Arizona Biosense Community of Practice

July 6 2022

Agenda

- Welcome & Attendance
- Team Updates
- Onboarding Updates
- National Trainings In July
  - 3 Part Series
  - CSTE/ Kahuina
- Nssp Updates
  - Slack
  - Dashboards
- Trending topics
  - Acute Hepatitis
- Using ESSENCE To Monitor Data Quality
- Presentation

Team Updates

New Team Members

- Alexis Griffin
- Rachel Berg

Onboarding Updates

- Hospitals in Progress
  - Benson
  - Sage
- Other Updates

ESSENCE & AMC

- Upcoming ESSENCE Trainings
  - **Introduction to ESSENCE 3-Part Series**
    - Setting aside some time to chat through an introduction to NSSP ESSENCE. This will be a 3 part series to provide an overview of the various functions and hands on experience using them.
      - When: July 12, 13, and 14th from 12-1PM MST
      - Where: Microsoft Teams
  - **CSTE/CDC NSSP Model SYS Trainings**
    - When: July 2022 TBA

CSTE/CDC NSSP model SyS training series

KAHUINA CONSULTING

Foundational Syndromic Surveillance Training Series

Starting July 2022 (exact training dates TBD)

Designed for new SyS analysts and data consumers to…

a. establish foundational concepts of SyS methodology

b. conceptualize new SyS public health applications

c. confidently act on SyS analyses

SyS State of Mind

Explore the common data sources and methods that define SyS practice. Learn how analyst query data and craft syndromes for many public health problems. Apply new knowledge to interactive exercises and simulated experiences, preparing learners to look at public health surveillance through a SyS lens.

Learning Objectives:
1. Describe the general process to categorize records into syndromes
2. Apply characteristics of SyS data (sources, variables, quality) when describing SyS results
3. Distinguish between which public health issues are and are not well suited for SyS

Expected Outcomes:
1. Reliably and confidently define a syndrome using typical syndromic surveillance data elements
2. Reliably and confidently describe representativeness and limitations of SyS results
3. Accurately frame and/or develop hypotheses for SyS applications

July

Expanding SyStems

Identify different SyS analysis methods to support different surveillance and response needs. Learn how to apply a near real-time data source to a diverse set of public health problems, broadening SyS utility. Content for all types of learners, with active engagement, didactic presentations and action-led micro-learning.

Learning Objectives:
1. Select and apply the analysis method as appropriate for the context and health condition of interest.
2. Identify how to utilize SyS data and methods for multiple public health domains

Expected Outcomes:
1. Accurately describe appropriate analytic methods to characterize processed SyS data.
2. Expand SyS application to additional health conditions of interest and public health domains.

August

AnalySys and Communication

Translate data into recommendations and public health actions. Learn how to tell a story through SyS analysis interpretation. Simulated learning experiences are coupled with integrated support tools to maximize best practices.

Learning Objectives:
1. Select appropriate public health actions based on SyS analysis.
2. Describe key messages for various target audiences, including data providers, decision makers, and the public

Expected Outcomes:
1. Determine appropriate response/public health action based on SyS finding
2. Craft and/or make recommendations for tailored communication per audience profile.

September

The NSSP CoP is supported by Cooperative Agreement # 6NU38OT000297-02-01 between the Centers for Disease Control and Prevention (CDC) and the Council of State and Territorial Epidemiologists. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

NSSP Community of Practice

ESSENCE & AMC

Slack

- #chief-complaint-processing
- #covid19
- #data-lab
- #data-sharing
- #data-quality
- #drug-overdose-use
- #environmental-health
- #essence-user
- #general
- #hospital-admissions
- #planned-analyses-and-publications
- #national-data-requests-sop
- #nssp-cop
- #race-and-ethnicity
- #random
- #r-user
- #sas-user
- #severe-weather
- #spherr
- #syndrome-definitions
- #training
- #violence-surveillance

NSSP

- There was no NSSP Communities of Practice Meeting in June because it interfered with the CSTE Conference
  - Did anyone Attend the CSTE Conference?
- Next NSSP CoP Meeting with be on July 27th

Current Topics of Interest

- Pediatric Hepatitis of Unknown Etiology
  - **Pediatric Hepatitis of Unknown etiology**
    - The NSSP team is working with CDC's pediatric hepatitis response team to share national trends using queries based primarily on the UK syndrome definition and 0–4, 5–11, and 0–11 age groups.
    - The NSSP team is working on two projects to validate and improve the query for identifying visits associated with pediatric hepatitis of unknown etiology.
      - NSSP analysts created a shared spreadsheet where sites can post their queries for identifying ED visits associated with pediatric hepatitis of unknown etiology. There is a link posted on the Syndrome Definitions Slack channel.
      - To better understand which ICD-10 codes are being used to identify persons under investigations (PUIs)

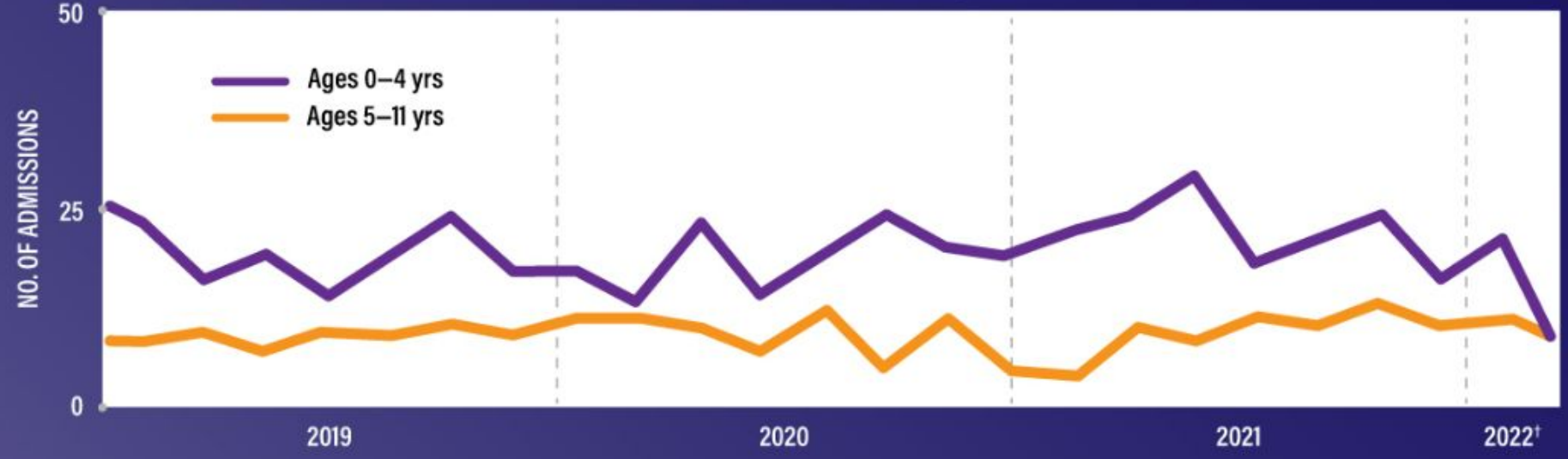
Pediatric Hepatitis of Unknown Etiology

(,(^JAUNDICE^,OR,^HEPATIC FAILURE^,OR,^HEPATITIS^,OR,^LIVER FUNCTION^,OR,^LIVER FAILURE^,OR,^TRANSAMIN^,OR,^JUANDICE^,OR,^JAUNICE^,OR,^JUANICE^,OR,^ICTER^,OR,^YELLOW EYES^,OR,^YELLOW SCLERA^,OR,^EYE YELLOW^,OR,^YELLOW SKIN^,OR,^TURNING YELLOW^,OR,^HEPITITIS^,OR,^HEPETITIS^,OR,^HEPATITUS^,OR,^HEPITITUS^,OR,^HEPETITUS,OR,^R17^,OR,^R74.0^,OR,^R740^,OR,^R94.5^,OR,^R945^,OR,^K71^,OR,^K72^,OR,^B17^,OR,^B19^,),ANDNOT,(,^NEONATAL^,or,^NEWBORN^,or,^[;/]P59.9^,or,^[;/]P599^,or,^Z23^,)

Acute Hepatitis

- **MMWR Report on Trends in Acute Hepatitis of Unspecified Etiology and Adenovirus Stool Testing Results in Children- United State, 2017-2022**
  - Analysis of four data sources did not indicate recent increases in hepatitis-associated emergency department visits or hospitalizations, liver transplants or adenovirus types 40/41 percent positivity among U.S. children compared with pre-COVID-19 pandemic levels.
  - Data in this report were obtained from the National Syndromic Surveillance Program (NSSP), the Premier Healthcare Database Special Release (PHD-SR), the Organ Procurement and Transplant Network (OPTN), and Labcorp, a large commercial laboratory network.
  - Hospital admissions among children aged 0–4 and 5–11 years during January 2019–March 2022 were identified using the same ICD-10-CM codes as were used for ED data.
  - This was compared to monthly hospitalizations and liver transplants in same months of 2017, 2018 and 2019.

The number of children hospitalized for hepatitis of unknown cause has not increased compared to before the COVID-19 pandemic*



* Inpatient data from about 1,000 U.S. hospitals during January 2019—March 2022
† March 2022 data might be underreported

bit.ly/MMWR7124
JUNE 14, 2022
MMWR

Using ESSENCE to Monitor Changes in Data Quality

- On ESSENCE you can create a micrograph timeseries that can be stratified across graphs by a data element, geography systems or medical grouping systems.
- There are two tabs to monitor Data Quality in MyESSENCE Library
  - Monitoring Data Quality (HasBeenE = Yes)
    - This tab is restricted to visits where patients visited the emergency department.
  - Monitoring Data Quality (HasBeenE = No)
    - This tab is restricted to visits where patients did not visit the emergency department.

ESSENCE Data Quality

- Each Tab includes micrograph timeseries for monitoring facility level changes in the percent of visits with incomplete information.
  - Visit volume
  - Non-informative discharge diagnosis (DDI = No)
  - Non-informative chief complaint (CCI = No)
  - Unknown values for age
  - Unknown values for sex
  - Unknown, not categorized, not reported or null values for calculated race
  - Unknown, not categorized, not reported or null values for calculated ethnicity
  - Unknown values for patient ZIP code
  - Null or blank triage notes original
  - Null or blank clinical impression
  - Null initial temperature

Syndromic Heat Surveillance in Maricopa County

AARON GETTEL

TONY BISHOP

Background

Tracking heat deaths since 2006

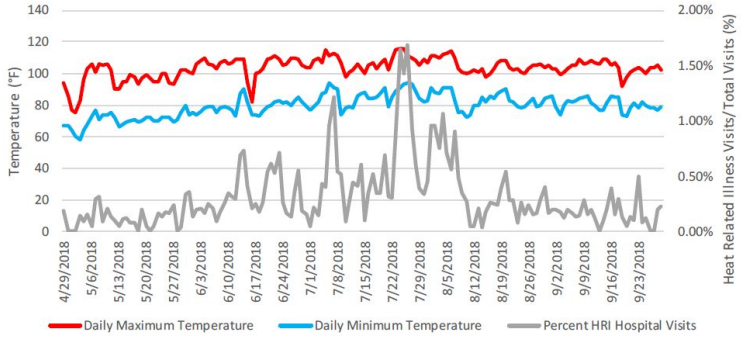
Produce Weekly and Annual Reports

Started syndromic heat surveillance in 2015

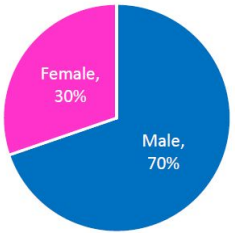
Added syndromic heat surveillance to weekly report in 2018

2018 Reports

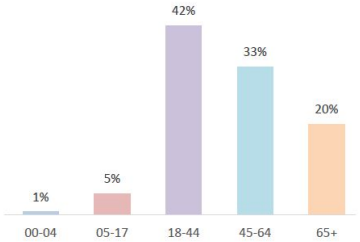
Graph 5. The percentage of emergency and inpatient hospital visits due to environmental heat was not above expected in Week 36.



Graph 6. More males than females have visted the emergency department due to environmental heat among the identified cases.



Graph 7. Most of the idenfied emergency department visits due to environmental heat have been among those 18-44 years of age.



Maricopa County Public Health
WeArePublicHealth.org

2018 Reports

Data Table

Patient Location	
Show Totals	
AZ_Maricopa	
2	
0	
4	
2	
0	
2	
2	
2	
2	
3	
3	
8	
4	
4	
4	
5	
3	
1	
2	
3	
8	
5	
4	
3	
3	
0	
4	
3	
3	
4	
7	
6	
8	
13	
6	
7	
6	
2	
3	
5	

Patient Region
Show Totals
AZ_Maricopa
7559
7408
7455
6494
6485
7665
7525
7323
7134
7225
6654
6555
7979
7761
7630
7312
7176
6838
6542
8236
8059
7661
7385
7579
7055
6945
8206
7929
7668
7363
7411
6816
6862
8394
7894
7734
7463
7346
6665
6683

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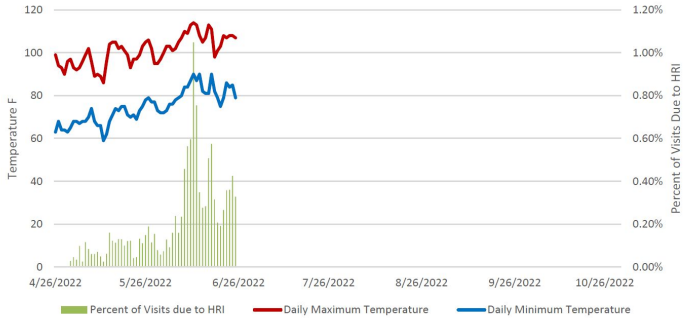
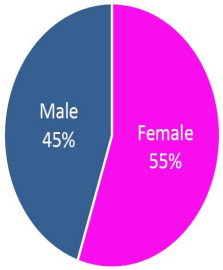
WeArePublicHealth.org

2022 Reports

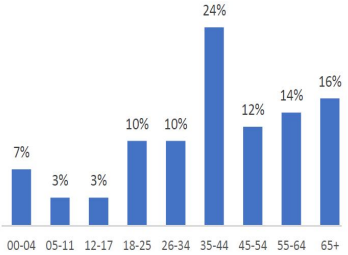
Graph 5. Daily Percentage of Hospital Visits due to Heat-Related Illness (HRI)



Graph 6. Heat Related Illness Visits by Gender



Graph 7. Heat Related Illness Visits by Age Group



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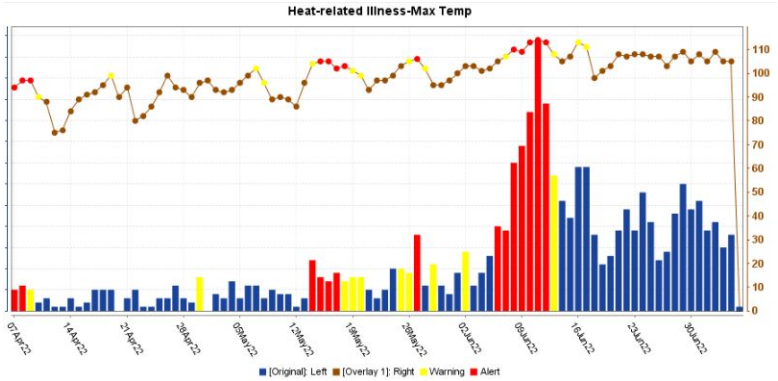
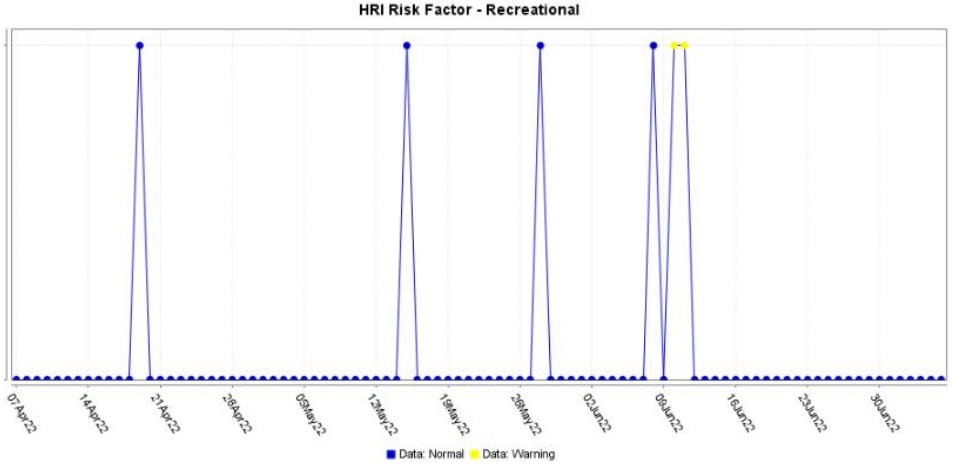
2022 Reports

	A	B
1	Date	Percent
2	2022-05-01	0.00028114
3	2022-05-02	0.00045626
4	2022-05-03	0.00034876
5	2022-05-04	0.00098365
6	2022-05-05	0.00025342
7	2022-05-06	0.00115577
8	2022-05-07	0.00083975
9	2022-05-08	0.00060277
10	2022-05-09	0.000563
11	2022-05-10	0.00069808
12	2022-05-11	0.00048786
13	2022-05-12	0.00024465
14	2022-05-13	0.00061912
15	2022-05-14	0.00160643
16	2022-05-15	0.00123305
17	2022-05-16	0.00113417
18	2022-05-17	0.00129824
19	2022-05-18	0.00129457
20	2022-05-19	0.00100013
21	2022-05-20	0.00121168

	A	B	C	D
1	Date	MaxTemp	MinTemp	
2	05/01/2022	97	65	
3	05/02/2022	93	68	
4	05/03/2022	92	68	
5	05/04/2022	93	67	
6	05/05/2022	96	68	
7	05/06/2022	99	68	
8	05/07/2022	102	70	
9	05/08/2022	96	74	
10	05/09/2022	89	68	
11	05/10/2022	90	66	
12	05/11/2022	89	66	
13	05/12/2022	86	59	
14	05/13/2022	96	62	
15	05/14/2022	104	68	
16	05/15/2022	105	71	
17	05/16/2022	105	74	
18	05/17/2022	102	73	
19	05/18/2022	103	75	
20	05/19/2022	101	75	
21	05/20/2022	99	71	

HRI ESSENCE Dashboard





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Next Steps

Add additional risk factors to weekly report

Work with National Weather Service

Add Death and Syndromic into one program

Maricopa County
Public Health
WeArePublicHealth.org

Questions?

Closing

- Please fill out survey on what you want seen from Exploratory Analysis Subgroup Meetings
- Exploratory Analysis Subgroup meeting
  - Date: August 15th 1 PM
  - Monthly every 3rd week
- Next Arizona Biosense Community of Practice
  - TBA: Quarterly unless need to occur more frequently

THANK YOU

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