



# Facilitating Epidemiology Best Practices and Collaboration across State Health Department Programs

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# Overview

- Issue
  - Desire to improve communication and collaboration among epidemiology and data staff at the Wisconsin Division of Public Health (DPH)
- Challenge
  - Epidemiologists are dispersed throughout DPH, separate from the Office of Health Informatics (OHI).
- Solution
  - Piloted and implemented a working group model

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# Background

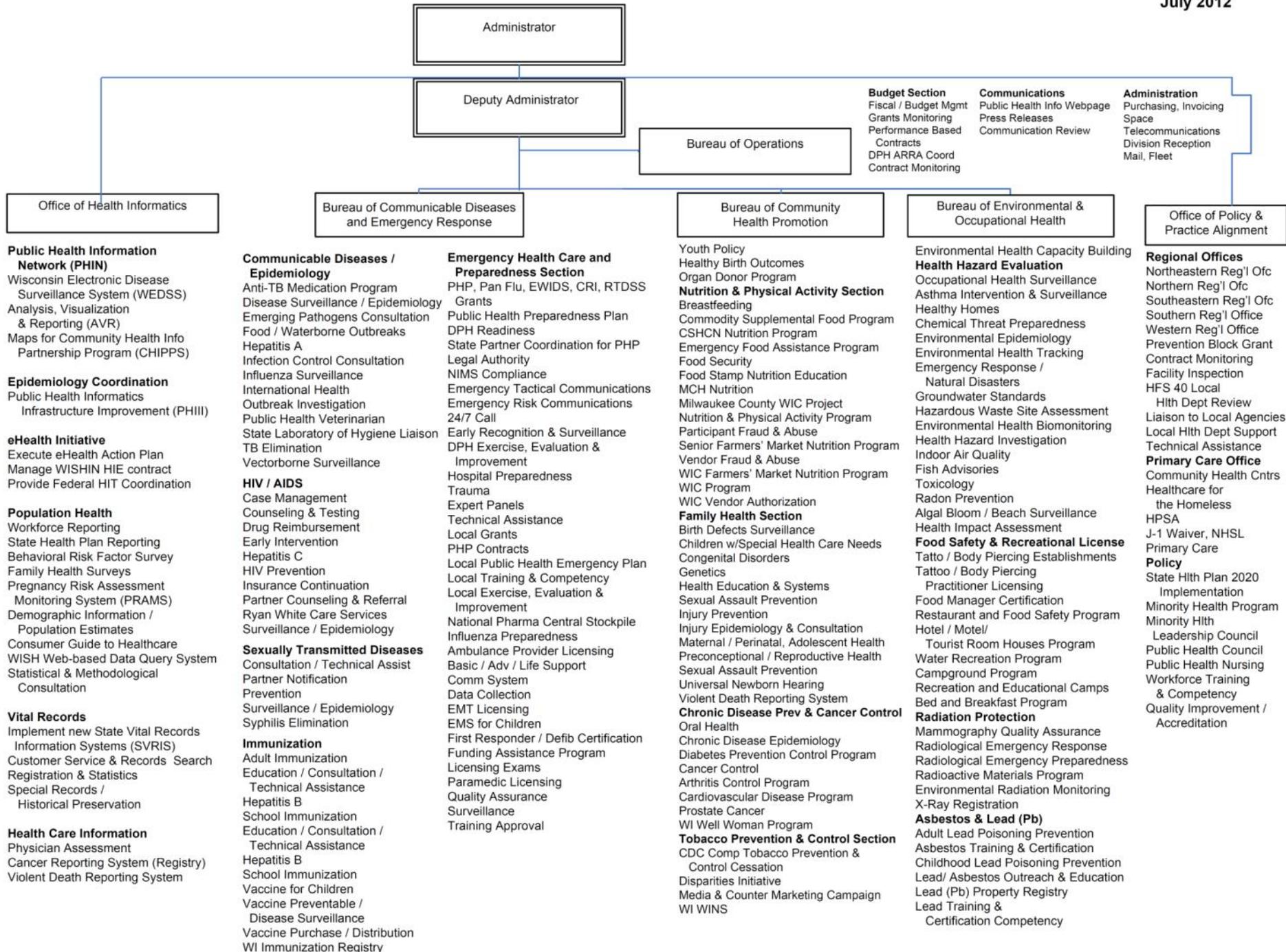
## Wisconsin Division of Public Health

- Bureau of Communicable Diseases
- Bureau of Community Health Promotion
- Bureau of Environmental and Occupational Health
- Office of Health Informatics
- Office of Policy and Practice Alignment
- Office of Preparedness and Emergency Health Care
- Bureau of Operations



# Epidemiology Staffing Model

- Epidemiologists are (primarily) embedded within programs such as Oral Health, AIDS/HIV, Communicable Disease, Asthma, Tobacco, and Maternal and Child Health.
- Office of Health Informatics (OHI) has research analysts and data stewards; the DPH Chief Epidemiologist (hired November 2013) also sits in OHI.





# Epidemiology Staffing Model

- Communicable Diseases
  - Outbreak investigation
  - HIV/AIDS and sexually transmitted diseases
  - Immunization
- Community Health Promotion
  - Chronic disease, oral health, tobacco, nutrition and physical activity
  - Maternal and child health
  - Injury

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# Epidemiology Staffing Model

- Environmental and Occupational Health
  - Asthma
  - Lead poisoning prevention
  - Environmental Public Health Tracking
- Preparedness and Emergency Health Care
  - Disaster and emergency planning
  - Preparing for epidemics, outbreaks, and pandemics
  - Trauma



# Epidemiology Staffing Model

- Policy and Practice Alignment
  - Regional offices and local health department support
  - State Health Plan: Healthiest Wisconsin 2020
- Health Informatics
  - eHealth
  - Electronic disease surveillance
  - Health care information
  - Population health systems and surveys
  - Vital records

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# Epidemiology Staffing Model

- Organizational structure provides strong links between epidemiologists and program staff.
- However, it does not facilitate collaboration, consistency or interaction of epidemiologists across programs and with OHI staff.
- Many epidemiologists had expressed an interest in opportunities to connect and work together across bureaus, offices and program areas.



# Methods

- CDC assignee convened small group of epis in early 2011 to assess interest in regular meetings.
- Decided to pilot division-wide working group.
  - Format: seminar sessions proposed.
  - Topics: data sources, share work, training.
  - Inclusion: invite all epidemiologists, fellows, research analysts and scientists, and data owners across DPH; include anyone else interested.
  - Meeting frequency: one hour, monthly.

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# Methods

- Desire to enhance work, not increase burden
- Email distribution list created from:
  - Contacts from prior epi events
  - Organizational charts
  - Job classifications
  - Requests to be added
- Ongoing direction from volunteer planning committee and periodic surveys of invite list



# DPH Epi/Data Working Group

- First meeting held in August 2011.
- Webcast option provided for regional staff.
- Sessions recorded and archived with materials on shared drive.
- Attendance has ranged from 15-30 in person and another 1-5 viewing remotely.



# Working Group Topics

- Clinical data sets available for analysis
- GIS examples and opportunities
- Public Health Information Network (PHIN) and University of Wisconsin Medical Record–Public Health Information Exchange (UW MED-PHINEX)
- Flu and communicable disease outbreaks
- Tips for presenting data to partners



# Feedback from Participants

- Survey was sent to contact list after first 5 sessions (N=35).
- Reasons for attending:
  - Interest in the topic (71%)
  - Professional development (66%)
  - To support the working group (51%)
  - To get to know other epi and data staff (49%)



# Feedback from Participants

- Survey respondents expressed support for continued meetings, monthly frequency, and meeting format of presentations and interactive discussion.
- Interest in topics such as SAS code and analyses, data system updates, record linkage and available data sets.



# Working Group Topics

- Survey of the Health of Wisconsin (SHOW)
- Behavioral Risk Factor Survey method changes
- Sexual minority health
- Health and disability
- Medicaid 101
- Wisconsin Family Health Survey
- Internal approval process for data dissemination

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# Working Group Topics

- Healthiest Wisconsin 2020 and Minority Health Report
- Environmental health data
- Accessing Medicaid and Wisconsin Health Information Organization (WHIO) data
- Vital records system updates
- Age adjustment
- Wisconsin statewide homeless count



# Successes

- Staff demonstrate continued interest based on strong attendance and requests to be added to the group.
- Organizational leadership has utilized group as a forum to communicate with and gather feedback from epi and data staff.
- Distribution list consists of nearly 100 staff, fellows and students from across the Division.



# Successes

## SAS Analysis for Behavioral Risk Factor Survey

- Offered two half-day, hands-on sessions in a training lab.
- Arranged for participants to have remote access to their desktop computers (for SAS access).
- Both sessions reached capacity.
- Based on high interest, additional SAS trainings and resources in development.



# Successes

## SAS User Group

- Formed after interest in BRFSS training session.
- Developed a SharePoint site with discussion board and resource sharing.
- Designed a series of three trainings on SAS Basics.



# Successes

## Epi/Data Open House (February 2014)

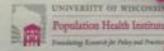
- Invited staff to showcase their work through posters, report handouts and table displays
- Advertised event throughout Department of Health Services office building
- More than 20 presenters, representing all participating bureaus and offices





# Wisconsin Unexplained Fatalities: Summer 2012

Sarah Dee Geiger<sup>1</sup>, Henry Anderson<sup>2</sup>  
<sup>1</sup>Epidemiologists, CDC-CSTE Applied Epidemiology Fellow  
<sup>2</sup> at Madison, Population Health Service Fellow  
<sup>3</sup> Department of Health Services, State Health Officer



## Introduction Background

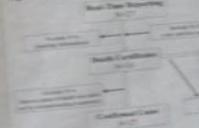
- 2012 was the hottest year on record for the continental United States.<sup>1</sup>
- Record highs in Wisconsin: July 2012 was the hottest on record for Milwaukee and second warmest for Madison.<sup>2</sup>
- Extreme heat threatens public health because heat-related illnesses, injuries, and death.<sup>3</sup>
- Heat-related fatalities of Wisconsin are previously described in articles about the record heat wave in Wisconsin during summer 2012.<sup>4</sup>
- From 2006-2010 the annual number of heat-related deaths in Wisconsin ranged from 1-24.
- Standardization of a heat-related fatality definition helps ensure that heat-related fatalities are consistently identified and characterized.

## Objective

Characterize heat-related mortality by examining demographics and risk factors of the cases that occurred in Wisconsin during summer 2012.

## Methods

Figure 1. Study Design Flow Diagram



## Case Definition

Heat-related mortality was defined as "heat" if any of the following criteria were met: "heat stroke", "heat exhaustion", "heat-related illness", "heat-related injury", "heat-related death", "heat-related cardiac arrest", "heat-related cardiac death", "heat-related cardiac arrest", "heat-related cardiac death", "heat-related cardiac arrest", "heat-related cardiac death".

## Results (cont.)

Table 1. Characteristics of the study sample

Characteristic	Number	Percentage
Age		
<18	1	1.0
18-24	1	1.0
25-34	1	1.0
35-44	1	1.0
45-54	1	1.0
55-64	1	1.0
65-74	1	1.0
75-84	1	1.0
≥85	1	1.0
Sex		
Male	1	1.0
Female	1	1.0
Ethnicity		
White	1	1.0
Black	1	1.0
Hispanic	1	1.0
Other	1	1.0
County		
Adams	1	1.0
Ashland	1	1.0
Barron	1	1.0
Bay	1	1.0
Beech	1	1.0
Berkshire	1	1.0
Boscawen	1	1.0
Brown	1	1.0
Buffalo	1	1.0
Calumet	1	1.0
Chippewa	1	1.0
Columbia	1	1.0
Dane	1	1.0
Dodge	1	1.0
Douglas	1	1.0
Dunn	1	1.0
Grant	1	1.0
Green	1	1.0
Green Lake	1	1.0
Iowa	1	1.0
Jackson	1	1.0
Jefferson	1	1.0
Johnson	1	1.0
Kewaunee	1	1.0
Koshong	1	1.0
Lafayette	1	1.0
Lancaster	1	1.0
Lincoln	1	1.0
Manitowish	1	1.0
Manitowish Water	1	1.0
Marathon	1	1.0
Marquette	1	1.0
Menomonie	1	1.0
Monroe	1	1.0
Oneida	1	1.0
Oconto	1	1.0
Oconto Water	1	1.0
Outagamie	1	1.0
Pierce	1	1.0
Plymouth	1	1.0
Port Washington	1	1.0
Shawano	1	1.0
Sheboygan	1	1.0
Shushong	1	1.0
St. Croix	1	1.0
Taylor	1	1.0
Trempealeau	1	1.0
Vernon	1	1.0
Vernon Water	1	1.0
Waushara	1	1.0
Winnebago	1	1.0
Winthrop	1	1.0
Wood	1	1.0
Wood County	1	1.0
Yoshimichi	1	1.0



## Discussion

- This case series was a descriptive investigation of public health in Wisconsin's 2012 heat fatalities.
- Mortal health conditions (17.7%) and underlying causes (17.7%) were prevalent in the study sample.
- Future public health messaging should target special health care providers, who could intervene at risk periods.
- Preventive efforts should include the importance of air conditioning and other cooling strategies.
- Long-term cooling strategies such as air conditioning and increased tree canopy cover could also be considered.

## References

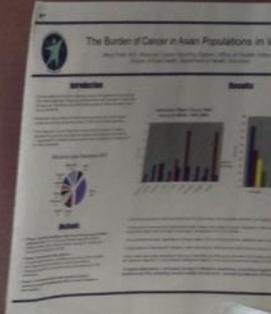
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3. Centers for Disease Control and Prevention. 2012. Heat-Related Illnesses and Deaths. <http://www.cdc.gov>.
4. Wisconsin Department of Health Services. 2012. Heat-Related Mortality in Wisconsin. <http://www.dhs.wisconsin.gov>.

## Acknowledgments

We thank the following individuals for their assistance in data collection and analysis: [names]

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# Successes

- Epi/Data Working Group model has served to:
  - Increase knowledge-sharing among program areas.
  - Educate epis on important analytic topics.
  - Better coordinate epi work across programmatic areas.
- Group has now become institutionalized, has gained leadership support and is pursuing sustainability.



# Next Steps for Working Group

- Continue monthly seminar meetings.
- Make Epi/Data Open House an annual event.
- Maintain current group as a learning community and create an additional DPH Core Epidemiological Workgroup to:
  - Serve as a decision-making body.
  - Develop needed division-wide epi policies.
  - Guide implementation of best practices.



# Working Group Meetings Changes

- Increase time spent on participant introductions at beginning of each meeting.
  - Highlight key work activities and topics
  - Provide regular staff updates
- Increase focus on sharing of detailed methods.
- Develop a repository of analytic code and sample data.



# Core Epidemiological Workgroup

- Modeled after the Strategic Prevention Framework State Incentive Grant (SPF SIG) State Epidemiological Outcome Workgroups.
- Draft charter has been developed and will be shared with leadership.
- Membership:
  - Epidemiology liaisons from each Bureau or Office
  - Chief Medical Officers



# Acknowledgements

- Epi/Data Working Group Planning Team
- DPH management, for their support of the Epi/Data Working Group
- Ousmane Diallo, current group facilitator
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