

## Course Description

**Credits: 3**

This course examines the study of disease in populations from a public health perspective. Topics include research methods, study designs, sampling, data analysis, interpretation of data, and application of findings for public health policy.

Prerequisites: None

## Required Textbooks and Resources

1. Friis, R. H. (2018). *Epidemiology 101* (2nd ed.). Burlington, MA: Jones & Bartlett Learning

**ISBN:** 978-1284107852      **E-Book ISBN** 978-1284143768

2. Aschengrau, A., & Seage, III, G. R. (2014). *Essentials of epidemiology in public health*. (3rd ed.). Jones and Bartlett.

**ISBN:** 978-1284028911      **E-Book ISBN** 978-1449657338

## Course Competencies

1. Apply epidemiological methods to the breadth of settings and situations in public health practice.
2. Select quantitative and qualitative data collection methods appropriate for a given public health context.
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
4. Interpret results of data analysis for public health research, policy, or practice.
5. Select communication strategies for different audiences and sectors.
6. Communicate audience-appropriate public health content, both in writing and through oral presentation.
7. Perform effectively on interprofessional teams.

## Course Calendar/Study Guide

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NOTE: Each week of the course begins on a Monday (12:00 AM) and ends on a Sunday (11:59 PM) AZ time. Please see your Canvas calendar for the equivalent time for your chosen time zone.

### Module 1

#### Module Learning Objectives:

- Define epidemiology and screening.
  - Discuss how screening is used to determine response to public health issues.
  - Complete an epidemiological simulation.
  - Discuss the simulation and its portrayal of real-world epidemiology.
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#### M1 Introduction

Welcome to the fascinating and important field of epidemiology, the basic science of public health. The objectives of epidemiology are to determine the diseases in a population, identify patterns and trends of these diseases, identify the causes, and evaluate the effectiveness of prevention and treatments.

In this course, you'll learn the key concepts of epidemiology. In addition to covering basic epidemiologic concepts, you will apply them to problems and conditions we encounter in our lives and work.

In this first module, you'll begin learning about different uses of epidemiology in public health. You will be introduced to the history of epidemiology, epidemiological terms, and the main elements of descriptive epidemiology.

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#### M1 Learning Activity 1

Read:

- Chapters 1 and 5 in the *Epidemiology 101* textbook. [22, 24 pages]
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## M1 Epidemiology at Work Discussion (50 points)

Locate and share a news article from popular media (e.g., CNN, MedLine Plus, WebMD, NPR, etc.) that illustrates one or more uses of epidemiology in public health. Provide a link to your chosen article.

Explain how the article uses epidemiology (data, measures, science, history, community health, health services, risk assessment, disease causality, etc.). How were the data or statistics collected for the article? Who conducted the epidemiological study? How does it impact the community in question? How does this information affect your future career?

In addition, discuss the epidemiological terms used in the article (e.g., mortality, prevalence, population, risk). Define the three main elements of descriptive epidemiology (person, place, and time) from the article. What other important variables are discussed?

In your response posts, discuss the articles chosen by your classmates and give new points of view on the question prompts or find other examples of news articles on the same topics.

For this discussion:

- Initial post: 350 words
- 3 response posts: 250 words each

**Learning Objectives:**

1. Define epidemiology and screening.
2. Discuss how screening is used to determine response to public health issues.

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## M1 WatersEdge Journal (30 points)

Work through the following simulation:

- Regents of the University of Minnesota. (2004). Outbreak at watersedge: A public health discovery game. Retrieved from <http://www.mclph.umn.edu/watersedge/> [There are three short videos included in the simulation. Transcripts for those videos are available in the course.]

After completing the simulation, what is your reaction to this activity? Do you think it depicts a real-world epidemiological investigation with accuracy? Why or why not? As an epidemiologist leading this investigation, what would you have done differently and why? What biostatistical and/or epidemiological measures did the simulation use, if any? What were the strengths and the weaknesses of the investigation.

Your entry should be approximately 500 words.

**Learning Objectives:**

1. Complete an epidemiological simulation.
2. Discuss the simulation and its portrayal of real-world epidemiology.

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**Module Learning Objectives:**

- Complete a series of epidemiological simulations.
  - Reflect on the concepts and ideas learned in each simulation.
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**M2 Introduction**

In this module, we'll explore descriptive epidemiology and measuring the occurrence of disease. Epidemiologic measurements describe the occurrence of diseases and conditions in populations. Measuring how often a certain disease occurs in a population is usually the first step to control it. You'll learn the common measures of disease frequency in epidemiology and some mathematical terms.

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**M2 Learning Activity 1**

Read:

- Chapters 2 and 3 in the *Epidemiology 101* textbook. [22, 18 pages]
  - Chapter 2 in the *Essentials of Epidemiology in Public Health* textbook. [26 pages]
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**M2 Learning Activity 2**

Read (available in the course):

- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of Workforce and Career Development. (2012, May). Principles of epidemiology in public health practice (3rd ed.) (Self-study course SS1978). [Read Lesson 3: Measures of Risk, Section 1: Frequency Measures; 9 pages]
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**M2 Learning Activity 3**

Watch:

- Patwari, R. (2013, July 26). *The relationship between incidence and prevalence* [Video file]. Retrieved from <https://youtu.be/1jzZe3ORdd8> [Run time: 3:40. Transcript available in the course.]
  - Stata Learner. (2013, January 22). *Week 2: Definition of prevalence* [Video file]. Retrieved from <https://youtu.be/MEfoljrxuY> [Run time: 6:00. Transcript available in the course.]
  - Stata Learner. (2013, August 24). *Week 3: Incidence intro* [Video file]. Retrieved from <https://youtu.be/WDnE7GNdWE> [Run time: 21:51. Transcript available in the course.]
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## M2 CDC Solve the Outbreak Journal (180 points)

Browse to the CDC's Solve the Outbreak game at <https://www.cdc.gov/mobile/applications/sto/sto-web.html>.

There are 12 Level 1 outbreaks/missions and you will need to complete all 12 during this course. The first is due this week. You may do the rest at any time throughout the course, but all 12 must be completed by the end of Module 10. It will be helpful to complete them in numerical order, 1-12.

After completing each mission, take a screenshot of your score. Then, create a journal entry with the title of the mission, post your screenshot, and explain what you learned from the exercise. The explanation should be approximately 250 words.

- Learning Objectives:**
1. Complete a series of epidemiological simulations.
  2. Reflect on the concepts and ideas learned in each simulation.
-

**Module Learning Objectives:**

- Compare and contrast the uses of surveillance and screening data.
  - Complete epidemiological calculations.
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**M3 Introduction**

This module focuses on screening for disease, an important method for reducing morbidity and mortality in populations. Screening programs are an important part of public health, medicine, and dentistry, so understanding screening is important for any future public health professional. In addition, you'll learn the levels of prevention and what surveillance in public health involves.

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**M3 Learning Activity 1**

Read:

- Chapters 4 and 9 in the *Epidemiology 101* textbook. [19, 13 pages]
  - Chapters 4 and 16 in the *Essentials of Epidemiology in Public Health* textbook. [22, 30 pages]
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**M3 Epidemiological Data Blog (25 points)**

Choose an example of epidemiological data (e.g., Zika, caries) and find a local/state source. Are these data the result of surveillance or screening?

Compare and contrast the uses, strengths, and weaknesses of surveillance data and screening data. Then find national data on your chosen condition and compare it to your local/state data.

Be sure to cite and reference your data sources. Your entry should be approximately 300 words.

**Learning Objective:** 1. Compare and contrast the uses of surveillance and screening data.

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**M3 Screening Test Exercise (20 points)**

In this exercise, you will calculate sensitivity, specificity, positive predictive value, and negative predictive value using the data provided.

**Learning Objective:** 1. Complete epidemiological calculations.

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**Module Learning Objectives:**

- Determine what type of study design(s) would be used in a specific example.
  - Discuss examples of study designs.
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**M4 Introduction**

Epidemiologic research can be done using different study designs, such as experimental and observational studies. Each epidemiologic study design represents a different way of collecting data and information.

This week, you will learn the main epidemiological study designs and how they relate to the science of epidemiology. You'll learn the differences between study designs, their pros and cons, and how to decide which study design to use for a public health issue.

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**M4 Learning Activity 1**

Read:

- Chapter 7 in the *Epidemiology 101* textbook. [16 pages]
  - Chapters 6-9 in the *Essentials of Epidemiology in Public Health* textbook. [30, 32, 28, 22 pages]
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**M4 Study Designs Discussion (40 points)**

Perform effectively on your Interprofessional Team to develop a study to gather more information on a specific public health topic. Briefly state your topic and which data you would need to collect (1-2 sentences). Select quantitative and qualitative data collection methods appropriate for your given public health context.

Provide feedback to your classmates on the study examples and chosen study designs. Be sure to do this for at least two classmates.

For this discussion:

- Initial post: 350 words
- 2 response posts: 250 words each

**Learning Objective:** 1. Determine what type of study design(s) would be used in a specific example.

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**M4 Study Designs Journal (30 points)**

Give an example for each type of study design: experimental, cohort, and case-control. Use peer-reviewed studies from the PubMed database and be sure to reference and provide links to these articles.

Discuss the differences, pros and cons of each study design and explain why your articles are good examples of those study designs. For the experimental study design, discuss whether randomization and blinding were used.

Your entry should be approximately 500 words.

**Learning Objective:** 1. Discuss examples of study designs.

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**Module Learning Objective:**

- Explain bias and confounding in research studies.
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**M5 Introduction**

Internal and external validity of the study results indicates if the study results are true and we can use the study results as evidence.

This week you will explore types of bias and confounding in epidemiological studies. Understanding what bias and confounding means in studies will help you to assess the validity and credibility of the evidence and become a better and more critical reader of scientific information.

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**M5 Learning Activity 1**

Read:

- Chapters 10 and 11 in the *Essentials of Epidemiology in Public Health* textbook. [28, 20 pages]

Review:

- Chapter 7, pages 160-162, in the *Essentials of Epidemiology in Public Health* textbook.
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**M5 Bias and Confounding Journal (20 points)**

Find two recent peer-reviewed articles - one a cohort study and one a randomized clinical trial design. By the end of the day Wednesday, submit these citations to your instructor for approval to use in this journal.

Review these studies and identify and discuss any potential bias and/or confounding. If neither are identified, explain how the studies avoided bias (including selection, performance, detection, attrition, and publication bias). Define confounding and give an example of how these studies may have been confounded.

Your entry should be approximately 300 words.

**Learning Objective:** 1. Explain bias and confounding in research studies.

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**Module Learning Objectives:**

- Discuss risk factors and risk assessment.
  - Discuss the use of Hill's Criteria in epidemiology.
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**M6 Introduction**

In Module 6, we'll talk about analytic epidemiology and the concepts of association and causality. When a certain exposure is associated with the outcome, it does not necessarily mean the exposure is *causing* the outcome.

You will learn the criteria for assessing causality and how association is different from the causal relationship. In addition, you will learn about risk and how risk factors can relate to diseases.

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**M6 Learning Activity 1**

Read:

- Chapter 15 in the *Essentials of Epidemiology in Public Health* textbook. [28 pages]

Review:

- Chapter 6 in the *Epidemiology 101* textbook.
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**M6 Learning Activity 2**

Read the articles (available in the course):

- Burt, B. A. (2005, August). Concepts of risk in dental public health. *Community Dentistry and Oral Epidemiology*, 33(4), 240-247. [8 pages]
  - Burt, B. A. (2001). Definitions of risk. *Journal of Dental Education*, 65(10), 1007-1008. [2 pages]
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**M6 Learning Activity 3**

Read the articles:

- Centers for Disease Control and Prevention. (2016). CDC concludes Zika causes microcephaly and other birth defects. Retrieved from <https://www.cdc.gov/media/releases/2016/s0413-zika-microcephaly.html> [2 pages]
  - Rasmussen, S. A., Jamieson, D. J., Honein, M. A., & Petersen, L. R. (2016). Zika virus and birth defects - reviewing the evidence for causality. *New England Journal of Medicine*, 374(20), 5. Retrieved from <http://www.nejm.org/doi/full/10.1056/NEJMSr1604338> [12 pages]
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**M6 Sign up for M7 Critical Review Discussion Sessions**

In the course calendar, sign up for your preferred time(s) to meet with your instructor and classmates next week to discuss your M7 Critical Review Paper.

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### **M6 Risk Discussion (50 points)**

Choose a disease (e.g., cancer, caries, oral cancer) and give examples of specific risk factors related to this disease. Discuss how risk assessment can be applied for this disease/condition to aid in disease prevention and/or treatment.

For this discussion:

- Initial post: 350 words
- 3 response posts: 250 words each

**Learning Objective:** 1. Discuss risk factors and risk assessment.

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### **M6 Zika and Hill's Criteria Paper (100 points)**

Using the information in the CDC and Rasmussen et al. articles in this module's learning activities, discuss how the first five of Hill's Criteria were applied to the relationship between the Zika virus and microcephaly. Which criterion was not met? How important is it that this one criterion was not met? Find another recent study (no older than 2016) that may support the CDC conclusions.

This paper should be approximately three pages, not including title page and references and be written following current APA style guidelines.

**Learning Objective:** 1. Discuss the use of Hill's Criteria in epidemiology.

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**Module Learning Objective:**

- Use the CASP checklist to evaluate the research study.
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**M7 Introduction**

Critical appraisal of literature is an important skill for any public health professional, because the findings of epidemiologic research inform and influence many decisions, practice, and programs. Quality, evidence-based care and decision making should be based on the best evidence, and learning to critically assess the available evidence is an important part of it.

In this module, you'll learn about the critical appraisal process and evidence-based practice.

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**M7 Learning Activity 1**

Read:

- Chapter 14 in the *Essentials of Epidemiology in Public Health* textbook. [26 pages]
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**M7 Learning Activity 2**

Read the articles (available in the course):

- Autio-Gold, J. T., & Courts, F. (2001). Assessing the effect of fluoride varnish on early enamel carious lesions in the primary dentition. *Journal of the American Dental Association*, 132(9), 1247-1253. [7 pages]
  - Brignardello-Petersen, R., Carrasco-Labra, A., Glick, M., Guyatt, G. H., & Azarpazhooh, A. (2015). A practical approach to evidence-based dentistry: III: How to appraise and use an article about therapy. *Journal of the American Dental Association*, 146(1), 42-49. [9 pages]
  - Carrasco-Labra, A., Brignardello-Petersen, R., Azarpazhooh, A., Glick, M., & Guyatt, G. H. (2015). A practical approach to evidence-based dentistry: X: How to avoid being misled by clinical studies' results in dentistry. *Journal of the American Dental Association*, 146(12), 919-924. [6 pages]
  - Carrasco-Labra, A., Brignardello-Petersen, R., Glick, M., Guyatt, G. H., & Azarpazhooh, A. (2015). A practical approach to evidence-based dentistry: VI: How to use a systematic review. *Journal of the American Dental Association*, 146(4), 255-265. [12 pages]
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**M7 Learning Activity 3**

Explore the websites:

- Centre for Evidence-Based Dentistry. (n.d.). <http://www.cebd.org>
  - Centre for Evidence-Based Medicine. (n.d.). <http://www.cebm.net/>
  - Critical Appraisal Skills Programme. (n.d.). <http://www.casp-uk.net/>
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## M7 Learning Activity 4

Watch:

• American Dental Association, Center for Evidence-Based Dentistry. (n.d.). *EBD educational tutorials* [Video files]. Retrieved from <http://ebd.ada.org/en/education/tutorials>. This series is located near the bottom of the web page. Please view the following tutorials:

- *Module 1, Lesson 1: What is EBD?* [Run time: 10:20. Transcript available in the course.]
- *Module 2, Lesson 1: What is null hypothesis?* [Run time: 4:59. Transcript available in the course.]
- *Module 2, Lesson 2: Why do we need statistics?* [Run time: 6:09. Transcript available in the course.]
- *Module 2, Lesson 3: What are the different types of data?* [Run time: 7:33. Transcript available in the course.]
- *Module 2, Lesson 4: What is a p-value?* [Run time: 7:58. Transcript available in the course.]
- *Module 2, Lesson 5: What is confidence interval?* [Run time: 6:15. Transcript available in the course.]

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## M7 Critical Review Discussion Sessions (30 points)

Appraise the Autio-Gold & Courts article from this module's learning activities using the CASP checklist for randomized clinical trials at [http://docs.wixstatic.com/ugd/dded87\\_4239299b39f647ca9961f30510f52920.pdf](http://docs.wixstatic.com/ugd/dded87_4239299b39f647ca9961f30510f52920.pdf). Answer each question and justify your answer with 1-2 sentences. For Section C questions, your local population can be from your community, dental school, or future practice.

You will discuss the answers to these questions in a live, synchronous discussion with your classmates and instructor, based upon the time slot you selected.

**Learning Objective:** 1. Use the CASP checklist to evaluate the research study.

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## M7 Critical Review Paper (90 points)

After participating in your synchronous Critical Review Session, review the article used for the M7 Critical Review Discussion Session. Revise the answers you prepared for the session that answer the following:

Appraise this article using the CASP checklist for randomized clinical trials at [http://docs.wixstatic.com/ugd/dded87\\_4239299b39f647ca9961f30510f52920.pdf](http://docs.wixstatic.com/ugd/dded87_4239299b39f647ca9961f30510f52920.pdf). Answer each question and justify your answer with 1-2 sentences. For Section C questions, your local population can be from your community, dental school, or future practice.

This paper should be approximately three pages, not including title page and references.

**Learning Objective:** 1. Use the CASP checklist to evaluate the research study.

**Module Learning Objectives:**

- Describe the steps to investigate an epidemiological incident.
  - Explain the differences between cases, outbreaks, epidemics, and pandemics.
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**M8 Introduction**

An outbreak occurs when more cases of a disease appear than were expected. Health departments and hospitals investigate these occurrences and cases in a systematic manner. This week you'll learn about the epidemiology of infectious diseases and outbreak investigation.

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**M8 Learning Activity 1**

Read:

- Chapter 10 in the *Epidemiology 101* textbook. [24 pages]

Review:

- Chapter 3, page 57, in the *Epidemiology 101* textbook.
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**M8 Learning Activity 2**

Read (available in the course):

- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of Workforce and Career Development. (2012, May). Principles of epidemiology in public health practice (3rd ed.) (Self-study course SS1978). [Read Lesson 6: Investigating an outbreak; 74 pages]
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**M8 Learning Activity 3**

Read the articles:

- Kravarik, J. (2016, October 12). Bacteria in dentist's water sends 30 kids to hospital. Retrieved from <http://www.cnn.com/2016/10/11/health/california-dental-water-bacteria/index.html> [4 pages]
  - National Public Radio. (2016, September 30). Infection outbreak shines light on water risks at dentists offices. Retrieved from <http://www.npr.org/sections/health-shots/2016/09/30/495802487/infection-outbreak-shines-light-on-water-risks-at-dentists-offices> [6 pages]
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### **M8 Outbreaks, Epidemics, and Pandemics Discussion (50 points)**

Assume you are the local public health authority. How would you explain to a member of the public the differences between a case, an outbreak, an epidemic, and a pandemic? Give examples of each of these. Take into consideration specific local factors, such as major international airports, travel policies, hospitals and major medical centers, etc. that might influence your community's exposure.

For this discussion:

- Initial post: 350 words
- 3 response posts: 250 words each

**Learning Objective:** 1. Explain the differences between cases, outbreaks, epidemics, and pandemics.

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### **M8 Case Study Paper (100 points)**

Based upon the articles from CNN and NPR, apply epidemiological methods to the breadth of settings and situations found in public health practice. For each step, outline and describe in a few sentences what it involves and what needs to be considered.

This paper should be approximately three pages, not including the title page and references.

**Learning Objective:** 1. Describe the steps to investigate an epidemiological incident.

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**Module Learning Objectives:**

- Debate the use of e-cigarettes with classmates.
  - Write a letter to a governmental official in support of a sugar tax policy.
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**M9 Introduction**

As public health professionals, we deal with policies and programs. Epidemiological data, methods, and principles are used for policy development and management of public health programs.

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**M9 Learning Activity 1**

Read:

- Chapter 8 in the *Epidemiology 101* textbook. [17 pages]
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**M9 Learning Activity 2**

Read:

- American Nonsmokers' Rights Foundation. (n.d.). Electronic smoking devices (ESDs): Not safe for use in smokefree spaces. Retrieved from <http://www.no-smoke.org/getthefacts.php?id=824> [2 pages]
  - American Public Health Association. (2012, October 30). Taxes on sugar-sweetened beverages. Retrieved from <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/23/13/59/taxes-on-sugar-sweetened-beverages> [12 pages]
  - Babb, S., Malarcher, A., Schauer, G., Asman, K., & Jamal, A. (2017, January 6). Quitting smoking among adults - United States, 2000-2015. *Morbidity and Mortality Weekly Report*, 65(52), 1457-1464. Retrieved from [https://www.cdc.gov/mmwr/volumes/65/wr/mm6552a1.htm?s\\_cid=mm6552a1\\_w](https://www.cdc.gov/mmwr/volumes/65/wr/mm6552a1.htm?s_cid=mm6552a1_w) [22 pages]
  - FDI World Dental Federation. (2016). Sugars and dental caries: A practical guide to reduce sugars consumption and curb the epidemic of dental caries. Retrieved from [https://www.fdiworlddental.org/sites/default/files/media/resources/sugar\\_toolkit-fdi-2016.pdf](https://www.fdiworlddental.org/sites/default/files/media/resources/sugar_toolkit-fdi-2016.pdf) [36 pages]
  - Huan, F. I., & Stolley, P. (2004). Epidemiology and public health policy: Using the smoking ban in New York City bars as a case study. Retrieved from [http://yes-competition.org/media.collegeboard.com/digitalServices/pdf/yes/4297\\_MODULE\\_24.pdf](http://yes-competition.org/media.collegeboard.com/digitalServices/pdf/yes/4297_MODULE_24.pdf) [16 pages]
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### M9 Learning Activity 3

Explore the websites:

- U.S. Department of Health and Human Services. (n.d.). Resources to learn more about e-cigarette use among youth and young adults | Know the risks: E-cigarettes and young people | U.S. surgeon general's report. Retrieved from <https://e-cigarettes.surgeongeneral.gov/resources.html>
- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (n.d.). CDC - information by topic - policy and legislation - smoking & tobacco use. Retrieved from [https://www.cdc.gov/tobacco/data\\_statistics/by\\_topic/policy/index.htm](https://www.cdc.gov/tobacco/data_statistics/by_topic/policy/index.htm)
- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (n.d.). Home | STATE System | CDC. Retrieved from <https://www.cdc.gov/STATESystem/>

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### M9 E-Cigarette Debates (35 points)

This week your instructor will divide the class into groups, and assign students to take the position either for or against the use of e-cigarettes. Read this week's announcement from your instructor to know which group and which position you have been assigned.

Within your group, debate the e-cigarette policy statement at <http://www.no-smoke.org/getthefacts.php?id=824>. Based on this source, and other sources you find, prepare your arguments either for or against the policy.

You may find it helpful to choose a specific state and review the data on tobacco use, policies, and legislation from that state. Epidemiologic data can be found at [https://nccd.cdc.gov/STATESystem/rdPage.aspx?rdReport=OSH\\_STATE.Highlights](https://nccd.cdc.gov/STATESystem/rdPage.aspx?rdReport=OSH_STATE.Highlights). Another source of information is <https://e-cigarettes.surgeongeneral.gov/resources.html>

For this discussion:

- Initial post: 350 words
- 3 response posts: 250 words each

**Learning Objective:** 1. Debate the use of e-cigarettes with classmates.

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### M9 Sugar Tax Policy Letter (100 points)

Write a letter to your specific state government representative, making a case for a Sugar Tax Policy for your state. Give statistics and data to support your arguments (e.g., obesity, dental caries, diabetes, heart health).

This letter needs to be 2-3 pages with at least five references.

**Learning Objective:** 1. Write a letter to a governmental official in support of a sugar tax policy.



**Module Learning Objective:**

- Discuss the opioid epidemic, including preventive strategies and programs at the state level.
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**M10 Introduction**

Epidemiology is a complex science involving many social and behavioral factors that affect health, including social disparities, stress, and negative lifestyle practices, such as tobacco use and substance abuse. Communicating information regarding social and behavioral factors to the public is an important part of public health.

In this last module of the course, you'll learn about the communication of public health issues and social and behavioral epidemiology.

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**M10 Learning Activity 1**

Read:

- Chapter 11 in the *Epidemiology 101* textbook. [20 pages]
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**M10 Learning Activity 2**

Read the articles:

- Gordon, E. (2017, February 26). Dentists work to ease patients' pain with fewer opioids. Retrieved from <http://www.npr.org/sections/health-shots/2017/02/26/513865623/dentists-work-to-ease-patients-pain-with-fewer-opioidsda.org/en/advocacy/advocacy-issues/prescription-opioid-abuse> [6 pages]
  - Park, H., & Bloch, M. (2016, January 19). How the epidemic of drug overdose deaths rippled across America. *The New York Times*. Retrieved from <https://www.nytimes.com/interactive/2016/01/07/us/drug-overdose-deaths-in-the-us.html> [4 pages]
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**M10 Learning Activity 3**

Explore the websites:

- American Dental Association. (n.d.). Prescription opioid abuse. Retrieved from <http://www.ada.org/en/advocacy/advocacy-issues/prescription-opioid-abuse>
  - U.S. Department of Health and Human Services. (n.d.). About the epidemic. Retrieved from <https://www.hhs.gov/opioids/about-the-epidemic/index.html>
  - U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (n.d.). Understanding the epidemic | Drug overdose. Retrieved from <https://www.cdc.gov/drugoverdose/epidemic/index.html>
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## M10 Learning Activity 4

Watch:

- New York Times, Retro Report. (n.d.). *Surviving heroin* [Video file]. Retrieved from <https://www.nytimes.com/video/us/100000004052626/surviving-heroin.html> [Run time: 2:17. Transcript available in the course.]
- NBC News. (2017, June 21). *Hooked: How opioid abuse starts at the dentist for many Americans* [Video file]. Retrieved from <http://www.nbcnews.com/nightly-news/video/hooked-how-opioid-abuse-starts-at-the-dentist-for-many-americans-710032451882> [Run time: 2:24. Video is closed-captioned. Transcript available in the course.]

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## M10 Opioid Epidemic Discussion (50 points)

Discuss the opioid epidemic, causes, data sources, solutions, and any personal reflections. Find other related recent news articles in the popular media. What kinds of preventive strategies or programs does your state have for opioid overuse? Support your data, statistics, and facts with appropriate references.

For this discussion:

- Initial post: 350 words
- 3 response posts: 250 words each

**Learning Objective:** 1. Discuss the opioid epidemic, including preventive strategies and programs at the state level.

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## Student Resources

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Make sure you are aware of all course policies in the following links. The link to these resources is available in each course using the CGHS Resources link on the course menu.

- Academic Guidelines: [https://guides.atsu.edu/CGHSStudentResources/Academic\\_Guidelines](https://guides.atsu.edu/CGHSStudentResources/Academic_Guidelines)
- Academic Integrity: [https://guides.atsu.edu/CGHSStudentResources/Academic\\_Integrity](https://guides.atsu.edu/CGHSStudentResources/Academic_Integrity)
- Calendar: <https://www.atsu.edu/academic-calendar>
- Career Services: <https://sites.google.com/a/atsu.edu/cghs-career-services/>
- CGHS Home Page: [http://guides.atsu.edu/CGHS\\_Programs](http://guides.atsu.edu/CGHS_Programs)
- Competency Definitions:  
[https://guides.atsu.edu/CGHSStudentResources/Program\\_Links\\_Competencies](https://guides.atsu.edu/CGHSStudentResources/Program_Links_Competencies)
- Contact Information: [https://guides.atsu.edu/CGHSStudentResources/ATSU\\_Services](https://guides.atsu.edu/CGHSStudentResources/ATSU_Services)
- Discussion Boards: [https://guides.atsu.edu/CGHSStudentResources/Blogs\\_Discussions](https://guides.atsu.edu/CGHSStudentResources/Blogs_Discussions)
- Getting Started: [https://guides.atsu.edu/CGHSStudentResources/Getting\\_Started](https://guides.atsu.edu/CGHSStudentResources/Getting_Started)
- Graduation: <https://guides.atsu.edu/CGHSStudentResources/Graduation>
- Library: <https://www.atsu.edu/library>
- Program Links: [https://guides.atsu.edu/CGHSStudentResources/Program\\_Links\\_Competencies](https://guides.atsu.edu/CGHSStudentResources/Program_Links_Competencies)
- Student Catalog: <https://catalog.atsu.edu/content.php?catoid=7&navoid=199>
- Student Handbook: <https://www.atsu.edu/pdf/atsu-student-handbook.pdf>
- Student Support: [https://guides.atsu.edu/CGHSStudentResources/Student\\_Support](https://guides.atsu.edu/CGHSStudentResources/Student_Support)
- Technology, Accessibility, and Privacy:  
[https://guides.atsu.edu/CGHSStudentResources/Technology\\_Accessibility](https://guides.atsu.edu/CGHSStudentResources/Technology_Accessibility)
- Textbooks: <https://guides.atsu.edu/CGHSStudentResources/Textbooks>
- Writing Center: <https://sites.google.com/a/atsu.edu/online-writing-center/>

## Grading Scale

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A = 90 to 100%  
B = 80 to 89.9%  
C = 70 to 79.9%  
F = 0 to 69.9%

Scores are not rounded up to the nearest whole number.

## Student Conduct

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ATSU students are expected to abide by two important codes: the Code of Academic Conduct (<https://catalog.atsu.edu/content.php?catoid=10&navoid=306#codeofacademicconduct>) and the Code of Behavioral Standards (<https://catalog.atsu.edu/mime/media/view/12/404/USH%202019-20.pdf>). The codes establish minimal expectations of students and serve as guidelines for professional behavior. Inappropriate behavior is subject to sanctions. Information on student academic and disciplinary codes and processes can be found in the ATSU University Catalog. For more information visit: <https://catalog.atsu.edu/index.php>

## Posting of Grades by Faculty

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The public posting of grades either by the student's name, school identification number, or social security number without the student's prior written consent is a violation of FERPA. This includes the posting of grades to a class website and applies to any public posting of grades for students taking distance education courses. Instructors who wish to post grades should use a system that ensures that FERPA requirements are met. This can be accomplished by obtaining the student's written consent or by using a unique identifier known only to the student and the instructor. The order of posting **should not** be alphabetic. For more information visit: <https://www.atsu.edu/department-of-student-affairs/enrollment-services/my-academics#ferpa-student-privacy>

## **Students with Disabilities**

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Learning & Disability Resources (LADR) supports ATSU students with disabilities by determining eligibility and coordinating necessary academic adjustments (accommodations), while maintaining the standards of the University. Any student seeking academic adjustments to accommodate limitations due to a documented disability is required to register with LADR. ATSU faculty will not provide disability-related academic adjustments without referral to and notice from LADR. To register, or to discuss adjustments and services as they may apply to your individual situation, please contact LADR at [disabilityresources@atsu.edu](mailto:disabilityresources@atsu.edu), 660.626.2774 Missouri campus, or 480.245.6248 Arizona campus. For more information visit: <https://www.atstu.edu/ladr>

## **Accessibility**

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ATSU uses Canvas to deliver all online courses. For more information on Canvas accessibility, go to <https://www.canvaslms.com/accessibility>. Information to assist students in navigating within Canvas is available at <https://community.canvaslms.com/docs/DOC-2061-accessibility-within-canvas>

## **Permissions**

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Permission for use of all journal articles within this course is provided via access rights through the A.T. Still Memorial Library.

## **Important**

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This course syllabus is an agreement between you and the instructor. You will be held accountable for what is in this syllabus and all content within the Canvas LMS. If you have any questions, do not hesitate to ask your instructor.

## **Title IX Reporting: Discrimination, Harassment, Trauma, Stress**

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If you inform a faculty member of issues regarding harassment, violence or discrimination, it is his/her duty to inform Student Affairs, Human Resources or ATSU's Title IX office. A student may also report concerns directly to these offices.

A range of resources are available within the University to assist any student struggling with trauma or stress. The Student Affairs website includes information about resources such as: counseling, self-help, student handbook, catalogs, etc.

For assistance or more information contact:

HUMAN RESOURCES - 660.626.2790 ([hr@atsu.edu](mailto:hr@atsu.edu))

STUDENT AFFAIRS - 660.626.2236 / 480.248.8137 (<https://www.atstu.edu/department-of-student-affairs>)

TITLE IX OFFICE - [660.626.2113](tel:660.626.2113) ([titleix@atsu.edu](mailto:titleix@atsu.edu))

## Course Competency Map

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Listed below each course competency is the associated program, national, and/or ATSU competency. Please see [https://guides.atsu.edu/CGHSSStudentResources/Program\\_Links\\_Competencies](https://guides.atsu.edu/CGHSSStudentResources/Program_Links_Competencies) for more information.

### 1. Apply epidemiological methods to the breadth of settings and situations in public health practice.

#### Associated Program/ATSU Competencies

- ATSU: Critical Thinking
- MPH1

#### Course Items

- M1 Learning Activity 1
- M1 Epidemiology at Work Discussion
- M1 WatersEdge Journal
- M2 Learning Activity 1
- M2 Learning Activity 2
- M2 Learning Activity 3
- M2 CDC Solve the Outbreak Journal
- M3 Learning Activity 1
- M3 Epidemiological Data Blog
- M3 Screening Test Exercise
- M4 Learning Activity 1
- M4 Study Designs Discussion
- M4 Study Designs Journal
- M5 Learning Activity 1
- M5 Bias and Confounding Journal
- M6 Learning Activity 1
- M6 Learning Activity 2
- M6 Learning Activity 3
- M6 Risk Discussion
- M6 Zika and Hill's Criteria Paper
- M7 Learning Activity 1
- M7 Learning Activity 2
- M7 Learning Activity 3
- M7 Learning Activity 4
- M7 Critical Review Discussion Sessions
- M7 Critical Review Paper
- M8 Learning Activity 1
- M8 Learning Activity 2
- M8 Learning Activity 3
- M8 Case Study Paper
- M8 Outbreaks, Epidemics, and Pandemics Discussion
- M9 Learning Activity 1
- M9 Learning Activity 2
- M9 Learning Activity 3
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter
- M10 Learning Activity 1
- M10 Learning Activity 2
- M10 Learning Activity 3
- M10 Learning Activity 4
- M10 Opioid Epidemic Discussion

**2. Select quantitative and qualitative data collection methods appropriate for a given public health context.**

**Associated Program/ATSU Competencies**

- ATSU: Critical Thinking
- MPH2

**Course Items**

- M1 Learning Activity 1
- M1 WatersEdge Journal
- M2 Learning Activity 1
- M2 Learning Activity 2
- M2 Learning Activity 3
- M2 CDC Solve the Outbreak Journal
- M3 Learning Activity 1
- M3 Epidemiological Data Blog
- M4 Learning Activity 1
- M4 Study Designs Discussion
- M4 Study Designs Journal
- M8 Learning Activity 1
- M8 Learning Activity 2
- M8 Learning Activity 3
- M8 Case Study Paper

**3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.**

**Associated Program/ATSU Competencies**

- ATSU: Critical Thinking
- MPH3

**Course Items**

- M1 Learning Activity 1
- M1 WatersEdge Journal
- M2 Learning Activity 1
- M2 Learning Activity 2
- M2 Learning Activity 3
- M2 CDC Solve the Outbreak Journal
- M3 Learning Activity 1
- M3 Epidemiological Data Blog

#### 4. Interpret results of data analysis for public health research, policy, or practice.

##### Associated Program/ATSU Competencies

- ATSU: Critical Thinking
- ATSU: Interprofessional Collaboration
- ATSU: Social Responsibility
- MPH4

##### Course Items

- M1 Learning Activity 1
- M1 Epidemiology at Work Discussion
- M1 WatersEdge Journal
- M2 Learning Activity 1
- M2 Learning Activity 2
- M2 Learning Activity 3
- M2 CDC Solve the Outbreak Journal
- M3 Learning Activity 1
- M3 Epidemiological Data Blog
- M5 Learning Activity 1
- M5 Bias and Confounding Journal
- M6 Learning Activity 1
- M6 Learning Activity 2
- M6 Learning Activity 3
- M6 Risk Discussion
- M6 Zika and Hill's Criteria Paper
- M7 Learning Activity 1
- M7 Learning Activity 2
- M7 Learning Activity 3
- M7 Learning Activity 4
- M7 Critical Review Discussion Sessions
- M7 Critical Review Paper
- M8 Learning Activity 1
- M8 Learning Activity 2
- M8 Learning Activity 3
- M8 Outbreaks, Epidemics, and Pandemics Discussion
- M9 Learning Activity 1
- M9 Learning Activity 2
- M9 Learning Activity 3
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter
- M10 Learning Activity 1
- M10 Learning Activity 2
- M10 Learning Activity 3
- M10 Learning Activity 4
- M10 Opioid Epidemic Discussion

## **5. Select communication strategies for different audiences and sectors.**

### **Associated Program/ATSU Competencies**

- ATSU: Critical Thinking
- ATSU: Interpersonal Skills
- MPH11

### **Course Items**

- M8 Learning Activity 1
- M8 Learning Activity 2
- M8 Learning Activity 3
- M8 Outbreaks, Epidemics, and Pandemics Discussion
- M9 Learning Activity 1
- M9 Learning Activity 2
- M9 Learning Activity 3
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter

## **6. Communicate audience-appropriate public health content, both in writing and through oral presentation.**

### **Associated Program/ATSU Competencies**

- ATSU: Critical Thinking
- ATSU: Interpersonal Skills
- ATSU: Social Responsibility
- MPH19

### **Course Items**

- M8 Learning Activity 1
- M8 Learning Activity 2
- M8 Learning Activity 3
- M8 Outbreaks, Epidemics, and Pandemics Discussion
- M9 Learning Activity 1
- M9 Learning Activity 2
- M9 Learning Activity 3
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter

## **7. Perform effectively on interprofessional teams.**

### **Associated Program/ATSU Competencies**

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### **Course Items**

- M4 Study Designs Discussion



## **ATSU Course Competency Map**

### **ATSU: Critical Thinking**

#### **Course Items**

- M1 Epidemiology at Work Discussion
- M1 WatersEdge Journal
- M2 CDC Solve the Outbreak Journal
- M3 Epidemiological Data Blog
- M3 Screening Test Exercise
- M4 Study Designs Discussion
- M4 Study Designs Journal
- M5 Bias and Confounding Journal
- M6 Risk Discussion
- M6 Zika and Hill's Criteria Paper
- M7 Critical Review Discussion Sessions
- M7 Critical Review Paper
- M8 Case Study Paper
- M8 Outbreaks, Epidemics, and Pandemics Discus:
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter
- M10 Opioid Epidemic Discussion

### **ATSU: Interpersonal Skills**

#### **Course Items**

- M1 WatersEdge Journal
- M2 CDC Solve the Outbreak Journal
- M7 Critical Review Discussion Sessions
- M8 Outbreaks, Epidemics, and Pandemics Discus:
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter

### **ATSU: Interprofessional Collaboration**

#### **Course Items**

- M8 Outbreaks, Epidemics, and Pandemics Discus:
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter

### **ATSU: Social Responsibility**

#### **Course Items**

- M1 Epidemiology at Work Discussion
- M1 WatersEdge Journal
- M2 CDC Solve the Outbreak Journal
- M3 Epidemiological Data Blog
- M6 Risk Discussion
- M7 Critical Review Discussion Sessions
- M8 Outbreaks, Epidemics, and Pandemics Discus:
- M9 E-Cigarette Debates
- M9 Sugar Tax Policy Letter
- M10 Opioid Epidemic Discussion

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