

HLTH S367

Global Health Across Audiences: Research and Communication

2021 Yale University Summer Session A

June 7, 2021 – July 9, 2021

Mondays & Wednesdays, 1:00pm est – 4:15pm est

Zoom Classroom Link: TBD

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Overview

The COVID-19 pandemic exposed a tragic disconnect between the science of global health research and the communication of scientific findings to policymakers, the general public, and scientists in other fields. *Global Health Across Audiences* explores the intersection of global health science and its communication. Using contemporary global health issues, students learn key scientific principles of public health and epidemiological research and then discover how to translate these principles to various semi-scientific and non-scientific audiences. It trains students on the methods and dynamics of scientific communication beyond peer-reviewed journals and academics, allowing them to identify key audiences and survey the landscape of media platforms from which to communicate their message.

Learning Objectives

The course seeks to combine public health research with communication literacy in order to prepare students to better advance public health issues. Students will engage with contemporary global health issues as well as the art of communication in order to strategically advance pressing challenges in global health. By the end of the course, each student will possess the skills needed to:

- Understand the principles of public health and epidemiology, including methodologies, study designs, and data in the field of epidemiology and global health:
 - *What can be concluded from different epidemiological studies? What cannot? How do we determine absolute and relative measures of risk, and what does each one tell us? How do we balance statistical significance with clinical or public health relevance?*
- Understand the difference between data, information, and knowledge:
 - *What is scientific evidence in global health? How do we reconcile conflicting evidence? What is knowledge synthesis?*

- Critically evaluate principles of scientific communication to internal and external audiences:
 - *How does public health science get consumed by the general public, policymakers, and other scientists? What are the current ways public health researchers engage with these audiences? How are these audiences influenced differently? What is epistemic trespassing, and how does it contribute to misinformation?*
- Translate complex epidemiological data and research into a format understandable to target audiences:
 - *What is framing, and how is it used to persuade? What are cues to enhance the credibility of the research findings? How do we use stories as a form of knowledge production? How do we effectively communicate stories for different audiences? What are different ways to present the same (simple) data and statistics, and how do they tell a different story?*

Course Format

All lectures and discussion sections will be conducted online, and students are expected to participate in real time. Students will learn through a combination of discussions, targeted lectures, guest speakers, and hands-on projects. Prior to class, students will be expected to complete the required weekly public health readings (or watching of relevant film, visiting interactive website, etc.).

For selected topics, guest lecturers, including public health professionals, community members, NGO workers, journalists, and/or film and media professionals will accompany class discussion to allow students to benefit from their expertise.

Course Requirements

- 1) **Individual Blog Posts:** Students will be required to complete **two** short individual blog posts on the class website throughout the course based on the week's discussion and activities. Although each individual student is only required to complete two, the class as a whole **must post at least one new blog posts every day.**
 - a. *Purpose of grading measure:* To ensure students are able to convey global health issues and work as a group to coordinate tasks.
- 2) **Weekly Assignments:** Each week, students will be expected to complete a short assignment based on the week's primary topic.
 - a. *Purpose of grading measure:* To engage students in continuous discourse and ensure they possess the technical skills and fund of knowledge for subsequent topics.
- 3) **Midterm Exam:** Students will be given a midterm exam on the public health and epidemiological methods addressed in the course.
 - a. *Purpose of grading measure:* To ensure students retain understanding of scientific methods covered throughout the course
- 4) **Final Project:** At the end of the semester, students will be expected to produce a final project that communicates scientific knowledge to an external audience. The format is

intentionally broad to encourage creativity, but may include a series of op-eds, infographics, video, website, written narrative, etc. Students will work with course instructors throughout the semester on their project.

- a. *Purpose of grading measure:* To ensure students are able to understand and implement the overall course concepts.

Grading

Blog Posts	20%
Weekly Assignments	20%
Midterm Exam	25%
Final Project	35%

Academic Integrity

Unless otherwise specified, all work must be consistent with Yale Academic Integrity Statement, [found here](#). Students who have been found to be in violation of this code will fail the course (given an “F” grade) and will be referred to Yale Executive Committee.

A Word About Plagiarism

You must document all of your source material. If you take any text from somebody else, you must make it clear the text is being quoted and where the text comes from. You must also cite any sources from which you obtain numbers, ideas, or other material. If you have any questions about what does or does not constitute plagiarism, ask! Plagiarism is a serious offense and will not be treated lightly. Fortunately, it is also easy to avoid and if you are the least bit careful about giving credit where credit is due you should not run into any problems. For more information, see: <https://poorvucenter.yale.edu/writing/wr-instructor-resources/addressing-academic-integrity-and-plagiarism>

Reading List

Course lectures will be tethered to real-world issues in global health, and the ways in which results of epidemiological studies are correctly and incorrectly conveyed. For each topic students are expected to read sentinel/influential epidemiologic studies. We will review the methods, strengths, and limitations pertaining to these studies, and assess their interpretation in the media.

Topic	Notes	Scientific Article	Suggested Related Public Media
Use of hydroxychloroquine/ chloroquine or Remdesivir to treat COVID	Observational Cohorts	<p>Arshad S, Kilgore P, Chaudhry ZS, et al. Treatment with hydroxychloroquine, azithromycin, and combination in patients hospitalized with COVID-19. <i>Int J Infect Dis.</i> 2020;97:396-403. doi:10.1016/j.ijid.2020.06.099.</p> <p>Rosenberg ES, Dufort EM, Udo T, et al. Association of Treatment With Hydroxychloroquine or Azithromycin With In-Hospital Mortality in Patients With COVID-19 in New York State. <i>JAMA.</i> 2020;323(24):2493–2502. doi:10.1001/jama.2020.8630</p> <p>Geleris J, Sun Y, Platt J, Zucker J, Baldwin M, Hripcsak G, Labella A, Manson DK, Kubin C, Barr RG, Sobieszczyk ME, Schluger NW. Observational Study of Hydroxychloroquine in Hospitalized Patients with Covid-19. <i>N Engl J Med.</i> 2020 Jun 18;382(25):2411-2418. doi: 10.1056/NEJMoa2012410. Epub 2020 May 7. PMID: 32379955; PMCID: PMC7224609.</p>	<p>“Treatment with Hydroxychloroquine Cut Death Rate Significantly in COVID-19 Patients, Henry Ford Health System Study Shows” Link</p> <p>“Henry Ford study on hydroxychloroquine for COVID quietly shut down” Link</p> <p>“Teva and Mylan to jumpstart production of old malaria drug to fight the novel coronavirus” Link</p> <p>“Trump aide Peter Navarro says 'second opinion' needed on Fauci's view of anti-malaria drug” Link</p>
	RCTs	<p>Boulware DR, et al. A Randomized Trial of Hydroxychloroquine as Postexposure Prophylaxis for Covid-19. <i>N Engl J Med.</i> 2020 Aug 6;383(6):517-525. doi: 10.1056/NEJMoa2016638. Epub 2020 Jun 3. PMID: 32492293; PMCID: PMC7289276.</p>	<p>“Another large study finds no benefit to hydroxychloroquine for COVID-19” Link</p>

		<p>Caleb P. Skipper, Katelyn A. Pastick, Nicole W. Engen, et al. Hydroxychloroquine in Nonhospitalized Adults With Early COVID-19: A Randomized Trial. <i>Ann Intern Med.</i>2020;173:623-631. [Epub ahead of print 16 July 2020]. doi:10.7326/M20-4207</p> <p>Oriol Mitjà, <i>et al</i>, Hydroxychloroquine for Early Treatment of Adults With Mild Coronavirus Disease 2019: A Randomized, Controlled Trial, <i>Clinical Infectious Diseases</i>, 2020;, ciaa1009, https://doi.org/10.1093/cid/ciaa1009</p> <p>Cavalcanti, A <i>et al</i>. Hydroxychloroquine with or without Azithromycin in Mild-to-Moderate Covid-19. <i>N Engl J Med.</i> 2020 Nov 19;383(21):e119. doi: 10.1056/NEJMs200021. Epub 2020 Sep 10. Erratum for: <i>N Engl J Med.</i> 2020 Nov 19;383(21):2041-2052. PMID: 33210858.</p>	<p>“What to Know About the Malaria Drug Trump Says He Is Using” Link</p> <p>“The Strange and Twisted Tale of Hydroxychloroquine” Link</p> <p>“Hydroxychloroquine is not dead yet” Link</p>
	Laboratory/ <i>in vitro</i> studies	<p>Vincent MJ, Bergeron E, Benjannet S, et al. Chloroquine is a potent inhibitor of SARS coronavirus infection and spread. <i>Virology</i>. 2005;2:69. Published 2005 Aug 22. doi:10.1186/1743-422X-2-69</p> <p>Wang, M., Cao, R., Zhang, L. <i>et al</i>. Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro. <i>Cell Res</i> 30, 269–271 (2020). https://doi.org/10.1038/s41422-020-0282-0</p>	
Use of vaccines and development of autism		Wakefield AJ <i>et al</i> . Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. <i>Lancet</i> . 1998 Feb	“One More Time, With Big Data: Measles Vaccine

		<p>28;351(9103):637-41. doi: 10.1016/s0140-6736(97)11096-0. Retraction in: Lancet. 2010 Feb 6;375(9713):445. Erratum in: Lancet. 2004 Mar 6;363(9411):750. PMID: 9500320.</p> <p>Paddy Farrington, Elizabeth Miller, Brent Taylor, MMR and autism: further evidence against a causal association, Vaccine, Volume 19, Issue 27, 2001.</p> <p>Brent Taylor, Elizabeth Miller, CPaddy Farrington, Maria-Christina Petropoulos, Isabelle Favot-Mayaud, Jun Li, Pauline A Waight, Autism and measles, mumps, and rubella vaccine: no epidemiological evidence for a causal association, The Lancet, Volume 353, Issue 9169, 1999.</p> <p>Kaye James A, del Mar Melero-Montes Maria, JickHershel. Mumps, measles, and rubella vaccine and the incidence of autism recorded by general practitioners: a time trend analysis. <i>BMJ</i> 2001; 322 :460</p>	<p>Doesn't Cause Autism" Link</p> <p>"How Anti-Vaccine Sentiment Took Hold in the United States" Link</p>
Others		<p>Taubes, G. Epidemiology faces its limits. <i>Science</i>. 14Jul1995: 164-169</p>	