

Arizona BioSense Community of Practice Meeting

**Eli Price, Krystal Collier, Yong Wang
Electronic Disease Surveillance Program
February 2nd, 2021**



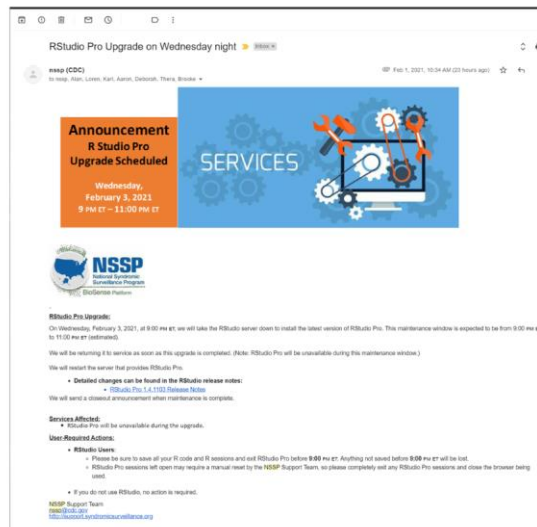
**ARIZONA DEPARTMENT
OF HEALTH SERVICES**

Health and Wellness for all Arizonans

- Welcome and Attendance
- Updates
 - R Studio Pro Update on 2/3/2021 9pm ET
 - Facility Onboarding
 - First Surgical Specialty Inpatient Facility in Production 01/07/2021
 - [NSSP Participation Map](#)
 - Data Sharing
 - CDC Vector-borne Diseases
 - [Tick Bite dashboard live with data from NSSP ESSENCE](#)
 - AMC Data Access Rules Update 02/01/2021
 - COVID Electronic Laboratory Reporting (CELR) summary data available to ESSENCE users on BioSense Platform Update

- Department of Defense (DoD) Bi-Directional Data Sharing Project Started
- Decisions, Templates, Protocol, Procedures for Data Sharing
- Use Cases
 - Updated Guidance CCDD Categories in NSSP ESSENCE
 - NSSP Updated Query for COVID-19 Vaccine-Associated Adverse Event Surveillance
 - Future CCDD Categories and Syndromes
 - Chemical Exposures
- Questions
- Other items

R Studio Maintenance



Contact syndromicsurveillance@azdhs.gov with questions.

Facility Onboarding Updates

- Hospitals
 - Production
 - O.A.S.I.S. Hospital 01/07/2021
 - Northern Arizona Healthcare 01/25/2021
 - Flagstaff Medical Center
 - Verde Valley Medical Center
 - Verde Valley Medical Center-Sedona Campus
- Testing and Validation
 - Tuba City Regional Healthcare Center
 - Summit Healthcare
 - Cobre Valley Regional Medical Center
- Revalidation
 - Banner Health scheduling kick off call

Current Facilities in Production

Apache County

White Mountain Regional Medical Center

Coconino County

Flagstaff Medical Center

Page Hospital

Cochise County

Canyon Vista Medical Center

Copper Queen Community Hospital

Douglas Emergency Department

Northern Cochise Community Hospital

Gila County

Banner Payson Medical Center

Graham County

Mt. Graham Regional Medical Center

La Paz County

La Paz Regional Hospital

Mohave County

Havasupai Regional Medical Center

Kingman Regional Medical Center

Kingman Regional Medical Center - Hualapai Mountain Campus

Valley View Medical Center

Western Arizona Regional Medical Center

Navajo County

Little Colorado Medical Center

Pima County

Banner University Medical Center South

Banner University Medical Center Tucson

Marana Hospital

Northwest Emergency Center at Marana

Northwest Emergency Center at Vail

Northwest Medical Center

Oro Valley Hospital

St. Joseph's Hospital

St. Mary's Hospital

Tucson Medical Center

Pinal County

Banner Goldfield Medical Center

Banner Ironwood Medical Center

Banner Casa Grande Medical Center

Florence Hospital

AZ-Dignity Health Urgent Care-Maricopa

Santa Cruz County

Holy Cross Hospital

Yavapai County

Verde Valley Medical Center

Verde Valley Medical Center-Sedona Campus

Yavapai Regional Medical Center East Campus

Yavapai Regional Medical Center West Campus

Yuma County

Yuma Regional Medical Center

Comprehensive

- Not all hospitals in AZ can or do participate
- Currently have 91 facilities in 14 counties
 - Represents 92% of all ED visits that occur in AZ
 - Represents 96% of all Inpatient visits that occur in AZ

Current Facilities in Production

Maricopa County

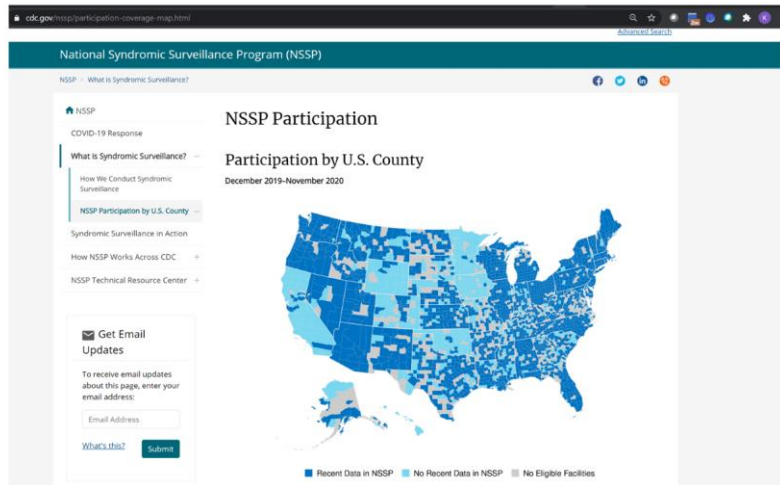
Abrazo Arizona Heart Hospital
 Abrazo Arrowhead Campus
 Abrazo Buckeye Emergency Center
 Abrazo Cave Creek Hospital
 Abrazo Central Campus
 Abrazo Mesa Hospital
 Abrazo Peoria Emergency Center
 Abrazo Scottsdale Campus
 Abrazo Surprise Hospital
 Abrazo West Campus
 Arizona General Hospital - Ahwatukee Emergency Room
 Arizona General Hospital - Chandler Emergency Room
 Arizona General Hospital - Chandler McQueen Emergency Room
 Arizona General Hospital - Glendale Emergency Room
 Arizona General Hospital - Glendale Camelback Emergency Room
 Arizona General Hospital - Gilbert Emergency Room
 Arizona General Hospital - Goodyear Emergency Room
 Arizona General Hospital - Laveen
 Arizona General Hospital - Mesa
 Arizona General Hospital - Mesa-Baseline Emergency Room
 Arizona General Hospital - Mesa Emergency Room
 Arizona General Hospital - San Tan Valley Emergency Room
 Arizona General Hospital - Surprise Emergency Room
 Arizona General Hospital - Tempe Emergency Room
 AZ-Dignity Health Urgent Care – Ahwatukee
 AZ-Dignity Health Urgent Care – Gilbert

AZ-Dignity Health Urgent Care - Queen Creek
 Banner Baywood Medical Center
 Banner Boswell Medical Center
 Banner Del E. Webb Medical Center
 Banner Desert Medical Center
 Banner Estrella Medical Center
 Banner Gateway Medical Center
 Banner Heart Hospital
 Banner Thunderbird Medical Center
 Banner University Medical Center Phoenix
 Chandler Regional Medical Center
 Deer Valley Medical Center
 John C. Lincoln Medical Center
 Mayo Clinic Hospital
 Maryvale Emergency Center
 Mercy Gilbert Medical Center
 Mountain Vista Medical Center
 O.A.S.I.S Hospital
 Scottsdale Osborn Medical Center
 Scottsdale Shea Medical Center
 Scottsdale Thompson Peak Medical Center
 Sonoran Health and Emergency Center
 St. Joseph's Hospital and Medical Center
 St. Joseph's Westgate Medical Center
 Tempe St. Luke's Medical Center
 Valleywise Health Medical Center
 Wickenburg Community Hospital

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NSSP Participation Map



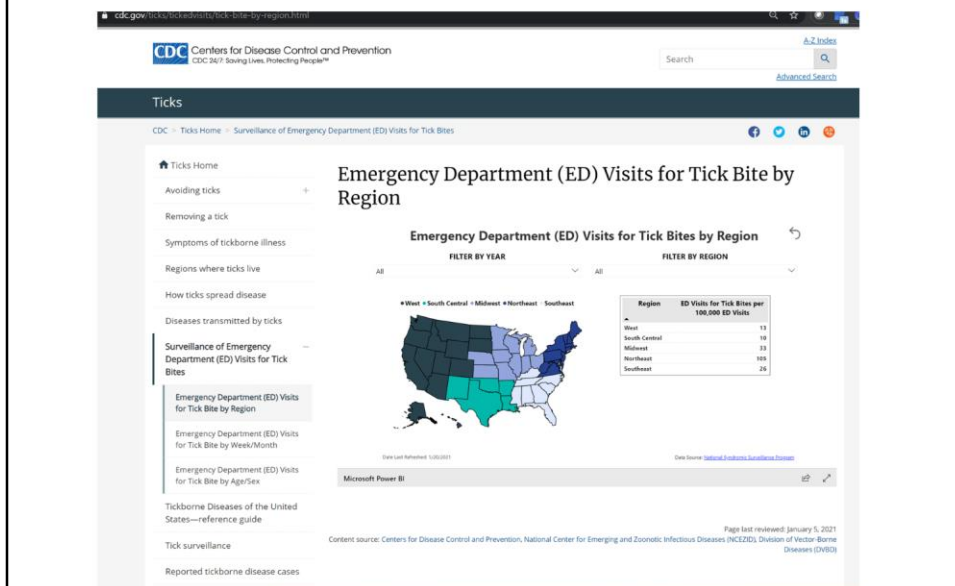
Contact syndromicsurveillance@azdhs.gov with questions.

NSSP Participation Map: <https://www.cdc.gov/nssp/participation-coverage-map.html>

Data Sharing

- CDC Vector-borne Diseases
 - [Tick Bite dashboard live with data from NSSP ESSENCE](#)
- AMC Data Access Rules Update 02/01/2021
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Data Sharing Vector-Borne



CDC Bacterial Diseases Branch, Division of Vector-Borne Diseases Tick Bite Syndromic Surveillance Dashboard-Public Website Live:

<https://www.cdc.gov/ticks/tickedvisits/tick-bite-by-region.html>

State Aggregate updates to the dashboard will be available in future months

AMC Data Access Remediation Plan

AMC Data Access Remediation Plan

nssp (CDC)

to nssp, Allen, Loren, Karl, Aaron, Deborah, Thera, Brooks

Mon, Feb 1, 1:25 PM (21 hours ago)

Announcement!

AMC Data Access Remediation Plan

SERVICES



Since July 2020, we've been working on a three-phase plan to mitigate an issue that can occur when a data access rule is edited. We are proceeding to Phase Three of this plan to develop a robust automated remediation. This announcement provides background and an update on the current state of this issue.



NSSP
National Syndromic Surveillance Program
BioSense Platform

Statement of Issue: Potential Loss of AMC Data Access Rule Permissions

When anyone creates or edits a data access rule in the Access & Management Center (AMC) that affects your access permissions (i.e., you are named or in a named group in the rule), you can lose access that you previously had or not receive the permissions expected. This loss happens when an error occurs during computing of new permissions. Inconsistencies created by these errors can restrict access to data you would expect to be queryable. A failure to receive these data might prompt editing the rule again, since you are unaware of incorrect or incomplete user permissions.

You are at risk if you fall into either of these two categories:

1. users who have access through many rules (because these users are most likely to be affected when someone edits a rule) or
2. users who have access through rules that are modified frequently.

Remediation Plan

To mitigate this issue and develop a method to resolve inconsistencies, the NSSP support team performed a root cause analysis and designed a three-phase remediation plan. The goal of this plan is to identify and correct inconsistencies when they occur.

AMC Data Access Remediation Plan

- **Phase Three: Began January 2021 [Design & Development]**
 - Our investigations have revealed that this issue stems from the database connection to the AMC databases and the ESSENCE database dropping while background processes are recalculating the new or revised permission sets. This drop results in incomplete changes and desynchronization of the AMC and ESSENCE databases.
 - In Phase Three we are planning a multipronged approach consisting of the following:
 - Database Connection Pooling: This pool of connections to the databases will help maintain continuity by returning a timed-out connection to the pool instead of dropping it. A connection can be immediately reused as subsequent calculations are made and database updates become available.
 - Database Optimization: We are taking a deep-dive investigation of the databases. We are analyzing both setup and structure in detail, including all database indices and triggers involved in these types of transactions.
 - Database Transaction Rollback Strategies: We are analyzing the possibilities of using a full transaction rollback versus a staged rollback strategy for feasibility and efficiency.
 - AMC Code Review: We are reviewing the code that is involved in the data access rules transactions in detail to verify use of best practices and to seek further efficiencies. For example, we have found that, when edits are made to user groups in AMC, the group details are dropped, each user's permissions are recalculated, and the group is completely rebuilt. This process creates a significant transaction load on the systems.
-

AMC Data Access Remediation Plan

- ***What does this mean for AZ?***
 - Need to ask NSSP questions about impact on process for setting up future data access rules

COVID ELR Summary Data in ESSENCE Update



Kristal Collier <kristal.collier@atthi.p>

Message to jurisdictions ELR/CELR contacts

Mon, Feb 1, 2021 at 12:45

From: CDC <ncdo@cdc.gov>

To: "Steve CDC" <ncdo@cdc.gov>

Cc: "Tara Allen (CDC/DPH/BS/CESL/SDHHS)" <all@cdc.gov>; "Rodgers, Loren E. (CDC/DPH/BS/CESL/SDHHS)" <lor@cdc.gov>; "Suzanne Karl (CDC/DPH/BS/CESL/SDHHS)" <skarl@cdc.gov>; "Kile Powell, Aaron (CDC/DPH/BS/CESL/SDHHS)" <kyp@cdc.gov>; "Guski, Deborah (CDC/DPH/BS/CESL/SDHHS)" <dguski@cdc.gov>; "Watson, Thera J. (CDC/DPH/BS/CESL/SDHHS) (CTRF)" <wat1@cdc.gov>; "Hovers, Brooke (CDC/DPH/BS/CESL/SDHHS) (CTRF)" <hb@cdc.gov>

Dear laboratory data and syndromic surveillance partners,

We are considering making COVID Electronic Laboratory Reporting (CELR) summary data available to ESSENCE users on Bidense platform, and we are seeking your comments on this proposal.

The National Syndromic Surveillance Program (NSSP) team at CDC has been working with the Applied Physics Laboratory at Johns Hopkins University on fusion models that combine data from multiple sources, including laboratory test results and emergency department visit data. These fusion models are designed to alert ESSENCE users to spikes in COVID transmission at the county level. Currently, these models are built on a subset of data from six commercial laboratories that report directly to CDC through ESSENCE. The addition of CELR data will increase the comprehensiveness and representativeness of this approach, allowing better tracking of COVID transmission and improving alerting to states and local authorities.

The data sent to ESSENCE would be a daily summary table generated of laboratory tests by county, by result, by age group (e.g., 0-4, 5-11, 12-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+), and by test type (PCR or antigen). CDC would generate the summary table, and no additional work is needed from you.

As with other data in ESSENCE, state and local access to the CELR data would be determined by the NSSP site administrator in each state or county. The default view is for state users to have access only to data and alerts from their own state. Federal users would be granted access to the CELR data in ESSENCE using the same access rules as those used for other systems, such as AIMS and HHS Protect.

Please reach out to us with an email to both ncsp@cdc.gov and ncdo@cdc.gov by Friday, February 12, 2021 if you have any questions or would like to opt out of making your state's CELR data available in ESSENCE.

Thank you,

Paula W. Yoon, ScD, MPH

Director, Division of Health Informatics and Surveillance

Loren Rodgers, PhD

National Syndromic Surveillance Program Lead

Jason Hall

Electronic Laboratory Reporting Technical Lead

COVID ELR Summary Data in ESSENCE Update

- Determining:
 - Benefits and Challenges
 - How does this access differ from our current ELR and ESSENCE data and tools?
 - What considerations do we need to factor in?
 - What about the 6 commercial labs already available in ESSENCE?
 - Levels Access
 - Aggregate vs Line Level
 - Users
 - Who should have access and what does this process look like?
 - Use Cases
 - What are these?

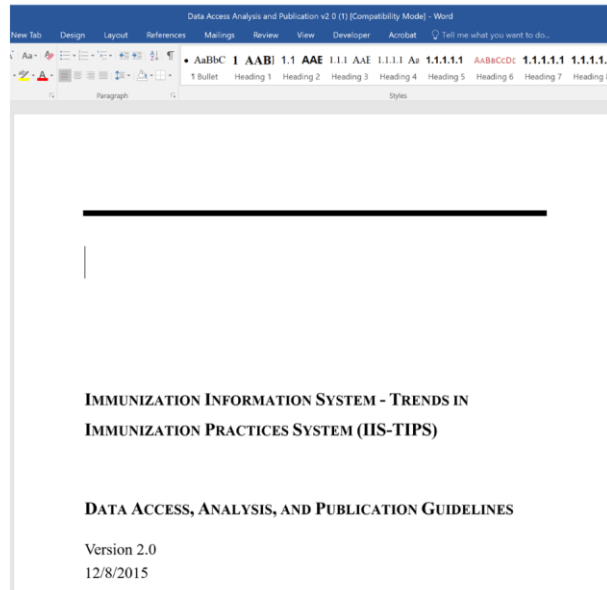
Department of Defense (DoD) Bi-Directional Data Sharing Project Started

- Kick Off Call in January 2021
- Initial Project set to go through end of May 2021
- Determining:
 - Benefits and Challenges
 - Levels Access
 - Aggregate vs Line Level
 - Users
 - Who should have access and what does that approval process look like
 - Use Cases
 - CLI, ILI, GI, HRI, Injuries, Special Populations

Decisions, Templates, Protocol, Procedures for Data Sharing

- *A big year for data sharing*
- Need more resources to help with making decisions, templates, protocols, procedures for data sharing in AZ
- ***Resources Currently***
 - NSSP CoP Data Sharing Workgroup
 - Protocol from Immunization registries for data sharing

Decisions, Templates, Protocol, Procedures for Data Sharing



Basecamp:

<https://3.basecamp.com/3164497/buckets/17031830/uploads/3435308486>

Use Case: COVID-19

- Updated Guidance CCDD Categories in NSSP ESSENCE
 - NSSP Updated Query for COVID-19 Vaccine-Associated Adverse Event Surveillance
- Future CCDD Categories and Syndromes
 - Chemical Exposures

ESSENCE Concepts

New CCDD Categories

- CDC COVID-Specific DD v1
 - New J12.82 coded added with same approach as U07.01
 - Anticipated hospital workflow would add this code after the data it was pushed out by CDC and CMS
 - Impact considerations on multiple CCDD categories if create a new version (like CLI CCDD categories)

Contact Syndromicsurveillance@azdhs.gov for more information.

- Request training if you aren't sure how to set up a particular query.
- See January 2021 Exploratory Analysis Subgroup/AZ BioSense Opioid Workgroup Slides for more information

ESSENCE Concepts

Updated CCDD Categories

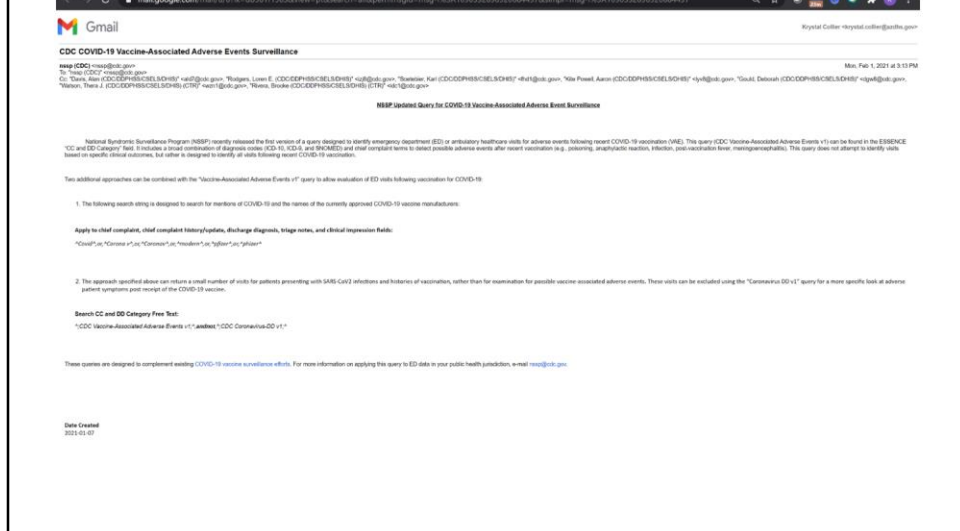
- CDC Intimate Partner Violence v2
- CDC Coronavirus-DD v1
- ILI Syndrome Neg Coronavirus DD v1
- ILI CCDD Neg Coronavirus DD v1
- CLI CC with CLI DD and Coronavirus DD v1
- CLI CC with CLI DD and Coronavirus DD v2

Contact Syndromicsurveillance@azdhs.gov for more information.

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ESSENCE Concepts

New CCDD Categories



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ESSENCE Concepts

- Need to ask NSSP for additional guidance on this recommendation with visuals
- What questions does each approach seek to answer?
- Would the second approach also pick up those with COVID diagnosis that have COVID-19 VAE?
- What other questions do you have?

Contact Syndromicsurveillance@azdhs.gov for more information.

- Request training if you aren't sure how to set up a particular query.
- See January 2021 Exploratory Analysis Subgroup/AZ BioSense Opioid Workgroup Slides for more information

Future CCDD Categories and Syndromes

- Chemical Exposures
 - **January 2021** (Topic: How Else Can Syndromic Surveillance Support COVID-19 Activities? Occupational Health...Environmental Health?) - [Recording](#)
 - Laura Fox, ADHS Presentation on Methanol Poisonings
 - Assistance with Testing CCDD category

Contact Syndromicsurveillance@azdhs.gov for more information.

- NSSP CoP Monthly Call January 2021: <https://vimeo.com/506291774>
- Contact syndromicsurveillance@azdhs.gov if interested in testing chemical exposure CCDD category
- Request training if you aren't sure how to set up a particular query.

Ad-hoc queries

- What training do we need to do to help users in AZ?

Contact Syndromicsurveillance@azdhs.gov for more information.

- Request training if you aren't sure how to set up a particular query.

AZ Shared Collaborative Space:

The screenshot shows a Basecamp workspace for the "AZ BioSense Workgroup". The browser address bar displays "3.basecamp.com/3164497/project/77031830". The navigation bar includes links for Home, Pings, Hey!, Activity, My Stuff, and Find. The workspace header features the group name "AZ BioSense Workgroup" and a mission statement: "The mission of the Arizona BioSense Workgroup is to work collaboratively as partners to build capacity and quality of BioSense syndromic surveillance in Arizona. Our vision is to improve population health and emergency response through the use of timely and effective syndromic surveillance. This space is a platform for our members to continue discussions and share cross-role topics and questions from providing the data to using syndromic data (clinician/IT/public health)." Below the mission statement is a row of member avatars, each labeled with a two-letter code (e.g., AG, A, A, A, AL, AS, AL, AS, A, AK, AS, AV, AD, AP, BF, B, B). To the right of the avatars is a link "Add/remove people". The workspace is divided into several sections: "Message Board" with a list of updates (e.g., "Save the Date + Registration: 2020 Syndromic Surveillance", "Poll: NSSP CoP Syndrome Definition Subcommittee", "Updates to ESSENCE Shortness of Breath", "AZ COVID-like Illness (CLI) EMS Regional Trends in NSSP", "Recent Updates Made in SS County Resource Files for"); "To-dos" with a green checkmark icon and the text "Make lists of work that needs to get done, assign items, set due dates, and discuss."; "Docs & Files" with a grid of document thumbnails (e.g., "Liaison and Member Lists", "Data Sharing Workshops", "AZ Stories of Syndromic Surveillance in Action", "Abstracts, Publications, Presentations"); "Campfire" with a blue speech bubble icon and the text "Chat casually with the group, ask random questions, and share stuff without ceremony."; "Schedule" with a list of events (e.g., "Tue, Oct 20 NSS CoP 12:00pm - 1:30pm", "Thu, Oct 22 Exploratory Analysis Subgroup/2Z BioSense Opioid Workgroup Call 1:00pm - 2:00pm", "Tue, Nov 17"); and "Automatic Check-ins" with a text prompt "In the past month, what public health actions and decisions have been made in part or in whole from syndromic surveillance data?" and a row of colored circles representing different days of the month.

Reminders

- NSSP CoP monthly call 02/16/2021@1-2:30pm AZ Time

NSSP Community of Practice

- To be added to the NSSP CoP listservs moving forward
 - CSTE has created a new email that can be used moving forward

syndromic@cste.org

Upcoming Meetings

Exploratory Analysis
Subgroup/Arizona
BioSense Opioid
Workgroup

Thursday,
February 25
from 1:00 – 2:00

Exploratory Analysis
Subgroup/Arizona
BioSense Opioid
Workgroup

Thursday, March
25 from 1:00 –
2:00



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