

Epicenter

DEPARTMENT OF EPIDEMIOLOGY NEWSLETTER

Volume 5, Issue 1, March 2019



HARVARD
T.H. CHAN

SCHOOL OF PUBLIC HEALTH
Department of Epidemiology

SEMINARS AND SPECIAL EVENTS

MARCH 27

1:00–1:50PM

Kresge 502

Katrina A. Armstrong, MD

*Chair of the Department of Medicine and
Physician-in-Chief, Massachusetts General Hospital;
Professor in the Department of Epidemiology,
Harvard T.H. Chan School of Public Health*

APRIL 3

1:00–1:50PM

Kresge 502

Josef Coresh, MD

*George W. Comstock Professor,
Departments of Epidemiology and Biostatistics,
Johns Hopkins Bloomberg School of Public Health*

APRIL 10

1:00–1:50PM

Kresge 502

Enrique Schisterman, PhD, MA

*Senior Investigator, Epidemiology Branch,
National Institute of Child Health and Human
Development (NICHD)/Division of Intramural
Population Health Research (DIPHR),
National Institutes of Health (NIH)*

APRIL 24

1:00–1:50PM

Kresge 502

James Robins, MD

*Mitchell L. and Robin LaFoley Dong
Professor of Epidemiology,
Departments of Epidemiology and Biostatistics,
Harvard T.H. Chan School of Public Health*

MAY 1

1:00–1:50PM

Kresge 502

POSTDOCS “WORKS-IN-PROGRESS” SEMINAR SERIES

Claire Perner

*Postdoctoral Research Fellow, Department of
Epidemiology, Harvard Chan School*

Wenyuan Li

*Postdoctoral Research Fellow, Department of
Epidemiology, Harvard Chan School*

MAY 8

1:00–1:50PM

Kresge 502

Barbara Mahon, MD, MPH

*Director, Division of Bacterial Diseases and CDC Lead,
Sierra Leone Trial to Introduce a Vaccine Against Ebola
(STRIVE), National Center for Immunization and
Respiratory Diseases Centers for Disease Control
and Prevention (CDC)*

MAY 10

4:00–5:00PM

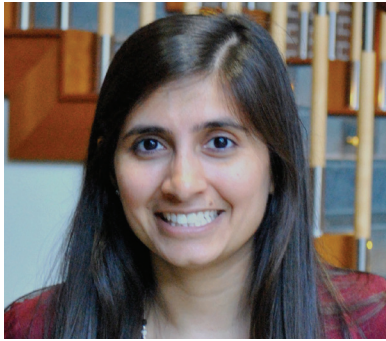
**Snyder Auditorium
Kresge G1**

THE 169TH CUTTER LECTURE ON PREVENTIVE MEDICINE

**Professor Sir Michael Marmot,
MBBS, MPH, PhD, FRCP, FFPHM,
FMedSci, FBA**

*Director of the International Institute for Society and
Health MRC Research Professor of Epidemiology and
Public Health University College, London, UK*

NEW FACES IN EPI



Shaili Jha
Senior Project Coordinator
(Koenen Group)

Shaili Jha received her B.A. in Cell Biology & Neuroscience and Psychology from Rutgers University in 2012 and a Ph.D. in Neuroscience from the University of North Carolina at Chapel Hill in 2017. She is passionate about research that advances our understanding of mental illness and has spent her graduate career studying early typical and atypical human brain development. She is also interested in science policy, outreach, and mentoring.



Sean McGrath
Research Assistant I (Hernan Group)

Sean McGrath is an incoming Ph.D. student in Biostatistics at Harvard. He received his B.Sc. degree in Mathematics at McGill University in 2018. His main area of interest is in statistical methods for causal inference and meta-analysis. In his free time, he enjoys playing tennis and learning languages.



Carter Newman
Senior Project Coordinator,
NeuroGAP-Psychosis (Koenen Group)

Carter Newman has focused on global mental health research, and has been fortunate enough to work in Uganda for the last few years. She attained a MSc in Global Mental Health, with distinction at the London School of Hygiene and Tropical Medicine. She garnered a breadth of experience coordinating and evaluating projects in Uganda, the United States of America and the United Kingdom.



Lewis Novack
Research Assistant II
(Mittleman Group)

Lewis Novack started research in Cardiovascular Epidemiology for Dr. Murray Mittleman. He has a demonstrated history of working in the non-profit organization management industry. He holds an honors Bachelor's Degree from Carleton University in Anthropology, a Masters in Science from Brandies University's Heller School in Global Health Policy and Management. He

also holds two post-graduate certificates in Global Infectious Diseases and Improving Global Health quality and Safety from the Harvard T.H. Chan School of Public Health.



Alyssa Pellegrini,
Department Intern
(Fall 2018–Spring 2019)

Alyssa Pellegrini is a senior at Simmons College double majoring in public relations and marketing with a minor in healthcare management. She has a particular interest in the public health and healthcare sectors, previously holding positions at the Harvard Dental Center, Harvard Chan School of Public Health Executive and Continuing Professional Education and most recently with a start-up in the MassChallenge and Innovate@BU.

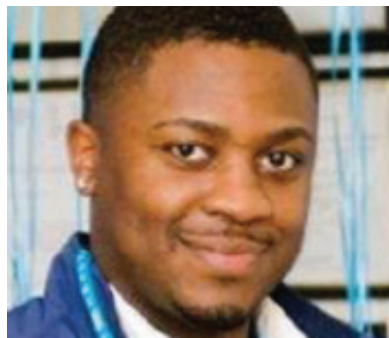


Brena Sena
Program Manager for NeuroMex
(Koenen Group)

Brena Sena is Program Manager for the Neuropsychiatric Genetics in Mexican Populations (NeuroMex) Program in collaboration between the Harvard T.H. Chan School of

NEW FACES IN EPI . . .

Public Health, the Stanley Center at the Broad Institute, and the National Institute of Psychiatry in Mexico. Ms. Sena has led multi-site research projects in the United States, Brazil, and Chile for more than 6 years. She received her MPH degree from Columbia University's Mailman School of Public Health.



Lawrence Vinson III

**Engagement Coordinator,
Pediatric to Adult Care Transition Study
(Seage Group)**

Lawrence Vinson is originally from Georgia where he attended Morehouse College. He has worked as a Field Epidemiologist for the Massachusetts Department of Public Division of STD Prevention and Project Manager for 'No Doubt' an HIV Testing Initiative at Codman Square Health Center. Lawrence currently is the Chair of Harvard CFAR CAB and has served as Commissioner on the Massachusetts Commission on LGBTQ Youth and Chair of Boston Metropolitan Ryan White Planning Council

NEW AWARDS

RECIPIENT: Caroline Buckee
FUNDING ORG: Bill & Melinda Gates Foundation
PROJECT TITLE: *Environmental molecular surveillance for water-borne pathogens in low-resource settings*
PROJECT PERIOD: 11/01/18–10/31/20
AWARD AMOUNT: \$498,581

RECIPIENT: Grace Chan
FUNDING ORG: Bill and Melinda Gates Foundation
PROJECT TITLE: *A Research Program for Maternal and Child Health in Ethiopia*
PROJECT PERIOD: 12/01/2018–11/30/2021
AWARD AMOUNT: \$4,000,000

RECIPIENT: Christy A. Denckla (advisor: Karestan Koenen)
FUNDING ORG: National Institute of Mental Health
PROJECT TITLE: *Pathogenic mechanisms in post-bereavement psychopathology: Contributions of gene–environment interplay, psychosocial factors, and cognitive ability in two population-based cohorts*
PROJECT PERIOD: 3/01/2019–2/29/2024
AWARD AMOUNT: \$175,936

RECIPIENT: Jaap Goudsmit/Albert Hofman
FUNDING ORG: Johnson & Johnson
PROJECT TITLE: *Biological Age and All-cause Mortality and Morbidity: Algorithms using Plasma Biomarkers predicting the Incidence of Disease including Dementia and Alzheimer's Disease*
PROJECT PERIOD: 12/1/18–12/31/21
AWARD AMOUNT: \$1,595,000

RECIPIENT: Phyllis Kanki/Julia Wu
FUNDING ORG: Joep Lange Institute
PROJECT TITLE: *Designing pooled next generation sequencing algorithms for affordable HIV drug resistance surveillance in Africa*
PROJECT PERIOD: 11/01/2018–10/31/2021
AWARD AMOUNT: \$176,555

RECIPIENT: Liming Liang
FUNDING ORG: Sun Yat-Sen University—China
PROJECT TITLE: *Genetic and epigenetic variants responsible for kidney diseases and related traits*
PROJECT PERIOD: 10/30/2018–10/29/2020
AWARD AMOUNT: \$102,005

RECIPIENT: Marc Lipsitch
FUNDING ORG: NHS-NIHR / University of Oxford (B. Cooper)
PROJECT TITLE: *Leveraging Pathogen Sequence Data and Adaptive Designs to Improve Vaccine Trials in Emerging Epidemics in LMICs*
PROJECT PERIOD: 4/01/18–3/31/21
AWARD AMOUNT: £249,948 (GBP)

RECIPIENT: Lorelei Mucci
FUNDING ORG: Prostate Cancer Foundation
PROJECT TITLE: *The Impact of DNA Damage Repair Abnormalities in Prostate Cancer*
PROJECT PERIOD: 10/12/2018–10/12/2020
AWARD AMOUNT: \$193,160

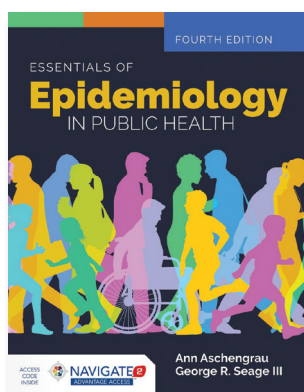
RECIPIENT: Lorelei Mucci
FUNDING ORG: Prostate Cancer Foundation
PROJECT TITLE: *Clonal Hematopoiesis in Prostate Cancer*
PROJECT PERIOD: 12/31/18–12/31/20
AWARD AMOUNT: \$300,000

RECIPIENT: James Robins (Sub-PI)
FUNDING ORG: University of Pennsylvania
PROJECT TITLE: *Next generation missing data methods in HIV research*
PROJECT PERIOD: 2/01/2018–1/31/2022
AWARD AMOUNT: \$323,641

DEPARTMENT UPDATES



Congratulations to **Alessandro Doria** who received the American Diabetes Association's 2018 Edwin Bierman Award. This award recognizes a leading scientist who has made outstanding contributions in the field of diabetes-related macrovascular complications and related risk factors.



Congratulations to **George R. Seage III** and co-author **Ann Aschengrau** on the release of the 4th Edition of their textbook, *Essentials of Epidemiology in Public Health* (published by Jones and Bartlett).

Drs. JoAnn Manson, Julie Buring, Nancy Cook, I-Min Lee, and colleagues published the principal results of the VITamin D and OmegA-3 TriaL (VITAL) in the *New England Journal of Medicine*. Dr. Manson presented the findings, on behalf of Co-PI Dr. Buring and the VITAL Research Group, at a late-breaking clinical trial plenary session at the American Heart Association annual meeting in Chicago on November 10, 2018.



Congratulations to postdoctoral fellow **Louise Emilsson** in the Causal Inference group who on Saturday, October 20, 2018 received the best citation award of the WONCA (World Congress of Family Doctors) held in Seoul, South Korea which was one of the three distinguished research awards of the Congress. This award was for "Examining Bias in Studies of Statin Treatment and Survival in Patients with Cancer," authored by Emilsson L, García-Albéniz X, Logan RW, Caniglia EC, Kalager M, and Hernán MA published in *JAMA Oncology*, January 2018.

Joel Schwartz gave a keynote talk at the World Health Organization's First Global Conference on air pollution and health on Oct 30, 2018

Announcing new infrastructure funding for the Nurses' Health Study 3 (NHS3):



Francine Laden & Jorge Chavarro are leading an NIEHS funded R24 entitled: "Nurses' Health Study 3: A multiple exposure environmental epidemiology cohort of young adults" (project period: 9/30/18–6/30/23). The current project year award is \$427,690 and the total anticipated project award is \$2,030,376. This grant focuses on expansion of recruitment into NHS3 with a focus on minorities and male nurses, collection of environmental exposure information through targeted questionnaires and in home environmental sampling (e.g. water, dust, air), and expansion of web-based mobile technologies.



The interdisciplinary co-investigative team includes Jaime Hart, Peter James, JP Onnela, **Stephanie Smith-Warner**, Antonella Zanobetti and Gary Adamkiewicz.

GINGER PROGRAM UPDATE

The **Global Initiative for Neuropsychiatric Genetics Education in Research** [GINGER] is now in its second year of programming.

IN-PERSON WORKSHOP AND VIRTUAL CLASSROOMS

This past summer, the GINGER Fellows came together from July 9-20 for the program's second in-person workshop hosted in Hampshire, UK. The workshop focused on solidifying analytic skill sets and boosting important soft skills such as public speaking. They attended training sessions led not only by Harvard-Chan faculty but also faculty and lecturers from research and academic institutions around the globe. From Harvard, **Dean Michelle Williams** provided the Fellows with an inspiring lecture on mentorship, and **Jonathan Rosenbluth**, a recent graduate of the Harvard Law School, led a day on negotiation skills. Additionally, **Dr. Elise Robinson** shared updated findings from her research on autism, and **Donald Halstead** conducted a two-day session on grant and manuscript writing. The Fellows also toured the Sanger Institute and began working on group projects, which will continue throughout the second year of the GINGER program. Outside the classroom, the Fellows went punting in Cambridge and visited Emirates Arsenal Stadium, although the highlight of the trip was meeting **Dr. Gerald Chan** and receiving a personal tour of his recently-launched hotel, Heckfield Place. The GINGER Fellows are now in the second year of Virtual Classrooms.

ONSITE TRAININGS, UGANDA AND KENYA

GINGER held its first on-site training from June 4–15 in Kampala, Uganda, in collaboration with the Department of Psychiatry at Makerere University. GINGER faculty, **Drs. Lori Chibnik** and **Bizu Gelaye**, along with faculty from Makerere University, and GINGER Teaching Fellows, including post-doctoral fellow in Epi **Dr. Reem Waziry**, and biostats doctoral students **Drs. Katrina Devick** and **Emily Slade**, led the two-week teaching program. GINGER received over 400 applicants for 40 seats, and classes included epidemiology, biostatistics, and R programming, as well as systematic reviews, and bioethics. A highlight of the training included meeting Masters-level student Thomas Katairo, who excelled in the Epidemiology classes. When asked about his previous experience in Epi, he remarked that he had learned everything he knew about Epidemiology from **Dr. Fran Cook**.



Thomas Katairo of Makerere University, participant in the Epidemiology course, with Dr. Fran Cook's online edX course.

GINGER executed a different on-site training in Kilifi, Kenya this past September, co-hosted with the Initiative to Develop African Research Leaders (IDeAL) at the KEMRI-Wellcome Trust Research Programme, and provided training in bioinformatics.



Participants in the GINGER Interactive Bioinformatics Workshop in Kilifi, Kenya

front row from left to right: Melkam Kebede, Patricia Kipkemoi, Linnet Onger, Ivy Kombe and
back row from left to right: Jonathan Abuga, John Mariuki, Symon Kariuki, Abigiya Tilahun, Mary Bitta, Sylvia Onchaga

STUDENT PROFILE

Building A Global Cohort

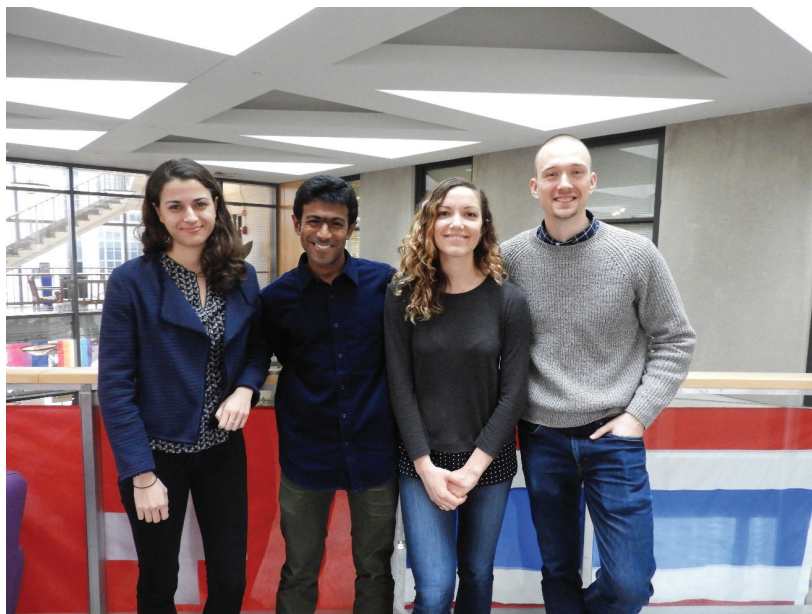
Chris Andersen and Hari Iyer are fourth-year doctoral students in the Department of Epidemiology. The following article is a summary based on a conversation with them, and emails, about their experience forming the Global Cohort program.

THE GLOBAL COHORT OF DOCTORAL STUDENTS is a community that promotes reciprocal learning between doctoral students all over the world and promotes shared capacity to address public health problems by engaging in research, forums for feedback, and professional development activities.

Epi doctoral students Chris Andersen and Hari Iyer, now in their fourth year, developed the idea for this group in the spring of their first year at the Harvard Chan School. Having had past positive experiences partnering with colleagues in various capacities in low- and middle-income countries (LMIC), they wanted to create a model of reciprocal learning adapted to the doctoral student experience at both Harvard and institutions abroad.

Once Andersen and Iyer initially connected on the idea to start the program, they did the hard work of building it from the ground up. This meant connecting with former African colleagues to run the idea by them and getting the support and advice of various faculty and leadership from around the school. “The more people that we talked to, the more we realized that the needs were fairly diverse, that there was a broad diversity that people were coming from and a broad set of needs, interests, and potential benefits that we can draw from each other,” said Andersen. He continued, “We wanted to develop a program that was flexible to the needs and interests of students based at Harvard and at LMIC institutions.”

The foundation of this program is the 1-on-1 partnership which is structured through a “learning contract.” Student pairs composed of one Harvard student and one LMIC institution student write a learning contract that outline their goals, how they can support the other in achieving those goals, and research activities in which they will engage. Andersen and Iyer piloted this idea with doctoral colleagues in Rwanda and Botswana in



The Global Cohort of Doctoral Student leadership team

left to right: Sara Sauer, Hari Iyer, Simone Passarelli, and Chris Andersen

2017. They went on to expand their activities to include a Canvas-based web forum where the students post their work and receive feedback from the entire community. “Being interested in the intersection of statistics and global health, engaging with the Global Cohort has added an important layer to my experience as a PhD student that I wouldn’t get from solely crunching numbers for my dissertation,” says Sara Sauer, a 3rd year biostatistics PhD student who joined the Global Cohort later in 2017.

Indeed, a critical component of the program’s development has been engaging with a broad body of students. The team doubled in size in 2017 with the addition of Sauer and Simone Passarelli (3rd year nutrition PhD student), who partnered with peers in Rwanda and Ethiopia. In 2018, nine additional doctoral students at the Harvard Chan School signed on to join the program. Passarelli commented, “It’s exciting to see how much interest there has been among the PhD community at Chan. It says to me that we’re filling a much-needed gap in global learning.”

This March, through funding from the Rose Service Learning Fellowship, the team will host their first annual symposium, which will bring all doctoral student partners from abroad to Boston for a week of team trainings and to host an event to share their experiences with the Harvard community.

STUDENT PROFILE . . .

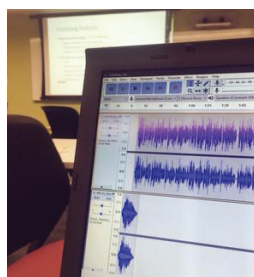
When asked about how their Harvard Chan School experience prepared them for this endeavor, Iyer said “We’ve just been so lucky that most of the people we’ve reached out to over email about this project have sat down and met with us. I don’t think you could say that about a lot of places—virtually every single person when we’ve sat down with them and shared about what we’re going to do, gave us a least a half an hour of their time, gave us really good feedback...” In particular, Dr. Wafaie Fawzi, Professor of Nutrition, Epidemiology, and Global Health & Population, and Dr. Bethany Hedt-Gauthier, Associate Professor in the Department of Biostatistics have been key mentors from the early stages of the project. Their combined decades of experience doing capacity building work informed Andersen and Iyer’s approach to a reciprocal capacity building model for doctoral students by emphasizing engagement with a broad stakeholder base and setting achievable short-term goals to demonstrate proof-of-concept.

When asked about what advice they would give to other students who are interested in starting a similarly ambitious endeavor, Andersen said “Breaking new ground entails risk, so the first thing is to abandon fear of failure. If you fail, you’ll still have learned some life lessons. If you succeed, you’ll have made a contribution to your community. Second, focus on effective communication. The first part of this is good listening; try to truly understand the perspectives of your stakeholders and be responsive to their feedback. The second part is effectively communicating your ideas; concisely conveying your key messages (especially with the use of visuals) can work wonders in helping people understand what you’re trying to do.”

The Global Cohort team is always looking for new student and faculty partners. If interested, please email them at gcds@hsph.harvard.edu. If you’d like to meet the team in person, please attend their event on “Reciprocal Capacity Building” in Building 1 room 1208 on Wednesday, March 27 from 5:30-7:00.

DEPARTMENT SPOTLIGHT

Bringing Epidemiology to the People, One Podcast at a Time



IN THE 2017 Harvard Chan School Commencement address, speaker **Gina McCarthy** addressed the audience with a challenge “It’s not enough to do science, you have to speak for the science in ways that non-scientists—aka real people—can understand [...] So, as young scientists, take off your lab coats and start practicing this. Go out and talk to people about what you do in the lab, what you learn in the library. Tell them what you know and what it really means to them and to their families.”

For then graduating doctoral student **Natalie DuPré**, this speech made it evident that there was a gap between the work that she and fellow epidemiologists were doing and what was being communicated to the general public.

In the months following McCarthy’s commencement speech, DuPré, along with faculty advisor **Professor Fran Cook, Myroslava (Mishka) Makuch**, a learning designer, and **Sejal Vashi**, Manager of Digital Learning at the Harvard Chan School, took it upon themselves to apply for the Harvard Initiative for Learning & Teaching (HILT) Spark Grant. The HILT Spark grant provides an

opportunity “for faculty and staff to help ‘spark’ promising teaching and learning projects from idea to reality and position innovations for future success.” Their proposal, titled “Development of Student-run Podcasts as an Innovative Learning and Communication Tool” was one of five projects that were awarded a grant in 2018.

The following is taken from an email exchange with DuPré, now Assistant Professor at the University of Louisville School of Public Health and Information Sciences, (with additional feedback from team members) about the project:

Could you elaborate about what initially brought the team together to submit the proposal? What roles did individual team members play?

Fran, Mishka, Sejal, and I were working as part of the blended MPH in Epidemiology program in various roles, all with a mutual interest in online education. Fran is the director of the MPH Epi program and employed me as Curriculum Fellow. My role was to develop and expand online resources available to the MPH Epi students. The result is a site called the Epidemiology iLibrary. This project required additional expertise and oversight from the Digital Learning team (enter Mishka and Sejal) at

photo by Eleanor Murray [@EpiEllie]

DEPARTMENT SPOTLIGHT . . .

the Harvard Chan who are incredibly knowledgeable and effective at creating a user-friendly online learning experience. In this process, an idea emerged in Summer 2017 that podcasts could be a way to engage the online MPH community (both current students and alumni) to continue epidemiologic thinking and learning. As a Curriculum Fellow, I explored podcast development and it was evident to me (at least) that creating podcasts is a creative and engaging learning experience that synthesizes and communicates epidemiologic research in ways that are often lost in the media. It was unknown whether this could be an effective learning tool for students to perform as a class activity, and the HILT Spark Grant offered an opportunity to further explore this; so we applied. It was definitely an organic process and allowed us to expand our team with doctoral students Ruoran Li and MyDzung Chu, and Production Specialist Rick Sheiber.

In terms of the project's stated goals, as laid out in the proposal, can you tell me what the outcomes have been so far?

Building a podcasting infrastructure that is conducive and sustainable for student use.

With the HILT funds, we have purchased two Yeti microphones with pop filters (no more puffs on your p's) that plug directly in to your laptop, one H4N field recorder and accessories that fit nicely in their own case to responsibly carry around to the recording studio. We are currently working with the IT department to create a self-service microphone borrowing and audio recording room reservation process. In the meantime, if you would like to borrow the equipment and/or reserve a recording studio, please email mets@hsph.harvard.edu.

Develop an on-campus and an online podcasting workshop to train students in podcasting

Approximately 25 people (average age of 29 years old)—from HMS and HSPH departments of Epidemiology, Social and Behavioral Sciences, and Health Policy and Management—attended the Fall workshop and thought that the on-campus workshop were effective or very effective. Based on a pre-workshop versus post-workshop survey data comparison (*NOTE: only half of the participants completed the surveys*), on average the workshop increased confidence in podcasting storyline development, editing and recording a podcast. At the end of the workshop, three quarters of the survey participants remained interested in creating their own podcast after the workshop. We are currently working on developing an online podcasting workshop.

Build a podcast library of student-generated podcasts

This has not materialized yet as we are figuring out ways to have a stronger student engagement.

For members of the Harvard Chan community who are interested in learning more about the project and/or podcasting resources—who should they contact and what can they look forward to in the near future?

While there are currently no plans to offer another on-campus course as the workshop leaders have left the Boston area, the materials that were used in the on-campus workshop are available on the Epidemiology iLibrary (if you would like access, please contact mets@hsph.harvard.edu). We are in the midst of creating an online version of the course that is expected to be available in April 2019.

Anyone interested in finding out more can contact Fran Cook, email ecook@bwh.harvard.edu.



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Department of Epidemiology

Harvard T.H. Chan School of Public Health
Department of Epidemiology
677 Huntington Ave, Kresge 9th Floor
Boston, MA 02115
hsph.harvard.edu/epidemiology

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