

Exploratory Analysis Subgroup

of the Arizona BioSense Workgroup

April 24, 2017



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans

Objectives

- Welcome and Attendance
- New ESSENCE CC&DD Category syndromes
 - CDC Herion Overdose v1
 - Coming Soon: Heat-related Illness v1
- Community of Practice Update
 - April Surveillance CoP Call
 - Seasonal Surveillance
 - Crypto
 - Call for your help from Steering Committee for your help to get involved!
 - Forum: Heat-related Illness Flash Mob
 - Syndromes Definition Workgroup Kick Off Meeting!!!!!!!!!!!!
 - [Register](#) for the call May 4th, 2-3pm EDT
 - Co-Chair Rasneet Kumar, Maricopa County and Zach Stein, Kansas
- Presentation by Rasneet Kumar, Maricopa County Department of Public Health
 - Maricopa County's Enhanced Surveillance during NCAA Final Four Tournament and Activities
 - Focusing on Syndromic Surveillance Efforts
- New Ideas for use of Syndromic Surveillance
 - Mumps?
 - ESSENCE CC & DD Category Syndrome
 - Mumps v1
- Questions and Open Discussion
- Next Meetings
-



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans

New ESSENCE CC&DD Category Syndromes

The screenshot displays the ESSENCE - NSSP Data Query web application. The browser address bar shows the URL: https://essence.syndromicsurveillance.org/nssp_essence/service/DataQueryWizardServlet. The application header includes the ESSENCE logo and the text "ESSENCE - NSSP Data Query". A navigation menu at the top lists various 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. A user login field is visible in the top right corner.

The main content area is titled "Query Wizard" and contains several configuration fields:

- Data Source:** Patient Location (Full Details)
- Time Resolution:** Daily
- Detector:** Regression/EWMA 1.2
- As Percent Query:** No Percentage Query
- Start Date:** 27Jan17
- End Date:** 27Apr17

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

- Sex
- Race
- Ethnicity
- Patient Class
- Disposition Category
- Discharge Diagnosis
- ICD10 Discharge Diagnosis
- Diagnosis Type
- CC and DD Category** (selected)
- Syndrome Free Text
- SubSyndrome Free Text
- Chief Complaint (Orig) Free Text
- Facility Type

The "CC and DD Category" section in the center allows users to "Select values for CC and DD Category:" and lists the following options:

- CDC Heroin Overdose v1
- Foreign Travel
- Mumps v1
- Norovirus v1
- Visits of Interest

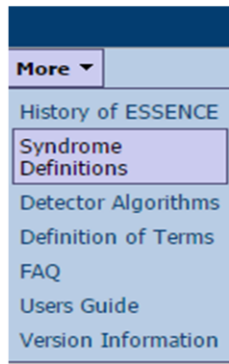
Buttons for "Select" and "Help" are provided for this section. The "Selected Query Fields" list on the right includes:

- Geography System**
 - Region
- Medical Grouping System**
 - ESSENCEsyndromes

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

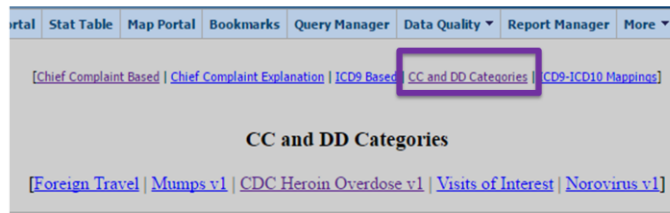
Reminder to find Syndrome Definitions in ESSENCE

- Go to the “More” Menu
- Select “Syndrome Definitions”



CC and DD Categories in ESSENCE

- Select the “CC and DD Categories” to find the Syndrome Definition
 - CDC Heroin Overdose v1
 - Coming Soon: Heat-related Illness v1

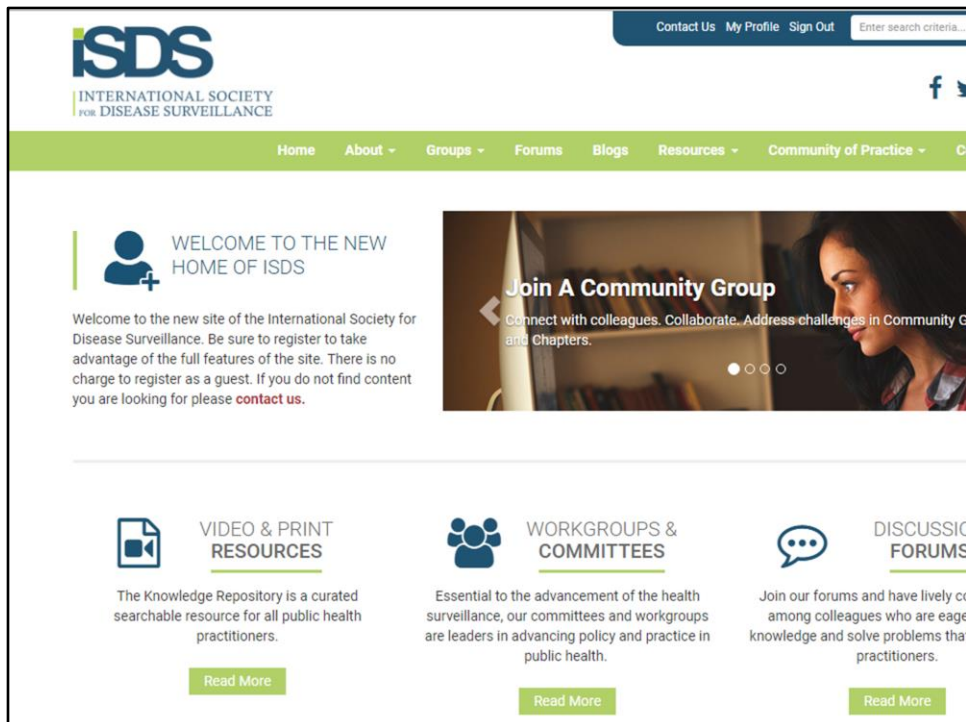


CC and DD Categories

[\[Foreign Travel\]](#) | [\[Mumps v1\]](#) | [\[CDC Heroin Overdose v1\]](#) | [\[Visits of Interest\]](#) | [\[Norovirus v1\]](#)

CDC Heroin Overdose v1

Category	Term	NegTermA	NegTermB	NegTermC	NegTermD
CDC Heroin Overdose v1	[/ JT40.1X1A*	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	[/ JT40.1X4A*	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	[/ JT401X1A*	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	[/ JT401X4A*	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	[AO]VERDOSE	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	ADV EFFECT DRUG	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	ADVERSE DRUG	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	ADVERSE EFFECT DRUG	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	ADVERSE REACTION	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	
CDC Heroin Overdose v1	ADVERSE RXN	DENIES HER[IO] [O]N	DENY HER[IO] [O]N	DENIED HER[IO] [O]N	



ISDS Website: <http://www.healthsurveillance.org/>

April Surveillance CoP Call

- Topic of the Month: Seasonal Surveillance
 - AZ shared some examples
 - Is anyone using Syndromic Data for Crypto Surveillance?
 - Does anyone have any resources or know of other jurisdictions doing this?
 - ESSENCE has a Chief Complaints Based Syndrome
 - Subsyndrome for Cryptosporidiosis

[\[Chief Complaint Based\]](#) | [\[Chief Complaint Explanation\]](#) | [\[ICD9 Based\]](#) | [\[CC and DD Categories\]](#) | [\[ICD9-ICD10 Mapping\]](#)

Chief Complaints Based Syndrome Definitions

[\[Syndrome\]](#) | [\[Subsyndrome\]](#)

[SUBSYNDROMES](#) > CRYPTOSPORIDIOSIS

Rules

Cryptosporidiosis = N/A

Terms

CRYPTOSPORIDIOSIS (10)

If you missed the April Surveillance CoP Call

Check out the monthly recordings and the slide decks

Monthly Call Recordings

 Group Home  Group Pages  Directory & Features  Options

 Share |    

Monthly Surveillance CoP Call Recordings 2017

Item Name	Posted By	Date Posted
Surveillance CoP Call - Apr 25, 2017 Link	E. Lamb	Yesterday
Surveillance CoP Call - Feb 28, 2017 Link	C. Tong	3/30/2017
Surveillance CoP Call - Mar 28, 2017 Link	C. Tong	3/30/2017

Go to the Surveillance CoP Community Group on the ISDS website. Select the Group Pages button and choose either the slides or recordings.

Link to Recordings:

http://www.healthsurveillance.org/members/group_content_view.asp?group=190174&id=654364

Monthly Call Slides

Group Home
 Group Pages
 Directory & Features
 Options

Share

Here you will find the slides and presentations from the Surveillance CoP monthly calls.

Monthly Surveillance CoP Call Slides 2017 [\[More Info\]](#)

Item Name	Posted By	Date Posted
Apr 2017 Monthly CoP Slides PPTX (15.83 MB)	E. Lamb	Yesterday
Mar 2017 Monthly CoP Slides PPTX PPTX (15.86 MB)	C. Tong	3/29/2017
Feb 2017 NC Opioid Presentation PPTX (260.52 KB)	E. Lamb	3/28/2017
Feb 2017 Monthly CoP Slides PPTX (15.86 MB)	E. Lamb	3/28/2017

Go to the Surveillance CoP Community Group on the ISDS website. Select the Group Pages button and choose either the slides or recordings.

Link to Slide Decks:

http://www.healthsurveillance.org/members/group_content_view.asp?group=190174&id=653812

ESSENCE Training: Sharing Queries

 Tell a Friend

Join us for the last of three ESSENCE trainings presented by Wayne Loschen on sharing queries in ESSENCE.



5/2/2017

When: Tuesday, May 2, 2017
2:00 PM

Where: Go To Webinar registration: <https://attendee.gotowebinar.com/register/8750387805174903041>
United States

Contact: Catherine Tong
ctong@syndromic.org

[« Go to Upcoming Event List](#)

Wayne Loschen is a Software Engineer at the Johns Hopkins University Applied Physics Laboratory (JHU/APL). He holds a B.S. in Computer Science from the University of Illinois Urbana-Champaign and an M.S. in Computer Science from Johns Hopkins University. He is the technical lead for ESSENCE.

This presentation will focus on how to share queries in ESSENCE. In addition to teaching the basic mechanics of the application, the presentation will explore advanced techniques for sharing queries in features like myESSENCE, report manager, and query manager.

Register today to join the webinar: <https://attendee.gotowebinar.com/register/8750387805174903041>.

Register for the ESSENCE Training: Sharing Queries on 05/02/2017@2:00pm-
<http://www.healthsurveillance.org/events/EventDetails.aspx?id=953100>

Call for your help from the Steering Committee: Flash Mob-Heat-related Illness

Forums

[My Subscriptions & Settings](#) [Top Posters](#) 

ISDS Discussion Forums are online communities where members and registered guests may read, ask and respond to questions on a wide range of public health surveillance subjects.

To enter a Forum, click on the forum name and click on "New Topic" to post to the forum.

Participants are encouraged to actively participate in the forums. If you are interested in creating a new subject for a forum, first consider if it is best suited as a topic in an existing forum, and if not, please contact the site [administrators](#) or your group admin.

General	Topics	Posts	Latest Activity
Syndromic Surveillance General Discussion This is the general forum for the Surveillance Community of Practice	2	3	Jurisdictions with Required Sy... by A. Ising Friday, April 21, 2017
Opioid Surveillance Discussion	7	28	SS and EMS Data for Opioid/H... by M. White 11 minutes ago
Heat-related Illness Discussion	0	0	No Activity
Influenza-like Illness Discussion	0	0	No Activity

Link to Forums: <http://www.healthsurveillance.org/forums/Default.aspx>

The Steering Committee is going to a Flash Mob for Weather Related Discussion thread and looking for AZ's help for Heat-related Illness!

Surveillance Community of Practice Call

 Tell a Friend  Events in Series

A newly-formed, 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 this field 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.



5/23/2017

When: Every fourth Tuesday
3:00 PM

Where: Go To Webinar registration: <https://attendee.gotowebinar.com/rt/2168546273482898690>
United States

Contact: Emilie Lamb
elamb@syndromic.org

ISDS Surveillance Community of Practice Call on **05/23/2017@3-4:30pm ET:**

<https://attendee.gotowebinar.com/rt/2168546273482898690>

ISDS Upcoming Events: http://www.healthsurveillance.org/events/event_list.asp

Workgroups: Syndrome Definition Workgroup

Groups » Surveillance Community of Practice » Data Quality Committee » Syndrome Definition Workgroup

 Directory & Features  Options

Group Feed

Write something...

Post

Mark Bova joined the group Workgroups: Syndrome Definition Workgroup.
Posted 6 hours ago

Erin Austin joined the group Workgroups: Syndrome Definition Workgroup.
Posted Wednesday, April 26, 2017

Jianhua Chen joined the group Workgroups: Syndrome Definition Workgroup.
Posted Wednesday, April 26, 2017

Anikah Salim joined the group Workgroups: Syndrome Definition Workgroup.
Posted Wednesday, April 26, 2017

Serena Rezny joined the group Workgroups: Syndrome Definition Workgroup.
Posted Tuesday, April 25, 2017

[More »](#)

 Group Directory
 Calendar
 Blogs
 Forums
 Photo Gallery

Group Admin
Rasneet Kumar

Group Admin
Zach Stein

Group Admin
Catherine Tong

Join Rasneet and collaborate with other jurisdictions on syndrome definitions by becoming a member of the the Syndrome Definition Workgroup.
Syndrome Definition Workgroup: <http://www.healthsurveillance.org/group/SYNDEF>

Syndrome Definition Workgroup Kick-off Call

 Tell a Friend

Kick-off call to establish goals and a direction for the Syndrome Definition Workgroup.

• [RSVP for this event](#)



5/4/2017

When: 5/4/2017
2:00 PM ET

Where: <https://attendee.gotowebinar.com/register/98290124568067586>
United States

[« Go to Upcoming Event List](#)

Registration link: <https://attendee.gotowebinar.com/register/98290124568067586>.

Syndrome Definition Workgroup Kick Off Call 05/04/2017@ 2pm-3pm ET:
<https://attendee.gotowebinar.com/register/98290124568067586>

Presentation

- Maricopa County's Enhanced Surveillance during NCAA Final Four Tournament and Activities
 - Focusing on Syndromic Surveillance Efforts
 - Presented by Rasneet Kumar, Maricopa County Department of Public Health



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans

Enhanced Syndromic Surveillance

NCAA Final Four 2017

Rasneet Kumar, 4/27/2017



**Maricopa County
Department of Public Health**

WeArePublicHealth.org twitter.com/Maricopahealth facebook.com/MCDPH

Association (NCAA) Final Four, 2017



- Men's College Basketball Tournament
- Maricopa County, Arizona
- Friday, March 31, 2017 – Monday, April 3, 2017



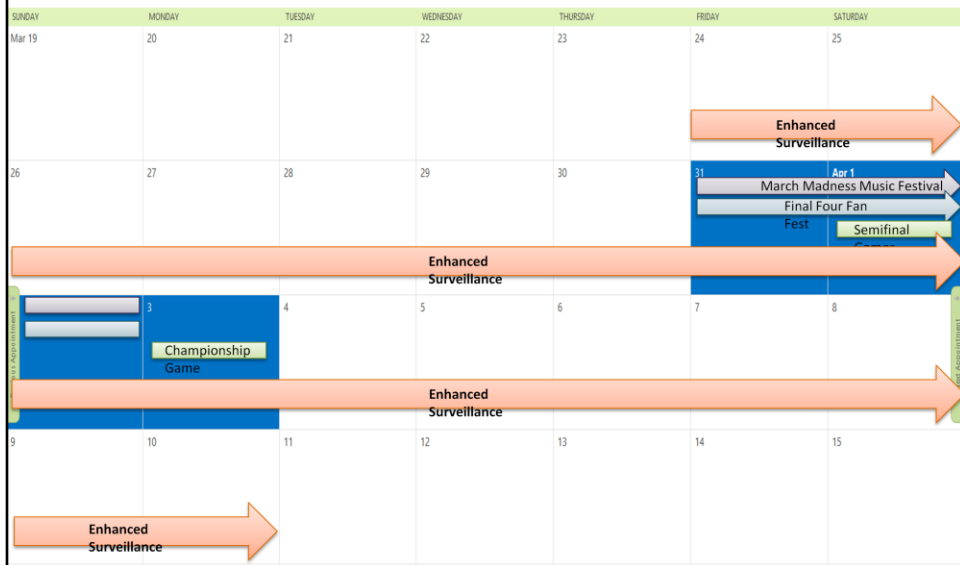
Final Four Events



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Mar 19	20	21	22	23	24	25
26	March madness Music Festival Final Four Fan Fest Games (Semifinals, Championship)		29	30	31	Apr 1 March Madness Music Festival Final Four Fan Fest Semifinal Games
Championship Game	3	4	5	6	7	8
9	10	11	12	13	14	15

Surveillance

3/24 – 4/10



Enhanced Surveillance Activities



- Urgent Care Surveillance
- School Surveillance
- ILI Surveillance
- 24/7 Disease Reporting Line/Poison Control Center (PCC) data
- Mortality Surveillance
- Aberration Detection using MEDSIS data
- Daily Outbreak Monitoring
- Media Surveillance
- Field Surveillance
- **ESSENCE Syndromic Surveillance**

Urgent Care: 15 urgent care within 3 mile radius and requesting ILI, GI, Rash and Neuro, any even of public health significance

School: 80 schools- school absenteeism

Traditional ILI surveillance- reports from ER and outpatient clinics

DRL/PCC: Daily monitoring

Mortality: monitoring data from Vitals and Medical Examiner

Media surveillance social and news media

Field surveillance: -collecting data from 1st aid stations

ESSENCE Syndromic Enhanced Surveillance

CDC NSSP Collaboration



- Initial planning call
- CDC NSSP shared
 - Experience during inauguration syndromic surveillance
 - Report template
 - Queries
- MCDPH shared
 - County aggregated data
 - Daily syndromic reports
- ADHS and NSSP worked together to provide uninterrupted ESSENCE availability

ESSENCE



- myESSENCE dashboard created with the following syndromes:
 - Influenza-Like Illness (ILI)
 - Gastrointestinal (GI) Illness
 - Injury
 - Heat Related Illness (CSTE Syndron
 - Records of Interest
 - Final Four Event-related
 - Mumps*
 - Meningitis*

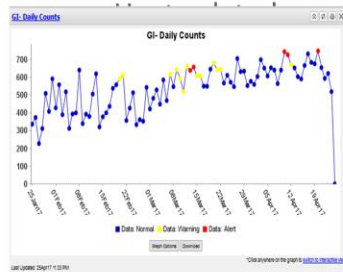


*Mumps and Meningitis were added to daily surveillance on 3/30/2017 due to outbreak reports from visiting states (OR-Meningitis, WA-Mumps)

Monitoring

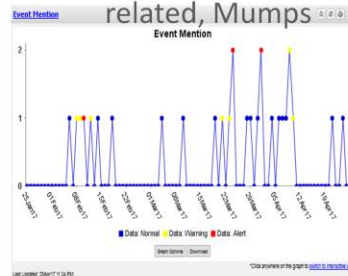


- myESSENCE dashboard was monitored daily for:
 - Increased disease activity
 - ILI, GI, Injury, Meningitis,



- Case finding

- Records of Interest, Final Four Event-related, Mumps



Reporting

Syndromic Surveillance Rep

- Distributed daily:
 - MCDPH Syndromic Team
 - MCDPH Intelligence Chief
 - ADHS
 - CDC NSSP Team



Enhanced Syndromic Surveillance Report

Final Four 2017- Arizona

Report Date/Time: 4/10/2017, 10:00AM

Reporter: Rasneel Kumar, RasneelKumar@mail.maricopa.gov (602) 291-2371

Key Findings: **No increased or unusual activity of public health concern was observed**

Baseline Activity	Increased or Unusual Activity	Action Required *See options below
Influenza-like illness (ILI) Gastrointestinal (GI) illness Injury Heat-related illness Records of Interest Final Four Event-related Mumps* Meningitis*		

*Mumps and Meningitis were added to daily surveillance on 3/30/2017 due to outbreak reports from visiting states (OR-Meningitis, WA-Mumps)

Investigation Summary:

No increased or unusual activity was observed

Possible Action Required
None: No follow up is required
Monitor: Monitor the increase or unusual activity
Communicate to Public Health Administration (PHA): If cluster or unusual activity of public health concern is suspected, contact the department administration
Communicate with the Medical Multi-Agency Coordination Center(MACC): If the public health concern is confirmed by the PHA, communicate the concerns to the MACC

Reporting

Public Health Surveillance Report

- Summary of all enhanced surveillance activities
- Distributed daily:
 - Internal and external partners

Overall Summary

March 28th, 2017, 12:00 PM



Special points of interest:
State of Arizona is at Regional activity level for influenza

Communicable Diseases/Outbreaks/Deaths

Contains communicable disease, outbreak, deaths review, and Influenza report information.

Situation as of 3/28/2017 12:00 PM

There is nothing new to report at this time.

Recommended Action Items

None at this time.

Healthcare System Reports

Final Four enhanced surveillance in place from 3/24/17 to 04/10/2017. Includes Health Alerts/Advisories, Poison Control Center, Enhanced Animal Disease Surveillance, Urgent Care and Emergency Department Surveillance.

Situation as of 3/28/2017 12:00 PM

There is nothing new to report at this time.

Recommended Action Items

None at this time.

Field Surveillance at First Aid Stations

FEST Teams will be stationed at first aid stations at the Fan Fest, March Madness Music Festival, Glendale Medical Station and inside Phoenix Stadium.

Situation as of 3/28/2017 12:00 PM

Field Surveillance active from 3/31/17 to 4/3/17. There is nothing new to report at this time.

Recommended Action Items

None at this time.

Media Surveillance, Arizona and National Update

Situation as of 3/28/2017 12:00 PM

Final Four enhanced surveillance in place from 3/24/17 to 04/10/2017. There is nothing new to report at this time.

Recommended Action Items

None at this time.

MARICOPA COUNTY DEPARTMENT OF PUBLIC HEALTH 4041 N. CENTRAL AVE., PHOENIX, AZ 85012
Facility Related Emergencies Please contact the MCDPH Duty Officer @ (602) 527-5078 or
From 3/31 to 4/3 The Medical Multi-Agency Coordination Center (MACCC) can be reached at (602) 495-0159

For questions specific to this report please contact:
William Smith, Office of Epidemiology William.Smith@maricopa.gov, Cell: (602) 527-0108, Desk: (602) 372-2855, Fax: (602) 372-2810



What did we find?



- Fortunately... Not much
- Four days of insufficient data (3/24 – 3/27)

Syndrome	Alerts
Influenza-Like Illness (ILI)	No Alerts
Gastrointestinal (GI)	No Alerts
Injury	No Alerts
Heat-related Illness	No Alerts
Records of Interests	5 days with alerts: The Records of Interest Syndrome flagged a record on 4/3/2017 as Smallpox. Further investigation revealed a false positive due to the mention of the word 'ariola' in the chief complaint. The Smallpox syndrome searches for the word 'variola'. Medical records for the individual were reviewed and indicated no symptoms of smallpox.
Final Four Event-related	2 days with alerts
Mumps	No Alerts
Meningitis	No Alerts

Lessons Learned



- Dashboards are a great tool for monitoring disease activity
- Collaboration with ADHS and CDC
- Receiving outbreak information
- Use more specific syndrome definitions, ex: GI
- Data quality
- 48 hour data delay

Questions



Rasneet Kumar
Syndromic Surveillance
Epidemiologist
Maricopa County Department of
Public Health

New Ideas for use of Syndromic Surveillance

- Mumps?
- ESSENCE new CC and DD Category Syndrome
 - Mumps v1

CC and DD Categories

[\[Foreign Travel\]](#) | [\[Mumps v1\]](#) | [\[CDC Heroin Overdose v1\]](#) | [\[Visits of Interest\]](#) | [\[Norovirus v1\]](#)

Mumps v1

Category	Term	NegTermA	NegTermB	NegTermC	NegTermD
Mumps v1	null	testing			
Mumps v1	null	immunization update			
Mumps v1	null	titer*			
Mumps v1	null	shots for school			
Mumps v1	null	prophylactic vaccination			
Mumps v1	null	well child			
Mumps v1	B26*				
Mumps v1	Mump*				

Upcoming Meetings

Exploratory
Analysis Subgroup



Arizona BioSense
Workgroup

- Thurs. May. 25
from 1:00 – 2:00

- Tues. June. 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

 @azdhs

 facebook.com/azdhs



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans