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## Vaccine Forum Syllabus

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Honors College Forum (HNRC 300VH)

## VACCINE

May 2021 Intersession (open to honors students and community members).  
ZOOM venue—forum conducted live, recorded, and posted on Blackboard (students) as well as the  
Live broadcast on Honors College YouTube, 10-11:30 a.m., May 10-21 (sans Sunday).  
Please enter the meeting with video off and microphone muted.

Instructors:

- Kaitlyn Akel (MPH, University of Michigan; Honors College Alumna)
- Lindsey Aloia (Communication)
- Bob Beitle (Chemical Engineering)
- A. Burcu Bayram (Political Science)
- Jagpreet Chhatwal (Harvard Medical School)
- Jyotishka Datta (Statistics)
- David Dobrzykowski (Supply Chain Management)
- Grant Drawve (Sociology)
- Jeannine Durdik (Immunology)
- Casey Harris (Sociology)
- Kevin Fitzpatrick (Sociology)
- Casey Kayser (Medical Humanities)
- Shan Liu (Industrial and Systems Engineering, University of Washington)
- David McNabb (Biological Sciences)
- Ashlea Milburn (Industrial Engineering)
- Sarah Nurre (Industrial Engineering)
- Angie Ohler (Libraries)
- Brian Primack (Public Health)
- Shannon Servoss (Chemical Engineering)
- Huda Sharaf (Medical Director, University of Arkansas)
- Trish Starks (History of Medicine)
- Joe Steinmetz (Chancellor, University of Arkansas)
- Shengfan Zhang (Industrial Engineering)

Forum Description:

This forum zooms in on the race to develop a vaccine for the COVID-19 Coronavirus through a diversity of academic and professional disciplines: medicine, medical history, sociology, statistics, social media studies, public health, immunology, political science, industrial engineering, supply chain management, and chemical engineering. In so doing, the forum’s instructors situate the COVID-19 vaccine within a broader narrative of the science of immunization, the history of vaccines, the social and economic inequalities produced by deploying a vaccine, and the challenges presented to the global supply chain.

Forum Requirements:

- Each student will submit questions via [this form](#) by 5 p.m. on the day before the presentation. Dr. Treat and Dean Coon will assemble the questions and queue up enrolled students who will pose them to the presenters.
- Students will have the opportunity to share their thoughts and reflections on the presentations with the honors coordinators of VACCINE during “**virtual office hours**” scheduled daily.
- Each student will compose a post for the Honors College or a LinkedIn article.
- Articles/blog posts will focus on one of the eleven presentations; honors facilitators will assign students to each presentation.

Blog Post or Linked-In Article:

- Each blog post should be about 500 words, submitted as a Word document, double-spaced, with 1 in. margins and 12 pt. Times New Roman font. A title for the post and your personal bio (see below) in italics should be included at the top of the post.
- Blog posts should engage critically with the subject under investigation.
- Your submissions should be both factual, as far as possible, and analytical in nature.

- Your article should include material from the presentation and your continued conversation with the faculty.
- Each submission should contain an introductory bio of you under the title in italics.
- Please note that your bio will not count toward your word count for the submission.
- For example: “Delfina Suarez is a senior honors student majoring in political science at the University of Arkansas. Originally from Searcy, AR, Delfina has been actively involved in activities on campus, including the Volunteer Action Center and the Honors College Ambassadors. After college, Delfina hopes to pursue a graduate degree in public policy.”
- For an example of an Honors College Blog, see: <https://honorsblog.uark.edu/remember-the-orange/>

Due Date for Article/Blog:

**5 p.m., Saturday, May 21. Please email your final papers to Lynda Coon and John Treat: [lcoon@uark.edu](mailto:lcoon@uark.edu); [jdt015@uark.edu](mailto:jdt015@uark.edu).**

Grading System:

- Participation = 500 points
- Article = 500 points
- TOTAL = 1000 points

Grade Breakdown:

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = Below 60%

Schedule:

Monday, May 10                      Forum #1: **Social Inequality, Justice, and Vaccine Intent and Distribution in the United States**

Instructor: Drawve, Fitzpatrick, and Harris

Readings:

- <https://www.nytimes.com/interactive/2021/03/05/us/vaccine-racial-disparities.html>
- Oppel *et al*, “The Fullest Look Yet at the Racial Inequality of Coronavirus,” *The New York Times*, July 5, 2020 (**Blackboard**).
- TFAH *et al*, “Building Trust in and Access to a COVID-19 Vaccine among People of Color and Tribal Nations (**Blackboard**).
- Barr, *Health Disparities in the United States* (Baltimore, MD: Johns Hopkins University Press, 2008), 1-63 (**Blackboard**).
- Jean-Jacques and Bauchner, “Vaccine Distribution—Equity Left Behind?” *Journal of the American Medical Association* 325/9 (2021): 829-30 (**Blackboard**).
- John J. Lennon, “I’m Incarcerated. This is My COVID Lockdown Story,” (**Blackboard**).

Tuesday, May 11                      Forum #2: **Development and Delivery of Vaccines in the Past/Domestic and International Politics of the COVID-19 Vaccine**

Instructor: Bayram and Starks

Readings:

### On the Vaccine Passport

- <https://www.kff.org/coronavirus-covid-19/issue-brief/key-questions-about-covid-19-vaccinepassports-and-the-u-s/>

### On Vaccine Diplomacy

- <https://www.economist.com/graphic-detail/2021/04/29/vaccine-diplomacy-boosts-russiasand-chinas-global-standing>
- <https://theconversation.com/vaccine-diplomacy-how-some-countries-are-using-covid-toenhance-their-soft-power-155697>

### On Vaccine Nationalism

- <https://www.nejm.org/doi/full/10.1056/NEJMp2103614>
- <https://www.theatlantic.com/health/archive/2021/04/the-consequences-of-vaccinenationalism/618750/>

### On India's Covid Crisis

- <https://www.nytimes.com/article/india-coronavirus-cases-deaths.html>

### On Forgotten Groups in Vaccine politics

- <https://www.hrw.org/news/2021/04/06/lebanon-refugees-migrants-left-behind-vaccinerollout>

### On Vaccine intentions and hesitancy in the U.S. and the World

- Khubchandani J, Sharma S, Price JH, Wiblshauser MJ, Sharma M, Webb FJ. COVID-19 vaccination hesitancy in the United States: a rapid national assessment. *Journal of Community Health*. 2021 Apr;46(2):270-7 (**Blackboard**).
- Lazarus JV, Ratzan SC, Palayew A, Gostin LO, Larson HJ, Rabin K, Kimball S, El-Mohandes A. A global survey of potential acceptance of a COVID-19 vaccine. *Nature medicine*. 2021 Feb;27(2):225-8 (**Blackboard**).

### History of Vaccines

- Stern and Markl, "The History of Vaccines and Immunization: Familiar Patterns, New Challenges" (**Blackboard**).

Wednesday May 12      Forum #3: **Immunology and the Vaccine**  
   Instructors: Durdik and McNabb

#### Readings:

- <https://www.ynhhs.org/patient-care/covid-19/vaccine/vaccine-faq.aspx>
- <https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html>
- Pardi, Hogan, Porter, and Weissman, "mRNA vaccines – a new era in vaccinology," *Nature Reviews* 17 (2018): 261-79 (**Blackboard**).
- Karikó *et al*, "Incorporation of Pseudouridine into mRNA Yields Superior Nonimmunogenic Vector with Increased Translational Capacity and Biological Stability" (**Blackboard**).

Thursday, May 13      Forum #4: **The Role of Chemical Engineers in Vaccine Development and Manufacturing**  
   Instructors: Beitle and Servoss

Readings:

- <https://www.nytimes.com/2020/11/17/health/coronavirus-vaccine-operation-warp-speed.html>
- <https://www.umass.edu/newsoffice/article/umass-amherst-chemical-engineering>

Friday, May 14

Forum #5: **Understanding Vaccine Efficacy and Effectiveness: A Statistician's Perspective/Open Access STEM research**

Instructor: Datta and Ohler

Readings:

**Data and Statistics**

- Piero Olliaro, "What Does 95% COVID-19 Vaccine Efficacy Really Mean?" (**Blackboard**).
- Dashiell Young-Saver, "What Does 95% Effective Mean? Teaching the Math of Vaccine Efficacy" (**Blackboard**).
- Marc Lipsitch and Natalie E. Dean, "Understanding COVID-19 Vaccine Efficacy" (**Blackboard**).
- Hodgson *et al*, "What Defines an Efficacious COVI-19 Vaccine?" (**Blackboard**).
- Baden *et al*, "Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine" (**Blackboard**).
- Zimmer and Collins, "What Do Vaccine Efficacy Numbers Actually Mean?" (**Blackboard**).
- Kreps *et al*, "Factors Associated with US Adults' Likelihood of Acceptng COVID-19 Vaccination" (**Blackboard**).
- Damian Garde, "The Story of MRNA: How a Once-Dismissed Idea Became a Leading Technology in the COVID Vaccine Race" (**Blackboard**).

**Open Access**

- Jeffrey Brainard, "A New Mandate Highlights Costs, Benefits, of Making All Scientific Articles Free to Read" (**Blackboard**).
- Rebecca Pool, "Closed Countries, Open Data" (**Blackboard**).
- Jack Grove, "Coronavirus May Be Encouraging Publishers to Pursue Open Access" (**Blackboard**).
- Willa Tavernier, "COVID-19 Demonstrates the Value of Open Access—*What Happens Next?*" (**Blackboard**).
- Majunder and Mandl, "Early in the Epidemic: Impact of Preprints on Global Discourse about COVID-19 Transmissibility" (**Blackboard**).
- Lindsay McKenzie, "New MIT Press Journal to Debunk Bad COVID-19 Research" (**Blackboard**).
- Serbe Horbach, "No Time for that Now! Qualitative Changes in Manuscript Peer Review During the COVID-19 Pandemic" (**Blackboard**).
- Besançon *et al*, "Open Science Saves Lives: Lessons from the COVID-19 Pandemic" (**Blackboard**).
- "Strong Community Response to Free Scholarly Article Access to Fight COVID-19" (**Blackboard**).
- Walter and Mullins, "To Fight COVID-19, Open Access to Scientific Publishing" (**Blackboard**).

Saturday, May 15

Forum #6: **Humanistic Health/The History of Vaccine Hesitancy: Lessons from Then and Now**

Instructor: Kayser and Akel

Readings:

- Charon, Rita. "Narrative Medicine: A Model for Empathy, Reflection, Profession and Trust." *Journal of the American Medical Association*, vol. 86, no. 15, 2001, pp.1897-1902 (**Blackboard**).
- Hooker, Claire. "The Medical Humanities: A Brief Introduction." *Australian Family Physician*, vol. 37, no. 5, May 2008, pp. 369-370 (**Blackboard**).

- Heidi Larson, “Stuck: How Vaccine Rumors Start—and Why They Don’t Go Away” (**Blackboard**).
- Figueiredo *et al*, “Mapping Global Trends in Vaccine Confidence and Investigating Barriers to Vaccine Uptake: A Large-Scale Retrospective Temporal Modelling Study” (**Blackboard**).

Monday, May 17            Forum #7: **Social Media and the Vaccine**  
Instructors: Aloia and Primack

Readings:

- Zhong *et al*, “Mental Health Toll from the Coronavirus: Social Media Usage Reveals Wuhan Residents’ Depression and Secondary Trauma in the COVID-19 Outbreak” (**Blackboard**).
- Cinelli *et al*, “The COVID-19 Social Media Infodemic” (**Blackboard**).

Tuesday, May 18            Forum #8: **Logistics and the Vaccine**  
Instructor: Milburn

Readings:

- Patino, M. (2021, January 22). The architecture of mass vaccine distribution. *Bloomberg CityLab*. <https://www.bloomberg.com/news/features/2021-01-22/the-architecture-of-covid-vaccine-distribution>
- Render, B. (2020, February 2). Teaching tip: the vaccination assembly line. *Jay, Barry and Chuck’s OM Blog*. <https://heizerrenderom.wordpress.com/2021/02/02/teaching-tip-the-vaccination-assembly-line/>
- Federal Emergency Management Agency. (2020). *Community vaccination centers playbook*. [https://www.fema.gov/sites/default/files/documents/fema\\_community-vaccination-centers\\_playbook.pdf](https://www.fema.gov/sites/default/files/documents/fema_community-vaccination-centers_playbook.pdf)
- Facher, L. (2021, March 23). ‘You work your butt off’: inside the scramble to bring Covid-19 vaccines to homebound Americans. *STAT*. <https://www.statnews.com/2021/03/23/covid-19-vaccines-homebound-americans/>
- McNeill, C., & Milburn, A.B. (2019). In-home strategic national stockpile dispensing by means of home health agencies: an alternative means of dispensing to vulnerable populations. *Disaster medicine and public health preparedness*, 14(6), 725-732 (**Blackboard**).

Wednesday, May 19            Forum #9: **Medical Decision Making During COVID-19**  
Instructor: Zhang, Chhatwal, and Liu

Readings:

- Cohen *et al*, “Vaccination, Herd Behavior, and Herd Immunity” (**Blackboard**).
- Lee *et al*, “COVID-19 Pandemic Response Simulation in a Large City,” (**Blackboard**).
- How CDC Is Making COVID-19 Vaccine Recommendations (<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations-process.html>)

Thursday, May 20            Forum #10: **COVID Vaccines: How did you get here?**  
Instructors: Dobrzykowski and Nurre

Readings:

- <https://www.bbc.com/news/world-asia-46616004>

- o <https://www.forbes.com/sites/saibala/2021/03/06/drones-are-now-being-used-to-deliver-covid-19-vaccines/?sh=4a85f04e26dc>
- o <https://www.pfizer.com/science/coronavirus/vaccine/manufacturing-and-distribution>

Friday, May 21

Forum #11: **Vaccinating the U of A**  
Instructors: Sharaf and Steinmetz

Assignment:

- o <https://www.cdc.gov/coronavirus/2019-ncov/testing/index.html>
- o <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>
- o <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines>

**Final Paper due by 5 p.m. on Saturday, May 22. Email to: [llcoon@uark.edu](mailto:llcoon@uark.edu)**