



MDH Interoperability Webinar Series: National Syndromic Surveillance Program (NSSP)

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PROTECTING, MAINTAINING AND IMPROVING THE HEALTH OF ALL MINNESOTANS

MDH Overall Data Strategy

Join any or all MDH Interoperability Webinars in this Series:

Date	Public Health Reporting Use Case
January 6	Expanded syndromic surveillance with participation in the National Syndromic Surveillance Program (NSSP) *
January 13	Electronic Case Reporting (ELR) *
January 20	Electronic Case Reporting (eCR) *
January 27	Laboratory Orders/Results – Infectious Disease Lab (IDL)
February 3	Laboratory Orders/Results – Newborn Screening Blood Spot (NBS)

Webinar materials: [DSI website](https://www.health.state.mn.us/data/interoperability/webinar.html)
(<https://www.health.state.mn.us/data/interoperability/webinar.html>)

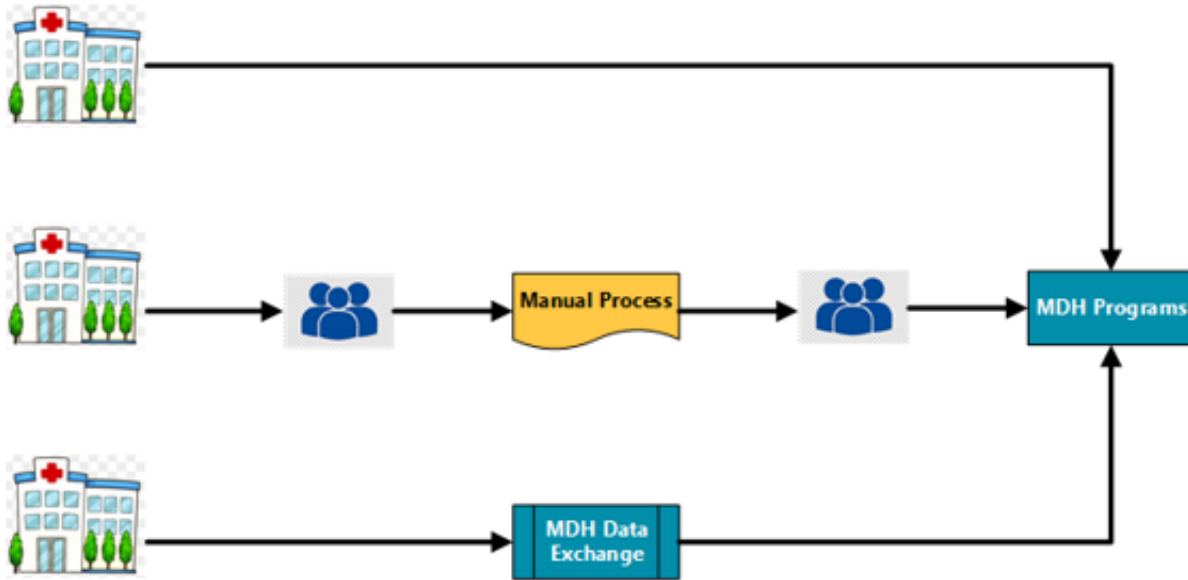
* Denotes CMS required public health reporting for Medicare payments

Webinar providing information towards:

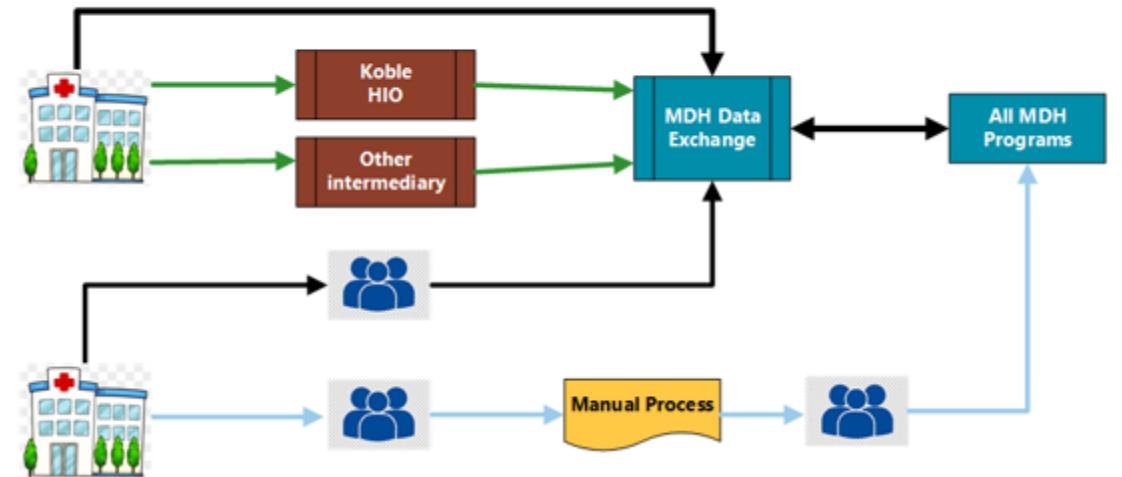
- ✓ Reducing your reporting administrative burden
- ✓ Meeting the CMS public health reporting requirements
- ✓ Improving data quality so information shared with MDH can better address future emerging threats and address population health issues
- ✓ Learning how you, your organization, and your patients benefit from improved public health reporting

MDH Interoperability Strategy: Overall

Current MDH Data Exchange



Planned MDH Data Exchange



Legend



MDH Request of External Partners

- ✓ **Schedule meeting with DSI** to discuss more details related to health system needs
 - Determine your organizations' public health reporting priorities for implementation and share with DSI (checklist)
 - Discuss any barriers or opportunities for electronic implementation with MDH
- Consider Participation Agreement with Koble or Audacious Inquiry
- Plan and coordinate MDH public health reporting improvements through DSI and provide feedback to processes

Expanded syndromic surveillance with participation in the National Syndromic Surveillance Program (NSSP)

What is syndromic surveillance?

- Real-time ***pre-diagnostic data*** for public health monitoring and investigation.
- Syndromic surveillance data may be used for:
 - Situational awareness
 - Characterize outbreak beyond initial detection
 - Monitor health concern and effectiveness of response and intervention activities
- These data help to ***detect, monitor, and respond quickly*** to events of public health importance.

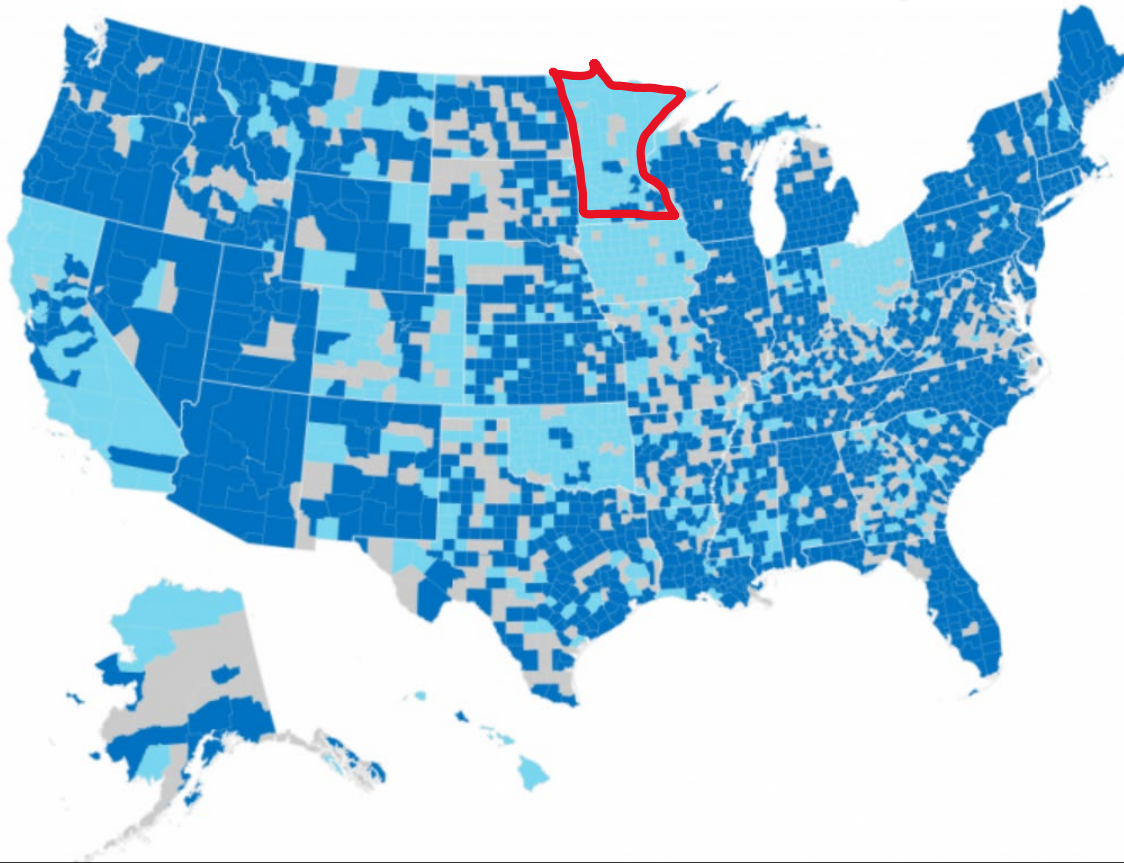
Examples of syndromic surveillance in other states

- Using syndromic surveillance, public health officials have been able to:
 - **Detect** illness, injuries, and health care needs after major disasters and environmental-related events
 - **Characterize** the burden of opioid and other drug-related overdoses
 - **Monitor** for early signs of outbreaks associated with mass gatherings (e.g., concerts, conventions, or large festivals)
 - **Respond** to foodborne outbreaks

Syndromic Surveillance in Minnesota

May 12, 2021–August 12, 2021

■ Recent Data in NSSP ■ No Recent Data in NSSP ■ No Eligible Facilities

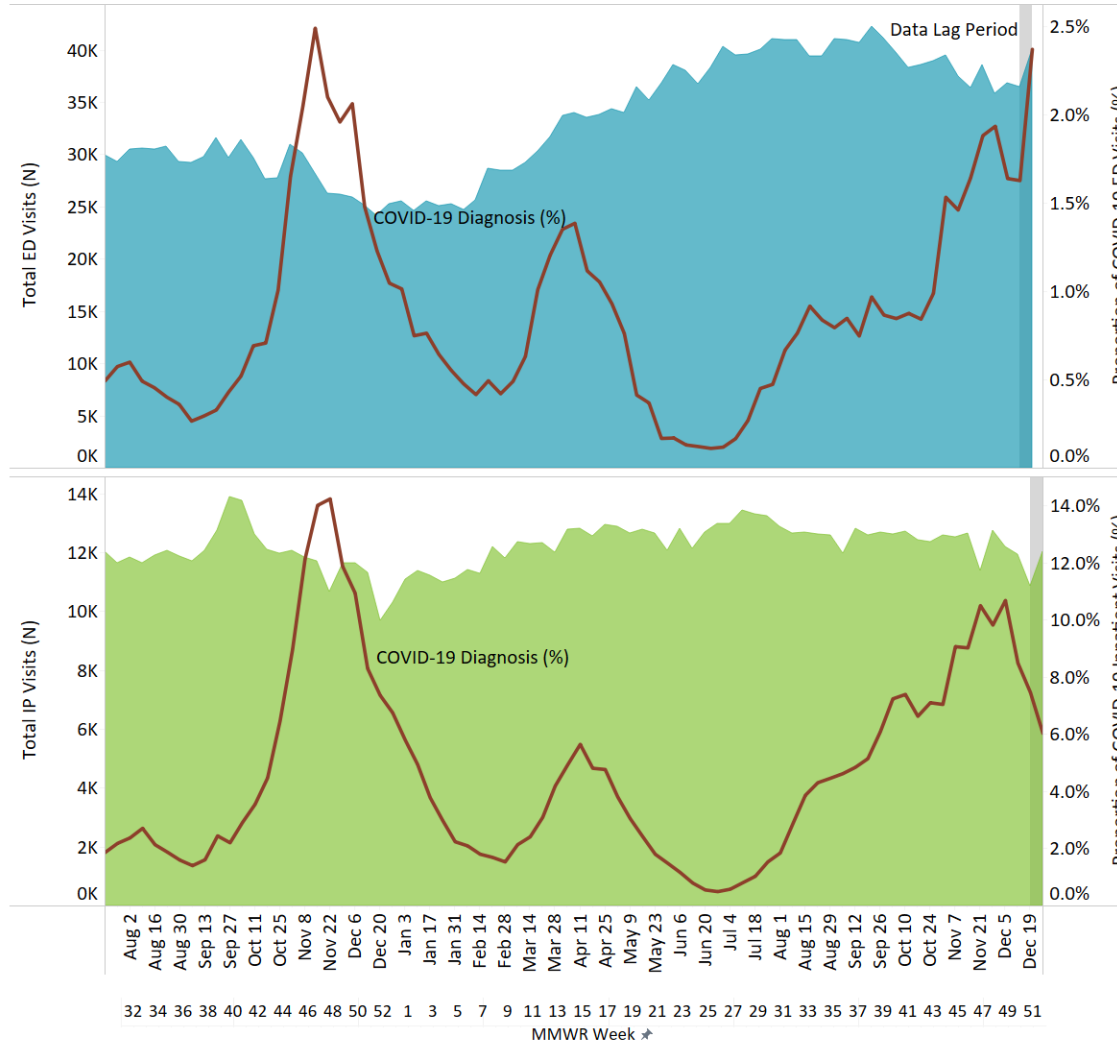


- Minnesota is a gap in the map of syndromic surveillance coverage.
- We have lagged other jurisdictions in the implementation and use of syndromic surveillance

Source: <https://www.cdc.gov/nssp/participation-coverage-map.html>

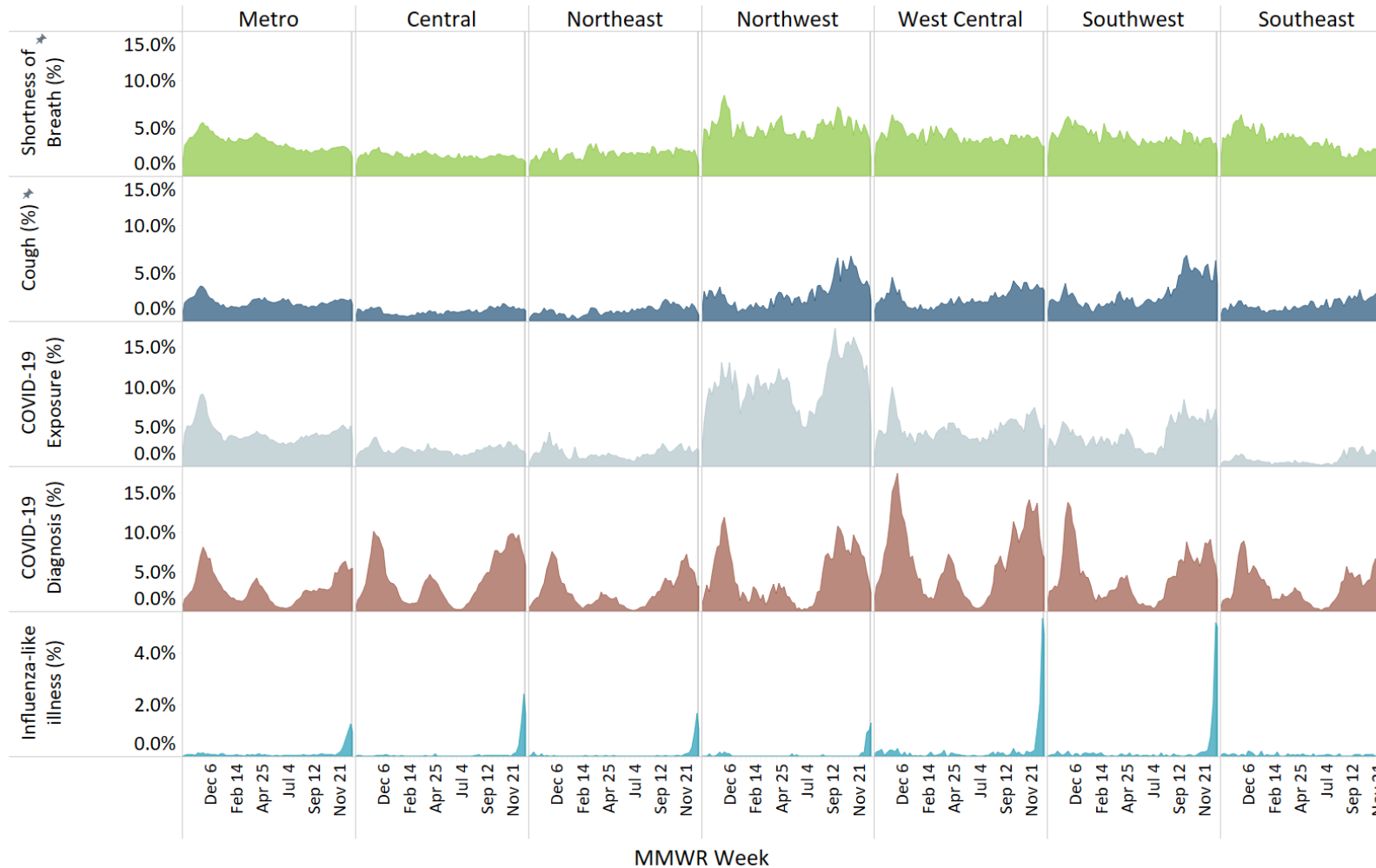
MDH is currently able to monitor and identify trends in COVID-19

Number of overall hospitalizations in Minnesota and proportion of hospitalizations for COVID-19 by Emergency Department (ED) and Inpatient (IP) visits



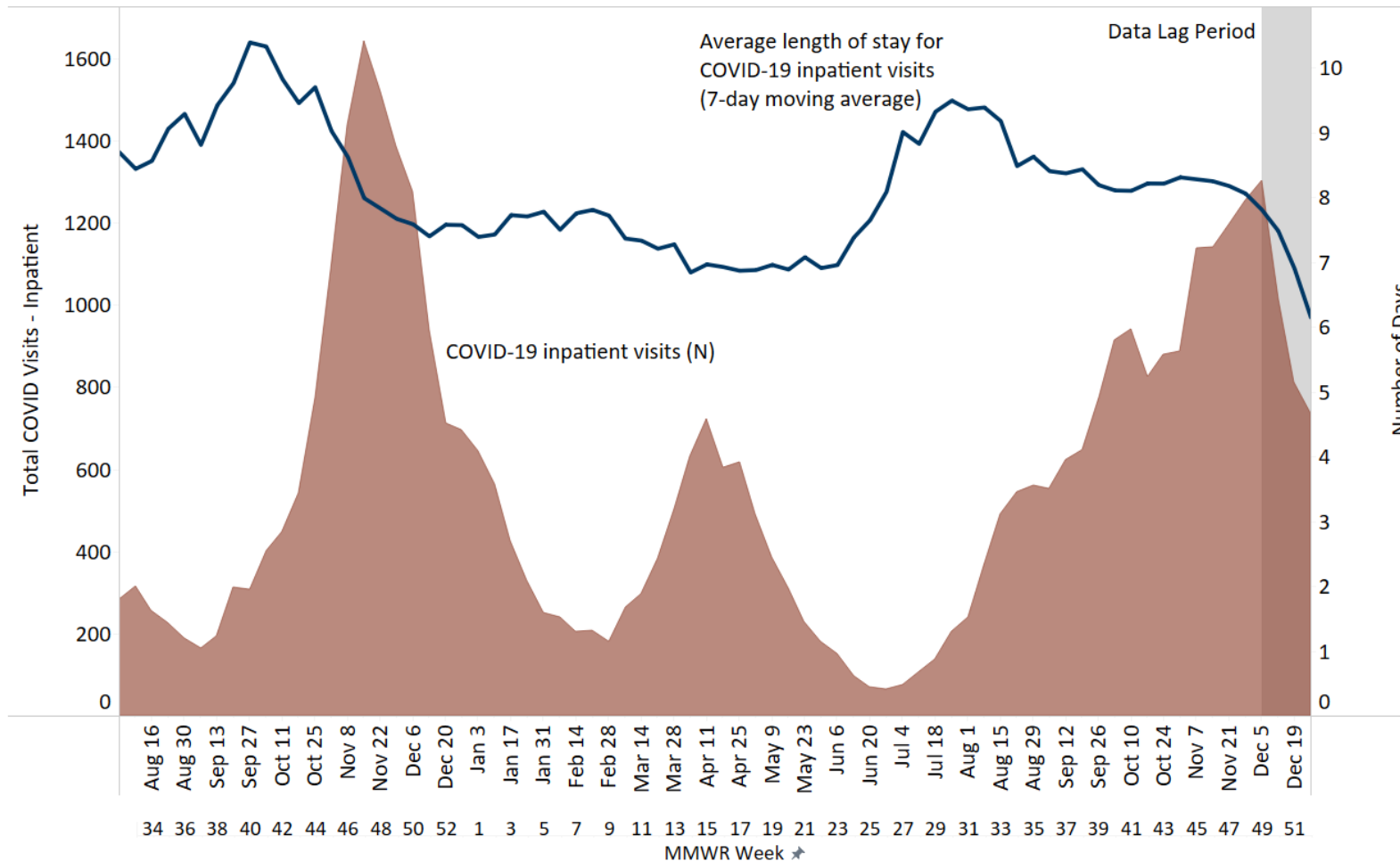
MDH is currently able to monitor and identify trends in COVID-19

Proportion of hospital-treated cases for COVID-19, COVID-like symptoms, and influenza-like illness by Infectious Disease Surveillance Region



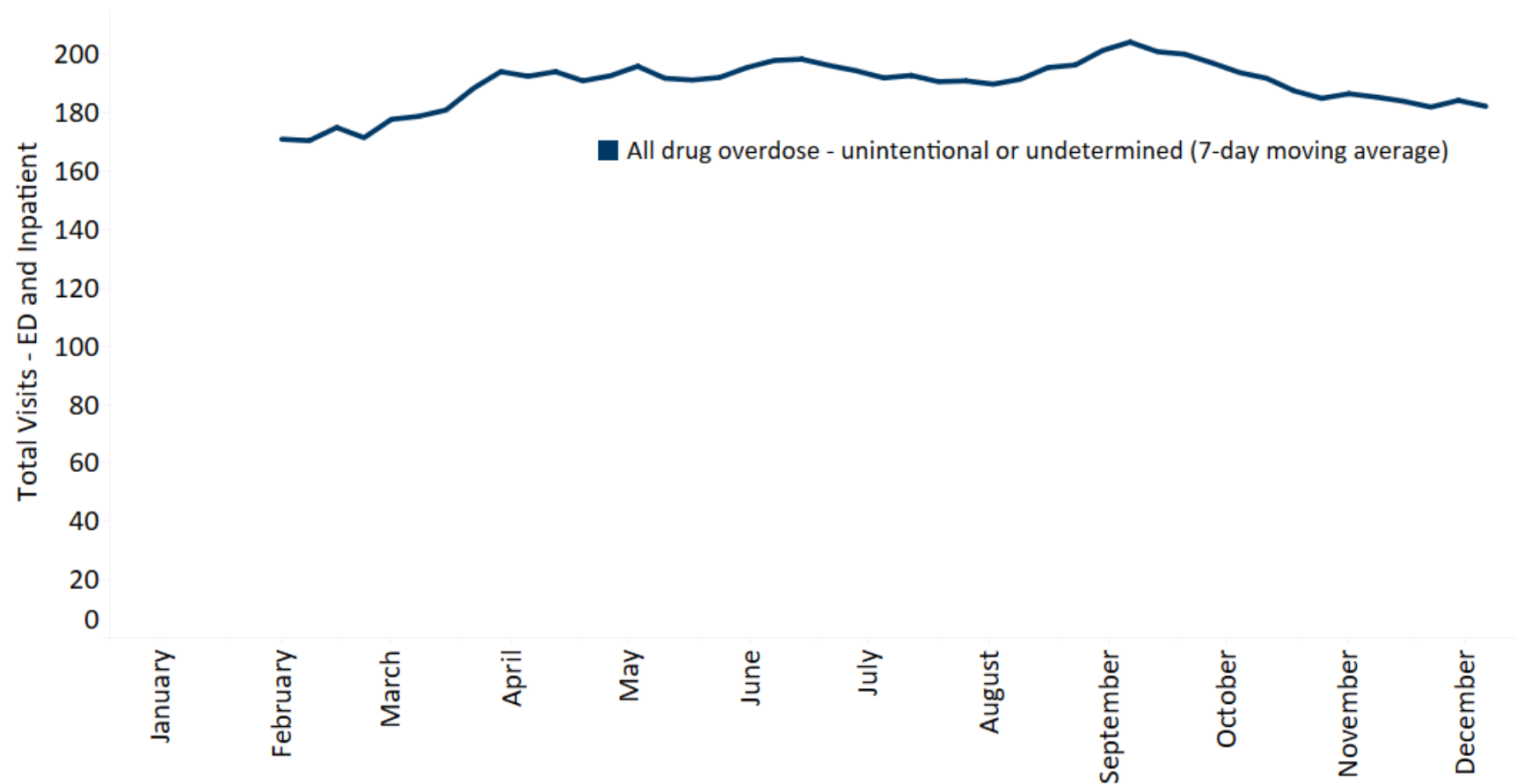
MDH is currently able to monitor and identify trends in COVID-19 (2)

Number of COVID-19 inpatient visits in Minnesota and the **average length of stay for COVID-19 inpatient visits (7-day moving average)**



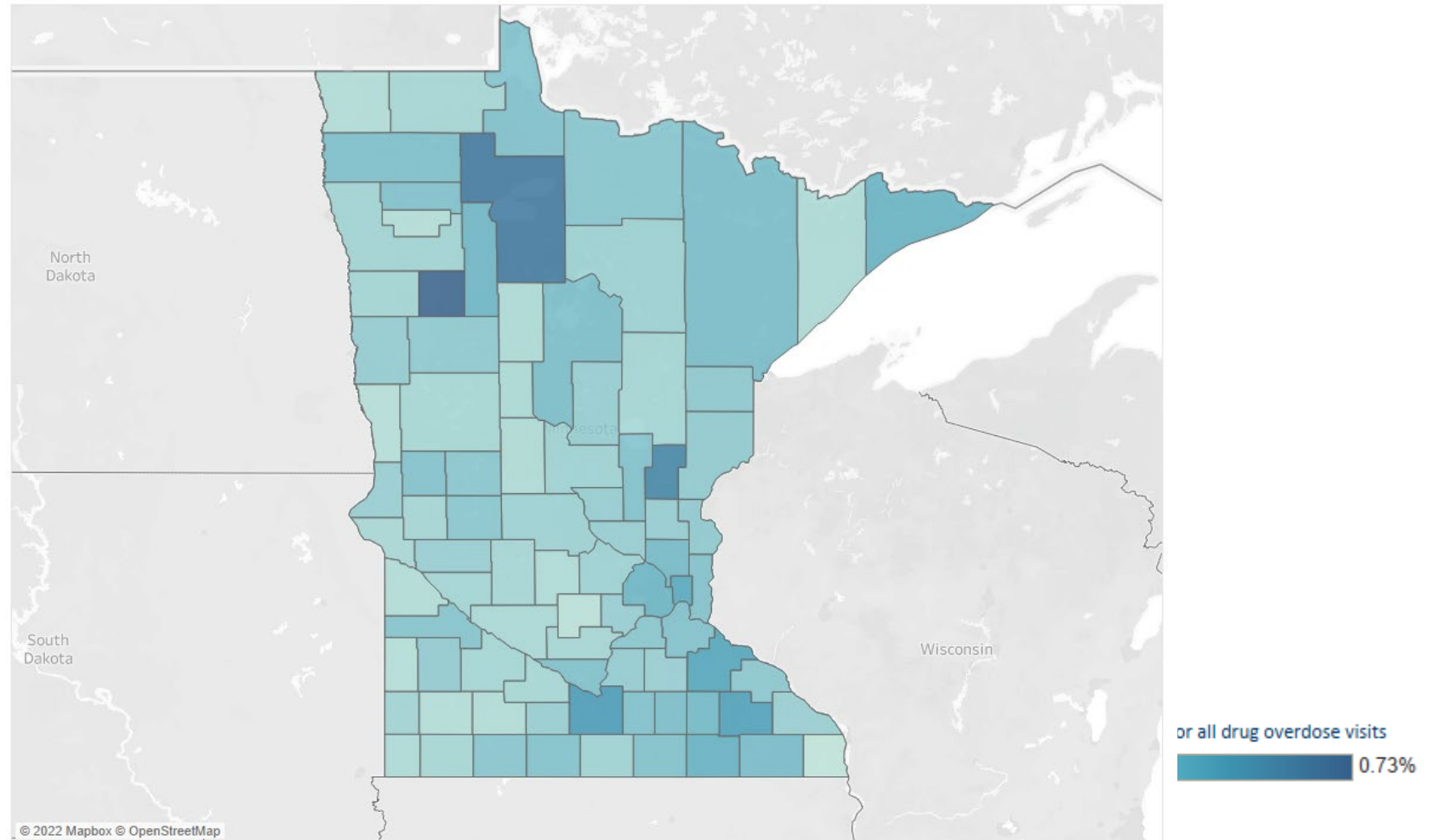
MDH is currently able to monitor and identify trends in Drug Overdose

Number of inpatient and emergency department visits for **unintentional and undetermined suspected drug overdoses** in Minnesota by week, Feb-Dec 2021 (7-day moving average)



MDH is currently able to monitor and identify trends in Drug Overdose

Proportion of hospital-treated visits for unintentional and undetermined suspected drug overdoses in Minnesota by county of residence, 2021



Syndromic Surveillance: Expanding from COVID only to NSSP

- Success for COVID: the quick response to Commissioner Malcolm's request for ADTs provided the situational awareness needed.
- This response also provided MN EAS with widespread capabilities of encounter alerting for care coordination of patients in MN.
- ADTs are also the transaction type used for the CDC National Syndromic Surveillance Program (NSSP)
- NSSP requires ADTs for all visits (not only for COVID as currently used in MN)
 - Specific data elements are missing or not standardized that are needed for NSSP onboarding requirements
 - e.g., Chief complaint, admit reason, discharge disposition, etc.

Benefit #1 of NSSP participation: Moving beyond COVID for future MDH public health surveillance

- Drug overdose
 - Monitor drug overdose trends by county to help inform MN's naloxone distribution plan
- Environmental Public Health Tracking
 - Future prediction of hospital visits for cold and/or heat-related illness
- Adverse Childhood Experiences (ACEs)/Social Determinants of Health
 - Understanding and evaluating health disparities
- Identifying new and emerging health issues
 - E.g., E-cigarette or Vaping Use-Associated Lung Injury (EVALI)

Benefit #2 of NSSP participation

- ***A public health reporting requirement*** in the CMS rules effective January 1, 2022
 - Meet one of the four requirements toward full Medicare reimbursement

[Medicare Program; Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Proposed Policy Changes and Fiscal Year 2022 Rates \(https://www.federalregister.gov/documents/2021/05/10/2021-08888/medicare-program-hospital-inpatient-prospective-payment-systems-for-acute-care-hospitals-and-the\)](https://www.federalregister.gov/documents/2021/05/10/2021-08888/medicare-program-hospital-inpatient-prospective-payment-systems-for-acute-care-hospitals-and-the)

Benefit #3 of NSSP participation

- CDC's ESSENCE: a data analysis tool that provides the ability to ***share data with the people providing it and serving the community.***
- Once local facilities begin sending data to the NSSP
 - Data users sign the BioSense Platform User Agreement
 - Then, MDH will coordinate data access and training
 - Templates for dashboards, maps, and graphs will be shared with partners
- With the goal to ***help with community level health assessments***

Example of syndromic surveillance data in ESSENCE

Absenteeism



Radiology



Diagnostic Labs



Poison Control



Prescriptions



ED Chief Complaints



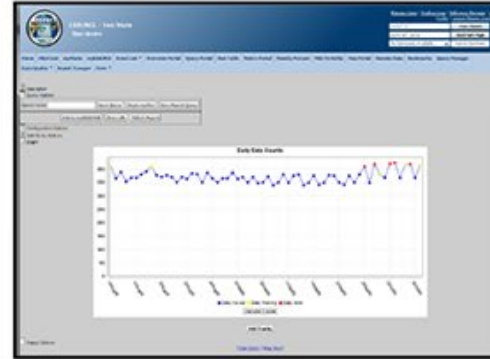
Nurse Call Center



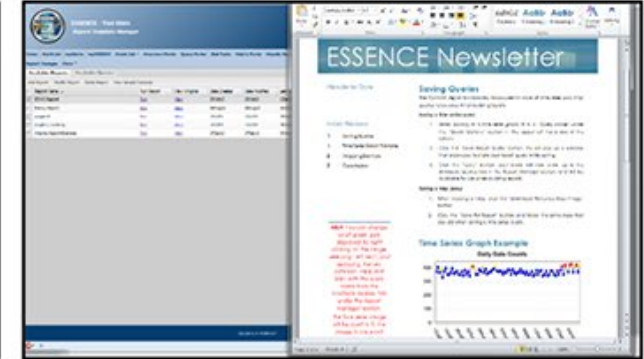
Over the Counter Sales



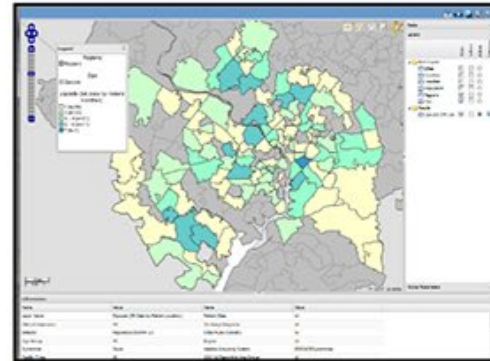
Query interface



Time series



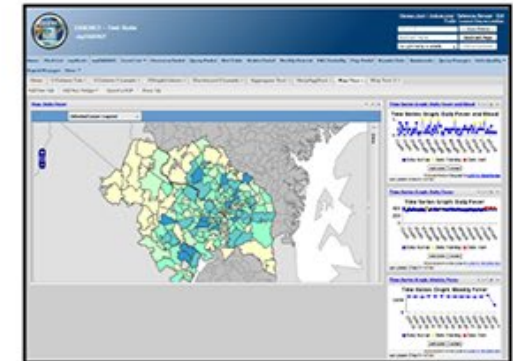
Customizable reports and dashboards



GIS maps



Detector results



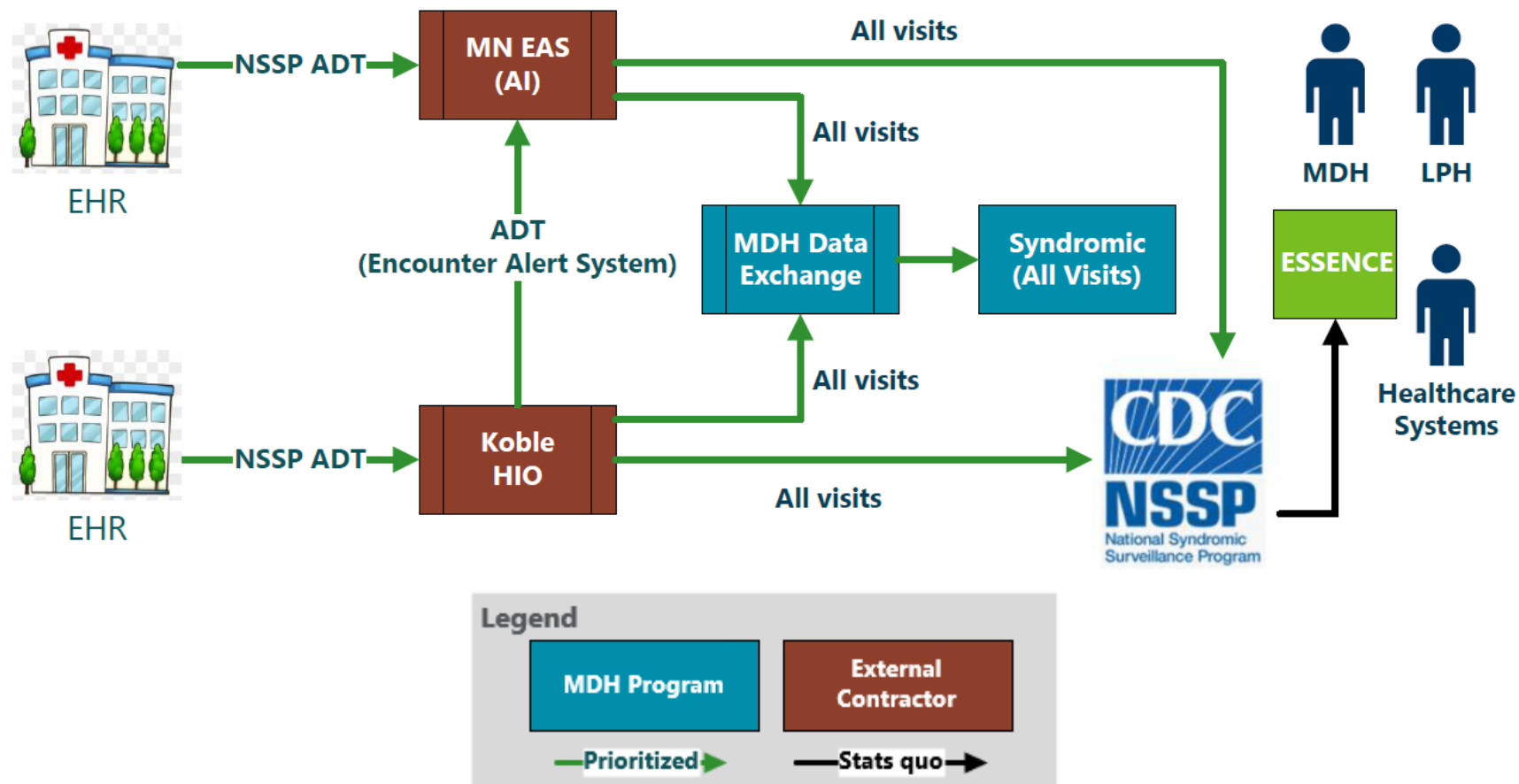
Benefit #4 of NSSP participation and using syndromic surveillance data

- Provides broader and more timely data for state and local epidemiologists.
 - Data is included on all visits treated at all hospitals and emergency departments.
 - Allows for monitoring public health concerns in near-real time based on presenting signs and symptoms.

Status of NSSP implementation in Minnesota and how does it work?

MDH Interoperability Strategy: NSSP Use Case

Expanded Syndromic Surveillance with Participation in the National Syndromic Surveillance Program (NSSP)



Health Systems Sending Data to NSSP

- Four health systems are in pilot stage of implementation
 - Various stages: Production, validation, testing
 - Various levels of experience with syndromic surveillance
- MDH is evaluating processes for how data are shared with MDH and CDC
- Receiving feedback on work effort to update feed, add data elements, etc. from pilot sites

Data elements and message specifications

PRIORITY 1 DATA ELEMENTS

- Chief complaint
- Admit reason
- Diagnosis code & description

PRIORITY 2 DATA ELEMENTS

- Patient county
- Patient age
- Patient race

PRIORITY 3 DATA ELEMENTS

- Smoking status
- Pregnancy status
- Triage notes

Hospitals' and health systems' responsibility for NSSP implementation

- Determine interest in NSSP use case
- Register with the MDH Office of Data Strategy and Interoperability
- Sign a contract/work order for NSSP use case with data vendor
- Work with vendor to send ADT messages that meet MN NSSP specs
- Focus onboarding for all hospital visits (emergency department and inpatient)
 - Potential future expansion to urgent care clinics

Next Steps

MDH syndromic surveillance resources

[MDH Syndromic Surveillance web page
\(https://www.health.state.mn.us/communities/injury/data/sys.html\)](https://www.health.state.mn.us/communities/injury/data/sys.html)

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Q&A

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Further questions: health.dsi@state.mn.us