

College of William and Mary
Department of Kinesiology and Health Sciences
KINE 280 – Introduction to Public Health
Fall 2018

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<u>Office Hours:</u>	Tuesdays and Thursdays: 11am to 1pm Other times by appointment
<u>Class Meets:</u>	Tuesdays and Thursdays: 9:30- 10:50 am

Catalog Description:

An introduction to the key concepts and considerations in public health research and practice. Selected public health topics will be presented from biomedical, epidemiologic, socio-cultural, and policy perspectives in the context of low, middle, and high-income countries.

Required Textbook Essentials of Public Health by Bernard Turnock
<https://ebookcentral.proquest.com/lib/cwm/detail.action?docID=4441374>

Additional required readings will be provided as links in the Syllabus or on Blackboard as pdf files. Majority of the classes will be audiotaped and available in Blackboard to students registered in the class.

Course objectives: Upon completing this course, students should be able to:

- Explain what public health is
- Carry out disease outbreak investigation
- Understand the principles of epidemiologic research used in public health
- Work as part of a team to improve health outcomes for a community, state or country
- Know public health interventions that have worked in the past
- Understand the inputs into making public health interventions for populations
- Strategize on interventions for stopping or reducing a public health issue

Important Dates: Add/Drop deadline: Sept 7th
Withdraw deadline: Oct 26th
Exam date: Dec 18th 9am
Mid-Term 1: Oct 11th
Mid-Term 2: Nov 20th

Overview of the Content to be Covered During the Semester:

Class number, Date	Topic	Readings
1 Thurs Aug 30	Course introduction What is Public Health? Definitions	<ol style="list-style-type: none"> 1. Essentials of Public Health by Bernard Turnock Chapter 1 2. Basic Epidemiology by Bonita et al, Chapter 2 Published by WHO (http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf)
2 Tuesday Sept 4	Successes in Public Health (Small Pox, Guinea Worm, Fluoride in Drinking water, Cholesterol screening)	<ol style="list-style-type: none"> 1. Diseases of Poverty (Epidemiology, infectious Diseases and modern plagues) by Adams, Lisa V. and John R. Butterly. "Guinea Worm Eradication." in <i>Diseases of Poverty</i>. Hanover, NH: Dartmouth College Press, 2015, pp. 69-73. 2. Chapter 2 Essentials of Public Health by Bernard Turnock
3 Thurs Sept 6	Using Data to Make Public Health Decisions/Consequences of Health Disparities	Guest Speaker: Dr. Rashida Dorsey
4 Tues Sept 11	Adverse Childhood Events	Guest Speaker: Dr. Cynthia Devore Reading: Chapter 4 in The Health Gap by Michael Marmot. (In blackboard)
5 Thurs Sept 13	Descriptive Epidemiology: Time, Age, Gender and Place. Data Analyses	<ol style="list-style-type: none"> 1. Rothman, Kenneth J. et al Modern Epidemiology "Chapter 3: Measures of Occurrence pages 32-38 2. Chapter 13. Fundamentals of Epidemiologic Data Analyses" in <i>Modern Epidemiology</i>. Boston, MA: Little, Brown and Company, 2008, pp. 213-219. (Both are in blackboard)

<p>6 Tues Sept 18</p>	<p>Health Disparities and Social Determinants of health</p>	<p>1. Susan P. Phillips. Gender in Public Health Research. Public Health Reports 2011, vol 126 suppl 3. 16-21 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3150124/</p> <p>2. W.A Rogers Feminism and Public Health Ethics. Journal of Medical Ethics 2006. Vol 32 No 6. 351-354. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2563367/</p> <p>3. Steven H. Woolf and Paula Braveman. The Social and Ecological Determinants of Health. In Book titled Contemporary Public Health. 2013, University of Kentucky Press. https://muse.jhu.edu/book/18300</p> <p>4. https://www.theatlantic.com/health/archive/2017/06/america-has-the-third-worst-level-of-health-inequality-in-the-world/529158/</p> <p>5. https://www.nytimes.com/2017/01/27/opinion/sunday/why-succeeding-against-the-odds-can-make-you-sick.html</p>
<p>7 Thurs Sept 20</p>	<p>Culture and Disease, Poverty and disease,</p>	<p>1. Hofstede, Geert, Gert Jan Hofstede, and Michael Minkov. "Chapter 11: Intercultural Encounters," in <i>Cultures and Organizations: Software of the Mind: Intercultural Cooperation and Its Importance for Survival</i>. New York: McGraw Hill, 2010, pp. 381-429. (In blackboard)</p> <p>2. http://www.slate.com/articles/news_and_politics/foreigners/2015/09/why_drivers_in_china_intentionally_kill_the_pedestrians_they_hit_china_s.html</p> <p>3. Effects of poverty on health in the US. https://www.theguardian.com/us-news/2017/sep/05/hookworm-lowndes-county-alabama-water-waste-treatment-poverty?CMP=share_btn_link</p>

8 Tues Sept 25	Health Systems	<ol style="list-style-type: none"> 1. https://wm-primo.hosted.exlibrisgroup.com:443/01COWM_WM:PCI:TN_medline26313044 (US vs Cuba health system) 2. https://wm-primo.hosted.exlibrisgroup.com:443/01COWM_WM:PCI:TN_oxford_sgml10.1093/ije/dyl175 (Cuba Health system) 3. Sri Lanka maternal health (in blackboard)
9 Thurs Sept 27	Globalization and Disease, Climate Change and Health	<ol style="list-style-type: none"> 1. Chapter 3 in Diseases of Poverty by Lisa Adams and John Butterly (In blackboard) 2. Shah Sonia, What You Get When you Mix Chickens, China and Climate Change. NY Times Feb 5 2016 article https://www.nytimes.com/2016/02/07/opinion/sunday/what-you-get-when-you-mix-chickens-china-and-climate-change.html 3. Howard Frumkin et al. Climate Change: the Public Health Response. American Journal of Preventive Medicine 2008;98:435-445 (In blackboard)
10 Tues Oct 2	Occupational Health, Environmental Health, Built Environment	<ol style="list-style-type: none"> 1. London Transport Workers Study: http://oem.bmj.com/content/oemed/11/4/260.full.pdf 2. Chapter 6 in The Health Gap by Michael Marmot(In blackboard)
11 Thurs Oct 4	Causation (Sufficient and Necessary Causes, Causal webs)	<ol style="list-style-type: none"> 1. The Structure of Scientific Revolutions, Thomas Kuhn, Fourth Edition. Chapter 7. (in blackboard) 2. Kenneth J. Rothman et al. Causal Inference in Epidemiology page 25 to 31. (In blackboard)

12 Tues Oct 9	Disease Surveillance and Monitoring/Herd Immunity	<ol style="list-style-type: none"> 1. Olowonyo MT, Oshin S, Obasanjo-Bello IO. Registering in a health facility for delivery protects against maternal mortality in developing country setting. Journal of Obstetrics and Gynecology 2005;25 (7):638-641 (In blackboard) 2. Diseases of Poverty (Epidemiology, Infectious Diseases and modern plagues) Adams LV, Butterly JR. pg 65-67. (In blackboard)
13 Thursday Oct 11	Mid-term 1	
14 Thurs Oct 18	Writing a Scientific Paper Types of Epidemiologic Research	<ol style="list-style-type: none"> 1. How to write a Scientific Paper by Hoogenboom and Manske. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474301/ 2. Basic Epidemiology by Bonita et al, Chapter 3. Published by WHO (http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf)
15 Tues Oct 23	Sampling/Sample Size/Selection Bias, Biases and Confounding	<ol style="list-style-type: none"> 1. Effects of Asbestos in Dockyard Workers. Geoffrey Sheers and Ann Templeton, British Medical Journal 1968;3;574-579 http://www.istor.org/stable/20393934?seq=1#page_scan_tab_contents 2. Chapter 7 in Modern Epidemiology by Kenneth Rothman 3rd edition 3. Chapter 3 in Designing Clinical Research by Stephen Hulley and Steven Cummings
16 Thurs Oct 25	US Health Group Meets	<p>Breaks into 2 groups</p> <ol style="list-style-type: none"> a) Health Disparities b) Health Policy
17 Tues Oct 30	Global Health Group meets	<p>Breaks into 2 groups</p> <ol style="list-style-type: none"> a) Comparison of US to High Income country b) Low/Middle Income countries

<p>18 Thurs Nov 1</p>	<p>Disease Outbreak Investigation</p>	<ol style="list-style-type: none"> 1. Disease outbreak Investigation: Legionnaires disease outbreak in Philadelphia. Medicine: The disease detectives and The Philadelphia Killer In Time Magazine Aug 16, 1976. (2 items) https://login.proxy.wm.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=53518320&site=ehost-live&scope=site https://login.proxy.wm.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=53518354&site=ehost-live&scope=site 2. Disease Outbreak Investigation: Lesham et al. Norovirus in a United States Virgin Islands resort: Outbreak Investigation, response, and costs. Journal of Travel Medicine 2016. pp 1-6. (in blackboard) 3. Hep A outbreak in VA (in blackboard)
<p>19 Tues Nov 6</p>	<p>Infectious Diseases (Malaria and Cholera)</p>	<ol style="list-style-type: none"> 1. Whitman TJ et al. An Outbreak of <i>Plasmodium falciparum</i> Malaria in US Marine Deployed to Liberia. American Journal of Tropical Hygiene 2010 vol 83 (2) pp 258-265 (In blackboard) 2. Frerichs et al, Nepalese Origin of Cholera epidemic in Haiti. Clinical Microbiology and Infection, 2012, 18:E158-E163 (In blackboard) 3. Piarroux R and Frerichs R. Cholera and blame in Haiti, The Lancet Vol 15, Dec 2015. (In blackboard) https://www.nytimes.com/2016/08/18/world/americas/united-nations-haiti-cholera.html?mcubz=1 https://www.nytimes.com/2017/07/07/world/middleeast/yemen-cholera-outbreak-war.html?mcubz=1

<p>20 Thurs Nov 8</p>	<p>Infectious Diseases (Measles, Polio)</p>	<ol style="list-style-type: none"> 1. Measles outbreak in CA. Disney Measles outbreak (In blackboard) 2. Current measles outbreak https://www.cdc.gov/measles/cases-outbreaks.html 3. Polio eradication video https://www.youtube.com/watch?v=ULKJjX16t3M 4. The secret to Polio eradication in India https://www.forbes.com/sites/devinthorpe/2014/03/15/the-secret-to-polio-eradication-in-india/#2b2eae245639 5. Polio in Nigeria https://www.nytimes.com/2016/08/12/health/polio-nigeria.html?mcubz=1
<p>21 Tues Nov 13</p>	<p>Infectious Diseases (Ebola) Public Health in Disasters and refugee camps</p>	<ol style="list-style-type: none"> 1. 2014-2016 Ebola Outbreak in West Africa-Case Counts, Centers for Disease Control. https://www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html 2. Case study material on management of Ebola spread into Nigeria during 2014 outbreak. (In blackboard) 3. Current Ebola Outbreak in DRC http://www.who.int/ebola/situation-reports/drc-2018/en/ 4. Video: Frontline documentary on Ebola (53 mins) http://www.pbs.org/wgbh/frontline/film/ebola-outbreak/ 5. Public Health in Disasters: Reading: Chapter 6 In Essentials of Public Health by Turnock

<p>22 Thurs Nov 15</p>	<p>Infectious Diseases (HIV/AIDS, Zika, reemerging diseases)</p>	<ol style="list-style-type: none"> 1. PEPFAR Summary https://www.cgdev.org/page/overview-president%E2%80%99s-emergency-plan-aids-relief-pepfar 2. HIV/AIDS Reading Pacha LA et al. Centralized HIV Program Oversight: An investigation of a Case Series of New HIV Infections among US Army Soldiers, 2012 to 2013. <i>Medicine</i> vol 94, no 46. Nov 2015. (In blackboard) 3. Reuters article: http://www.reuters.com/article/us-health-aids-idUSKBN13G17V 4. Diseases of Poverty (Epidemiology, infectious Diseases and modern plagues) Adams LV, Butterly JR. Chapter 12 5. Imperato, Pascal James. “The Convergence of a Virus, Mosquitos, and Human Travel in Globalizing the Zika Epidemic.” <i>Journal of Community Health</i>. March 11, 2016. http://link.springer.com
<p>23 Tues Nov 20</p>	<p>Mid-Term 2</p>	
<p>24 Tues Nov 27</p>	<p>Non Infectious Diseases (Nutrition, Reproductive health)</p>	<ol style="list-style-type: none"> 1. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pmss.html 2. http://www.cnn.com/2016/08/24/health/maternal-mortality-trends-double-texas/index.html 3. MacDorman MF, Declercq E, Cabral H, Morton C. Recent Increases in the US Maternal Mortality Rate. <i>Obstetrics and Gynecology</i> Vol 128 #3, Sept 2016. 4. https://www.vox.com/science-and-health/2017/6/29/15830970/women-health-care-maternal-mortality-rate

25 Thurs Nov 29	Non Infectious Diseases (Diabetes, CHD, Obesity)	<ol style="list-style-type: none"> 1. Barnes AS. The Epidemic of Obesity and Diabetes, Texas Heart Institute Journal.2011 38:2; 142-144 In Blackboard. 2. Gillium et al Racial and geographic trends in CHD mortality BMC Public Health. 2012, 12. In Blackboard. 3. Ogden et al, Obesity trends in children (In Blackboard). 4. Wang et al. Health and economic burden of obesity trends (In Blackboard).
26 Tues Dec 1	Life Expectancy/Opioid Addiction	<ol style="list-style-type: none"> 1. NY Times Dec 8, 2016, Life Expectancy in US Declines Slightly and Researchers are Puzzled. By Katie Rogers https://www.nytimes.com/2016/12/08/health/life-expectancy-us-declines.html 2. Stewart et al. Forecasting the effects of Obesity and Smoking on US Life expectancy NEMJ 2009;361:2252-2260. In Blackboard. 3. Rehm et al Policy Implications of Marked reversals of population life expectancy caused by substance abuse BMC Medicine 2016 14:42 In Blackboard 4. Dasgupta et al Opioid Crisis: No Easy Fix to its social and economic determinants AJPH Feb 2018, Vol 108, #2. In Blackboard.
27 Thurs Dec 6	Group Presentations	

Instructional Methods:

The course meets twice a week for eighty minutes. The way we use this time will vary, and will include lectures, discussions, films, and in-class exercises.

Grading: There will be two midterm examinations and a final examination. There will be one paper assignment due last week of classes (Week of Dec 3rd)

	% of Grade:
Exam 1	15
Exam 2	15
Paper	25
Small Group Participation	10
Final exam	25
Topic deadline/other deadlines	10
	100%

Final Paper will be a maximum of 2500 words. You will choose the topic for your final paper by Nov 6th. You can choose either a US Health Issue or an International Health Issue. For the US health Issue you can focus either on Health Disparities or Health Policy and for the International Health group, you can focus on either Comparison of a High Income Country (OECD Country) to the US or a problem occurring in a Low or Middle Income country. Please use tables and graphs as much as possible and doing statistical analyses will get you extra points. For Bonus Point(s) you can volunteer for the small group presentation. Bonus points will be either 1 or 2 points added to the final percentage based on contribution to the group presentation.

<u>Grading scale*:</u>		
	94-100	A
	90-93	A-
	87-89	B+
	83-86	B
	80-82	B-
	77-79	C+
	73-76	C
	70-72	C-
	67-69	D+
	63-66	D
	60-62	D-
	Below 60	F

Notes:

Students will be expected to understand and abide by campus policies related to **academic integrity** and **appropriate citation of sources** in all written work completed. Plagiarism is a serious offense, deliberate or not, and will be referred for further disciplinary action. If you need further guidance regarding citation, please see me.

There are times when **extraordinary circumstances occur** (e.g., serious illness, death in the family, etc.). In such circumstances, and/or if you need additional time to satisfactorily complete any course requirement, please consult with me within a reasonable amount of time. *Nota bene:* Extensions are not guaranteed and will be granted at the discretion of the instructor. No extra credit projects will be assigned.

Papers and all other assignments must be submitted when due except when an extraordinary circumstance as described above occurs. Late submission will lead to daily point subtractions.

Every effort will be made to respond to student **emails** in a timely fashion (within 24-48 hours).

Electronics Policy:

- 1) Using laptops or tablets to take notes is permitted. (However, research suggests you learn better when you take notes with pen and paper.) If you are also going to use your laptop or tablet to check email, do Facebook, shop, do work from other classes, read the news, or otherwise dissociate, sit in back. (Because really, that's just distracting and obnoxious, let's be honest.)
- 2) Please do not have your phones out. If you cannot survive the class period without checking your phone, sit in back. (Then read the research showing that compulsive phone-checking simulates the feeling of being in love, and do some soul-searching.)
- 3) Consider making the decision to be mindfully present during our time together.

Final Paper Rubric

The final paper is a research paper and should follow the guidelines of research papers in your field. You can use any style such as APA, MLA or Chicago style or use the style of a particular journal in your field. A research paper is not an essay and should have subtitles and the standard subtitles are Introduction, Methods, Results and Discussions but this can vary based on your adopted publication journal.

Papers will be graded on

1. Relevance of title and topic: Is this topic important for today's real world problems?
2. Stated hypothesis and if analyses done fits resolving the hypothesis.
3. Coherence of association discussed in the paper, is the association logical.
4. Organization: Does the paper flow and ease of reading.
5. Concise and Brevity: Ideas should not be repeated over and over.
6. Use of graphical presentation of data or results
7. Use of Statistical Analyses will lead to bonus points but points will not be taken for not using statistical analyses.