

Monitoring Population Health
PHS 803
Fall 2015
Wednesday, 4:00- 6:30pm
HSLC 1203

Course Instructor: Maureen Durkin, PhD, MPH, DrPH
Professor of Population Health Sciences
Office hours by appointment
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I. Goal and Learning Objectives

This course focuses on the “core public health function” of *population health assessment* and the “essential public health service” of *monitoring the health status of populations to identify and solve community health problems* (<http://www.cdc.gov/nphpsp/essentialServices.html>). The class will teach you how to identify existing sources of data and to use and present data in meaningful ways to increase understanding and improve population health.

Goal: Understand the principles and practice of monitoring population health.

Learning Objectives:

1. Understand the purpose and role of monitoring population health.
2. Name and describe in detail some of the existing data systems that are used to monitor population health in Wisconsin, the U.S. and globally.
3. Understand and use methods for gathering and analyzing population health data.
4. Complete a final project and brief report to monitor a health priority.

II. Attendance

Class Attendance: Students are expected to attend every class. All absences must be cleared before class with the course instructor via email. Students are responsible for content and information provided in all class sessions, even those for which they were not in attendance.

III. Course mechanics

This course will consist of presentations, group discussions, guest lectures, and online discussions.

Assigned readings: The instructor will post reading material at Learn@UW at least one week prior to class. Students are expected to read assigned articles thoroughly before the class session.

Weekly current event discussion leader: For selected weeks students will be assigned to identify a current event/issue or journal article related to the topic under discussion (or monitoring population health, in general). Each student will do this once during the semester, providing a brief overview of the event/issue/paper to the class and leading a brief discussion on the topic. This portion of the class session will usually cover 30 minutes weekly. Please post your article

and/or link to the Learn@UW discussion board no later than noon on the Tuesday before the assigned class period.

Weekly assignments: For weeks 2-13, students will be expected to post a total of 8 responses (each approximately ½ to 1 page, single spaced, or 250-500 words) to topics discussed in class, including assigned readings, data sets and websites. These responses will sometimes simply be your reaction to the topics and readings, but should be thoughtful and well written. Assignments should be posted to the discussion section on Learn@UW by the following Monday at 8:00pm. See the weekly discussion threads for more details on each week's assignment. Students will complete 8 assignments (10 points each). In addition, during each week of weeks 2-13, students are expected to post at least one reaction posting to another student's assignment or to the weekly current event or lecture topic.

Other Readings that are NOT assigned, but may be helpful to students as background material and for reference include:

- Wisconsin's State Health Plan <http://dhfs.wisconsin.gov/statehealthplan/index.htm#state>
- Healthy People 2010/2020 <http://www.healthypeople.gov/>
- Institute of Medicine: The Future of the Public's Health in the 21st Century http://books.nap.edu/openbook.php?record_id=10548
- Principles and Practice of Public Health Surveillance, 2nd Edition, Teutsch and Churchill eds. Oxford, 2000.

Final project: A final project will be required of all students. The goal of the project is to conduct an analysis of a population health issue in Wisconsin using datasets and analyses covered in class. The final project will consist of both a written paper and in-class oral presentation.

IV. Learn@UW

Learn@UW, a course management system, will be used for posting course news items, Web-based readings, and other electronic resources. In addition, it will be utilized for outside class communication via the discussion board.

V. Evaluation and Grading

Students will be evaluated dependent upon the following:

Final project	100 pts (Paper: 75 / Presentation: 25)
Weekly assignments	80 pts (8 assignments @ 10 points per assignment)
Participation (online and in class)	20 pts
Total	200 pts

93.0-100%	A	77-79.0%	BC
87-92.9%	AB	70-76.9%	C
80-86.9%	B	<70%	Fail

VI. Nondiscrimination Policy

The UW Madison is committed to creating a dynamic, diverse and welcoming learning environment for all students and has a non-discrimination policy that reflects this philosophy. Disrespectful behaviors or comments addressed towards any group or individual, regardless of race/ethnicity, sexuality, gender, religion, ability, or any other difference is deemed unacceptable in this class, and will be directly addressed by the professor.

VII. Student Disability

Your success in this class is important. If there are circumstances that may affect your performance in this class, please let the instructor know as soon as possible by making an appointment to discuss your situation and jointly develop strategies for adapting assignments as needed to ensure that everyone has an opportunity to meet the requirements of the course.

Final Project Guidelines

The goal of the final project is to utilize the data sources and methods introduced in the course to conduct an analysis of a population health issue in Wisconsin.

Identify a health problem/topic:

Select one measure of population health; this could be a health outcome (e.g., quality of life, disease morbidity, mortality, disability, or other outcome) or a health determinant (e.g., behavioral risk factor, environmental health problem, health care, or social/economic determinant). *Healthy People 2020* or *Healthiest Wisconsin 2020* can serve as resources of potential health problems.

Students should be prepared to briefly describe their selected topic (this does not need to be final) during the class session on September 23rd. Approximately 2 minutes per student.

Identify an available data source or sources to address the problem:

Select data sources available for your identified health issue. It is key that there are existing data publicly available on the topic you selected for your paper. Students may contact a public health professional working in their topic of interest for advice on selecting a data source and focus for the project, but this is not required. If a student is interested in a topic for which data are not available, he or she should select a related health topic or a determinant of the issue of interest for which data are available. Students are encouraged to consult with the instructor for advice on topic selection and/or potential data sources.

Prepare a project proposal

Students will conduct a background and literature review on the topic of interest and prepare a brief proposal. Proposals for the analysis can involve one of the many approaches to evaluating health problems in populations, including:

- Estimate the magnitude of a health problem
- Portray the natural history of diseases
- Track trends in a disease, disability or health problem
- Detect an epidemic or document spread of disease
- Examine differences in prevalence/incidence across populations (disparities)
- Test hypotheses
- Evaluate prevention and control measures
- Monitor changes in infectious agents
- Detect changes in health practice
- Plan prevention and control programs

The proposal must include a brief explanation of the problem, a description of the methods to be used (including the data source), and proposed “table shells” of results.

The project proposal should be submitted to the Learn@UW dropbox by Wednesday, October 21st.

Complete analysis and write the paper

The final step is to prepare a paper suitable for brief report publication in the Wisconsin Medical Journal. Follow the guidelines and instructions for authors found at:

<https://www.wisconsinmedicalsociety.org/professional/wmj/for-authors/#briefreport>, and summarized on page 7 below. Papers should be 1500 to words in length (not including the abstract or references/tables/figures).

Papers should include:

- Abstract
- Introduction
- Methods
- Results
- Discussion
- References
- Tables
- Figures

The final project paper should be submitted to the Learn@UW dropbox by Friday, December 11th.

Prepare a brief presentation on your topic and key findings

On October 14th, November 4th, 11th, and 18th, and December 2nd and 9th, students will give 10 minute presentations to the class describing their topic and progress related to the methods, analysis, and findings. Up to five minutes following each presentation will be reserved for Q & A from students and the instructor.

VIII. Course Schedule

Date	Topic
Week 1 9.02.15	Course overview
Week 2 9.9.15	4:00-5:30 Introduction to data 5:30-6:30 Student led topic discussion
Week 3 9.16.15	4:00-6:00 Using vital statistics to monitor maternal and child health (including introduction to the use of WISH and WONDER query systems), Guest speaker and course leader Dr. Angie Rohan, with Lisa Walker (tentative) 6:00-6:30 Student led topic discussion
Week 4 9.23.15	4:00-5:45 Surveillance and prevention of injuries and of opiate abuse, Guest speakers Dr. Hank Weiss and Dr. David Nordstrom 5:45-6:30 Student brief project descriptions
Week 5 9.30.15	4:00-6:00 The Wisconsin Immunization Registry, Guest speaker Ashley Petit, MPH; and Monitoring pertussis and influenza vaccination in Wisconsin, Guest speaker Ruth Koepke, MPH 6:00-6:30 Student led topic discussion
Week 6 10.07.15	4:00-6:00 Mortality and other event reviews, Guest Speakers Dr. Angie Rohan and Mike Totoraitis 6:00-6:30 Student led topic discussion
Week 7 10.14.15	4:00-5:00 Use of the Behavioral Risk Factor Survey for monitoring population health in Wisconsin, Guest speaker Dr. Ann Ziege 5:10-5:40 Student led topic discussion 5:45-6:30 Student Project Presentations
Week 8 10.21.15 Class to be held in room 4327 Sterling Hall	4:00-6:00 General principles and methods of using survey data to monitor population health, Guest speakers John Stevenson and Steve Coombs 6:00-6:30 Student led topic discussion
Week 9 10.28.15 No in-person class meeting	View "Finding and Using Health Statistics" online short-course http://www.nlm.nih.gov/nichsr/usestats/index.htm **There will be no in-person class meeting this week.** **Can be used for 1 of 8 required assignments.**
Week 10 11.04.15 In-person class 4:00-4:50 only	4:00-4:50 Student Project Presentations View recorded lecture on Learn@UW, Synthesis and analysis: What do you do with the data?
Week 11 11.11.15 In-person class 4:00-4:50 only	4:00-4:50 Student Project Presentations View recorded lectures on Learn@UW, Risk factor data (risk behavior, context), communicating data & moving to action
Week 12 11.18.15 In-person class 4:00-4:50 only	4:00-4:50 Student Project Presentations View recorded lecture on Learn@UW, Special topics in monitoring population health

Week 13 11.25.15 No in-person class meeting	Communicating data and moving to action View online webinar <i>A New Way To Talk About the Social Determinants of Health</i> . Link to “webinar recording” at http://www.rwjf.org/pr/product.jsp?id=66428 **There will be no in-person class meeting this week.** **Can be used for 1 of 8 required assignments.**
Week 14 12.02.15 In-person class 4:00-4:50 only	4:00-4:50 Student Project Presentations
Week 15 12.9.15 In-person class 4:00-4:50 only	4:00-4:50 Student Project Presentations Guest Instructor: Patrick Remington, MD, MPH
Friday 12.11.15	FINAL PROJECT PAPER DUE

Guest Speakers:**Steve Coombs**

Director of Field Operations, University of Wisconsin Survey Center

Ruth Koepke, MPH

Epidemiologist/Researcher supporting the Wisconsin Department of Health Services
University of Wisconsin – Madison, School of Medicine and Public Health

David L Nordstrom, PhD, MPH, MS

Prescription Drug and Opioid Abuse Epidemiologist, Injury and Violence Prevention Program
DPH/BCHP/Family Health Section - Wisconsin Department of Health Services

Ashley Petit, MPH

Wisconsin Immunization Registry Epidemiologist, Wisconsin Department of Health Services

Patrick Remington, MD, MPH

Associate Dean for Public Health, University of Wisconsin School of Medicine and Public Health

Angela Kempf Rohan, PhD

Senior MCH Epidemiologist / CDC Assignee to the Wisconsin Department of Health Services
Centers for Disease Control and Prevention

John Stevenson

Associate Director, University of Wisconsin Survey Center

Mike Totoraitis

Violence Prevention Resource Coordinator, Milwaukee Homicide Review Commission

Lisa Walker

Vital Statistics, Wisconsin Department of Health Services

Harold (Hank) Weiss, PhD, MPH, MS

Injury and Violence Prevention Coordinator, Wisconsin Division of Public Health

Anne Ziege, PhD

Research Scientist/ Behavioral Risk Factor Survey Coordinator/Project Director
Wisconsin Division of Public Health, Office of Health Informatics

Wisconsin Medical Journal

Brief Report Guidelines (<https://www.wisconsinmedicalsociety.org/professional/wmj/for-authors/#briefreport>)

Brief Reports are for presenting the results of local demonstration projects, pilot studies or preliminary research. Included in this category are **Health Innovations** submissions—reports that showcase the outcomes of initiatives and interventions being tested in clinical and community settings to improve health care quality and delivery, patient safety and satisfaction, and cost efficiency. Consideration is given to the originality of the intervention or initiative, potential to inform others and ability to replicate the results.

Length: 1500 words (6 manuscript pages), not including abstract, references, tables, figures or boxes.

References: Up to 10.

Tables/Figures/Boxes: Up to 3.

Abstract: Include an abstract, not to exceed 120 words, stating objectives, process used, and outcome:

1. *Background:* Definition of problem that intervention/initiative is meant to address, i.e., “Why we did this.”
2. *Methods:* Description of initiative/intervention and how it was implemented.
3. *Results:* Outcomes, with data (preliminary results of pilot projects are acceptable).
4. *Discussion:* Lessons learned and implications.