Because most data collected by the BioSense Platform are immediate and relevant to a range of public health issues, practitioners have considerable flexibility in how they categorize data or search by key word or phrase. This comes at the expense of specificity yet plays an important role in the early stages of an event. For example, SyS could be used to monitor exposure to wildfire smoke associated with cardiopulmonary emergency department (ED) visits in rural areas. In exposed counties, practitioners might observe significant increases in asthma, chronic obstructive pulmonary disease, pneumonia, and acute bronchitis. Practitioners might also see an increase in ED visits associated with cardiopulmonary symptoms and heart failure.

A practitioner's ultimate goal should be to integrate syndromic with traditional surveillance methods. Short-term, the immediacy of data potentially makes SyS a practical early-warning indicator during a public health disaster. Long-term, practitioners can use SyS with traditional reporting and other surveillance to monitor events that require further public health investigation or response.

SyS as an Early Warning Indicator—During the early stages of an event, practitioners can use SyS data to better understand an event's significance and to answer questions such as *What lab tests should I order? What specimens should I collect and from what areas? What should a case definition look like for other reporting methods?* Then, as relevant information from traditional health surveillance systems and data sources becomes available, practitioners can integrate all available data to enhance their understanding of events and to assist public health officials in decision making.

SyS as a Monitoring System—During later phases of an emergency response, practitioners can use SyS data to evaluate the effectiveness of preventive actions already being taken or to gauge a community's resilience. Practitioners can even integrate new data sources into the BioSense Platform, although not always immediately. For example, members of a Disaster Medical Assistance Team could provide ad-hoc data feeds of medical records to the BioSense Platform. The BioSense Platform's ESSENCE application is configured to receive ad hoc data feeds, which at certain times might provide the only available representation of "on-the-ground" responses and, therefore, enhance situational awareness.

The bottom line? Syndromic surveillance should be integrated more fully into public health practice. Its flexibility and near real-time data provide timely insight into trends and complement data being gathered through traditional surveillance.

UPCOMING EVENTS

October 11, 2016	Phase 3 Group 5 Orientation and Adminer Webinar: 1:00 PM–2:00 PM EDT
October 13, 2016	Phase 3 Group 4 Production Sign-off
October 18, 2016	Phase 3 Group 5 Access & Management Center (AMC) and ESSENCE Webinar: 1:00 PM–2:00 PM EDT

TECHNICAL ASSISTANCE UPDATES

- Experts from Johns Hopkins University Applied Physics Laboratory conducted training on ESSENCE at the 2016 Public Health Informatics Conference. The presentation (PDF) is posted on the NSSP website.

- Two more groups will transition to the BioSense Platform's new data flow: on September 1, 2016, Phase 3 Group 2 signed off to move into production. On September 22, 2016, Phase 3 Group 3 signed off.

- September 20, 2016   Webinar: Phase 3 Group 4 Transition Kick-off

- Mondays   Onboarding Support Calls: 3:00 PM–4:00 PM EDT

- Wednesdays   Data Validation Support Calls: 3:00 PM–4:00 PM EDT

PHASE III SCHEDULE AND UPDATE: TRANSITION TO ESSENCE

The Phase 3 Transition Schedule to ESSENCE and the activities involved are shown below. Every 4 weeks, nine sites will transition. The NSSP Team will conduct two webinars with each set of sites. The first webinar will orient system users to the transition plan and Adminer (an SQL tool for viewing MS SQL data in the BioSense Platform Archive). The second webinar will introduce the Access & Management Center and ESSENCE.

If your site anticipates a schedule conflict, please contact http://support.syndromicsurveillance.org.

Quick Start Guides to AMC, Adminer, and ESSENCE will help users navigate the platform tools to conduct routine syndromic surveillance or review data. During the transition, the NSSP Team will schedule conference calls to answer questions and share information.

Phase 3 Transition Schedule
(updated 5/4/2016)

Site Group	Wk 29 (18–22 Jul)	30 (25–29 Jul)	31 (1–5 Aug)	32 (8–12 Aug)	33 (15–19 Aug)	34 (22–26 Aug)	35 (29 Aug–2 Sep)	36 (5–9 Sep)	37 (12–16 Sep)	38 (19–23 Sep)	39 (26–30 Sep)	40 (3–7 Oct)	41 (10–14 Oct)	42 (17–21 Oct)	43 (24–28 Oct)	44 (31 Oct–4 Nov)	45 (7–11 Nov)	46 (14–18 Nov)	47 (21–25 Nov)	48 (28 Nov–2 Dec)	49 (5–9 Dec)	50 (12–16 Dec)	51 (19–23 Dec)	52 (26–30 Dec)
Illinois (includes Cook) / Massachusetts / Kentucky / Arizona / Mississippi / Arkansas / West Virginia / Kansas / Houston, TX	■	■	■	■																				
Nevada / Utah / New Mexico / Denver Public Health / Riverside, CA / Idaho / North Dakota / Montana / Alaska				■	■	■	■																	
Stanislaus, CA / Linn County, IA / Santa Clara, CA / Nevada, CA / Florida / Ohio / Pennsylvania / New York / North Carolina								■	■	■	■													
Georgia / New York City / New Jersey / Indiana / Tarrant County TX / Missouri / Louisiana / Maryland / Washington												■	■	■	■									
Oklahoma / Minnesota / Connecticut / South Carolina / Oregon / Maine / Nebraska / New Hampshire / Rhode Island															■	■	■	■						
Boston Public Health Commission / County of Sacramento, CA / District of Columbia / Delaware / San Diego, CA / Hawaii / Vermont / South Dakota / San Mateo, CA																		■	■	■	■			

Weekly Transition Activities (updated 4/29/2016)

Week 1	Weeks 2 and 3	Week 4
▪ CDC presents transition plan and conducts orientation to Adminer ▪ Users access Adminer to view new BioSense Platform Archive ▪ Users confirm accuracy of Master Facility Table	▪ CDC leads orientation to the Access & Management Center (AMC) and ESSENCE ▪ Users set up accounts and data access via AMC ▪ Users learn ESSENCE functionality and use it to visualize syndromic surveillance data	▪ Sites transition to production (new) data flow ▪ CDC begins converting legacy data from BioSense 2.0 front-end application to BioSense Platform Archive and into ESSENCE

ONBOARDING

Onboarding Support

Conference calls are held every Monday, 3:00 PM–4:00 PM EDT, to discuss the process and answer questions in a group forum. Requests received throughout the preceding week will be discussed during this call.

Data Validation Support

Conference calls are held every Wednesday, 3:00 PM–4:00 PM EDT, to assist with data validation compliance. For more information or to download the template for validating data, contact the service desk: http://support.syndromicsurveillance.org.

MASTER FACILITY TABLE UPDATES

CDC takes steps to make sure facility information is accurate and consistently stored in a Master Facility Table, or MFT. The MFT captures metadata about facilities that will enhance a user's ability to categorize and compare surveillance data on the basis of facility properties—for example, by *patient class*. The MFT is essential for managing data access.

This table shows CDC's progress toward standardizing data in the MFT across facilities that input data to NSSP's BioSense Platform. To check a site's progress, match the accompanying icon to the flow chart.
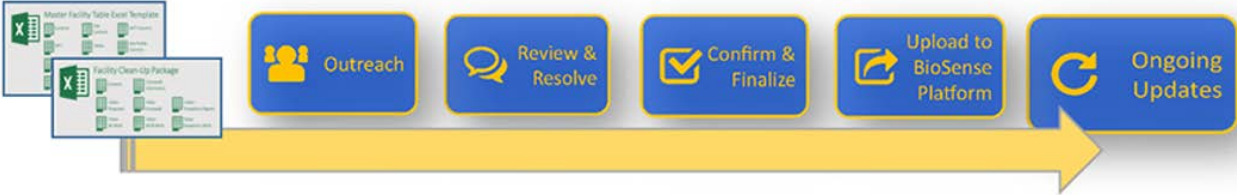
Schedule for Reviewing Master Facility Table (updated September 21, 2016)			
June 2016		**July 2016**	**August 2016**
Alabama	Illinois	Nevada	Stanislaus, CA
Tri County, CO	Massachusetts	Utah	Linn County, IA
Marion, IN	Kentucky	New Mexico	Santa Clara, CA*
Michigan	Arizona	Denver PH	Nevada, CA
Tennessee	Mississippi	Riverside, CA	Florida
Virginia	Arkansas	Idaho	Ohio
Washington	West Virginia	North Dakota	Pennsylvania
Wisconsin	Kansas	Montana	New York
Department of Defense	Houston, TX	Alaska	North Carolina
Veterans Affairs			
September 2016	**October 2016**	**November 2016**	
Georgia	Oklahoma*	County of Sacramento, CA	
New York City	Minnesota	District of Columbia	
New Jersey	Connecticut*	Delaware	
Indiana*	South Carolina*	San Diego, CA	
Tarrant County, TX	Oregon	Vermont	
Missouri	Maine	South Dakota	
Louisiana	Nebraska	San Mateo, CA	
Maryland	New Hampshire	El Dorado, CA	

*site-requested deferred transition

Florida's Use of Syndromic Surveillance to Support Zika Response

Florida is utilizing its syndromic surveillance system, ESSENCE-FL, to support Zika response efforts. Syndromic surveillance has played an integral role in supporting the overall efforts.

To date, nine Zika cases in five counties have been identified through syndromic surveillance efforts reviewing chief complaint and discharge diagnosis information received by the system within 24 hours of the patient presenting for care. These nine individuals were not previously reported to public health and had not been tested, treated, or provided disease prevention information prior to public health identifying these individuals. Following identification, mosquito control was also sent to the vicinity of the patient residence to implement mosquito control efforts in an effort to prevent or limit the potential spread of local transmission.

In addition, the system has been instrumental in our efforts to monitor potential health effects or potential exacerbation of existing chronic illnesses in the areas where aerial spraying efforts are occurring. Without this system in place, our ability to identify illness and provide timely information to those directly responsible for the response efforts and resource prioritization would be limited.

Content provided by Janet Hamilton, Florida Department of Health.

CDC Resources:
Guidance on Zika Virus: http://www.cdc.gov/zika/index.html
Zika Communication Toolkits: http://www.cdc.gov/zika/comm-resources/toolkits.html

Site Visits
FOA CDC-RFA-OE-15-1502

With a shared vision and strategy, CDC's NSSP Project Officers collaborate with others to increase the impact of syndromic surveillance within communities and across the nation.

Tarrant County, Texas; September 13–14, 2016

Project Officer Kim Raymond conducted a site visit with the Tarrant County Public Health (TCPH) staff and other stakeholders to review progress, challenges, and opportunities associated with the cooperative agreement. She was joined on site by Health Scientist Cassandra Davis, who provided technical expertise about data evaluation. Providing assistance via phone were Analytic Data Management Team Lead Roseanne English and Statistician Paul McMurray.

To date, TCPH has migrated 63 hospitals into production on the BioSense Platform and also has met Meaningful Use stage 2 requirements. Of the 63 hospitals in production, 100% of the patient records are being reported to the BioSense Platform within 48 hours of patient registration.

Adding to these successes, TCPH staff described how they are mentoring staff from two local health departments—the Houston Health Department and the El Paso Department of Health. The mentoring accelerates both health departments' progress in using syndromic surveillance and, ultimately, increases data representativeness. TCPH is also working with the Texas Department of State Health Services to

establish its syndromic surveillance system. The plan is for the Texas Department of State Health Services to receive syndromic data from the El Paso Department of Health and other areas of the state. These data will be combined and then sent to the NSSP BioSense Platform, enabling data sharing across Texas regions and completing the syndromic surveillance health picture for Texas. By collaborating with and mentoring practitioners affiliated with other health departments, TCPH is replicating its fine work to advance syndromic surveillance. Keep up the great work, Tarrant County!

COMMUNITY OF PRACTICE UPDATES

The International Society for Disease Surveillance (ISDS) is working on several key activities:

1. **Select NSSP Community of Practice Manager and Steering Committee**

   ISDS is interviewing candidates to manage the NSSP Community of Practice (CoP). ISDS is also reviewing candidates nominated for the CoP Steering Committee, which will comprise representatives from different aspects of syndromic surveillance. Committee members will take an active role in creating (and sustaining) the CoP and will use their collective knowledge of syndromic surveillance to engage and mobilize the community.

2. **Expand Knowledge Sharing via CoP Website**

   ISDS and CDC plan to launch a new CoP website late this year. The CoP will offer forums in which participants can share and discuss interests and will serve as a venue to find solutions to their immediate needs. As of August 2016, 198 of the 650 ISDS Community Forum members had accessed the forum, which is an increase of 151 members in 2015. With the upcoming expanded capabilities, such as sharing queries and code, coupled with the BioSense's Platform data sharing capabilities, participation will be increased.

3. **Revise Syndromic Surveillance Messaging Guide**

   Please welcome ISDS Technical Editor Tracy Sandifer. Tracy is reviewing the *PHIN Messaging Guide for Syndromic Surveillance*. One of Tracy's tasks is to identify information that should be brought to the attention of CoP members for discussion. Once CoP members reach consensus, Tracy will work with HL7 technical writers to integrate the CoP's suggestions into the Guide.

eSHARE EVENTS

- ISDS 2016 Annual Conference: **December 6–8, 2016**; New Frontiers in Surveillance: Data Science & Health Security; http://www.syndromic.org/annual-conference/2016-isds-conference