

ESSENCE Now Capable of Sending Data to ILINet

Outpatient influenza-like illness (ILI) data are collected through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), a collaborative effort between CDC, state, local, and territorial health departments and healthcare providers. ILINet consists of more than 3,000 enrolled outpatient healthcare providers in all 50 states, Puerto Rico, the District of Columbia, and the U.S. Virgin Islands. Any specialty that provides primary care is eligible to participate in ILINet including: emergency medicine, urgent care, family practice, pediatrics, internal medicine, infectious disease, and student health. Each week, these providers report data to CDC on the total number of patients seen for any reason and the number of those patients with ILI by age group.



One system to submit ILINet
and syndromic data:
BioSense Platform

The CDC/Influenza Division, in collaboration with the National Syndromic Surveillance Program, is interested in partnering with our state and local health colleagues to incorporate weekly ILI data that is currently reported to ESSENCE into ILINet. All facilities interested in participating will undergo data validation prior to inclusion in ILINet. While ILINet enrollment and data validation activities occur year-round, the deadline for inclusion for the upcoming 2018–2019 influenza season is September 14, 2018.

If any facilities are interested in contributing their ESSENCE ILI data to support national influenza surveillance activities, please contact your state influenza coordinator.



NSSP UPDATE



September 2018

People

SUBSCRIBE NOW

COMMUNITY OF PRACTICE UPDATES

Trending Topics

Looking for fireworks related-injury syndromes? Visit the Surveillance Definition Committee Forums and look at our community discussion on [Firework Injuries](#). You can also find the [Kansas Department of Health and Environment's Firework Injuries Syndrome](#), the [process](#) they used to develop that syndrome, and other resources in the [Surveillance Knowledge Repository](#). For general tips on how to use forums, check out our [FAQ pages](#). Don't see a question that should be on the FAQ lists? [Let us know!](#)

Member login, which is free, is required to access some links.

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Workgroup and Committee Updates

- **NEW! NSSP Community of Practice (CoP) Technical Committee**—Come join the [NSSP CoP Technical Committee](#)! This committee's goal is to bridge communication between members of the National Syndromic Surveillance Program (NSSP) CoP and CDC NSSP team, making sure that syndromic surveillance data management, analysis, visualization, and reporting needs are always being met. Whether you want to stay abreast of upcoming BioSense Platform developments or give input on future Platform enhancements, this committee is for you. The committee plans to meet quarterly, with the first meeting slated for October. Please visit our [Group Homepage](#) for more information, to join the group, and to get meeting details.
- **Help your group win the Engagement Award at the [2019 ISDS Annual Conference](#)!** The International Society for Disease Surveillance (ISDS), which facilitates the Syndromic Surveillance CoP, is working with committee chairs and group administrators to help members connect with one another. An engagement report has been developed to serve as a pulse check for CoP group activities. The engagement report presents an overall score for each committee calculated from weighted scores based on group forum activity, membership logins, and group call attendance. These analytics will be used to award one committee or workgroup the “Engagement Award” at the [2019 ISDS Annual Conference in San Diego](#). **What can you do to help your group win?** Complete your Member Profile, including your Work Location Information, actively participate in group calls and webinars, and log in to join conversations on your group’s forums and blogs.



NSSP Community of Practice Call

Please join the monthly NSSP CoP Call. This call is powered by community members who want to share guidance, resources, and technical assistance. The NSSP CoP Call includes an open forum for discussion and questions.

The next call will be held **September 17, 2018, 3:00–4:30 PM ET**. (Note: this is a day earlier than usual.) We will discuss **Suicide Ideation** in reference to Suicide Prevention Month in September. Click [here](#) to register for the entire call series.

To access [slides](#) and [recordings](#) from previous calls, visit the [NSSP Community of Practice Group Page](#).

Reminder: Deadline for Submitting Input to CMS is September 10, 2018

The Centers for Medicare & Medicaid Services (CMS) requests comments on a proposed change to the Syndromic Surveillance Reporting Measures for stage three of the Promoting Interoperability Programs (formerly titled “Meaningful Use”), specifically Objective 8, Measure 2. Stage three focuses on the use of Certified Electronic Health Record Technology (CEHRT) to improve health outcomes.

This modification would change the definition of Eligible Providers (EP) from providers practicing exclusively in urgent care and emergency department clinical care settings to ANY provider practicing within ANY clinical venue with the ability to provide syndromic surveillance data as defined by local and state health regulations. Read [Rules](#) and then submit [comments](#) electronically.

Implementation Guide for Syndromic Surveillance

ISDS, CDC, and the Message Guide Workgroup continue to work with the HL7 Public Health Workgroup to review and integrate comments. They are on schedule to resolve most comments by November 2018 before the guide is published as a standard for trial use.

Development Schedule	
Time Frame	Activity
2015	Version 2.0 Final RELEASE*
2016	Erratum and Clarification Documents Released for Version 2.0
2017 Summer	Version 2.2 Working Draft Released for Community Comment and Consensus
2017 Winter	Version 2.3 to be Released for Review and Community Comment
2018 March	Version .09
2018 Spring	HL7 Balloting; Guide Balloted is Implementation Guide for Syndromic Surveillance Release 1.0 Standard for Trial Use (STU) HL7 Version 2.5.1**
2018 Fall	Anticipated Completion of HL7 Balloting and Release of <i>HL7 2.5.1 Implementation Guide for Syndromic Surveillance for Trial Use Version 1</i>

* Version 2.0 is currently being used; subsequent versions are working drafts only.

** Added April 2, 2018.

CDC FUNDING RECIPIENTS AND PARTNERSHIP UPDATES

Connect to Illinois Department of Public Health Via CoP Portal

Last month the Illinois Department of Public Health (IDPH) joined the many other state and local resources that can be accessed via the [Syndromic Surveillance CoP Portal](#). IDPH's website describes how they conduct syndromic surveillance and how data flow from their vendors and regional health information exchange to the NSSP. They link to tips for [understanding and interpreting data](#), opioid OD reporting requirements, training, and other resources. IDPH is another good example of how states are integrating syndromic data to build comprehensive surveillance systems.



Kansas Success Story Shows Utility of SyS Data for Educating the Public and Healthcare Providers

Syndromic surveillance is, first and foremost, about good data and smart application. Health departments routinely monitor local trends and use data to inform partners, health practitioners, and the public. Data inform education campaigns and interventions and can also be used to monitor the effectiveness of public health outreach. The May 2018 issue of *NSSP Update* gave an example of how Kansas used syndromic data to educate healthcare practitioners and the public about rabies. This story is now available on the NSSP website.



[READ THE STORY >>](#)

Kansas epis use syndromic data to find out if rabies post-exposure prophylaxis is being administered. They also use syndromic data to educate the public about rabies.

Tarrant County Public Health Presents at PHI Conference

We hope you attended this year's Public Health Informatics (PHI) Conference, held August 20–23, 2018, in Atlanta, Georgia. The presentations were diverse and provided a broad picture of how IT systems are being modernized and health data exchanged to improve population health.

Informatics Manager William (Bill) Stephens of Tarrant County Public Health, Texas, presented on the utility of syndromic surveillance data for conducting timely analyses associated with disasters. Stephens described his team's collaboration with CDC and others to examine the medical surge in Dallas–Fort Worth during Hurricane Harvey. He emphasized the importance of—

- Coordinating disaster preparedness efforts across geographical boundaries to account for population mobility during an event;
- Preparing for a medical surge *before* the storm, particularly in hospitals 1 to 4 hours driving distance from the event; and
- Improving surveillance methods so that public health agencies can track disaster-related deaths and injuries associated with evacuees.

For background, Hurricane Harvey made landfall in Texas on August 25, 2017, resulting in 88 fatalities and more than \$125 billion in damages to infrastructure. In Houston, flooding created a toxic mix of chemicals, sewage, biohazards, and 8 million cubic yards of garbage. Biohazard exposure and injuries from trauma among persons residing in affected areas was widespread. Houston evacuees affected emergency department visits in Dallas–Fort Worth, **with at least 10 hospitals experiencing a 600% surge in ED visits from evacuated areas**. The near “real-time” nature of syndromic data improved situational awareness throughout this disaster. The lessons learned can inform emergency preparedness at all levels of public health.

See the [poster](#) and look for the [success story](#) in NSSP's Resource Center.



Idaho's Recent Use of Syndromic Surveillance

Epidemiologists at the Idaho Division of Public Health and Idaho's local public health districts are enhancing surveillance through the use of emergency department (ED) data contributed to the BioSense Platform. Not only do they regularly evaluate influenza-like illness, a host of weather-related conditions, and opioid overdose, they use syndromic data to examine and anticipate other conditions indicative of a need for a public health response. For example, they examine non-traumatic dental care, suicide ideation and attempts, and homelessness. Not all analyses reveal the need for a public health response. They consider (and value) negative findings when assessing results.

Idaho's 2018 Annual Performance Report demonstrates a range of successes. Analysis of ED visit data contributed for syndromic surveillance is successfully being integrated with analyses from other surveillance systems, generating synergy among those who work with these data. Here are a few ways in which syndromic surveillance augments data collected by other systems:

- Vaccine adverse events complement the [Vaccine Adverse Event Reporting System](#) (VAERS).
- Suicide ideation and attempts data and opioid overdose data complement mortality and injury surveillance.

- Dental data complement oral health data from the Idaho Behavioral Risk Factor Surveillance System and Idaho Smile Survey.
- Data on trauma, stroke, and heart attack (“time-sensitive emergencies”) can be analyzed soon after an ED visit, complementing more extensive data gathered for the Idaho Time-Sensitive Emergency Registry months after an incident.

In addition, ED visit data are the only source of surveillance data for most non-reportable conditions of interest.

Idaho is using ED visit data contributed for syndromic surveillance in novel ways to examine public health behaviors:

Nontraumatic Dental Care—The Idaho Oral Health Program has anecdotal evidence that some Idahoans are compensating for shortages in the dental health profession by seeking dental care in EDs. Although ED use for dental care caused by oral trauma can be expected, and is appropriate, the use of EDs for non-traumatic dental care may indicate use of the wrong resources.

Idaho wanted to move discussions of ED dental care visits beyond anecdotal reports and gain a better understanding of the scope of the problem and who makes these types of visits. Although this activity has not yet produced a measurable impact on public health practice, ED visit data have proved valuable by filling a known knowledge gap in Idaho regarding the use of EDs for non-traumatic dental care.



Suicide Attempts and Ideation—In 2015, Idaho was among the top 10 states for completed suicides in the United States. Suicide as the cause of death for teens and young adults in Idaho was exceeded only by accidental deaths. On average, one suicide death among all ages occurred every day.¹ Among the 7 Idaho local public health districts, Panhandle Health District (PHD1) had the highest suicide rate at 28 deaths per 100,000 population.²



After determining a 12-month baseline for ED presentations of suicide ideation or suicide attempts, the lead PHD1 epidemiologist for the project developed an initial set of hypotheses and then used NSSP’s BioSense Platform (ESSENCE) to examine ED visit data.

This analysis is ongoing. ED visit data contributed for syndromic surveillance provide aggregated and timely information about suicide-related activity that was previously siloed and unavailable to public health officials. Information on suicide attempts and ideation complements available information about suicide deaths and could provide clues to better ways of intervening before another life is lost to suicide.

¹ Griffin J, Van Beek M, Harder P. Suicide Prevention Action Network of Idaho (SPAN) Suicide in Idaho: Fact sheet [Internet]. 2016 Sep [cited 2018 Jun 21]. Available from: <http://healthandwelfare.idaho.gov/Portals/0/Users/059/07/2107/2016%20sept%20fact%20sheet.pdf>

² North Idaho Community Health Improvement Plan (CHIP). May 2014. Panhandle Health District and Idaho North Central District. p. 8. Available at: <https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/chip.pdf>

UPCOMING EVENTS

September 14	Scheduled vendor patches in staging environment: 6:00–10:00 AM ET
September 20	Scheduled vendor patches in production environment: 6:00–10:00 AM ET
January 29–February 1, 2019	17th Annual International Society for Disease Surveillance Conference: Harnessing Data Science to Improve Population Health and Public Health Surveillance; San Diego, California

LAST MONTH'S TECHNICAL ASSISTANCE

August 1	Data Validation Support Call
August 6	Production deployment of Access and Management Center (AMC), including new Master Facility Table (MFT) module
August 21	Vendor patches applied in staging environment
August 23	Vendor patches applied in production environment

Practice

NSSP Launches Master Facility Table and Two New Guides

After a successful pilot test in August, NSSP launched the **Master Facility Table (MFT)** to the Production environment of the Access & Management Center (AMC). Site administrators can use the MFT to add and modify facility information, ensure onboarded facilities are mapped correctly, and monitor facility onboarding status. Essentially, this enhanced version of the MFT puts more control of facility data in the hands of site administrators and will benefit anyone involved in onboarding or concerned with data quality.

To help you navigate the MFT, we developed a [BioSense Platform Quick Start Guide to Using the Master Facility Table](#).

This guide defines various fields and includes FAQs and use-case scenarios.

Also, because we recognize that many users want a strong understanding of “data under the hood,” we developed the **MFT Data Reference Guide**, which explains the structure of MFT views and content of underlying data. (Look for the guide soon in the NSSP Resource Center.) The guide is modeled after the format of the Data Dictionary and contains the following tabs:



Master Facility Table Data Reference Guide	
Tab Name	Description
Facility_Master	Contains information about available data elements and associated processing rules in the enhanced Facility_Master view.
Operational_Crosswalk	Contains information about data elements and data processing rules available in the Operational_Crosswalk view.
Vendors	Contains information about the data elements in the Vendor view.
SQL Queries	Contains examples of SQL queries that can be used to query the above tables.
Conversion Notes	Summarizes columns dropped from legacy views when facility data were migrated into the Access & Management Center, Master Facility Table database structure.

Each tab in the *MFT Data Reference Guide* has comprehensive information about data element names, including definitions, data processing rules, and indications on whether the data element is ingested into ESSENCE. If applicable, the tab includes comments on the history of the data element.

The Conversion Notes tab contains data elements no longer maintained in the MFT and was created to bridge the gap between the legacy MFT and current MFT. The *MFT Data Reference Guide* includes samples of commonly used MFT-related SQL queries that you can use to conduct your own investigations.

Please take a look at the enhanced MFT. As always, do not hesitate to reach out with questions or concerns. Your site inspectors are available to help!

Parent Organization and Vendor Now Available on Data Quality Reports!

Early this summer we began adding vendor information to the Data Quality (DQ) Reports. We are pleased to announce that your Completeness, Validity, and Timeliness reports now contain updated vendor information that matches what is recorded in the Master Facility Table (MFT).

To access the MFT, go to the Access & Management Center. If you haven't done so already, please consider updating your facility vendor information. The MFT includes a list of standard vendors from which you can select. Your next round of DQ reports will automatically pick up the updates you make so that you can compare data quality across vendors.

Similarly, after receiving recommendations from several community members, we added parent organizations to the DQ reports. As with vendor, a parent organization is based on what is recorded in the MFT. Some members of the community have pointed out that the "same vendor" may be associated with different hospital systems. Consequently, the use of parent organization helps in identifying data quality issues associated with a vendor within a specific organization.

DATA QUALITY CORNER

Several members of the community have asked about changes recently made to the Data Dictionary. So, we compiled excerpts from a couple previous articles that describe the changes. If you read the explanation and have more questions, our Analytic Data Management (ADM) team site inspectors are always willing to answer questions and review your site data.

Updates to Data Dictionary (V32)

We added three new tabs to provide additional insight into data processing:

- 1. Data Flow Enhancements Tab.** Issues resolved over time can be difficult to track because there are so many aspects to data processing and so many teams involved. To simplify the process, we developed a table that shows the processing updates to data elements. You can find this table under the Data Flow Enhancements Tab, which we added to the Data Dictionary, V32, earlier this year.

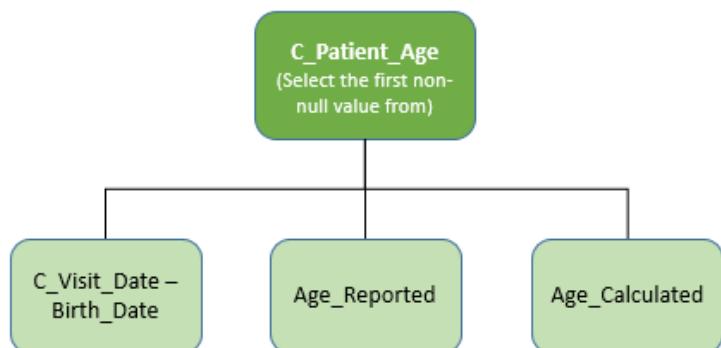


Go to the Data Dictionary. Click the Data Flow Enhancements Tab to see a summary that describes each issue, the affected data elements, and the steps taken (or planned) to resolve the issue. We also included the logic and data changes for both NSSP and ESSENCE. This table will help you monitor the status of processing changes and patches to retrospective data (if applicable).

Issue Summary		
Issue	Resolution	Affected Fields
C_Death Processing Sites sending values in PV1-36.1 that were not recognized by NSSP processing and C_Death was incorrectly set to 'No'.	Update to C_Death Processing in Mirth to include additional values from PV1-36.1. Updated processing will set C_Death to "Yes" IF: 1. PID-30.1 (Patient_Death_Indicator) = First letter of "Y" and/or 2. PID-29.1 is not null and/or 3. PV1-36.1 contains "20", "22", "23", "24", "25", "26", "27", "28", "29", "40", "41" or "42" ELSE set to "No"	C_Death

Excerpt from Issue Summary table.

- 2. Core Calculated Variables Tab.** An NSSP-calculated variable is defined as a *variable computed via a formula during the processing from the Raw Table into the Processed Table*; a calculated variable is not included in the raw message. On the Core Calculated Variables tab, you will find flow diagrams clarifying information on eight commonly-referenced NSSP-calculated variables, including visual diagrams detailing how each variable is calculated.



- 3. Disposition Category Mapping Tab.** In the past, there's been some confusion about how ESSENCE determines Disposition Category. For those unfamiliar with how NSSP processes data to ESSENCE, the DischargeDisposition is mapped to a corresponding DispositionCategory in an ESSENCE reference table. The underlying data are stored in the format initially received in DischargeDisposition (usually disposition codes), and the mapped/formatted data are displayed in the DispositionCategory. The ESSENCE reference table is based on an original ESSENCE discharge disposition mapping table that NSSP expanded to include standard [discharge disposition codes](#). To provide even more insight, we added a tab to the Data Dictionary that contains the reference table ESSENCE uses to do mapping.

We looked across the Data Dictionary and, thanks to user input, resolved several processing issues:

Processing Updates for Data Elements

We updated the Data Dictionary processing description for data elements. A small sample of data elements with updated processing logic follows:

- C_Death
- ESSENCE Initial_Temp and Initial_Temp_Calc
- All combo fields

We also resolved discrepancies in the data type/length specified in the Data Dictionary and updated content to align with the current data structure.

Correction to NSSP Processing Issue: Concatenated Facility Type

Thanks to the watchful eyes of a community member, the NSSP team has identified a defect in how Facility Type is processed. Per our Data Dictionary, NSSP is supposed to pull data from OBX-5.1 for facility-type observation messages and store the standard facility type code in facility_type_code. Similarly, for facility_type_description, NSSP is supposed to pull data from OBX-5.2 and store the standard facility type description in facility_type_description. However, the NSSP process is actually storing both the standard value and local value, concatenated, with a semicolon separator.

Unfortunately, this results in a **nonstandard** facility_type_code value (due to local code OBX-5.4 being concatenated), even though the message may have had a valid standard value in OBX-5.1. A similar issue applies to the facility_type_description. Further, because facility_type_code is nonstandard, the NSSP process cannot set the calculated patient class associated with the facility type (*c_factype_patient_class*).

Let's look at an example. In the raw message shown below, you can see two pairs of coded elements for Facility Type:

```
OBX|1|CWE|SS003^Facility/Visit Type^PHINQUESTION||261QE0002X^Emergency  
Care^HCPTNUCC^AQ.EROB^ER UNSCHEDULED OB PATIENT^L^^^ER UNSCHEDULED OB  
PATIENT|||||F|||201803101820
```

Current processing logic concatenates the values in OBX-5.1 and OBX-5.4 with a semicolon to populate facility_type_code; similarly, the values in OBX-5.2, OBX-5.5, and OBX-5.9 are concatenated to populate facility_type_description. The raw message in this example would be processed as follows:

Facility_Type_Code	Facility_Type_Description
261QE0002X;AQ.EROB	Emergency Care;ER UNSCHEDULED OB PATIENT;ER UNSCHEDULED OB PATIENT

This current processing logic is incorrect. Only one value should exist for facility type code and facility type description. The repercussion from this defect is low (<1% of all records), but the NSSP team is working to correct this defect so that Facility Type is based on the standard value only. (Note. This defect has been documented in the Data Flow Enhancements tab of the Data Dictionary V32.)

Correction: Multiple Facility Types Sent for Single Facility

While investigating the defect in concatenated Facility Type, we discovered that a “concatenated facility type code” can also be attributed to messages that contain multiple OBX facility type segments. While this rarely occurs (<.01% of all records), we did want to bring it to your attention.

Per the [Public Health Information Network \(PHIN\) Messaging Guide](#), Facility Type has a cardinality of 1..1, such that only one OBX segment is expected for Facility Type. If more than one OBX facility type segment is sent, the NSSP process will concatenate values “across the separate OBX segments,” as done with, for example, OBX chief complaint segments.

Therefore, if you have multiple OBX facility type segments that report only standard facility type, you may see values in facility_type_code that reflect <standard>;<standard>. Even though each OBX had a standard value, the resulting value in facility_type_code will be deemed non-standard.

Let's look at another example:

OBX|7|CWE|SS003^FACILITY / VISIT TYPE^PHINQUESTION||261QM2500X^Medical
Specialty^NUCC|||||F|||20170829065900;OBX|14|CWE|SS003^FACILITY / VISIT
TYPE^PHINQUESTION||1021-5^Inpatient Care Setting^HSLOC|||||F

The preceding raw message would be processed and stored in the Processed Table like so:

Facility_Type_Code	Facility_Type_Description
261QM2500X;1021-5	Medical Specialty;Inpatient Care Setting

PHIN standards do not allow multiple OBX facility type segments to be sent; therefore, NSSP has no plans now to correct the processing.

Questions and Tips

Q. How can I identify leptospirosis in ESSENCE data?

A. The near real-time nature of syndromic data complements traditional surveillance to create a comprehensive health picture. An emerging trend is to use syndromic surveillance to find instances of illness that may *not* have been identified through normal case-reporting processes. Analysts do this by mining chief complaint text and discharge diagnosis fields for mention of certain reportable conditions.

One such condition they can help identify is leptospirosis, a bacterial disease (see sidebar) that, although rare, is a concern in flooded areas, an occupational hazard among people who work outdoors or with animals, and a hazard to people who engage in recreational water activities. In an ideal world, these cases would be detected and show up during routine case reporting, but underreporting is commonplace. To compensate, analysts mine syndromic data to identify patient encounters with an unreported diagnosis.



The public needs to be cautious in flooded areas. Water contaminated with urine from infected animals can spread leptospirosis.

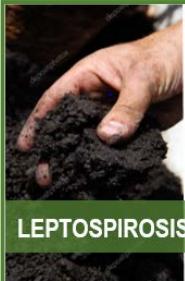
Lepto query modification: A leptospirosis query is listed under ESSENCE syndrome sub-categories. NSSP staff have modified this query and are sharing it for your use and feedback:

Modified Leptospirosis Query

^lepto^,andnot,(^leptoscopic^,or,^trileptol^,or,^leptomeningeal^,or,^leptomeningela^,or,^leptomeningitis^,),or,^[/]A27^

Share queries and modifications via the NSSP Community of Practice forums.

When running the query, keep in mind that data quality is limited by the records received and completeness of specific data elements. Not all healthcare facilities provide chief complaint data in the same manner. If you decide to follow up because, for example, you observed clusters or patterns in syndromic data, you could use reportable disease case investigation workflows. Since leptospirosis is nationally notifiable but not reportable in all states, examine your syndromic indicators alongside your state's reportable disease data to ensure data on leptospirosis are being captured.



What is Leptospirosis?

Leptospirosis is a bacterial disease caused by *Leptospira* species that can affect people when they come in contact with soil or water (rivers, lakes) contaminated with urine of infected animals including rodents, wild animals, cattle, or pigs. Heavy rains and flooding can increase chances of exposure.

Leptospirosis can be difficult to identify because the symptoms mimic many other flu-like illnesses. Symptoms can include high fever, chills, headache, and organ dysfunction. However, some people may *not* exhibit noticeable signs.

Anyone engaged in water recreational activities should be especially careful. The bacteria is transmitted to humans when they are exposed to contaminated soil or water. Therefore, avoiding contact with floodwater or contaminated water greatly reduces risk. Otherwise, wearing protective clothes and shoes when passing through floodwater or fresh water and soil in a potentially affected area makes sense.

Human-to-human transmission of *Leptospira* spp. is rare. Although leptospirosis occurs worldwide, it is most common in temperate or tropical climates. Still, it can be an occupational hazard for people who work outdoors or with animals (e.g., farmers, sewer workers, slaughterhouse workers, veterinarians). (An *MMWR* article describes how Louisiana's Office of Public Health received notification through electronic laboratory reporting of two patients diagnosed with leptospirosis. Both patients were exposed to floodwater before becoming ill.¹)

¹ Frawley AA, Schafer IJ, Galloway R, Artus A, Ratard RC. *Notes from the Field: Postflooding Leptospirosis—Louisiana, 2016. MMWR Morb Mortal Wkly Rep* 2017;66:1158–9. Available at: <https://www.cdc.gov/mmwr/volumes/66/wr/mm6642a9.htm>

More Reading

CDC [Leptospirosis Website](#) including fact sheets, *EID* and *MMWR* articles, and other resources.

CDC. National Notifiable Diseases Surveillance System (NNDSS): 2016 Annual Tables of Infectious Disease Data. Atlanta, GA. CDC Division of Health Informatics and Surveillance, 2017. Available at: <https://www.cdc.gov/nndss/infectious-tables.html>.

Syndromic Surveillance of Mental and Substance Use Disorders: A Validation Study Using Emergency Department Chief Complaints¹

Syndromic surveillance (SyS) was initially about protecting the public from large-scale terrorist acts. Now, syndromic data are routinely used to detect disease outbreaks, monitor symptoms associated with seasonal hazards, and examine opioid use. But, are syndromic data useful for understanding mental health disorders? If, for example, a financial downturn or uncertainty in a local job market prompts people to seek care, can syndromic surveillance capture data and accurately classify into syndromes? This study assesses whether SyS can identify patients who seek care from EDs for conditions related to mental health, including anxiety and depression.



The authors studied SyS data for 146,315 ED visits to Fresno County hospitals (California) from January 1, 2013, through December 31, 2013. They assessed whether chief complaints and associated syndrome classifications aligned with the discharge diagnosis. A description of data source, measures (syndrome classification, visit variables), and statistical analyses are described.

The authors found “near-perfect agreement between the mental health and substance abuse syndrome classification and the group of ICD-9-CM discharge diagnoses indicating psychiatric or substance use disorders.”¹

The BioSense Platform captures discharge diagnoses, but that's not true of all SyS systems, and not all facilities transmit these data. For this reason alone, having syndrome-classified chief complaints can be especially useful for monitoring conditions related to mental health and substance abuse disorders. The authors' findings suggest that patients whose visits are classified under “mental health and substance abuse” have needs for care beyond distress and are more likely to be transferred to a psychiatric, rehab center, or other facility.

This study has implications for both mental health and behavioral healthcare, which may be useful during emergencies (mass violence).¹ Once public health practitioners understand who seeks care due to depression, anxiety, or alcohol and drug abuse, they will be able to respond appropriately.

¹ Goldman-Mellor S, Jia Y, Kwan K, Rutledge J. Syndromic Surveillance of Mental and Substance Use Disorders: A Validation Study Using Emergency Department Chief Complaints. *Psychiatric Services* [Internet]. 2017 [cited 2018 Jul 25];(69):55–60. Available from: <https://ps.psychiatryonline.org/doi/10.1176/appi.ps.201700028>

Program

UPDATES

Technology Update

ESSENCE V1.21 Release Notes—Notes about the enhancements deployed August 16, 2018, can be found [here](#) and are posted in the NSSP Resource Center.

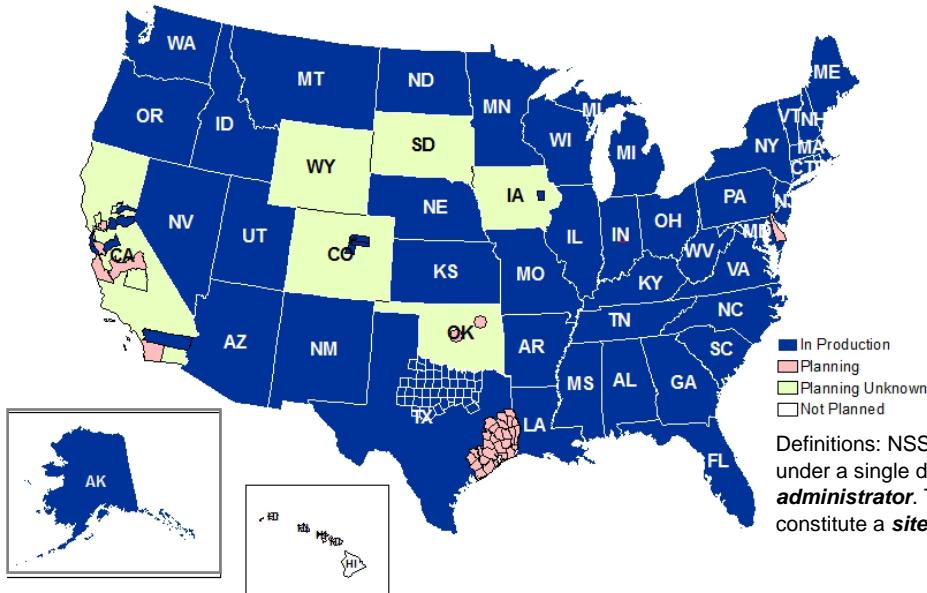
SAS—The NSSP team is upgrading the SAS system to provide more memory and CPU for SAS Studio. Also, the team developed the *BioSense Platform Quick Start Guide to Using SAS Studio*, which is scheduled for posting this month in the NSSP Resource Center. We will email you the details soon.

Legacy Data Transition

No change from August 2018. NSSP has converted legacy data into the production environment for 95% of the 43 sites that requested legacy migration. Two sites are being reviewed in the staging environment.

NSSP PARTICIPATION

NSSP receives data from more than 4,000 facilities. Of these, about 2,567 are emergency departments (EDs) that actively submit data, which means that about 60% of all ED visits in the country are being represented (based on American Hospital Association data). At least 55 sites in 45 states, including the District of Columbia, participate in NSSP. Although NSSP is pleased with participation to date, sites with data in production do not always translate into sites with broad ED coverage.



ONBOARDING UPDATES

Data Validation Support

Conference calls are held the first Wednesday of each month, 3:00–4:00 PM ET, to assist with data validation compliance. For more information, contact the [NSSP Service Desk](#).