Arizona BioSense Workgroup Meeting

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Electronic Disease Surveillance Program

February 14th, 2018

- Welcome and Attendance
- Updates
  - Onboarding
    - Re-validation process underway for Banner UMC Tucson Facilities
  - Legacy Data
    - Review In Process
  - ISDS Conference 2018:
    - Abstracts shared in the Knowledge Repository
  - Community of Practice
    - New Syndromic Surveillance Public Health Emergency Preparedness Response and Recovery Committee (SPHERR)
      - Bill Smith, Maricopa County Co-Chairing Committee
    - NSSP CoP call 2/20/2018@1-2:30pm AZ time topic
      - Winter weather + ILI = seasonal surveillance / winter surveillance activities

- Year 3 Charter
  - Objective and Deliverable Status:
    - 1 and 4-NSSP Success Story
      - Featured in NSSP Update January 2018
    - 1, 2 and 3-Hospital ILI Surveillance Use Case
      - ADHS Flu Report Week 5, Page 7 and 8
    - 4-ISDS Conference 2018 Abstracts
      - 6 Total accepted from AZ!
      - Share what we learned from the conference
    - 4-NSSP Recipient Meeting
      - **Request for your input:** Do you have any success stories on how the CoP has been used by members to increase or enhance their SyS practice?
      - ADHS asked to be field representatives for 2 roundtables
- Questions
- Other items


Updates

Electronic Partners Status Update

Hospital Onboarding

- Registration of Intent = 69
- Hold Queue = 43
- Testing = 0
- Validation = 2
- Production = 24

Data Use Agreements

- Hospitals = 66
- Local Public Health Jurisdictions = 15

Onboarding Updates

- Banner UMC Tucson Facilities
  - Banner University Medical Center-South Campus
  - Banner University Medical Center-Tucson Campus

- Transitioning from EHR System on 10/1/2017
  - ADHS continues the **process of revalidating** the data
  - Impacts both Syndromic Surveillance and ELR

Banner Health/Cerner Processing Delays

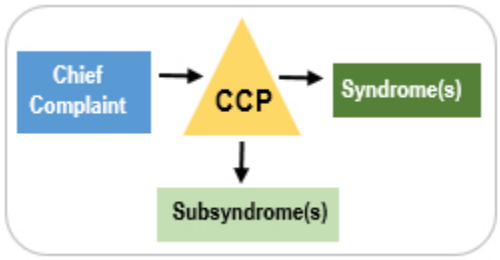
- ADHS has been working with Banner Health and Cerner to fill in backed data gaps
- Processing Delays in the month of October and November
- Extra assistance and efforts from Banner Health and Cerner have been involved to get processing back to normal expectations.

Legacy Data Project

- ADHS is still reviewing the legacy data (2014 – April 2016)

NSSP
National Syndromic Surveillance Program
BioSense Platform

IN THIS ISSUE:



Data Element: Temperature

Issues with Processing Temperature Measure and Units

We are troubleshooting data issues associated with "Initial temperature of the patient":

1. **Adherence to Standards:** Incoming data for "units" part of temperature do not consistently reflect the unit standards published in the *Public Health Information Network Vocabulary Access and Distribution System* (PHIN/VADS). The PHIN standard follows:

Concept Code	Concept Name	Preferred Concept Name
Cel	degree Celsius	degree Celsius [temperature]
[degF]	degree Fahrenheit	degree Fahrenheit [temperature]

2. **NSSP Processing Issue**: When data are ingested into ESSENCE, processing truncates the received temperature unit to only the first character.
3. **ESSENCE Processing Issue**: ESSENCE normalizes temperature values based on unit values of "F" or "C" only, which does *not* align with all the current standards for units.We are modifying the process so that full units are ingested into ESSENCE (units are pulled from OBX-6.2). Once the NSSP units processing updates are made, NSSP will work with ESSENCE software developers from Johns Hopkins University Applied Physics Laboratory (JHU-APL) to expand the normalization algorithm to account for all units' values.

Let's dig a little deeper into these issues to understand what is currently going on:

SAS Pilot

Technology Update

In January, the BioSense IT development team worked on improvements to the Access & Management Center (AMC). These development efforts included security fixes and near-term improvements to user interface speed. Also, the team continues to work on the much anticipated **AMC Master Facility Tool**, which will deployed in phases beginning spring 2018.

Preparations are also underway for an upcoming **SAS pilot**. We look forward to having members of the community validate new documentation and explore how well SAS performs on the BioSense Platform under different scenarios.

QUESTIONS AND TIPS

Q: What is the purpose of the Chief Complaint Processor (CCP)?

A: The CCP categorizes chief complaint text into as many syndromes and subsyndromes as the text matches (figure 1).

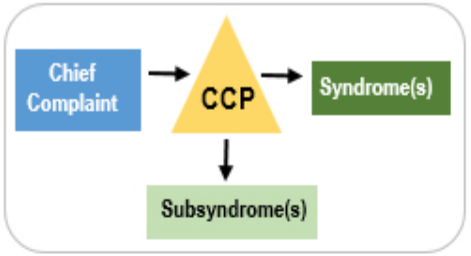


Figure 1. The Chief Complaint Processor (CCP) categorizes text.

To understand how the ESSENCE Chief Complaint Processor works, keep in mind that "chief complaint" is **any type of text string or combination** thereof:

- One word: "fever"
- Several words: "shortness of breath"
- Verbose text: "patient was seen with a cough that had been persistent for 3 weeks along with additional head aches and chills"
- Text with abbreviation: "sob"
- Text with negation: "patient was not vomiting"
- Text with misspellings: "patient was mot vomiting"
- First person: "I am having chest pain"
- Other languages: "estoy teniendo dolor en el pecho"

A **syndrome** is a group of associated symptoms:

- Fever
- GI
- Respiratory

A **subsyndrome** is a smaller, specific group of associated symptoms:

- Abdominal pain
- Difficulty breathing
- Diarrhea

Remember to Register for NSSP CoP February Call

NSSP Community of Practice Call

Tell a Friend

A monthly NSSP-CoP conference call open to anyone interested in issues relating to the BioSense Platform, Meaningful Use and public health practice. The purpose of this call is to bring together various stakeholders with a vested interest in public health sruveillance and spark collaborative efforts to share guidance, resources, and technical assistance. The call was created by merging the BUG, Meaningful Use and Public Health Practice community calls.

2/20/2018

When: Tuesday, February 20, 2018
3:00 PM

Where: https://attendee.gotowebinar.com/rt/6449185840118035715
United States

Contact: Emilie Lamb
elamb@syndromic.org

Remember to Register for NSSP CoP February Call

- The next call will be held on February 20, 2018, 3:00–4:30 PM ET

- Trending Topic
  - **Winter weather+ ILI=seasonal surveillance/winter surveillance activities**.

Remember to Register for future SDC Calls

Syndrome Definition Committee Meeting

Tell a Friend Events in Series

3/7/2018

When: Wednesday, March 7, 2018
From 1 to 2 pm ET

Where: https://attendee.gotowebinar.com/rt/3295459936992207617
United States

Contact: Catherine Tong
ctong@syndromic.org

« Go to Upcoming Event List

Syndrome Definition Library Now Available

Help Build the Syndrome Definition Library

The Syndromic Surveillance Community of Practice is beta testing its Syndrome Definition Library . Look for syndromes by keyword. Filter search results by platform or author name.

To name a few topics, the library includes Heat-related Illness, Homeless Population, Zika, West Nile and Saint Louis Encephalitis, Chikungunya and Dengue, (various) Mass Gatherings, Opioid Diagnosis Codes, Fireworks Injuries, Agriculture-related Injuries, Hazardous Materials, and Rabies Exposure.

New SPHERR Committee

New SPHERR Committee

Committees: SyS PH Emergency Preparedness, Response & Recovery

Directory Calendar Blogs Forums Actions

Welcome

Syndromic surveillance and Public Health Emergency preparedness, Response and Recovery (SPHERR) Community of Practice

The Syndromic surveillance and Public Health Emergency preparedness, Response and Recovery (SPHERR)Community of Practice helps Syndromic Surveillance and Public Health preparedness professionals fully integrate Syndromic Surveillance data and information into preparedness and emergency response and provides access to a national peer network for ad hoc support or collaborations during incidents and events of national interest (e.g., extreme weather events, and mass gatherings).

Group Feed Show Current Posts

Features

- Directory
- Calendar
- Blogs
- Forums

Group Reps

Charles Ishikawa
Group Chair

William Smith
Group Chair

Zachary Faigen (Steering Committee Member)
NSSP Steering Committee Liaison

Charter 2017-2018

Objective 1: Continue to increase awareness among acute care facilities (hospitals) about how BioSense data is used.

Deliverable 1: Implement a process to provide outreach to acute care facilities regarding updates, use, onboarding, etc., at a state and/or local level. Report on the status of the decided process(es).

NSSP
National Syndromic Surveillance Program
BioSense Platform

Syndromic Surveillance
Success Stories

Female *Aedes aegypti* mosquito

Lessons Learned

- ***Syndromic surveillance can be used to identify cases of arboviral disease.*** This case illustrates that arboviral disease records may be identifiable in the syndromic surveillance data *before* laboratories or healthcare providers are required to report.
- ***Syndromic surveillance can improve situational awareness of arboviral diseases.*** Syndromic surveillance best serves as part of an integrated approach to surveillance. In the absence of other surveillance, such as mosquito surveillance, syndromic data may be useful.

Syndromic Surveillance for Arboviral Diseases in Arizona

Public Health Problem

Arizona reports an average of 116 cases of West Nile virus (WNV) each year, and in 2015, Arizona saw a reemergence of St. Louis encephalitis (SLE) virus. In addition, Arizona is at risk for importation of viruses such as chikungunya, dengue, and Zika due to an abundance of *Aedes aegypti* mosquitoes in many parts of the state. Rapid identification of potential cases of arboviral disease (borne by mosquitoes and ticks) is critical to implementing appropriate public health responses. These include mosquito surveillance and control to eliminate infected mosquitoes and education about mosquito avoidance to prevent further transmission during the viremic period, when people are either symptomatic or asymptomatic and can transmit the virus.

Actions Taken

In 2015, Arizona's BioSense Exploratory Analysis Subgroup, which includes representatives from the Arizona Department of Health Services (ADHS) and seven Arizona counties, collaborated to develop a query and standard procedure for identifying potential arboviral disease cases by using the National Syndromic Surveillance Program's (NSSP) BioSense Platform. In Arizona, syndromic surveillance data contains emergency department and inpatient hospital records, including chief complaint (CC) and discharge diagnosis (DD) fields. The arboviral query identifies keywords and ICD-9-CM and ICD-10-CM diagnosis codes for chikungunya, dengue, SLE, WNV, and Zika in the combined "CC and DD" field. The query results are monitored by ADHS twice a week during the primary WNV season and once a week during the rest of the year, and ADHS staff notifies the county health departments when a record is identified for their jurisdiction. County investigators can use a "Case Investigation Decision Tree,"

Charter 2017-2018

Objective 2: Collaborate with the ADHS BioSense team, NSSP and ISDS to determine training needs, conduct trainings, review training and guidance materials, and disseminate training materials to relevant users.

Deliverable 2: Determine the best methods to train users on the BioSense Platform based on the evaluation of needs and available resources. Report on the number of users trained for use of the BioSense ESSENCE and/or back end analysis and the available methods and resources available.

Charter 2017-2018

Objective 3: Assist ADHS and local health department users adapt to the NSSP transition. Continue to develop new and advance existing use cases which will include maintaining updates for current protocols.

Deliverable 3: Define new use cases for Arizona and any revisions for existing use cases. Report the number of use cases for routine analysis and event/outbreak analysis.

New Use Cases

- ILI Hospitalizations

- Thank you to
  - Shane Brady
  - Becca Bridge
  - Xandy Peterson

ESSENCE Data in Reports

2017–2018 Influenza Season (10/01/2017 – 9/29/2018)

Synopsis:

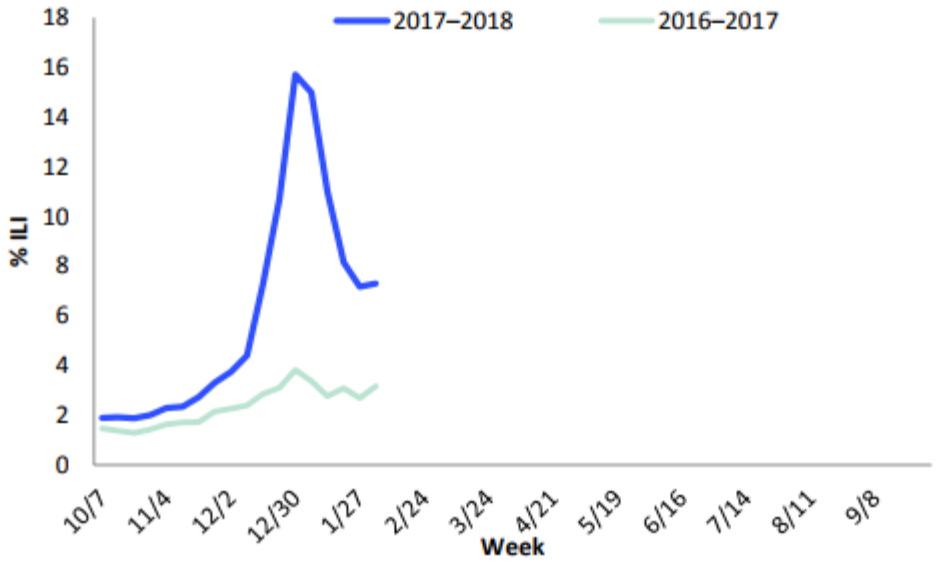
Influenza activity is elevated. Arizona reported Widespread Activity for week 5. Subscribe to the *Flu & RSV* report at azhealth.gov/email.

ADHS Report Week 5

Hospital Influenza-Like Illness (ILI) Surveillance

Hospital influenza-like illness data are analyzed using tools in the national BioSense Platform. More than 20 hospitals in Arizona share limited data about all emergency department visits and inpatient admissions (hospitalizations) with public health officials via an automated feed. Additionally, data from participating healthcare facilities in other states provide a national comparison. Patients meeting an ILI syndrome have a diagnosis of influenza or fever plus either a cough or a sore throat.

7% of Emergency Room visits were ILI in the past week compared to 3% for the same week in the 2016–2017 season.



*Note: Emergency room visits that resulted in inpatient admissions at the same hospital are counted in inpatient admissions below.

Charter 2017-2018

Objective 4: Evaluate Arizona's syndromic surveillance use cases and validate BioSense data.

Deliverable 4: Present to workgroup and/or subgroup results of evaluation. Report on number of evaluations presented.

2018 ISDS Conference Abstracts

- 6 Abstracts accepted
  - 2 Panels with CDC NSSP
  - 2 Oral Presentations
  - 1 Lighting Round
  - 1 Poster Presentation

- January NSSP Update featured our Arizona Arboviral Diseases Success Story

- Are there other success stories we could submit?

Exploratory Analysis Subgroup Projects

- New Use Cases?

- Any Collaborative Ideas?

Annual NSSP Recipient Meeting

CDC FUNDING RECIPIENTS AND PARTNERSHIP UPDATES

Get Ready to Collaborate!

NSSP's 2018 Annual Recipient Meeting—Maintaining and Advancing Syndromic Surveillance—will be held in Atlanta, Georgia, on February 27–March 1, 2018. Through presentations, roundtable discussions, and hands-on training, participants will learn how to improve the nation's situational awareness and respond to hazardous events and disease outbreaks. In addition, Rear Admiral Michael F. Iademarco, MD, director of the Center for Surveillance, Epidemiology, and Laboratory Services (CSELS), will meet with funding recipients to answer questions.

Registration and hotel information have been emailed to funding recipients and the agenda posted . If you did not receive this information, please contact your project officer. We look forward to another successful annual meeting!

**State and local public health authorities receive funding through CDC-RFA-OE15-1502 : Enhancing Syndromic Surveillance Capacity and Practice.*

Roundtables

- Information Sharing and Reporting
- Data Flow, Data Quality, and Data Validation Production Process and Onboarding Process

Community of Practice Session

Request for your input:

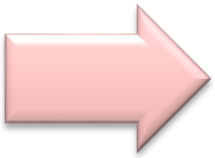
Do you have any success stories on how the CoP has been used by members to increase or enhance their SyS practice?


Feedback
Questions

Upcoming Meetings

Exploratory Analysis Subgroup

- Thurs. Feb. 22 from 1:00 – 2:00



Exploratory Analysis Subgroup

- Tues. Mar. 22 from 1:00 – 2:00

THANK YOU

syndromicsurveillance@azdhs.gov | 602-542-6002

azhealth.gov

@azdhs

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