



Indiana
Department
of
Health

Indiana's Overdose Outbreak Detection

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OUR MISSION:

**To promote, protect, and improve
the health and safety of all Hoosiers.**

OUR VISION:

**Every Hoosier reaches optimal health
regardless of where they live, learn,
work, or play.**



Indiana's Syndromic Surveillance System: ESSENCE

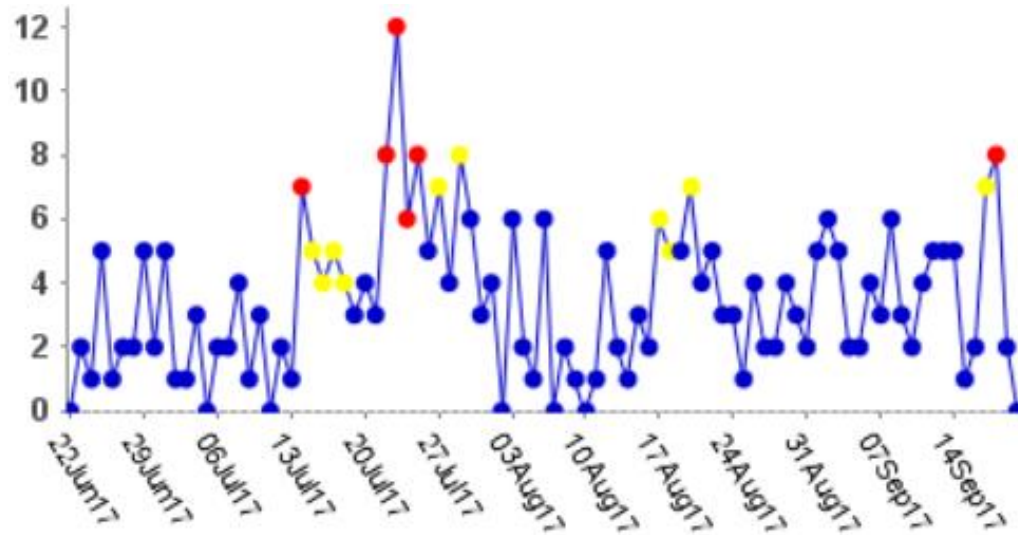
- Our own instance of ESSENCE since 2006
- Onboarding to NSSP version
- Local health departments, reporting hospitals, and IDOH employees may access the system
- Reporting required under Indiana Administrative Code 410 IAC 1-2.4

Overview of Alerting Protocol

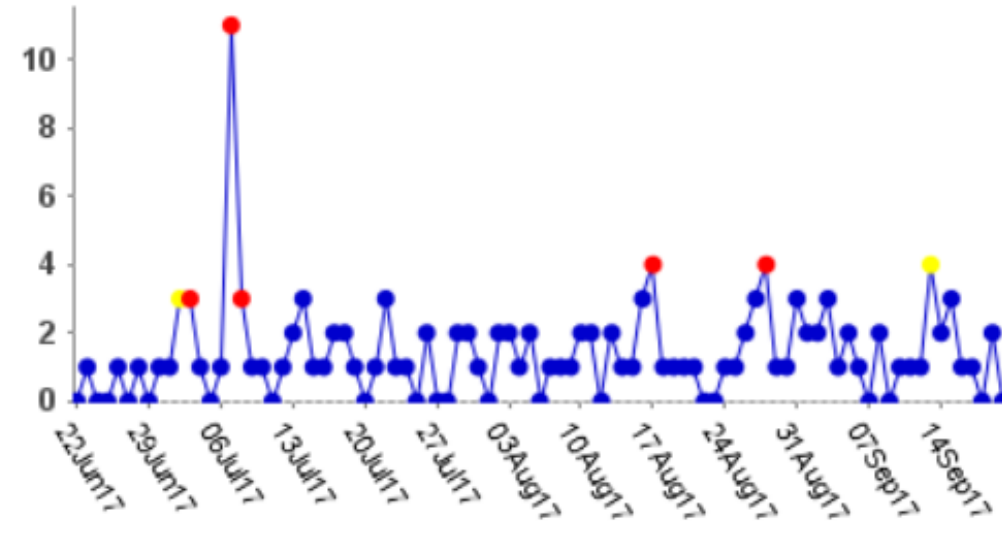
- Define suspected overdose using the CDC's CC & DD Category All Drug v1 query
- Automated daily monitoring of suspected overdose counts by county and hospital facility
- Manual review of data to rule out "false positives"
- Send email alerts to LHDs

Overdose Alert Case Definition

2 red alerts



Unusual occurrence



Counties or hospitals

1. Receive an alert (red dot) two days in a row; OR
2. Receive an alert (red dot) preceded or proceeded by two warnings (yellow dots); OR
3. See an unusual occurrence or pattern of suspected overdoses

Automating Daily Monitoring of ESSENCE

- Daily automated emails for OD alerts broken down by region and facility
- ESSENCE API being used for OD query definitions
 - Pulled into R as a JSON and parsed
 - Facility and region parameters dynamically fed into URL from API
- Email includes:
 - Time Series Plot for each region/facility
 - Table with date, alert type and region/facility for the last three days of an alert

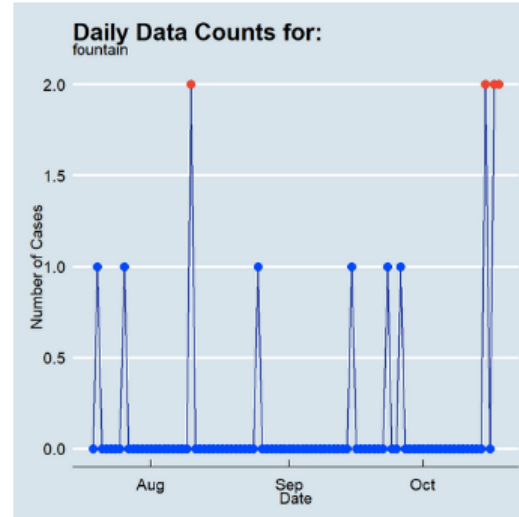
Example Email

Alert Email -OD- Region

Alert!

The following Regions have high counts for OD. Please review these regions!

Region	Date	Status
Fountain	2020-10-18	High
	2020-10-17	High
	2020-10-16	Normal



Alerting Partners

- Email alerts are sent to reporting facilities and LHDs
- Include basic details:
 - What triggered the alert (warnings, etc.)
 - Timeframe
 - Suspected OD count
- Links to ESSENCE are provided for second-time alert receivers, and ESSENCE account forms for first-time receivers

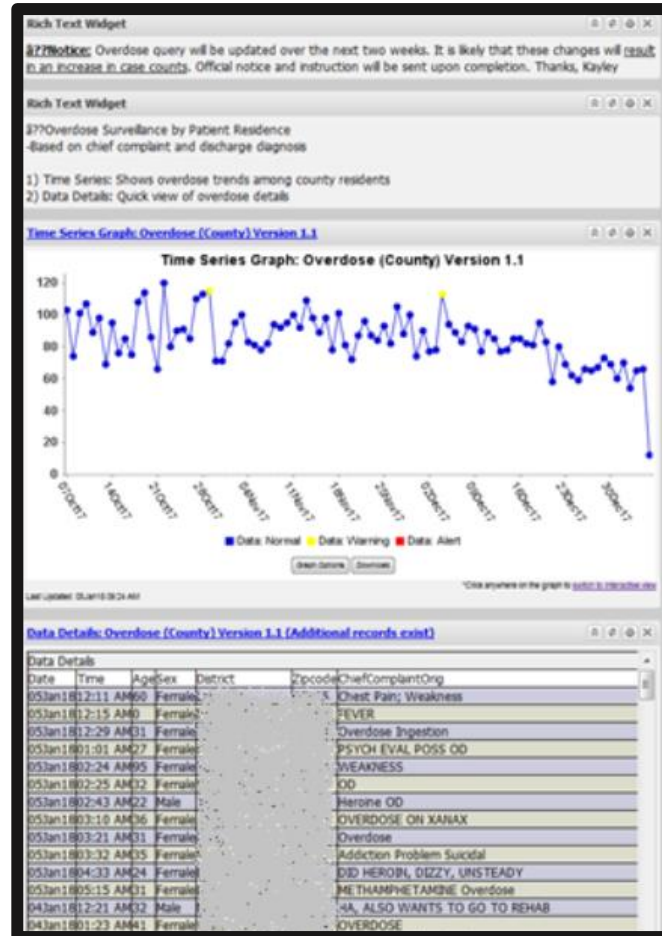
Overdose Surveillance Dashboard

County of residence

County hospital(s)

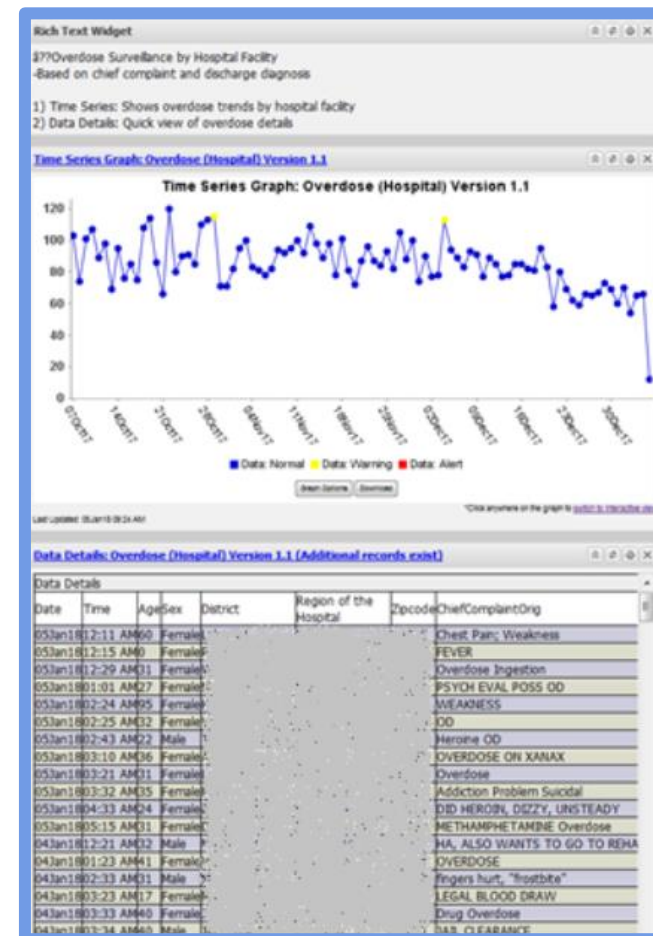
County
time
series

County
data
details



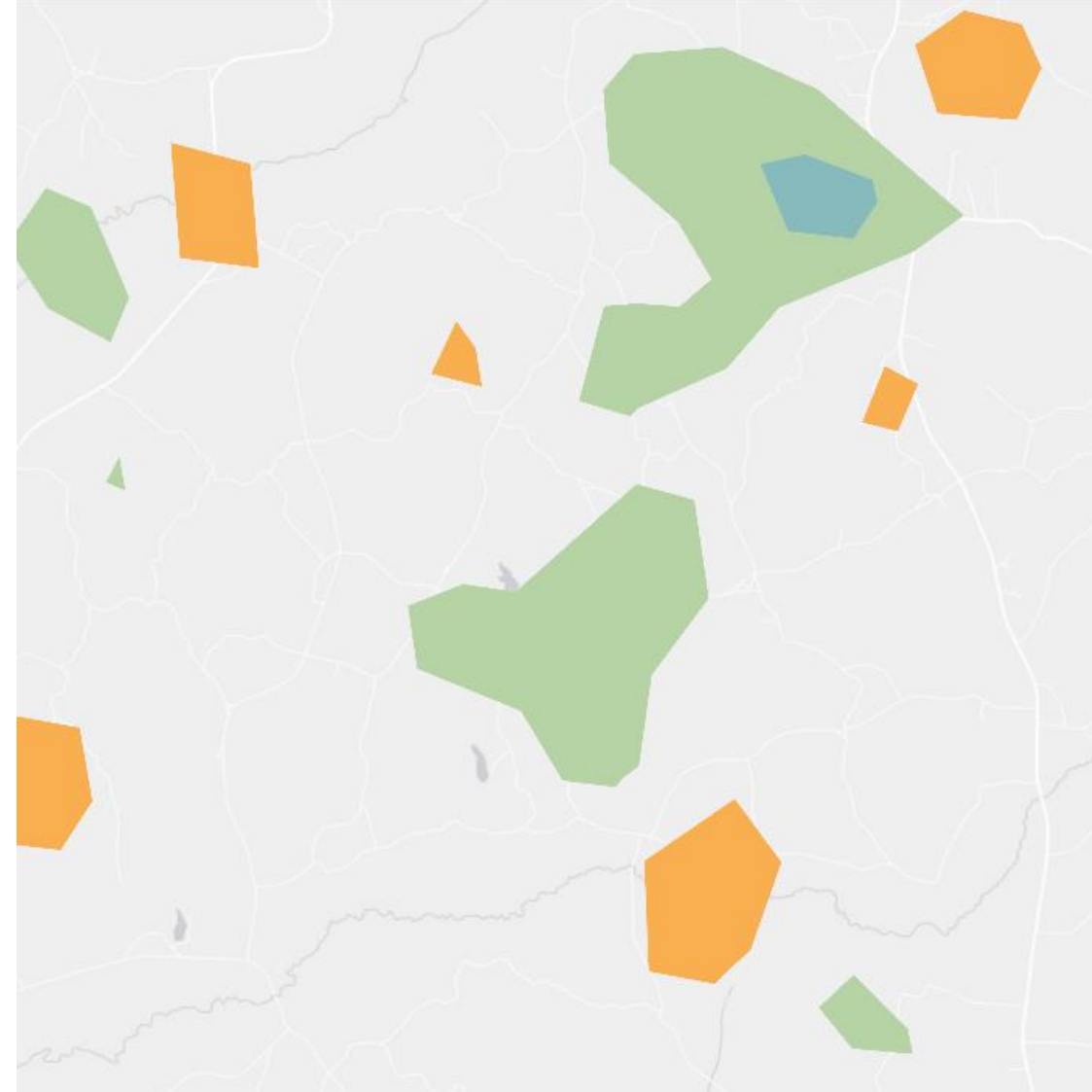
Hospital
time
series

Hospital
data
details



Enhancing Alerts

- To better target intervention and prevention efforts, we have enhanced alerts with Kernel Density Mapping
 - Shows patterns at the neighborhood level
 - Calculates the kernel density of case counts



Overdose Response Project (2017-2019)

- Monitor drug OD data in ESSENCE
- Strengthen partnerships
 - First responders, law enforcement, treatment centers, hospitals, transitional housing providers, community organizations, schools, and anyone with a role in substance use
- Develop an overdose response plan
- Test their plan
- Contribute to overdose response toolkit

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Toolkit

Get the Numbers

[Learn More](#)

State Agency Resources

Know the O Facts to Understand Opioid Use Disorder

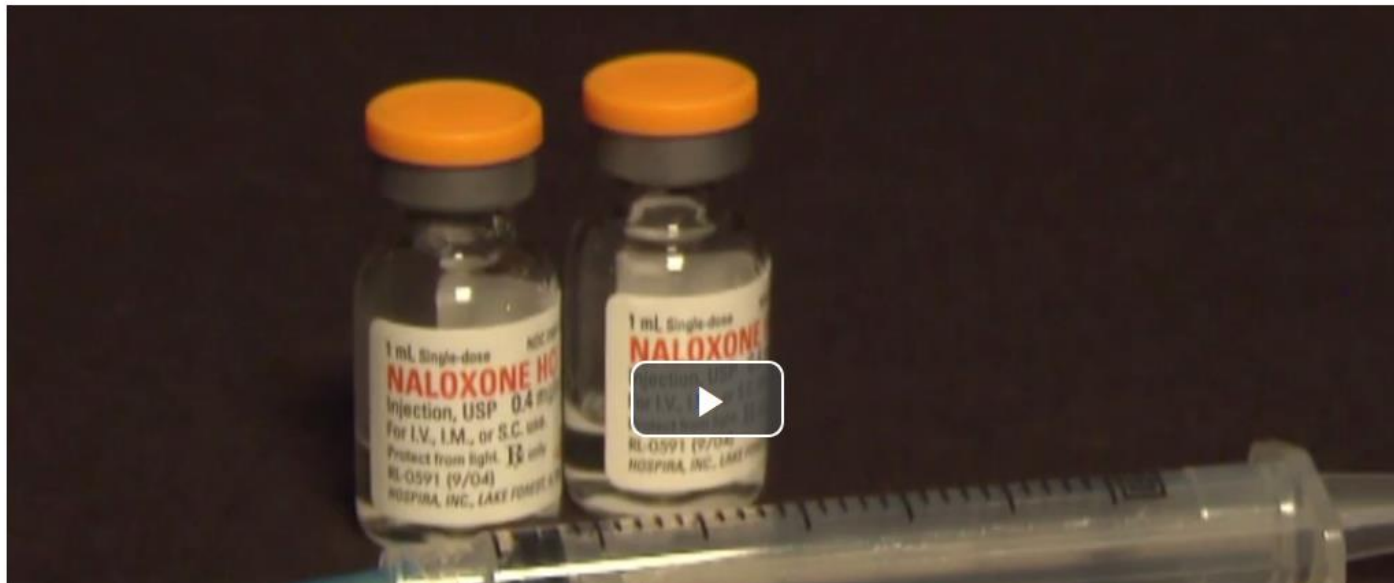


Alert Response Success Story

Spike in overdoses reported in Marshall County, officials stress Naloxone training

By: **Marisa Oberle** [Facebook](#) | [Twitter](#)

Posted: Dec 4, 2018 8:25 AM EST



<https://www.abc57.com/news/spike-in-overdoses-reported-in-marshall-county-officials-stress-naloxone-training>

Next Steps

- Revamping content of alerts
 - Demographic/drug breakdown
- Re-integrating alerts into communities with additional partners
 - Would like to work with hospital partners
- Potential inclusion of EMS and Poison Control Data

Comments or Questions?

Contact me!



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