

**Expanding Meaningful Use to  
include Syndromic Surveillance of  
Chronic Disease in Nebraska  
*A Promising Practice***

**Jeff Armitage**

Epidemiology Surveillance Coordinator

Office of Community Health and Performance  
Management

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**DHHS**

N E B R A S K A

# Today's Presentation



- **Nebraska's NPHII Grant**
- **Meaningful use in Nebraska & the role of the State Division of Public Health**
- **CVD Syndromic Surveillance**
  - **Background**
  - **Scope of work**
  - **Benefits to Public Health**
  - **Current progress**
  - **Future plans & challenges**





# SOUTH DAKOTA

WYOMING

IOWA

COLORADO

MO.

KANSAS

## NEBRASKA

- CITIES
- State capitals
- County seats
- Cities

- BOUNDARIES
- State
- County





## **Nebraska's NPHII Grant**

- **Component I and II recipient**
- **Office of Community Health and Performance Management (OCHPM) was the grant recipient, located within the Division of Public Health (DPH) of the Nebraska Department of Health and Human Services**
- **Two full time staff and part time project administrator working under the NPHII grant within the OCHPM**
- **Goal of component II is to strengthen the state and local public health system and improve public health outcomes**
- **Several projects are funded under component II. Some of the projects are being led by other offices within the State DPH while others are being led outside organizations outside the DPH.**

## **Meaningful Use in Nebraska**

- **Currently working to expand lab reporting, the immunization registry, and syndromic surveillance to meet the public health requirements for meaningful use.**
- **The Nebraska Division of Public Health recognizes the opportunity to expand usage of EHR information to advance public health in Nebraska.**
- **Hospitals and health care providers in Nebraska can report their EHR data to the State Division of Public Health. These data are made available to Local Health Departments.**
- **LB 591**
- **Low access to care in rural areas with the majority of acute care hospitals in Nebraska being critical access hospitals**

BRANXTON LIONS CLUB

**DRIVE CAREFULLY**

60



*We have*



**TWO CEMETERIES**

**NO HOSPITAL**

# **Syndromic Surveillance of Cardiovascular Disease Hospitalizations in Nebraska**

## **Background**

- **Hospitals report ER and IP discharge data annually to the Nebraska Hospital Association to create the Nebraska Hospital Discharge Database**
  - **Limitations of the current process/database**
  - **IP data are important for chronic disease prevention**
- **Syndromic surveillance in Nebraska, similar to the rest of the country, has been limited to emergency room visits to monitor the incidence of infectious disease syndromes.**
- **Near real-time IP hospitalization data are unavailable in Nebraska**

## **General Scope of Work**

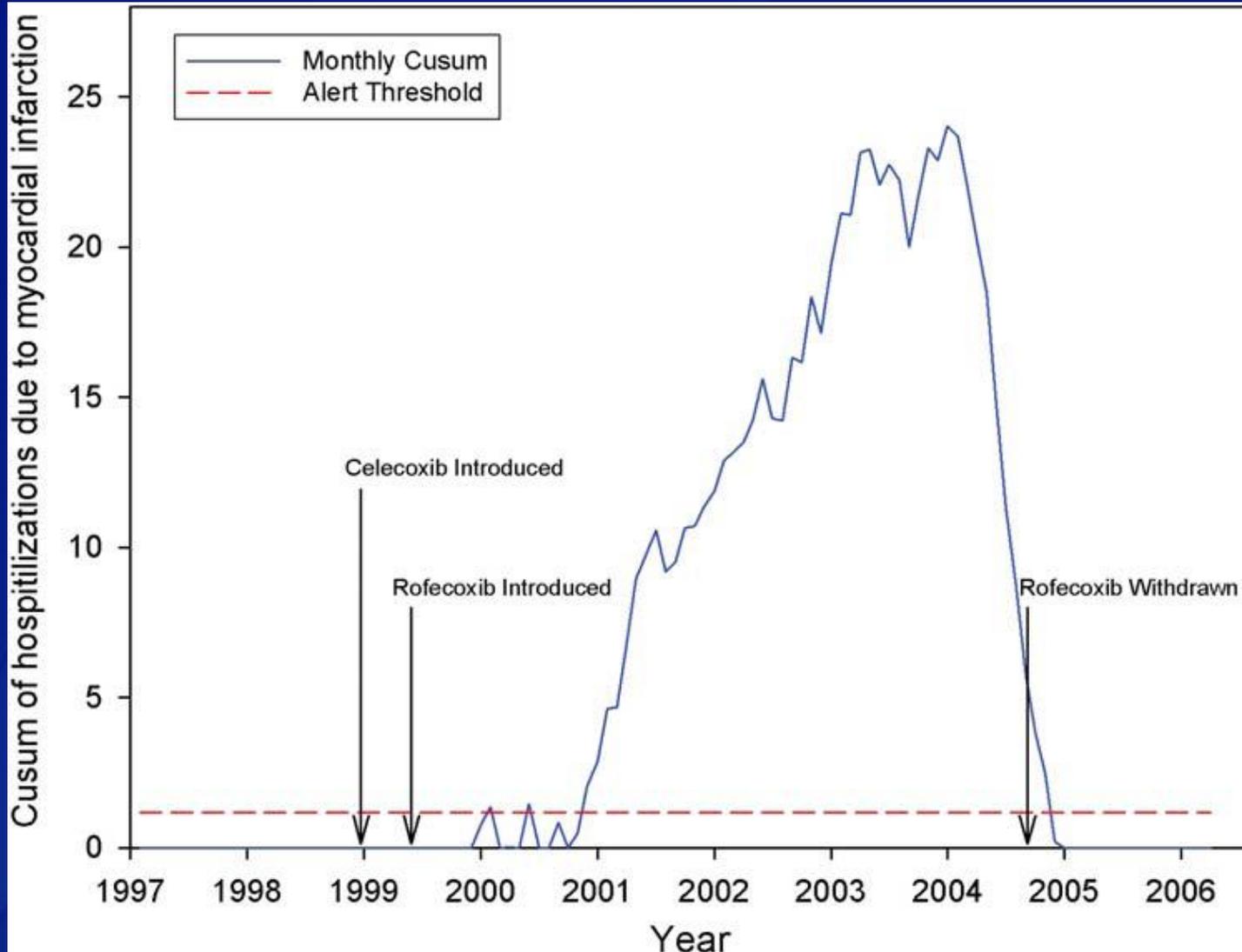
- **Expand beyond syndromic surveillance of infectious disease to chronic disease surveillance by capturing real-time cardiovascular hospitalization data using EHRs.**
- **Not true syndromic surveillance**
- **Why cardiovascular disease?**
- **Led by the Office of Epidemiology within the Division of Public Health.**
- **Hired a full-time syndromic surveillance coordinator**
- **Utilize team approach consisting of a senior level project supervisor, syndromic surveillance coordinator, informatician, and other staff as needed**
- **Phase 1 – develop the system with a pilot hospital**
- **Phase 2 – expand the system statewide**

## **Specific Scope of Work**

- **Collect near real-time CVD IP hospitalization data**
- **Incorporate the data elements under meaningful use that are unavailable within the existing HDD**
  - **Lifestyle/Demographics (BMI, smoking status, occupation, etc.)**
  - **Clinical risk factors/vitals (blood pressure, active medication list, EKG interpretation, etc.)**
  - **Laboratory results (lipids, hemoglobin A1C, other cardiac biomarkers, etc.)**
  - **Follow-up (discharge recommendation, prescription medication, etc.)**
- **Provide stipend to hospital to create the export process to meet the desired scope of work**
- **Pilot test...Send flat file (eventually HL7 file) to DPH seven days after admission and again two weeks after discharge**

## **Benefits to Public Health**

- **Goal is to identify and promote public health and medical care best practices that prevent CVD, and facilitate the expansion of EHR usage for public health.**
- **Identify near real-time changes in CVD incidence, rather than looking retrospectively at HDD**
  - **Helena Montana heart health study**
  - **Medications contributing to CVD (Vioxx)**



Source: Brownstein JS, Sordo M, Kohane IS, Mandl KD (2007) The Tell-Tale Heart: Population-Based Surveillance Reveals an Association of Rofecoxib and Celecoxib with Myocardial Infarction. PLoS ONE 2(9): e840. doi:10.1371/journal.pone.0000840

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  - **Medications contributing to CVD (Vioxx)**
- **Within a healthcare system we can track patients using unique ID to better understand how they are arriving and moving through the system**
- **Enhance planning and evaluation of CVD prevention interventions, like the implementation of the Stanford Chronic Disease Management Program in Nebraska, and other current and future prevention initiatives such as sodium reduction.**

## **Current Progress – Phase 1**

- **Hired staff**
- **Selected one large hospital in Omaha as a pilot to build the system**
- **List of data elements and system specs is complete**
- **Process for exporting flat data file from pilot hospital to DPH is almost complete. Still deciding feasibility of HL7, but hopeful.**
- **Waiting on final contract approval between pilot hospital and DPH to take the information live**

## **Future Plans**

- **Begin exchange and conduct evaluation of data and process (e.g., completeness, timeliness, quality). Make necessary changes.**
- **At the end of phase 1:**
  - **Develop HL7 standard file specification for CVD surveillance**
  - **Work with the Nebraska Health Information Initiative (NeHII) to assess the feasibility of collecting the same data through the state's Health Information Exchange.**
  - **Methodology and protocols for expanding system to other hospitals will be completed if/when other hospitals agree to participate.**
- **Implement phase 2:**
  - **Assuming hospitals adopt suitable EHR systems, the goal is to interface with at least 10 by the end of year one and 18 per year for the next four years (goal of 82 hospitals in five years)**
  - **Prioritize by patient volume and readiness**

## **Challenges (existing and anticipated)**

- **Hospital participation**
  - **Emergency response and syndromic surveillance have lost some urgency with H1N1 being off the radar screen for hospitals**
  - **Most are not conducting basic syndromic surveillance at this time (8 in production, working with 8 others)**
  - **Low resources/capacity at many hospitals**
  - **Some facilities have expressed disagreement regarding interpretation that these activities are public health practices exempted by HIPAA.**
  - **Lack of understanding of the value of enhanced surveillance of IP hospitalizations using EHRs**
- **Passage of legislative bill fails**

- **Questions/Comments**

Jeff Armitage

Epidemiology Surveillance  
Coordinator

Office of Community Health and  
Performance Management

Division of Public Health

Nebraska Department of Health and  
Human Services

Email: [jeff.armitage@nebraska.gov](mailto:jeff.armitage@nebraska.gov)

Phone: (402) 471-7733

**He who has health has hope, and  
he who has hope has everything.  
- Arabian Proverb**

