



School of Public Health

- Course Title:** Using Public Health Surveillance to Assess Public Health Needs
- Course Number:** EPID-0721J
- Course Location:** Online/Zoom
<https://lt.rutgers.edu/canvas>
Class lectures, readings, assignments, syllabus updates, and resources will be posted and updated regularly. *It is critical that you check the Canvas site regularly to ensure that you don't miss important updates or supplementary class material.*
- Help with technical problems with Canvas is available 24/7: Email help@canvas.rutgers.edu or call: 877-361-1134
- Course Date & Time:** September 6th to December 21st
Tuesdays
- Course Instructor:** **Josephine Shenouda, DrPH, MS**
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- Office Hours:** [By appointment](#)
- Required Text:** Lee & Teutsch, Principles and Practice of Public Health surveillance, 3rd Edition, 2010
- Recommended Text:** Justin Gest, Mass Appeal: Communicating Policy Ideas in Multiple Media, 2020
Geoffrey Rose, Rose's Strategy of Preventative Medicine, 2008

Course Description: Public Health Surveillance is a core function of public health practice. Surveillance is performed to recognize new diseases, injuries and hazards, and to monitor existing public health issues by tracking trends and estimating the scope of these issues. This course will discuss the evolution of public health surveillance efforts, the types of surveillance efforts currently in use, and the legal and ethical issues at play when surveilling populations. Students will learn how to evaluate surveillance efforts, analyze surveillance data, and communicate findings to a broad audience. Articles from CDC's Morbidity and Mortality Weekly Report will be discussed to familiarize students with a variety of public health issues and surveillance data. Assignments will ask students to research and present information on public health issues they care about to help students develop and further their interests.

Selected Concentration Competencies Addressed: Each Concentration identifies competencies for each degree offered. The competencies addressed in this course for the DrPH in Leadership, Practice and Research are:

Explain the use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs and to address a population's health. Communicate public health science to diverse stakeholders, including individuals at all levels of health literacy, for purposes of influencing behavior and policies.

Please visit the Concentration webpages on the School of Public Health's website at sph.rutgers.edu for additional competencies addressed by this course for other degrees and concentrations.

Course Objectives: By the completion of this course, students will be able to:

- 1) Describe different types of surveillance efforts in the United States.
- 2) Identify the strengths and weaknesses of current public health surveillance efforts
- 3) Design a surveillance program to monitor a public health issue.
- 4) Present the findings from surveillance data to a broad audience.
- 5) Provide constructive feedback to peers and incorporate feedback from others as a part of the creative process.

Course Requirements and Grading:

Surveillance Summaries: Throughout the semester, you must read 2 of the CDC's MMWR Surveillance Summaries (https://www.cdc.gov/mmwr/indss_2019.html) or listen to 2 podcasts at <https://tools.cdc.gov/medialibrary/index.aspx#/podcastseries/id/302084> (in addition to those already assigned) and summarize the findings for the class. At the beginning of the semester, we will discuss these sources and you will be able to identify the summaries you would like to review (this will allow the class to cover the widest swath of material without duplicating effort). Please provide information that summarizes the problem, outlines the type of surveillance being performed, identifies the primary findings, and discusses interventions of public health actions that can be taken. Responses should be 1-2 pages in length and should be made available to classmates.

Press Release Communicating Surveillance Findings: You will be given a brief that discusses a surveillance effort monitoring a public health issue and a set of tables with data on a number of outcomes measured by this effort. In a 2 page 'executive summary' style paper, summarize the findings of surveillance data and discuss the 'take-away' points; please focus on interpreting the data for a general audience that includes government officials, medical and public health professionals, researchers, as well as a lay audience. You may want to produce graphics that provide visual interest and are easily understood by the reader.

Group Project: Working in a group of 2-3 people, identify a public health issue that you are passionate about. Summarize available surveillance efforts and assess the quality of these efforts. Analyze surveillance data that are currently available and interpret these findings. Based on these data, design an intervention to reduce the incidence, prevalence, and/or severity of the issue. Your project should address the following concepts:

- Scope: percentage of population covered by surveillance, ability to generalize knowledge gained from surveillance, relative significance of problem
- Population: who is at risk, what increases risk within the population, are there groups that are easier/ harder to serve, does surveillance and intervention need to be tailored for specific groups Page 5 Rutgers, The State University of New Jersey
- Knowledge: what information we currently have about this issue and what information we still need, the ability of surveillance programs to provide information critical to creating interventions/ reduce incidence/prevalence of the issue, what types of surveillance are required to provide necessary data
- Processes: what factors mitigate the incidence/ prevalence/ severity of the issue, how should the

intervention be delivered (at school, through community-based organizations, through policies mandating participation, etc)

• Outcomes: what should the intervention accomplish (what would constitute success), what metrics need to be tracked and how often

The project will consist of 3 components:

1. A 20-25 minute Powerpoint presentation (presented at the last 2 classes).
2. Written feedback provided to 3 different groups on their presentations (within 3 days of presentation). Feedback should be constructive in nature.
3. A 3-5 page paper describing revisions to your project based on the feedback you received.

Discussions: We will have a total of 4 discussion. All students will be asked to read the discussion board for current topics, article and question. Each student is to provide a unique post and a response to one other student's post. The Discussion Grade will be based on participation in the class discussions– including number of posts, thoughtfulness of comments and relevancy to public health surveillance. The Discussion grades are assigned on a 3-level scale. The main determinant of discussion grades is effort and content (see detail below): **Have you participated actively and on time?** Are you trying to apply what you are learning to the discussion?

Discussion Board Grading Rubric:

Contributions Description

Provocative Goes beyond simply answering the prompt; relevant to epidemiology and concepts learned in class; attempts to stimulate further thought & discussion; respectful of other's posts

Substantial Response provides most of the content required by the prompt, but does not require further analysis of the subject, some relevancy to public health and epidemiology

Superficial Response provides obvious information without further analysis of the concept; lacks depth of knowledge or reasoning; very little public health application

None No response provided to the prompt within the associated timeframe

Communication: You can ask (and answer!) questions by posting them on Canvas. Students are encouraged to get to know each other and contribute their particular strengths, expertise, and experience to enrich the class. Working with your classmates, explaining concepts to each other, and interacting with your instructors are the most effective ways to understand the principles of epidemiology and succeed in this course. ***By posting questions on Canvas (rather than via email) the entire class has the benefit of learning from the discussions so please consider posting as a first option.*** Students may also use Canvas e-mail to send questions to the instructors or other students. By using Canvas, the instructors can make sure that course-related questions are responded to. The instructor will make every effort to respond within 24 hours, either directly to the student or by posting to the discussion section for the entire class. Students who would like to speak to the instructor by phone or in-person should make an appointment via e-mail.

Final letter grades are based on the total average weighted percentage as shown below:

	Honor code	1%
	Assignments	13%
	Class Participation	10%
	Press Release Communicating Surveillance Data Findings	10%
	Surveillance Summaries (2)	10%
	Project 1a: Design a surveillance system – Group Presentations	20%
	Discussions (3)	15%
	Project 1b: Feedback & Final Report	20%
	Course Evaluation	1%

Grading scale:

94 – 100	A	80	– <84	B-
90 – <94	A-	77	– <80	C+
87 – <90	B+	70	– <77	C
84 – <87	B	<70		F

*Grades will NOT be rounded.

POLICIES AND FURTHER INFORMATION

School of Public Health Honor Code: The School of Public Health Honor Code is found in the student bulletin (rutgers.edu/academics/catalog/index.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another’s work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the school community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Students with Disabilities: Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student must Apply for Services by first completing a Registration Form with the Rutgers Office of Disability Services (ODS) at <https://ods.rutgers.edu>. The student will also be required to participate in an ODS intake interview and provide documentation. If reasonable accommodations are granted, ODS will provide you with a Letter of Accommodations which should be shared with your instructors as early in your courses as possible.

Graduate Student Computer Policy: Students are required to possess a personal laptop, no older than approximately two years, that must meet minimum requirements which may be found online at: rutgers.edu/student_life/computer_requirements.html

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom

lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.

Withdrawal/Refund Schedule: Students who stop attending their course(s) without processing an [Add/Drop Course](#) form will receive a failing grade. Furthermore, students dropping to zero credits for the semester are considered withdrawn and must submit a completed [Leave of Absence](#) form from the School of Public Health's Office of Student Affairs. The School of Public Health refunds tuition only. Administrative and technology fees are non-refundable. You may find the Withdrawal/Refund Schedule on the School of Public Health website at:

<https://sph.rutgers.edu/academics/academic-calendar.html>

Important Dates to Remember: For this course, **September 19th** is the last day to add a course to existing schedule and **September 19th** is the last day to drop course w/o "W" grade if not withdrawing in full.

November 14th is the last day to withdraw with a grade of W.

Special Circumstances During COVID-19 (For Fall 2022)

The School of Public Health recognizes that students may experience challenges or be negatively impacted due to the COVID-19 pandemic, mental and emotional health toll from systemic racism, altered personal and professional obligations, and other crises existing at the moment in our local, national, and global communities. Students are encouraged to discuss these challenges and circumstances with their instructor, if they feel they may need additional support or temporary accommodations at the beginning or during this course. The course instructor may consider making reasonable temporary adjustments depending on the student's situation. If additional support is needed, students may reach out to the [Office of Student Affairs](#) (studentaffairs@sph.rutgers.edu) or any of the appropriate referral resources listed on the [Student Connect Canvas page](#).

EPID 0721 Fall 2022 Course Schedule:

Week	Topic	Book Chapter/Readings	30 Minute Online Activity	Assignment	Due (by 11:59 PM)
Week 1 (9/6-9/12)	No Class	CDC Vision	CDC : Intro to Public Health Surveillance	Assignment 1 - Honor Code Assignment 2 – Intro slides	9/12
Week 2 (9/13-9/19)	Introduction to Surveillance Student presentations	Ch 1 Historical Overview	MMWR	Assignment 3 - Surveillance Summaries 1st selection	9/19
Week 3 (9/20-9/26)	Types of Surveillance Systems – Objective & Case Definitions	Ch 3	2 Podcasts	Assignment 4 – MMWR presentation (PPT)	9/26
Week 4 (9/27-10/3)	ASD Surveillance Summary Data Sources & Data collection instruments	Ch 4	Disaster Surveillance	Discussion 1 Discussion Replies Assignment 5 – Passive vs. Active Surveillance	9/30 10/3 10/3
Week 5 (10/4-10/10)	Surveillance summaries presentations (#1) Analyzing and interpreting surveillance data	Ch 6	Using R to design maps	Course Project – Select Group Members	10/4
	Course Project Overview			Surveillance Summaries – Report (#1)	10/10
				Assignment 6 - Creating Maps in R	11/21
Week 6 (10/11-10/17)	Evaluating Surveillance efforts Field-test methods	Ch 8	Data collection using REDCap	Assignment 7 - Surveillance Summaries 2nd selection	10/17
Week 7 (10/18-10/24)	Communicating findings from Surveillance Guest Speaker: Dr. Laura Lindberg	Ch 7	CDC Community Report	Assignment 8 - MMWR presentation (PPT)	10/24
				Assignment 9: Press Release	10/31
Week 8 (10/25-10/31)	Global, state and local surveillance	Ch 18	Develop Logic Model for Surveillance sys	Course Project – topic	10/28
	Surveillance summaries presentations (#2)			Discussion 2 Discussion 2 – Replies	11/4 11/7
Week 9 (11/1-11/7)	Ethical and legal considerations in public health surveillance	Ch 9 & Ch 10	Population Denominators	Assignment 10 – Surveillance Summaries – Report (#2)	11/14

Guest Speaker: Dr. Henry Raymond					
Week 9 (11/8-11/14)	Challenges, changes and current approaches	Ch 19 & Ch 20	US Census – American Community Survey		
Week 10 (11/15-11/21)	Guest Speaker: William Halperin, MD, DrPH		Endnote/Pubmed	Assignment 11 – ADDM summary	11/28
Week 11 (11/22-11/28)	No Class			Discussion 3 Discussion 3 - Replies	12/09 12/12
Week 12 (11/29-12/5)	Group Presentations	Ch 14	RFA/Grant Proposals	Course Project – PPT Slides	12/6
Week 13 (12/6-12/12)	Group Presentations			Course Project - Feedback	12/13
Week 14 (12/13-12/21)	Class Discussion Publishing peer-reviewed manuscripts			Course Project - Final Report	12/20

Assignment	Due Date	Course Grade (pts)
Honor Code – please read	9/12	1
Intro Slide – Student’s introductions	9/12	3
Surveillance Summaries #1 – Selection	9/19	1
Surveillance Summaries #1 – PPT slides	9/26	2
Discussion 1	9/30	4
Surveillance Summaries #1 – Report	10/10	2
Discussion 1 Replies	10/3	1
Passive vs Active Surveillance	10/3	2
Course Project Group Selection	10/4	0
Surveillance Summaries #2 – Selection	10/17	1
Surveillance Summaries #2 – PPT slides	10/24	2
Course Project Topic Selection	10/28	0
Press Release	10/31	10
Discussion 2	11/4	4
Discussion 2 Replies	11/7	1
Surveillance Summaries #2 – Report	11/14	2
Creating Maps in R	11/21	3
ADDM summary tables	11/28	5
Course Project PPT slides	12/6	20
Discussion 3	12/9	4
Discussion 3 Replies	12/12	1
Course Project – Feedback	12/13	10
Course Project – Final Report	12/20	10
Course Evaluation	TBD - December	1

Class Participation is 10 points of your grade including class discussion & attendance