

Arizona BioSense Workgroup Meeting

**Sara Johnston, Krystal Collier, Yong Wang and
Sara Chronister**

**Electronic Disease Surveillance Program
December 5th, 2017**



**ARIZONA DEPARTMENT
OF HEALTH SERVICES**

Health and Wellness for all Arizonans

- Welcome and Attendance
- Updates
 - Onboarding
 - Re-validation process underway for Banner UMC Tucson Facilities
 - Legacy Data
 - Reviewing Process
 - Community of Practice:
 - Resources shared from [November Surveillance CoP](#) call topic: Disaster Surveillance
 - San Diego Wildfire Response-Jeff Johnson
 - Houston Hurricane Response-Eric Bakota and Lauren Leining
 - Florida Hurricane Response-Dave Atrubin
 - NSSP Hurricane Response-Aaron Kite-Powell and Mike Coletta
- Year 3 Charter
 - Objective and Deliverable Status:
 - 2-Training Suggestions for NSSP and ISDS
 - Air Quality Data now available
 - [ESSENCE Q & A](#)
 - [Syndrome Definitions Library](#)
 - 4-NSSP Success Story
 - Still moving through CDC approval process
 - 4-ISDS Conference 2018 Abstracts
 - 6 Total accepted from AZ!
- Questions
- Other items



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 = 14

Onboarding is currently on hold during while ADHS reprioritizes hospitals due to EHR System and software upgrades.

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

Please contact the syndromicsurveillance@azdhs.gov for any questions about your ESSENCE data.

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.

Please contact the syndromicsurveillance@azdhs.gov for any questions about your ESSENCE data.

Cerner Processing Delays

- ADHS has been working with Cerner to fill in backed data gaps experienced during
 - November 17th-November 18th, 2017
- This was a global issue
- It is expected that data gap should be filled this early this week per Cerner update.

Please contact the syndromicsurveillance@azdhs.gov for any questions about your ESSENCE data.

Service Desk

NSSP Service Desk

12/5/2017 - ESSENCE Processing Backlog

The BioSense Platform is currently working through a data processing backlog of data to update the ESSENCE application. Current estimates are that the system is about 2 days behind as of 12/5/17 a.m. We have made adjustments to the system to expedite current data processing and are monitoring. Further adjustments to data throughput will be made if required. Thank you,
NSSP Team

Please contact the syndromicsurveillance@azdhs.gov for any questions about your ESSENCE data.

Legacy Data Project

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



Technology Update



ESSENCE. The NSSP Team is still testing the new version of ESSENCE (v1.21). This version offers an access control system to improve system performance and enables new levels of data sharing and improved graph overlay functionality. Users will be able to define and query multiple text fields when building free-text queries (not just chief complaint, CC/DD, or triage note alone) and view data details (line list) of more than 5,000 records.

AMC. To complement the release of ESSENCE version 1.21, some cosmetic changes are being made to the Access & Management Center (AMC) interface, and a new feature is being added to allow site administrators to grant access to RStudio and Adminer without submitting a Service Desk ticket.



IN THIS ISSUE:

- Overall NSSP
- Spotlight on Sys Practice
- Upcoming Events
- Last Month's Technical Assistance
- NSSP Participation
- Onboarding Updates
- NSSP Funding Recipients and Partnerships
- Community of Practice
- Archived *NSSP Update*

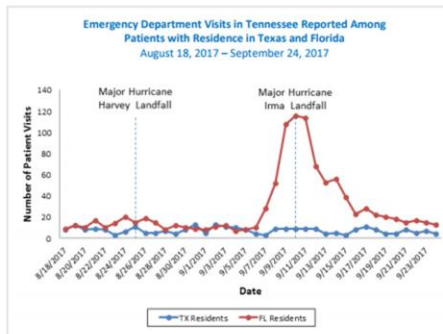
NSSP Update: <https://www.cdc.gov/nssp/news.html>

Tennessee Monitors Population Changes for Hurricane Emergency Management Support

In late summer 2017, the United States endured two severe hurricanes back to back. Although Tennessee was far from the eye of the storms, state health officials knew residents from Texas and Florida could choose to shelter in Tennessee.

In preparation for the influx of evacuees, Tennessee health officials used ESSENCE to monitor out-of-state patients seeking emergency healthcare. Syndromic data was the only information source capable of rapidly collecting health data on out-of-state patients. State health officials monitored the volume of out-of-state ED patients in Tennessee, assessed the impact on its healthcare system, and identified geographic or hospital-specific spikes in out-of-state patient visits.

To learn more and find out how the Tennessee Department of Health set up its queries to monitor visits among residents of Texas and Florida, please visit [Success Stories](#) on the NSSP website.



Check Out this
new Success
Story

NSSP Update: <https://www.cdc.gov/nssp/news.html>

NSSP Success Story- Monitoring Population Changes for Emergency Management Support in Tennessee: <https://www.cdc.gov/nssp/documents/success-stories/NSSP-Success-Story-TN-Monitoring-Population-Changes.pdf>

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).

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.

2017-2018 Training Requests



During the October 10, 2017 we had requests for more training to support AZ users needs for ESSENCE and hurricane/disaster surveillance experience shared during the Surveillance CoP calls. Both of these request have national webinars to help address requests passed on by our AZ users.

ESSENCE Q & A: <https://www.surveillancerepository.org/essence-q>

Surveillance CoP November 2017 Call Recording: <https://vimeo.com/245223106>

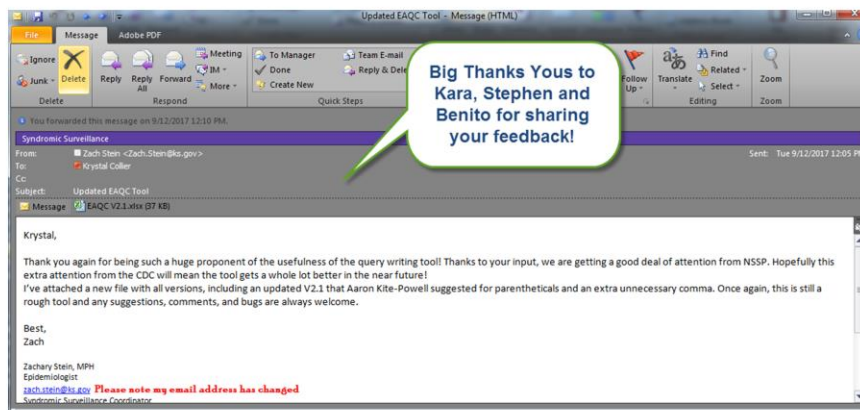
Remember this from September's Exploratory Analysis Subgroup Call

Main Term Fields		Term 1	Term2	Term 3	Term 4
Enter up to 50 Main Terms of Interest bat			rabies		
AND Values by Main Term		Ands - Term 1	Ands - Term 2	Ands - Term 3	Ands - Term 4
Enter up to 5 AND Terms for each Main Term - 1		bite	exposure		
2					
3					
4					
5					
ANDNOT Values by Main Term		ANDNOTs - Term 1	ANDNOTs - Term 2	ANDNOTs - Term 3	ANDNOTs - Term 4
Enter up to 50 ANDNOT Terms for each Main Term and its AND Terms - 1		baseball	vaccine		
2		batter			
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Health and Wellness for all Arizonans

You can find new tools and opportunities to work Zach and Rasneet by participating on the SDC calls. Zach shared with AZ to see if this would help us and our needs as we learn to ESSENCE. He would love to hear your feedback on the tool and if you would like to see more resources like this in the future.

ESSENCE Query Writer Tool



Zach Stein, who is also Rasneet's co-chair partner on the Syndrome Definitions Committee has created this tool to make writing queries in ESSENCE syntax easy. Xandy Peterson is helping test this tool and provide feedback to KS.

Zachary Stein, MPH

Epidemiologist

zach.stein@ks.gov **Please note my email address has changed**

Syndromic Surveillance Coordinator

kdhe.syndromic@ks.gov

KDHE-DPH-BEPHI-PHI-VSDA

1000 S Jackson Street, STE 130

Topeka, KS 66612

785-296-8629

Public Health Informatics Group - <http://www.kdheks.gov/phi/index.htm>

Kansas Information for Communities – <http://kic.kdheks.gov/>

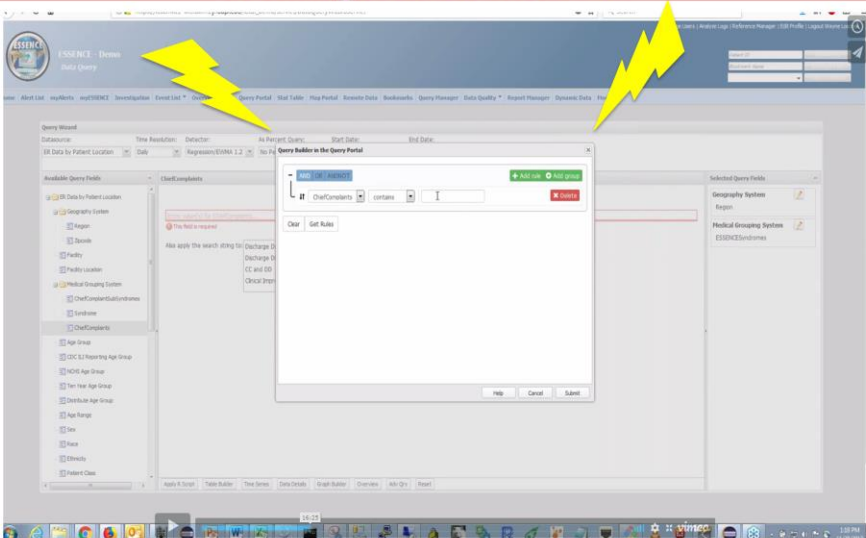
Kansas Health Matters - <http://www.kansashealthmatters.org/>

Kansas Meaningful Use - http://www.kdheks.gov/health/meaningful_use/

TA DA!

ESEENCE Auto-Query Writer Tool

Coming to version 1.21



The screenshot displays the ESEENCE Auto-Query Writer Tool interface. The tool is a web-based application with a blue header bar containing the ESEENCE logo and navigation links. A central panel displays a 'Query Wizard' with a 'Query Builder' dialog box open. The dialog box shows a rule: 'If ChartComments contains []'. The background interface includes a sidebar with 'Available Query Fields' and a main area with 'Selected Query Fields'. Two yellow lightning bolt graphics are overlaid on the image, one pointing to the 'Query Wizard' and the other to the 'Query Builder' dialog box.

This screenshot is an early preview of the tool featured in the ESSENCE Q & A webinar held on 11/29/2017: <https://www.surveillancerepository.org/essence-q>

Background



ESSENCE Tip: Auto-Query Tool Simplifies Free-text Queries

As epidemiologists start to use ESSENCE, they're often excited to try advanced features such as customized queries. However, they don't always have time to visit the query portal and learn the syntax. To bridge this gap and enable new ESSENCE users to quickly create free-text queries, epidemiologist Zach Stein of the Kansas Department of Health and Environment created the ESSENCE Auto-Query Tool (EAQT)—a name he says accurately conveys why epis have careers in data science, not in product naming and branding. The EAQT does what the name suggests: it is a fillable spreadsheet that takes key terms and diagnosis codes and automatically combines them into language that ESSENCE understands.

The EAQT comes with basic instructions. The EAQT spreadsheet can accommodate up to 20 key terms, with up to 5 "AND" terms and 20 "ANDNOT" negation terms for each. After the spreadsheet is completed, the "Output String" can be copied and pasted into the free-text field in ESSENCE. The EAQT has been incredibly useful in Kansas as a teaching tool. The [tool](#) is posted on the Community of Practice website (login required), and comments and revisions are encouraged.

Epidemiologist Zach Stein of the Kansas Department of Health and Environment created this tool to help others in Kansas who use ESSENCE. Zach shared the tool with the community on November 1, 2017, during the Syndrome Definition Committee's monthly call.

NSSP Update December issue:

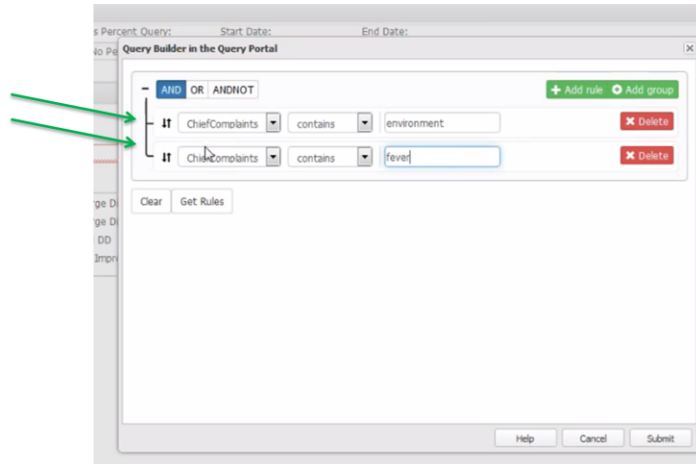
<https://www.cdc.gov/nssp/documents/newsletters/nssp-update-2017-12-508.pdf>

ESSENCE Query Tool

The screenshot displays the 'Query Builder in the Query Portal' window. At the top, there are input fields for 'Percent Query:', 'Start Date:', and 'End Date:'. Below these, a green arrow points to a tabbed interface with 'AND', 'OR', and 'ANDNOT' options. The 'AND' tab is selected. A rule is currently defined: 'ChiefComplaints' (selected from a dropdown) 'contains' (selected from a dropdown) an empty text input field. To the right of the rule are buttons for '+ Add rule' and '+ Add group', and a red 'X Delete' button. Below the rule, there are 'Clear' and 'Get Rules' buttons. At the bottom right of the window are 'Help', 'Cancel', and 'Submit' buttons.

This screenshot is an early preview of the tool featured in the ESSENCE Q &A webinar held on 11/29/2017: <https://www.surveillancerepository.org/essence-q>

ESSENCE Auto-Query Tool



This screenshot is an early preview of the tool featured in the ESSENCE Q &A webinar held on 11/29/2017: <https://www.surveillancerepository.org/essence-q>

Coming to ESSENCE Version 1.21

The screenshot displays the ESSENCE - NSSP Data Query web application. The interface includes a top navigation bar with the ESSENCE logo and a 'Logout: crystal' link. Below the navigation bar is a menu with options: Home, Alert List, myAlerts, myESSENCE, Event List, Overview Portal, Query Portal, Stat Table, Map Portal, Bookmarks, Query Manager, Data Quality, Report Manager, and More. The main content area features a 'Query Wizard' window with the following configuration:

- Data Source:** Air Quality Data
- Time Resolution:** Daily
- Detector:** Regression/EVINRA 1.2
- As Percent Query:** No Percentage Query
- Start Date:** 06Sep17
- End Date:** 05Dec17

The 'Available Query Fields' list on the left includes:

- Air Quality Data
- Air Quality Parameter
- Air Quality Station
- County
- State
- Reporting Agency
- Time Aggregation Function
- Station Aggregation Function

The 'Selected Query Fields' list on the right includes:

- Air Quality Parameter (PM2.5-24hr)
- Time Aggregation Function (Max)
- Station Aggregation Function (Max)

At the bottom of the wizard, there are buttons for 'Table Builder', 'Time Series', 'Data Details', 'Graph Builder', 'Overview', 'Adv Qry', and 'Reset'.

ESSENCE Q & A: <https://www.surveillancerepository.org/essence-q>

ESSENCE User Group Forum

General Discussion - Environmental Data and Queries

Community Groups: [ESSENCE User Group Forum Index](#) » [General Discussion](#) » [Environmental Data and Queries](#)

Moderator(s):

[Reply](#) [Thread Actions](#)

Search Forums...

M. Jagger

12/4/2017 at 5:09:09 PM GMT

Posts: 1

Environmental Data and Queries

Oregon Weather and Air Quality Overlay Guide To help local users understand and use the weather and air quality data available within Oregon ESSENCE, we have a [new guide](#). This is also useful for overlays in general.

Oregon Seasonal Hazard Reports We regularly monitor and report on statewide trends of seasonal hazards. This fall/winter season, we're looking at hypothermia and frostbite, CO exposure, falls, winter-related visits, asthma, and NVD. Reports are released every two weeks or after a storm event.

- Report is found [here](#).
- [Subscribe for auto delivery](#).
- Queries for current and prior season are documented [here](#) (see page 4).

Syndromic Surveillance Climate and Health Guidance Document If you haven't seen it yet, this [guidance document](#) provides instruction in five areas: (1) identifying a weather- or climate-related surveillance outcome, (2) developing a syndrome case definition, (3) combining, externally and internally, syndromic surveillance data with environmental data, (4) interpretation and display of data, and (5) engaging with partners.

Contact: oregon.essence@state.or.us

Attached Files: [Weather_Environmental_Data_in_ESSENCE.pdf](#) (1.21 MB), [Syndromic_surveillance_clima.pdf](#) (5.19 MB)

ESSENCE Q & A: <https://www.surveillancerepository.org/essence-q>

ESSENCE User Group Forum:

http://www.healthsurveillance.org/forums_engagement/Posts.aspx?topic=1398792

Attached Files:

http://c.ymcdn.com/sites/www.healthsurveillance.org/resource/dynamic/forums/20171204_120902_13283.pdf

http://c.ymcdn.com/sites/www.healthsurveillance.org/resource/dynamic/forums/20171204_120906_26310.pdf

Remember to Register for future SDC Calls

Syndrome Definition Committee Call

 View Registrations  Tell a Friend  Events in Series

 **12/6/2017** • RSVP for this event

When: Wednesday, December 6, 2017
1 - 2 PM ET

Where: <https://attendee.gotowebinar.com/rt/6116206436909396738>
United States

Contact: Rasneet Kumar
rasneetkumar@mail.maricopa.gov

[« Go to Upcoming Event List](#)

Registration Link
<https://attendee.gotowebinar.com/rt/6116206436909396738>

Syndrome Definition Committee Call:

<https://attendee.gotowebinar.com/rt/6116206436909396738>

Click on the event and you will be taken to the webinar registration information page.

SDC December 06, 2017 Call
11am-12pm

- **Agenda:**
- ISDS Updates
- Overview of last call
- ESSENCE Data Quality Issues
- National ESSENCE Query Statistics - Aaron Kite-Powell
- Suicide-related syndrome
 - Presentation: Dr. Kristin Holland, CDC, Division of Violence Prevention
 - ICD-CM and SNOMED codes

Syndrome Definition Committee Call:

<https://attendee.gotowebinar.com/rt/6116206436909396738>

Click on the event and you will be taken to the webinar registration information page.

Join the Group: [https://healthsurveillance.site-](https://healthsurveillance.site-ym.com/members/member_engagement/groups.aspx?code=SYNDEF)

[ym.com/members/member_engagement/groups.aspx?code=SYNDEF](https://healthsurveillance.site-ym.com/members/member_engagement/groups.aspx?code=SYNDEF)

Syndrome Definition Library Now Available

Welcome to the Syndrome Definition Library (Beta)

Click on a topic under the Syndrome Category section in the left column, then select a syndrome from the list of syndromes that appear for that topic. You may also search for specific syndromes by entering one or more keywords in the Search bar. You can filter the search results by Platform or Author Name.

Syndrome Category ▼

- Infectious Disease (5)
- Emergency Preparedness (4)
- Environmental Exposure (4)
- Behavioral Health (2)
- Injury (2)
- Occupational Health (1)

Syntax Platform ▶

Jurisdiction ▶

Surveillance System ▶

Heat-related Illness - CSTE Heat Workgroup

This definition is based on the following document created by the CSTE Heat Workgroup: Heat-related Illness Syndrome Query: A guidance Document for Implementing Heat-related Illness Syndromic Surveillance in Public Health Practice (attached). The query is built using chief complaint and discharge... [Read more](#)

Homeless Population - Maricopa County Department of Public Health

This syndrome was created using BioSense 2.0 phpMyAdmin and later transitioned to ESSENCE. The syndrome queries chief complaint and discharge diagnosis fields. The Maricopa County data include emergency room and inpatient visits.

Zika - Arizona

This syndrome was created as a part of the Arizona Arboviral Syndrome Surveillance Project, which includes bi-weekly monitoring of syndromic data to enhance traditional surveillance. The syndrome was initially created using BioSense 2.0 phpMyAdmin and later transitioned to ESSENCE.

Chikungunya and Dengue - Arizona

Syndrome Definition Library:

<https://www.surveillancerepository.org/search/syndrome>

8 Syndromes from AZ submitted, including 3 from the Exploratory Analysis Subgroup Arboviral Syndromic Surveillance Protocol

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.

2017-2018 Use Cases

Requests have come in from AL to share our knowledge and resources on developing protocols

- Thank yous
- Matt and Pinal County for HRI and Weather Stations
- Arboviral Syndromic Surveillance Protocol requested too

2017-2018 Use Cases

- New Use Cases?
 - Any Collaborative Ideas?

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.

Exploratory Analysis Subgroup Projects

- 1 Evaluation in Progress
- 1 NSSP Success Story
- Arboviral Syndromic Surveillance Project Evaluation
 - Maricopa County assisting with process
 - 2018 ISDS Conference Abstract Accepted

Exploratory Analysis Subgroup Projects

- New Use Cases?
 - Any Collaborative Ideas?

The banner features the NSSP logo on the left, which includes a map of the United States and the text "NSSP National Syndromic Surveillance Program BioSense Platform". In the center, there is a graphic of a hand holding a smartphone displaying a bar chart, with a line graph and data points floating above it. On the right, the text "Syndromic Surveillance" is in a smaller font, and "Success Stories" is in a large, bold, white font.

- Stay tuned Next Month for our Arizona Arboviral Diseases Success Story
 - Might be a featured story in the NSSP Update...

NSSP Update: <https://www.cdc.gov/nssp/news.html>

2018 ISDS Conference Abstracts

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



Upcoming Meetings

Exploratory
Analysis Subgroup



AZ BioSense
Workgroup

- Thurs. Jan. 25
from 1:00 – 2:00

- Tues. Feb. 06
from 1:00 – 2:00



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans

THANK YOU

syndromicsurveillance@azdhs.gov | 602-542-6002

azhealth.gov

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