

Introduction to Global Health Spring 2021 Syllabus

Faculty Leader

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Location and Time

February 1, 2021 – March 29, 2021
Mondays, 1:00-2:00pm or 5:00-6:00pm

Course Overview

Introduction to Global Health introduces students to key topics in global health through weekly seminars. Course faculty are drawn from Weill Cornell and other institutions, and have extensive field and research experience in global health. The course is designed as a non-credit elective for first-year medical students.

Expectations of Student

- Attendance is voluntary but we hope that you try to attend all sessions.
- Reading of materials provided for each session.
- Participation in class discussions.
- Completion of mandatory feedback surveys.
- Professionalism during presentations.

*Note: Those who attend $\frac{3}{4}$ of the sessions will be eligible for a Certificate in Global Health, which is awarded in March of the 4th year.

Course Objectives

By the end of this course participants will be able to

- Understand the principles of screening for cancer in LMICs, especially during a pandemic.
- Recognize issues in women's health in LMICs.
- Recognize the health issues surrounding reproductive health that are common in LMICs
- Identify the leading causes of global blindness, and the potential treatments and interventions to ameliorate the burden of global blindness.
- Become familiar with issues of palliative care in LMICs.
- Compare the similarities and differences between the methods of diagnosis, treatment and prevention of diabetes in developed vs developing nations.
- Become familiar with the difficulty in reducing malaria transmission in places like sub-Saharan Africa.
- Become familiar with issues of "decolonizing" global health.

DATE	TIME	SPEAKER	TOPIC (and Zoom link)	Zoom ID/ Passcode
February 1, 2021	1:00pm – 2:00pm	Madelon Finkel, Ph.D.	Screening for Cancer in the Age of COVID-19: Focus on LMICs	Meeting ID: 986 2633 1111 Passcode: 886531
February 8, 2021	5:00pm – 6:00pm	Jyoti Mathad, M.D.	Women's Health Issues in LMICs	Meeting ID: 929 3743 6313 Passcode: 214786
February 22, 2021	1:00pm – 2:00pm	Grace Sun, M.D.	Global Blindness	Meeting ID: 950 8203 0968 Passcode: 586713
March 1, 2021	5:00pm – 6:00pm	Lucy Bruell, Randi Diamond, M.D., Howard Eison, M.D., and Gemella Raymore, MD.	Palliative Care MODERATOR: Dr. Madelon Finkel	Meeting ID: 940 3098 9169 Passcode: 546727
March 8, 2021	5:00pm – 6:00pm	Jason Baker, M.D.	Diabetes in the Developing World	Meeting ID: 921 9171 4192 Passcode: 096379
March 15, 2021	1:00pm – 2:00pm	Kirk W. Deitsch, Ph.D.	The Persistent Problem of Malaria in the Developing World	Meeting ID: 938 6466 1904 Passcode: 652267
March 22, 2021	1:00pm – 2:00pm	David Scales, M.D.	Humanitarian Crisis: Global Health	Meeting ID: 985 9146 1353 Passcode: 264130
March 29, 2021	5:00pm – 6:00pm	Leslie Bull, M.A, Luiza Perez, and Nicholas Roberts, M.P.H.	Panel Discussion: Challenges of Global Health Work MODERATOR: Dr. Madelon Finkel	Meeting ID: 916 9178 0417 Passcode: 149562

Speaker: Madelon Finkel, MD

Date: February 1, 2021

Time: 1:00pm to 2:00pm

Title: Screening for Cancer in the Age of COVID-19: Focus on LMICs

Zoom info: <https://weillcornell.zoom.us/j/98626331111> **Meeting ID:** 986 2633 1111 **Passcode:** 886531

Summary: Review of the principles of screening; discussion of how to screen for cancer during a pandemic; focus on challenges of cervical cancer screening in LMICs

Suggested Readings:

Shieh, Y., Eklund, M., Sawaya, G. et al. Population-based screening for cancer: hope and hype. *Nat Rev Clin Oncol* 13, 550–565 (2016). <https://doi.org/10.1038/nrclinonc.2016.50>.

del Pilar Estevez-Diz, M., Colombo Bonadio, R., Costa Miranda, V., & Paula Carvalho, J. (2020). Management of cervical cancer patients during the COVID-19 pandemic: a challenge for developing countries. *Ecancermedicalscience*, 14, 1060. <https://doi.org/10.3332/ecancer.2020.1060>.

Gorin, S. N. S., Jimbo, M., Heizelman, R., Harmes, K. M., & Harper, D. M. (2020a). The future of cancer screening after COVID-19 may be at home. *Cancer*. <https://doi.org/10.1002/cncr.33274>.

Case Study:

The coronavirus disease (COVID-19) pandemic has caused huge disruptions in the ability to screen for cancer. Individuals are fearful of going to hospital clinics for screening, and the potential ramifications of such could lead to patients presenting with advanced disease. In low- and middle- income countries (LMICs) the challenges of encouraging individuals to be screened are especially great. Using cervical cancer screening as an example, share your ideas about how to screen for this disease during the COVID-19 pandemic in a LMIC of your choice.

Discussion Questions:

Describe where you will conduct your screening program; define the target population; articulate the proposed screening program; how might your proposals be integrated into clinic screening programs once the pandemic has passed?

Speaker: Jyoti Mathad, M.D.

Date: February 8, 2021

Time: 5:00pm - 6:00pm

Title: Women's health issues in LMICs

Zoom info: <https://weillcornell.zoom.us/j/92937436313> **Meeting ID:** 929 3743 6313 **Passcode:** 214786

Summary: Focus on health issues that are more common in LMICs or diseases that may be managed differently in LMICs. The talk will also include issues surrounding reproductive health with discussion focused on how social and environmental factors intersect with the provision of appropriate health care in resource-limited settings.

Suggested Readings:

List of Recommendations from the Task Force on Research Specific to Pregnant Women and Lactating Women (PRGLAC)

The Sustainable Development Goals and the Global Strategy for Women's, Children's and Adolescents' Health

Mendenhall, E., & Weaver, L. J. (2014). Reorienting women's health in low- and middle-income countries: the case of depression and Type 2 diabetes. *Global Health Action*, 7(1), 22803.

<https://doi.org/10.3402/gha.v7.22803>

Case Study:

Women's Health in LMIC's Case Study: A sick postpartum woman in India

Cc: dizzy and weak

HPI: 24 yo female in India presents with dizziness and weight loss for two weeks. The patient recently delivered a baby boy 8 weeks ago. Her pregnancy was uneventful except that she has a history of HIV and was only intermittently adherent to her antiretroviral therapy. At the time of delivery her HIV viral load was in the low thousands.

Two weeks ago, she was seen for her 6-wk postpartum visit and was noted to have cough, fevers, and weight loss. At that time she submitted a sputum sample that was acid fast bacilli (AFB) stain negative. However her chest Xray was notable for a left upper lobe lesion and her sputum was Gene Xpert positive. She was started on anti tuberculosis therapy that day and was encouraged to stay adherent to her antiretroviral therapy as well.

Today she presents with continued weight loss and cough and was found to be hypotensive (78/42) in the clinic. Of note, she has not been adherent with her HIV medications or her TB medications.

Discussion Questions:

- What is your differential diagnosis?
- How would you manage this patient?

Speaker: Grace Sun, M.D.

Date: February 22, 2021

Time: 1:00pm - 2:00pm

Title: Global Blindness

Zoom info: <https://weillcornell.zoom.us/j/95082030968> **Meeting ID:** 950 8203 0968 **Passcode:** 586713

Summary: Focus on identify the leading causes of global blindness, potential treatments and interventions to ameliorate the burden of global blindness and skills to perform a basic eye exam in under-resourced communities'

Suggested Readings:

Tanzania Fact Sheet

Global Data on Visual Impairments, World Health Organization

Woodward, R., Mgaya, E., Mwanansao, C., Peck, R.N., Wu, A. and Sun, G. (2020), Retinopathy in adults with hypertension and diabetes mellitus in Western Tanzania: a cross-sectional study. *Trop Med Int Health*, 25: 1214-1225. <https://doi.org/10.1111/tmi.13463>

Case Study:

Weill Cornell Ophthalmology's efforts in Tanzania

Speaker: Lucy Bruell and Randi Diamond, M.D.

Date: March 1, 2021

Time: 5:00pm – 6:00pm

Title: The Persistent Problem of Malaria in the Developing World

Zoom info: <https://weillcornell.zoom.us/j/94030989169> **Meeting ID:** 940 3098 9169 **Passcode:** 546727

Summary: Oli Otya? Life and Loss in Rural Uganda is the story of a team of nurses from a small hospital and volunteer doctors from the U.S. who care for villagers with life-threatening illnesses. The film follows the palliative care team as they travel to the villages to bring medical supplies, pain medicine, compassion, and spiritual support to patients in their homes. The session will feature a panel discussion with the filmmaker and the medical team featured in the documentary about the challenges they encountered in practicing palliative care in rural Uganda.

Suggested Readings:

<https://www.oliotyafilm.com/screening/weill-cornell-screening-march-01-2021/>

PW: CornellMAR012021#

Knaul, F. M., Farmer, P. E., Krakauer, E. L., De Lima, L., Bhadelia, A., Jiang Kwete, X., Zimmerman, C. (2018). Alleviating the access Abyss in palliative care and pain RELIEF—AN imperative of universal health coverage: The Lancet Commission report. *The Lancet*, 391(10128), 1391-1454.

[https://doi.org/10.1016/s0140-6736\(17\)32513-8](https://doi.org/10.1016/s0140-6736(17)32513-8)

Lynch, T., Connor, S., & Clark, D. (2013). Mapping levels of palliative care development: A global update. *Journal of Pain and Symptom Management*, 45(6), 1094-1106.

<https://doi.org/10.1016/j.jpainsymman.2012.05.011>

Speaker: Jason Baker, M.D.

Date: March 8, 2021

Time: 5:00pm to 6:00pm

Title: Diabetes in the Developing World

Zoom info: <https://weillcornell.zoom.us/j/92191714192> **Meeting ID:** 921 9171 4192 **Passcode:** 096379

Summary: Focus on the similarities and differences between the methods of diagnosis, treatment and prevention of diabetes in developed vs developing nations

Suggested Readings:

<https://www.marjoriesfund.org/>

<https://ifl-usa.org/>

<https://idf.org/>

Case Study:

Marjorie was 3 years old when she was diagnosed with type 1 diabetes in Uganda, and just 29 years old when she died, having succumbed to diabetes-related kidney failure. Unlike so many people with type 1 diabetes in Uganda and other parts of the developing world, Marjorie was one of the lucky ones.

Marjorie had been provided with enough insulin and glucose testing supplies to allow her to survive. Yet, Uganda is starved for resources that would have allowed Marjorie to keep her blood sugar levels under good enough control to avoid diabetic complications. While she awaited a kidney transplant – a treatment she never received – Marjorie relied on weekly dialysis treatments to stay alive. More often than not, Marjorie could not afford such treatments, and faced a preventable slow and painful death.

Throughout this painful time, Marjorie continued her efforts to educate both patients and healthcare providers on how to better manage type 1 diabetes, in hopes of preventing others from suffering her fate. Speaking at various medical conferences, Marjorie recounted her story, and fought to change a system, which had limited her own care because of a lack of resources. Marjorie's passed away, but others need not. Sadly there are many more Marjorie's in the world, and much work is needed to improve global diabetes care to allow everyone a change to thrive with diabetes.

Speaker: Kirk Deitsch, M.D.

Date: March 15, 2021

Time: 1:00pm – 2:00pm

Title: The Persistent Problem of Malaria in the Developing World

Zoom info: <https://weillcornell.zoom.us/j/93864661904> **Meeting ID:** 938 6466 1904 **Passcode:** 652267

Summary: Focus on explaining the difficulties in reducing malaria transmission in places like sub-Saharan Africa, I have chosen to discuss several papers that are somewhat dated now, but that provide a possible explanation for the difficulties confronting the global health community. It is hoped that these papers will provide an opportunity to introduce and discuss the underlying topics of pathogenesis, host/parasite interactions, immunity to parasitic infections, the dynamics of vector-borne diseases and disease intervention. I will also provide a description of the basic molecular and cellular biology of these parasites.

Suggested Readings:

World Malaria Report 2019, World Health Organization

Trape, J.-F., & Rogier, C. (1996). Combating malaria morbidity and mortality by reducing transmission. *Parasitology Today*, 12(6), 236–240. [https://doi.org/10.1016/0169-4758\(96\)10015-6](https://doi.org/10.1016/0169-4758(96)10015-6).

Case Study:

Aponte, J. J., Aide, P., Renom, M., Mandomando, I., Bassat, Q., Sacarlal, J., Manaca, M. N., Lafuente, S., Barbosa, A., Leach, A., Lievens, M., Vekemans, J., Sigauque, B., Dubois, M.-C., Demoitié, M.-A., Sillman, M., Savarese, B., McNeil, J. G., Macete, E., ... Alonso, P. L. (2007). Safety of the RTS,S/AS02D candidate malaria vaccine in infants living in a highly endemic area of Mozambique: a double blind randomised controlled phase I/IIb trial. *The Lancet*, 370(9598), 1543–1551. [https://doi.org/10.1016/s0140-6736\(07\)61542-6](https://doi.org/10.1016/s0140-6736(07)61542-6).

Speaker: David Scales, M.D.

Date: March 22, 2021

Time: 1:00pm – 2:00pm

Title: Humanitarian Crisis: Global Health

Zoom info: <https://weillcornell.zoom.us/j/98591461353> **Meeting ID:** 985 9146 1353 **Passcode:** 264130

Summary: Be able to define humanitarian emergency and syndemic; Understand the intertwined health risks after humanitarian crises and initial approaches to address them.

Suggested Readings:

Kohrt, B. A. & Carruth, L. (2020). Syndemic effects in complex humanitarian emergencies: A framework for understanding political violence and improving multi-morbidity health outcomes. *Social Science & Medicine*, 113378. <https://doi.org/10.1016/j.socscimed.2020.113378>

Case Study:

Please take particular note of Case Study #2 in the above reading: “diabetes, anxiety, persistent wounds, and humoral dysfunction in the Somali Region of Ethiopia”

Discussion Questions:

Based on this reading, be prepared to share an example from a country you are familiar with about how the emergency conditions created by the Covid-19 pandemic may lead to a syndemic among certain vulnerable populations. What are the intertwined social, political, economic and health forces that are leading to increased disease vulnerability?

Speakers: Leslie Bull, M.A, Luiza Perez, and Nicholas Roberts, M.P.H.

Date: March 29, 2021

Time: 5:00pm to 6:00pm

Title: Panel Discussion: Challenges of Global Health Work

Zoom info: <https://weillcornell.zoom.us/j/91691780417> **Meeting ID:** 916 9178 0417 **Passcode:** 149562

Summary: Notes from the field focusing on the challenges and joys doing global health work.