



CENTER FOR HEALTH
AND WELLBEING

PRINCETON UNIVERSITY

2 0 2 2 ANNUAL REPORT

**Center for
Health and
Wellbeing**



ACKNOWLEDGMENTS

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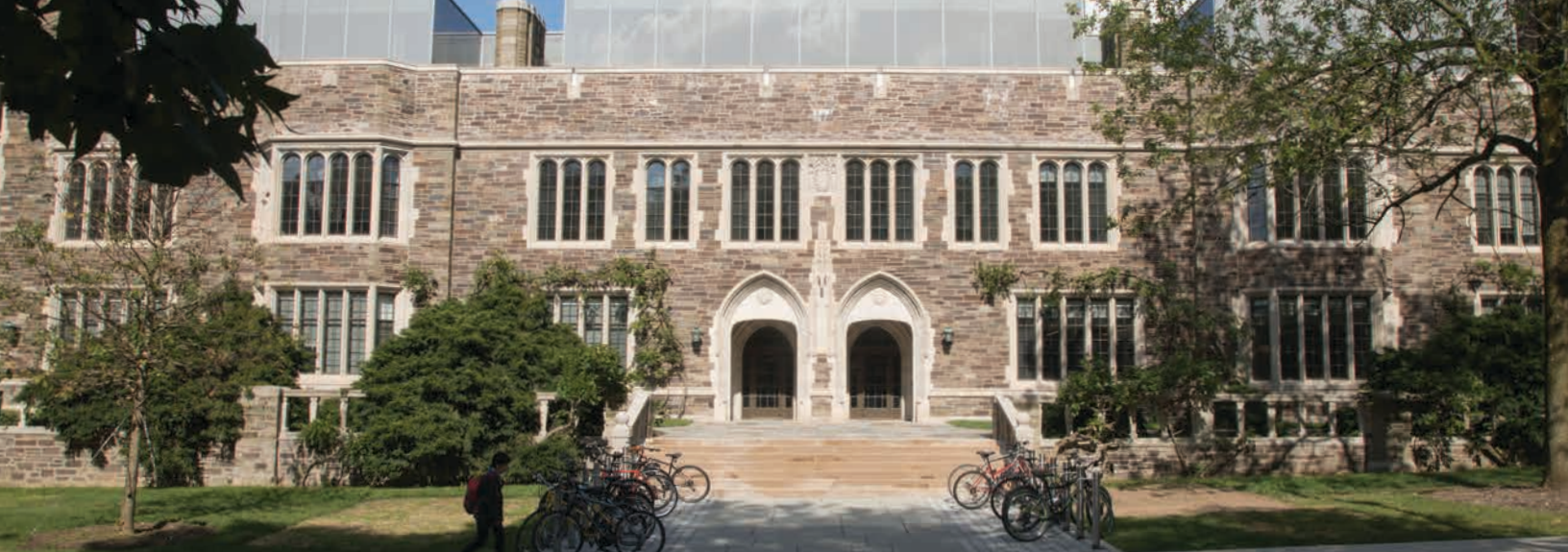
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Jeffrey Sturchio '73, Past Chairman, Rabin Martin



The Julius Romo Rabinowitz Building, home of the Center for Health and Wellbeing.

CONTENTS

Letter from the Co-Directors	2	HHP Course Spotlights	24
Mission, History & Structure	3	Disease Group	26
Affiliates	4	Book Club: Continuing the Conversation	26
Visiting Scholars & Postdoctoral Associates	11	Health Policy Career Events	27
2022 Visiting Scholars	11	HHP Student Reflections	28
2022 Postdoctoral Research Associates	13	HHP Alumni Reflections	29
International Collaboration Brings Health Researchers to Princeton	16	Internship Programs	30
Academic Programs	18	Research & Advocacy	37
Global Health and Health Policy Certificate	18	CHW-Funded Research	37
GHP Certificate Course Highlights	19	Program on U.S. Health Policy	41
GHP Student Awards and Accomplishments	19	State Health & Value Strategies Program	44
2022 Senior Thesis Prize	20	Princeton Pulse Podcast	49
Health Scholars Program	21	Events	50
Students Present Health-Focused Research	22	CHW Seminar Series	50
GHP Alumni Reflections	23	GHP Colloquium Series	51
Health & Health Policy Certificate	24	Conferences	51
		Other Events	52
		Event Highlight	52

LETTER FROM THE CO-DIRECTORS



The past year brought growth and exciting new initiatives at CHW. We are pleased to have added a record 19 new faculty affiliates in the past year, reflecting diverse disciplinary perspectives on health policy, from engineering to art history. A sampling of their recent awards gives some sense of the quality of these new affiliates: Catherine Jensen Peña received a New York Stem Cell Foundation Robertson Neuroscience Investigator Award for work on the way that early life stress affects molecular brain development to increase risk for psychiatric disease; A.J. te Velthuis received an NIH Director's New Innovator Award for his work on influenza; and Sam Trejo was awarded a Brocher Fellowship for his work on the implications of genomics for health and social policy.



We have successfully launched the Africa Health Research Initiative, with financial support from the School of Public and International Affairs (SPIA), which will facilitate student engagement with African partners, including Princeton's Mpala Research Centre. We have also launched the Pandemic Preparedness and Response Initiative, again with SPIA support, to match students working in this area with research partners all over the world.

Closer to home, Heather Howard is anchoring our new Princeton Pulse podcast. The inaugural broadcast features New Jersey first lady Tammy Murphy and Princeton professor Betsy Armstrong discussing the state's drive to lower maternal morbidity and mortality. On campus, CHW supports a multi-disciplinary disease group bringing together researchers for discussion and collaboration. Also, our graduate health certificate student representative Katie Comando began a popular health policy book club.

Our global health internship program has rebounded from the pandemic, and we were able to offer a record number of summer internships, mostly in person, all over the world. Settings ranged from close to home, at the Rutgers Cancer Institute and the New York City Health and Hospitals Special Pathogens Unit, to the University of Malaya, the Oswaldo Cruz Foundation in Brazil, and UNICEF in South Africa. Some of the impressive accomplishments of these interns are detailed on pages 30-36 of this report.

We have been very pleased to give back to long-time international partner institutions who have hosted and mentored many of our student interns, by hosting some of those partners' affiliated graduate students for semester-long visits at Princeton under our new International Health Research Collaboration Initiative. It is uplifting to interact with these students who are astonished by all that Princeton has to offer, and grateful to have the opportunity to learn here. See pages 16-17 for more information about these visiting students.

We continually work to improve our communications and outreach. Please visit us at chw.princeton.edu, and follow us on Facebook (@CHWPrinceton), Twitter (@PrincetonCHW) and Instagram (Princeton_CHW). We always love to hear from our students, affiliates, friends, and alumni (see the features on Sarina Shrier on page 23 and Rachel Cohen on page 29) about your pathways at Princeton and beyond.

Best regards,

A handwritten signature in black ink that reads "Janet Currie".

Janet Currie
CHW Co-Director
Henry Putnam Professor of Economics & Public Affairs

A handwritten signature in black ink that reads "Kate Ho".

Kate Ho
CHW Co-Director
John L. Weinberg Professor of Economics & Business Policy



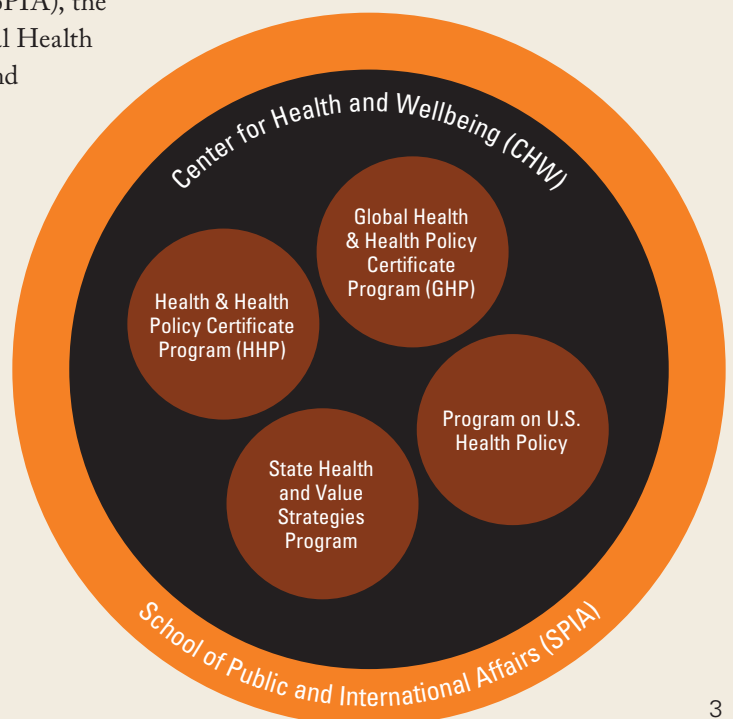
MISSION, HISTORY & STRUCTURE

The Center for Health and Wellbeing (CHW) fosters research and teaching on diverse aspects of health and wellbeing in both developed and developing countries. The Center's goals are to understand the determinants of health and wellbeing; investigate the role of public policy in shaping the quality of people's lives; and educate undergraduate and graduate students who aspire to careers in health and health policy.

In 2000, former Princeton professor and current president of Brown University Christina Paxson founded CHW to create a home for interdisciplinary scholarly collaboration and education around topics in health at Princeton University. Today, CHW is a thriving and vibrant community with a tremendous capacity for health-focused research. The Center, led by Co-Directors Janet Currie and Kate Ho, and Associate Director Gilbert Collins, supports its associates and students through grants, certificate programs, mentorship, and events.

Housed within the School of Public and International Affairs (SPIA), the Center offers two certificate programs: the undergraduate Global Health and Health Policy (GHP) certificate and the graduate Health and Health Policy (HHP) certificate.

Also under the CHW umbrella are the Program on U.S. Health Policy, which sponsors research and activities addressing aspects of domestic health care and health policy, and the State Health and Value Strategies Program, a Robert Wood Johnson Foundation-funded program assisting states with health reform implementation.





CHW affiliate and professor of African American Studies Ruha Benjamin studies the social dimensions of science, technology, and medicine.

AFFILIATES

CHW affiliates are Princeton University faculty members and lecturers from diversified disciplines in the natural sciences, social sciences, and humanities. Our affiliates teach health-focused courses, advise students in health-related research, and mentor students on internships and careers in global health.

NEW AFFILIATES IN 2022

Anna Arabindan-Kesson African American Studies and Art & Archaeology

Anna Arabindan-Kesson is an assistant professor of black diasporic art with a joint appointment in the Departments of African American Studies and Art & Archaeology. Born in Sri Lanka, she completed undergraduate degrees in New Zealand and Australia and worked as a registered nurse before completing her Ph.D. in African American studies and art history at Yale University. Arabindan-Kesson focuses on African American, Caribbean, and

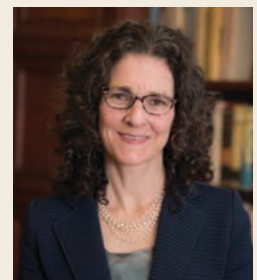


British art, with an emphasis on histories of race, empire, medicine, and transatlantic visual culture in the long 19th century. Her first book, published with Duke University Press, is called “Black Bodies White Gold: Art, Cotton and

Commerce in the Atlantic World.” She is also the director, along with Jessica Womack, of the digital humanities project *Art Hx: Visual and Medical Legacies of British Colonialism* [www.artandcolonialmedicine.com].

Amy Borovoy East Asian Studies

Amy Borovoy is a professor in the Department of East Asian Studies. Her work in the field of cultural anthropology focuses on biomedicine, public health, and mental health care in Japan, and Japan’s family-oriented social welfare system. Her first book, “The Too-Good Wife: Alcohol, Codependence, and the Politics of Nurturance in Postwar Japan,” explored alcoholism, recovery, and the gendered division of labor in Japan.



Borovoy's medical anthropological research and teaching recently have concentrated on late life and end-of-life issues. In 2021, she completed an introductory essay to William LaFleur's book, "Biolust,' Brain Death, and the Battle Over Organ Transplants," a text that will be published posthumously in 2023 with Bloomsbury Press. The essay deals with ethical issues in declaring death by neurological criteria, including the hesitancy to embrace neurological death as human death in Japan.

Borovoy is working on a journal article about the containment of Covid-19 in Japan, discussing Japan's policies of containment without heavy reliance on lockdowns or digital surveillance. The piece will highlight public health messaging, contact tracing, and social surveillance. Additionally, she is completing a book manuscript, "A Living Laboratory: Japan in American Social Thought," returning to canonical works in postwar Japan studies in the U.S.

Rebecca Carey Psychology

Rebecca Carey is an assistant professor in the Psychology Department. Her research takes a sociocultural perspective to investigate how experiences of societal and economic adversity impact people's close relationships, and how close relationships, in turn, can impact socioeconomic disparities in health and wellbeing. She currently runs the Adversity and Relationships in Context (ARC) Lab, where she works with a diligent team of researchers to examine a wide range of topics, including social class, social networks, self and identity, health disparities, first-



generation college students, and cross-class interactions. Before coming to Princeton, Rebecca completed her Ph.D. at Stanford University and a postdoctoral fellowship at the Kellogg School of Management at Northwestern University.

Allison Carruth American Studies, High Meadows Environmental Institute

Allison Carruth is a professor in the Department of American Studies and the High Meadows Environmental Institute. Her research interests include environmental narrative, media and art; science communication; contemporary food movements; and evolving relationships between technology, ecology and

environmentalism in American culture. Her scholarship and collaborative public projects have been supported by ArtPlace America, the National Science Foundation, Princeton University, UCLA, the University of California Humanities Research Institute, and the Wayne Morse Center for Law and Politics.



Andrew Dobson Ecology & Evolutionary Biology

Andrew Dobson was born in London and grew up in Scotland, where he developed an interest in natural history, wilderness, and mathematics. He completed his undergraduate degree in zoology at Imperial College, London University and his D.Phil. at Oxford University, focused on the study of "Mortality Rates of British Birds." Dobson returned to Imperial College to work as a postdoctoral fellow with Roy Anderson on population dynamics of host-parasite relationships and continued to develop this interest during a second postdoctoral opportunity with Bob May at Princeton.



Dobson was on the faculty at University of Rochester for three years before returning to Princeton as an assistant professor in January 1990. He has been at Princeton in the Department of Ecology & Evolutionary Biology ever since,

undertaking research in Serengeti, Yellowstone, Coastal California and on the house finches that occupy most people's backyards in the United States.

Since 2011, Dobson has been a member of the external faculty at the Santa Fe Institute and is currently an external A.D. White Professor at Cornell University. Additionally, he holds a visiting chair in sustainable development at IMéRA at the University of Aix-Provence in Marseille, France. He is an elected fellow of the America Association for the Advancement of Science and of the Ecological Society of America. He has published over 200 papers and several books. His most recent book is "Unsolved Problems in Ecology," jointly edited with David Tilman and Bob Holt (Princeton University Press).

Hanna Garth Anthropology

Hanna Garth, an assistant professor in the Department of Anthropology, is a sociocultural and medical anthropologist who studies food access and the global food system. She studies these questions in Latin America and the Caribbean, and among Black and Latinx communities in the United States. This work has looked at the ways in which macro-level changes and shifts in local food distribution systems impact communities, families, and individuals. She has conducted over 10 years of research on food access in Cuba and published the book “Food in Cuba: The Pursuit of a Decent Meal,” released in January



2020. In addition to her work in Cuba, she has an ongoing research project in Los Angeles, CA. Based on this work, she co-edited the volume “Black Food Matters: Food Justice in the Wake of Racial Justice,” released in October 2020.

Adam Goldstein Sociology and School of Public and International Affairs

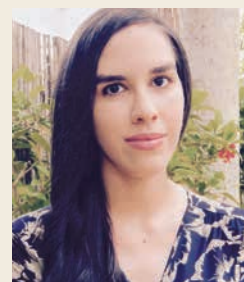
Adam Goldstein is assistant professor of sociology and public affairs, and is currently the Ralph O. Glendinning University Preceptor. He earned his Ph.D. in sociology from the University of California at Berkeley and was previously a Robert Wood Johnson Postdoctoral Scholar in Health Policy at Harvard. His areas of interest include economic sociology, organizations, and social stratification. Goldstein’s research examines the social consequences of financialization, and the individualization of risks across social institutions in the United States.



Dannelle Gutarra Cordero African American Studies and Gender & Sexuality Studies

Dannelle Gutarra Cordero, a lecturer in African American Studies and Gender & Sexuality Studies, earned a Ph.D. in History from the University of Puerto Rico, Río Piedras Campus in 2012. Gutarra Cordero specializes in the intellectual history of the Caribbean and the Atlantic World, and her research and teaching interests include the topics of scientific racism,

slavery, gender, sexuality, and colonialism. Her first book, titled “She Is Weeping: An Intellectual History of Racialized Slavery and Emotions in the Atlantic World,” was published by Cambridge University Press in 2021. At



Princeton, Gutarra Cordero is currently a faculty adviser at Forbes College and is affiliated with the Program in Latin American Studies as well as the Center for Health and Wellbeing and its Global Health Program. She was previously a visiting fellow of the Hutchins Center for African & African American Research at Harvard University and taught graduate and undergraduate courses at the Inter American University of Puerto Rico and Virginia Commonwealth University.

Niraj Jha Electrical and Computer Engineering

Niraj Jha, professor of electrical and computer engineering, has been a faculty member of the Department of Electrical Engineering since 1987. He received his B.Tech. degree in electronics and electrical communication engineering from Indian Institute of Technology, Kharagpur, India, and his Ph.D. degree in electrical engineering from University of Illinois at Urbana-Champaign, IL. Jha is a fellow of IEEE and the Association for Computing Machinery, and was given the Distinguished Alumnus Award by I.I.T., Kharagpur. He has received the Princeton Graduate Mentoring Award and has served as an associate director for the Andlinger Center for Energy and the Environment. Jha is a co-founder of a startup company called NeuTigers, which is commercializing edge analytics and smart healthcare research licensed from the university-based on work in his lab. Furthermore, he has served as the editor-in-chief of IEEE Transactions on VLSI Systems and an associate editor of several other journals.

Jha’s research interests include smart healthcare, machine learning, cyberphysical systems, and cybersecurity. He has co-authored five widely used books and 460 papers. His work has won 20 best paper awards or nominations and 23 patents. Additionally, he has given several keynote speeches in the areas of nanoelectronic design/test, smart healthcare, and cybersecurity.



Satyel Larson Near Eastern Studies

Satyel Larson is an assistant professor specializing in women, gender, and sexuality in the Middle East and North Africa. Her work is ethnographic, historical, and mostly based in Morocco. Her scholarship focuses on how legal, medical, and religious culture influence practices of kinship and reproduction, and on the flow of ideas and technologies of gender and sexuality between the Middle East, North Africa, and Western Europe.

Larson has written on the politics of kinship, ethnicity, and Islamic identity in Maghrebi law and society. Her current book project examines the resilience of unconventional kinship and reproductive practices in modern Morocco. The book is based on archival research and fieldwork conducted in an Islamic family law court, a maternity hospital, and popular healing sites in Rabat and Casablanca.



Larson holds a Ph.D. from the University of California, Berkeley. She was a Harper-Schmidt Fellow in the Social Sciences and Department of Anthropology at the University of Chicago. At Chicago, she taught courses in political

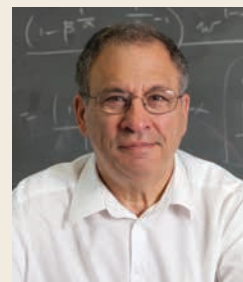
economy, social and political theory, feminist and postcolonial thought, and cultural analysis, for which she was awarded an outstanding distinction in undergraduate teaching and mentoring. In her teaching as well as her research, she attends to questions of knowledge production and social marginalization, and to discourses of progress, normalcy, health, freedom, and resistance. She has held fellowships from various institutions, including the American Association of University Women, the Max Planck Institute for Social Anthropology, the Empirical Legal Studies Group at Boalt Law School, and the Al-Falah Program in Islamic Studies at the Center for Middle Eastern Studies, UC Berkeley.

Simon Levin Ecology & Evolutionary Biology

Simon Levin is the James S. McDonnell Distinguished University Professor in Ecology & Evolutionary. His research interests are in understanding how macroscopic patterns and processes are maintained at the level of ecosystems and the biosphere, in terms of ecological and evolutionary mechanisms that operate primarily at

the level of organisms; in infectious diseases; and in the interface between basic and applied ecology, especially the interface with economics.

Levin received his Ph.D. in mathematics from the University of Maryland. He is a fellow of the American Academy of Arts and Sciences and the American Association for the Advancement of Science, a member of the National Academy of Sciences and the American Philosophical Society, and a foreign member of the Istituto Veneto and the Istituto Lombardo. He is a university fellow of Resources for the Future, and a fellow of the Beijer Institute of Ecological Economics, the Society for Industrial and Applied Mathematics, the Society for Mathematical Biology, the American Mathematical Society, and a distinguished fellow of the Luohan Academy. Additionally, Levin is a former president of the Ecological Society of America and the Society for Mathematical Biology, chair of the Council of IIASA, chair of the Board of the Beijer Institute, and chair of the Science Board of the Santa Fe Institute.



He has received numerous awards, including the Kyoto Prize in Basic Sciences, Heineken Prize for Environmental Sciences, Margalef Prize for Ecology, Tyler Prize for Environmental Achievement, the U.S. National Medal of Science, and the BBVA Foundation Frontiers of Knowledge Award in Ecology and Conservation Biology. Throughout his career, Levin has mentored more than 150 Ph.D. students and postdoctoral fellows.

Cameron A. Myhrvold Molecular Biology

Cameron Myhrvold is an assistant professor of molecular biology. His work specializes in the development of CRISPR-based technologies for studying RNA, with an emphasis on detecting and destroying RNA viruses. Myhrvold received a Ph.D. in systems biology from



Harvard University. His Ph.D. studies in synthetic biology and nucleic acid nanotechnology, supported by a Fannie and John Hertz Foundation fellowship, involved the development of three technologies that demonstrated a variety of

applications for self-assembled nanostructures. During his postdoctoral fellowship, he turned his attention towards the RNA-targeting CRISPR effector protein Cas13, where he has led or co-led the development of four Cas13-based technologies, including CARMEN, CARVER, and SHINE.

Kristina Olson Psychology



Kristina Olson, professor of psychology, leads Princeton University's Human Diversity Lab. She received her B.A. in psychology and African American studies at Washington University and her Ph.D. in psychology from Harvard

University. Before coming to Princeton, she was a faculty member at Yale University and the University of Washington. Her research focuses primarily on gender development and wellbeing in transgender, intersex, and other gender diverse children and adolescents. Olson's lab is currently funded by the National Science Foundation and the National Institutes of Health. She has been awarded the National Science Foundation's Alan T. Waterman award, which honors an outstanding young U.S. scientist or engineer, and was named a 2018 MacArthur Fellow, among other honors.

Catherine Jensen Peña Neuroscience

Catherine Jensen Peña, assistant professor of neuroscience, earned her B.A. at the University of Pennsylvania, her Ph.D. at Columbia University, and continued her postdoctoral training at the Icahn School of Medicine at Mount Sinai. She joined the Princeton Neuroscience Institute as an assistant professor in 2019.

Peña's research focuses on understanding how early life stress affects brain development and risk for psychiatric disease. Her laboratory studies the neurobiological mechanisms through which early environmental experiences are encoded and maintained into adulthood to have long-lasting impact on behavior. Ultimately, she hopes the knowledge gained from this research can be applied to innovative therapies for individuals who experienced childhood stress and trauma.



Laurence Ralph Anthropology

Laurence Ralph is a professor of anthropology and the director of the Center on Transnational Policing. He earned both a Ph.D. and an M.A. degree in anthropology from the University of Chicago, and a B.S. degree from Georgia Institute of Technology, where he majored in history, technology, and society.

Ralph's work explores how police abuse, mass incarceration, and the drug trade make injury and premature death seem natural for people of color. His first book, "Renegade Dreams" (University of Chicago Press, 2014), received the C. Wright Mills Award



and the J.I. Staley Prize. His second book, "The Torture Letters" (University of Chicago Press, 2020), explores a decades-long scandal in which hundreds of Black men were tortured in police custody. "The Torture Letters" is also the name of his award-winning, animated short film, which is featured in The New York Times Op-Doc series. Ralph's work has been featured in The Paris Review, The New York Times, The New York Review of Books, The Nation, The Chicago Review of Books, Boston Review and Literary Hub, among other publications.

Anu Ramaswami Princeton Institute for International and Regional Studies, Civil & Environmental Engineering, and High Meadows Environmental Institute



Anu Ramaswami, an interdisciplinary environmental engineer, is the Sanjay Swami '87 Professor of India Studies, and a professor of civil and environmental engineering at the Princeton Institute for International and Regional

Studies and the High Meadows Environmental Institute. She is also the inaugural director of Princeton's M.S. Chadha Center for Global India.

Ramaswami has pioneered sustainable urban systems science and knowledge co-production for developing low-carbon, healthy, and equitable cities. Her work explores how eight key sectors – that provide water, energy, food, buildings, mobility, connectivity, waste management and green/public spaces – shape human and environmental wellbeing, from local to global scales. This work integrates

environmental science and engineering, industrial ecology, public health, and public affairs, with a human-centered and systems focus.

She has authored more than 100 peer-reviewed articles published in leading journals, including *Science*, *Nature Climate Change*, *Nature Sustainability*, *Proceedings of the National Academy of Sciences (PNAS)*, *Environmental Science & Technology*, and *Environmental Research Letters*. Additionally, she is the lead principal investigator and director of the National Science Foundation (NSF)-supported Sustainable Healthy Cities Network, and serves on the United Nations Environment Programme's International Resource Panel.

Timothy Searchinger School of Public and International Affairs and Center for Policy Research on Energy and the Environment

Tim Searchinger is a senior research scholar at the School of Public and International Affairs, as well as a senior fellow and technical director of the Food Program at the World Resources Institute. His work today combines ecology, agronomy, and economics to analyze the challenge of how to feed a growing world population while reducing deforestation and greenhouse gas emissions from agriculture.



Searchinger's publications include multiple papers in *Science* and *Nature* addressing the greenhouse implications of agriculture, bioenergy, forest protection and nitrogen pollution. His research ranges from global analyses to projects

in countries around the world, including Colombia, Rwanda, Zambia, Vietnam and Denmark, and focuses both on issues of science and of public policy.

For the first part of his career, Searchinger worked as an environmental attorney, primarily at the Environmental Defense Fund, where he directed its work on agricultural policy, wetlands, and restoration of several major aquatic ecosystems, and received a National Wetlands Protection Award from the U.S. Environmental Protection Agency. Searchinger is also a fellow of the Bezos Earth Fund, and he has been a fellow of the Smith School of Enterprise and Environment at Oxford University, a transatlantic fellow of the German Marshall Fund, a senior fellow of the Law and Environmental Policy Institute at Georgetown

University Law Center, a deputy general counsel to Governor Robert P. Casey of Pennsylvania, and a federal appellate law clerk. He holds a J.D. from Yale Law School where he was Senior Editor of the *Yale Law Journal*.

Sam Trejo Sociology

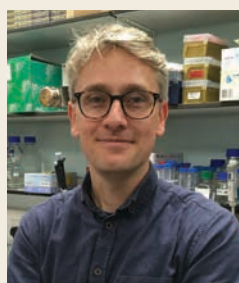
Sam Trejo is an assistant professor of sociology. His research explores how social and biological factors jointly shape human development across the life-course and the implications for public policy. Trejo specializes in quasi-experimental, biosocial, and computational methods. A driving theme of his work is the reciprocal relationship between health and education. Furthermore, he has become an expert in the use of polygenic scores, new measures meant to summarize a person's genetic predisposition for a given trait, as well as their interpretational challenges.



Trejo received a Ph.D. and two M.A. degrees from Stanford University as well as a B.A. from the University of Texas at Austin prior to his career at Princeton.

A.J. te Velthuis Molecular Biology

A.J. te Velthuis, assistant professor of molecular biology, received his Ph.D. in Medicine from the University of Leiden, the Netherlands, for his work on the replication of the SARS coronavirus. He completed his postdoctoral training at the University of Oxford, working on influenza virus replication and virulence. In 2017, te Velthuis started his own group at the University of Cambridge,



United Kingdom, and he joined Princeton University as assistant professor in 2021. Te Velthuis uses molecular biology and single-molecule tools to study how emerging RNA viruses replicate and induce life-threatening innate immune

responses in humans. His work is funded by the National Institutes of Health, Wellcome Trust, Royal Society, Dutch Organization for Scientific Research, Dutch Organization for Health Research, and Public Health England. He is a member of the Global Virus Network.

2022 CHW AFFILIATES

Jeanne Altmann Ecology & Evolutionary Biology, Emerita
Anna Arabindan-Kesson African American Studies and Art & Archaeology
Elizabeth Armstrong Sociology and SPIA
Ruha Benjamin African American Studies
João Biehl Anthropology
Amy Borovoy East Asian Studies
Rebecca Carey Psychology
Allison Carruth American Studies and High Meadows Environmental Institute
Anne Case Economics and SPIA, Emerita
Jonathan Cohen Psychology and Neuroscience
Alin Coman Psychology and SPIA
Dalton Conley Sociology
Angela Creager History
Janet Currie Economics and SPIA
Angus Deaton Economics and SPIA, Emeritus
Andrew Dobson Ecology & Evolutionary Biology
Thomas Fujiwara Economics
Hanna Garth Anthropology
Noreen Goldman Demography and SPIA
Adam Goldstein Sociology and SPIA
Andrea Graham Ecology & Evolutionary Biology
Bryan Grenfell Ecology & Evolutionary Biology and SPIA
Katja Guenther History
Dannelle Gutarra Cordero African American Studies and Gender & Sexuality Studies
Tod Hamilton Sociology
Arun Hendi Sociology and SPIA
Kate Ho Economics
Heather Howard SPIA
Niraj Jha Electrical and Computer Engineering
Yibin Kang Molecular Biology
Ilyana Kuziemko Economics
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W. Bentley MacLeod Economics and SPIA
Jessica Metcalf Ecology & Evolutionary Biology and SPIA
Sanyu Mojola Sociology and SPIA
Cameron A. Myhrvold Molecular Biology
Yael Niv Psychology and Neuroscience
Kelly Noonan Economics
Daniel Notterman Molecular Biology
Kristina Olson Psychology
Catherine Jensen Peña Neuroscience
Alexander Ploss Molecular Biology
Laurence Ralph Anthropology
Anu Ramaswami Princeton Institute for International and Regional Studies, Civil & Environmental Engineering, and High Meadows Environmental Institute
Carolyn Rouse Anthropology
Joan Ruderman High Meadows Environmental Institute
Matthew Salganik Sociology
Timothy Searchinger SPIA
Eldar Shafir Psychology and SPIA
Harold Shapiro Economics and SPIA
Alyssa Sharkey SPIA
David Silver Economics and SPIA
Paul Starr Sociology and SPIA
A.J. te Velthuis Molecular Biology
Shirley Tilghman Molecular Biology and SPIA, Emerita
Sam Trejo Sociology
Keith Wailoo History and SPIA

SAMPLING OF CHW AFFILIATE AWARDS & HONORS IN 2022

Janet Currie was elected president of the American Economic Association. She is serving as president-elect in 2023 and will serve as president in 2024. Currie joins a long list of distinguished Princeton economists to hold this position — including Ben Bernanke, Angus Deaton, Christopher Sims, Orley Ashenfelter, and Avinash Dixit. Furthermore, she is one of only a handful of women selected to lead the organization.

Martin Halliwell won the 2022 British Association for American Studies Book Prize for “American Health Crisis: One Hundred Years of Panic, Planning, and Politics” (University of California Press). This distinction recognizes his work as the best book in the field of American Studies this year. The book also received an award from the Barbara S. Isgur Endowment Fund in Public Affairs.

W. Bentley MacLeod served as President of the American Law and Economics Association and organized its annual conference at Columbia University in August 2022.

Catherine Jensen Peña was awarded a New York Stem Cell Foundation Robertson Neuroscience Investigator Award in 2022. The five-year, \$1.5 million award will support her research program aimed at understanding fundamental principles of brain development, understanding how early life stress alters molecular brain development to increase risk for psychiatric disease, and developing novel approaches to promote resilience.

A.J. te Velthuis received an NIH Director’s New Innovator Award (also called DP2) for his work on influenza A virus infections.

Sam Trejo was awarded a Brocher Fellowship for the summer of 2023. The Brocher Fellowship is a competitive residency at the prestigious Brocher Foundation. Located outside of Geneva, Switzerland, The Brocher Foundation is an internationally recognized multidisciplinary center dedicated to the study of the impact of medical development on society.



In addition to teaching core and elective courses, mentoring students and supervising senior theses, visiting scholars and postdoctoral associates are global thought leaders, engaged in innovative research from a wide range of disciplines.

VISITING SCHOLARS & POSTDOCTORAL ASSOCIATES

CHW's Visiting Scholars Program invites researchers from other leading institutions to devote either an academic year or semester in residence at Princeton. They spend this time focused on research, discussion, and scholarly collaborations concerning the determinants of physical, mental, and emotional wellbeing along with the effect of public policy on health and wellness. Visiting researchers are specialists in a variety of health-related fields, including medicine, psychology, biology, epidemiology, economics, sociology, and other social science disciplines.

2022 VISITING SCHOLARS

Colleen Carey Visiting Research Scholar

Colleen Carey's work focuses on the U.S. health care industry. Her primary line of research examines government-managed markets for health insurance. A second line is focused on physician behavior, such as the role of financial relationships with drug firms or their response to demand shocks and price changes. She has written a number of papers examining the role of physicians in the U.S. opioid epidemic. Carey was previously a staff economist at the Council of Economic Advisers. She visited Princeton from



Cornell University, where she is an assistant professor in the Department of Economics.

Valentina Duque Visiting Research Scholar

Valentina Duque, an assistant professor at the School of Public Affairs at American University in Washington D.C., is an economist specializing in health economics, economic development, and public policy. In her academic work, Duque has studied the effects of economic and environmental



shocks on children's physical and mental health and educational outcomes; and the role of social policies in mitigating early-life adversities and fostering long-run human capital outcomes. Currently, she is working on analyzing the effects of public housing on the education and health outcomes of children in developing countries using a large-scale randomized controlled trial. Duque received her Ph.D. in social policy from Columbia University and later pursued a postdoctoral program at the University of Michigan. Before joining American University, she was an assistant professor in Economics at the University of Sydney, where she taught courses in applied empirical methods, health, and social policies.

Martin Halliwell Visiting Research Scholar

Martin Halliwell is professor of American thought and culture at the University of Leicester, U.K. He recently completed a term as head of the School of Arts at Leicester (his second as head of school), where he has previously served as deputy pro-vice-chancellor international and director of the Centre for American Studies. He has held visiting fellowships at the University of Oxford, University College London, and the University of Manchester, and he is currently a guest professor at Shanghai International Studies University.

Halliwell is the author and editor of 15 books in the fields of cultural and intellectual history, medical and health humanities, and transatlantic literature, film, and music. His most recent publications include "The Companion to the Politics of American Health"



(Edinburgh University Press, 2022) and "American Health Crisis: One Hundred Years of Panic, Planning, and Politics" (University of California Press, 2021), which won the 2022 British Association for American Studies Book Award.

He is currently working on the final monograph of a trilogy for Rutgers University Press that traces a cultural history of mental health in the United States since World War II. Following the first two volumes, "Therapeutic Revolutions" (2013) and "Voices of Mental Health" (2017), this third book, "Transformed States: Medicine, Biotechnology, and American Culture, 1990–2020," examines the promise and peril of biotechnology for transforming American health, from the end of the Cold War to our current Covid and climate crises.

Ori Heffetz Visiting Research Scholar

Ori Heffetz is a professor in the Bogen Family Department of Economics and the Federmann Center for the Study of Rationality at the Hebrew University of Jerusalem; an associate professor in the Johnson Graduate School of Management at Cornell University; and a research associate at the National Bureau of Economic Research.

Heffetz is a data-based economist, using lab and field surveys and experiments to study the psychological, social, and cultural aspects of economic behavior, wellbeing, and policy. His work investigates what we can and cannot learn from economic and wellbeing indicators—household expenditures, the unemployment rate, or self-reported happiness—and how governments can use such data to guide policy. For example, he studies how people interpret and respond to survey questions, and how the resulting data are affected. Heffetz also studies people's economic perceptions, inferences, beliefs, and expectations, how they are related to behavior, and how policymakers can take them into account to design better policies and markets. For example, he has studied product visibility and conspicuous consumption, and how people infer quality from prices, choose relative to reference points, and respond to reminders, deadlines, guarantees of data privacy, or public information about health risk.



Heffetz holds a B.A. in physics and philosophy from Tel Aviv University and a Ph.D. in economics from Princeton University. He co-authored a widely used "Principles of Economics" textbook, and has created an award-winning macroeconomics course that introduces basic concepts and tools from economic theory and applies them to current news and global events. Beyond his academic research and teaching, Heffetz advises governmental and non-governmental institutions, and writes and speaks about economic issues.

Sophie Mitra Visiting Research Scholar

Sophie Mitra is professor of economics, founding director of the Research Consortium on Disability at Fordham University in New York City and principal investigator of the Disability Data Initiative. Her research agenda has



documented economic insecurity and identified policies that reduce it. A line of work consists in evaluating the impact of social protection policies on wellbeing and health with a particular focus currently on long-term care insurance. Another line of work

has produced evidence to document disability inequalities and to understand the factors that drive them, such as discrimination or extra costs of living for families (e.g. medical or transportation costs).

Mitra has held visiting positions at Columbia University, the École des Hautes Études en Sciences Sociales (School of Advanced Studies in the Social Sciences), and Princeton University. She received her doctorate in economics from Université Paris 1 Panthéon-Sorbonne. Mitra is the author of “Disability, Health and Human Development” (Palgrave MacMillan, 2018).

Maria Prados Visiting Research Scholar

Maria Prados is an economist at the Center for Economic and Social Research at the University of Southern California. She received her Ph.D. in economics from Columbia University, was a postdoctoral research scholar at the Schaeffer Center for Health Policy and Economics, and a RCMAR scholar for the Minority Aging Health Economics Research Center at USC.

Prados specializes in quantitative and applied economics, and her research interests concentrate on health, gender, labor economics, and household decisions. Recent research includes the gendered effects of the pandemic on labor market outcomes and the mental health of working parents, environmental influences on teenage obesity, the value of treatment for Alzheimer’s Disease, and the long-term effects of high quality early childhood education.



Her research has been funded by the Michigan Disability and Retirement Research Center, the NIH, the Roybal Center for Health Policy Simulation, and the Roybal Center for Health Decision Making and Financial Independence in Old Age.

Emma Zang Visiting Research Scholar

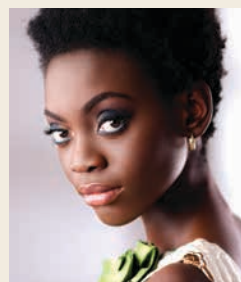
Emma Zang is an assistant professor of sociology at Yale University. She received her Ph.D. in public policy in 2019 and an M.A. in economics in 2017, both from Duke University. As a demographer, her research interests lie at the intersection of health, family, and inequality. Her work aims to improve the understanding of how early-life conditions affect later-life health outcomes, social stratification and health, and spillover effects within the household exploiting policy changes. She is also interested in developing and evaluating statistical methods to model trajectories and life transitions in order to better understand how demographic and socioeconomic inequalities shape the health and wellbeing of individuals from life course perspectives.



Zang’s work has appeared in journals such as the American Journal of Sociology, Demography, Journal of Marriage and Family, International Journal of Epidemiology, and JAMA Internal Medicine. Her research has been widely covered by major media outlets in the United States, China, South Korea, India, and Singapore.

2022 POSTDOCTORAL RESEARCH ASSOCIATES

Esther Annan Postdoctoral Research Associate



Annan received her medical degree from the Kwame Nkrumah University of Science and Technology, Ghana. After close to three years of clinical work, she pursued an MPH with a concentration in public health policy at New York University,

focusing on how to bridge the gap between medicine, research, and health policy implementation. She then acquired a Ph.D. in epidemiology at the University of North Texas Health Science Center to strengthen her research skills and further explore her research interests in infectious diseases.

Annan's research primarily examines how spatiotemporal relationships and demographic patterns play a role in the etiology of infectious diseases. Of particular interest are vector-borne diseases like dengue fever. Her research interests also involve utilizing epidemiological methodological approaches to assess and establish causal inference. Much of her work has used large datasets from Mexico to advance our understanding of dengue fever severity in Mexico. Furthermore, Annan hopes to use her medical background and training in public health policy to examine how these relationships may help to guide location-specific policies in the management and eventual prevention of vector-borne diseases.

Michael Cassidy Postdoctoral Research Associate

Michael Cassidy is an applied microeconomist whose research spans labor, public, and urban economics, with particular emphasis on welfare, education, and health. His current work focuses on homeless families, while his overall research agenda endeavors to understand how people make decisions and how social policy, broadly construed, can help them make better ones. Cassidy earned a B.A. from the University of Pennsylvania, an MPA from Princeton University, and a Ph.D. in economics from Rutgers University.



Adriana Corredor-Waldron Postdoctoral Research Associate

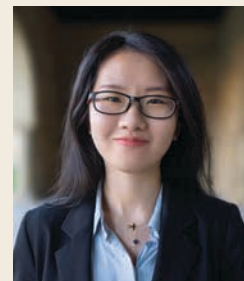


Adriana Corredor-Waldron's research in the areas of health economics and applied microeconomics focuses on disability and access to health care. Her recent research investigates problems confronting health care policy,

including access of the elderly to long-term care and opioid addiction. She obtained her Ph.D. in Economics from the University of Illinois at Urbana-Champaign and her M.A. and B.A. in economics from the University of the Andes in Colombia. In 2022, Corredor-Waldron was appointed assistant professor of economics at the Poole College of Management, North Carolina University.

Hui Ding Postdoctoral Research Associate

Hui Ding's research focuses on demand and supply-side factors of health care utilization, especially in the mental health care setting. In her current work, Ding studies the geographic variation in mental health care use among the Medicare population, primary care physicians' practice patterns in diagnosing and treating depression, and the relationship between educational stress and child mental illnesses. She has also been working on infectious disease spread within households and the role of public insurance in setting prices and promoting primary care services. Ding received her Ph.D. degree in economics at Stanford University, before which she graduated from Peking University with bachelor's degrees in economics and psychology. In 2023, Ding will join Fudan University in Shanghai, China as an assistant professor in the economics Department.



Arbel Griner Associate Research Scholar

Arbel Griner uses her multidisciplinary training in social medicine, anthropology and social studies of science and technology to produce a nuanced critical perspective of how ideas of pathology, normality and health are conceptualized in contemporary neuroscience and how these ideas are integrated into medicine, public health, and ethical debates. She received her Ph.D. in collective health from the Institute for Social Medicine of the State University of Rio de Janeiro. In her dissertation, Griner scrutinized the claims of neuroscientific theories about biological affectivity and examined the ways in which they are appropriated by biomedical practices and bioethical regulation. She is now interested in looking more carefully into the use of biotechnology, more specifically pharmaceuticals, as treatment resources for so-called affective and gender-based pathologies in Brazil's public health clinics.



Boriana Miloucheva Postdoctoral Research Associate



Boriana Miloucheva's current work focuses on the financial relationships between pharmaceutical firms and physicians, and their consequences for patient outcomes. She has also examined the role of inequality on health

as well as the health consequences of pollution and natural disasters. Miloucheva holds a B.A. from York University's Glendon College, and an M.A. and Ph.D. from the University of Toronto. In 2023, she will join the University of Toronto's Institute of Health Policy, Management and Evaluation in the Dalla Lana School of Public Health as an assistant professor.

Gugulethu Moyo Postdoctoral Research Associate

Gugulethu (Gugu) Moyo obtained a Ph.D in nutritional science at Texas Tech University. Prior to that, she completed an MSc in international public health nutrition at London Metropolitan University and worked for several years within the international development sector. In her dissertation, Moyo investigated the social and nutritional determinants of favorable fetal growth conditions in pregnant women living in South Africa. She now seeks to design and test the efficacy of interventions, that leverage traditional ecological knowledge, to improve the food and nutrition security status of pregnant and lactating women. She also aims to explore the chrononutrition of human milk, and its role in infant health.



Sebastián Ramírez Postdoctoral Research Associate

Sebastián Ramírez's research on internally displaced persons in his native Colombia explores the role of health care services in efforts to remake ideas of home and citizenship in the aftermath of violence. His dissertation elucidates how official networks of aid and restitution for victims of war are remade in the everyday efforts of the uprooted to claim their

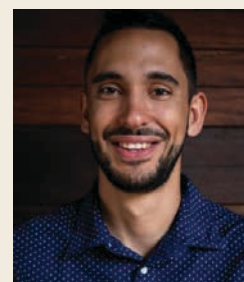


rights and remake their lives. He is starting a second project investigating how survivors of social cleansing campaigns forge mental health support networks through artistic projects commemorating the loss of family and friends. Ramírez received a B.A. from Queens College CUNY in anthropology and psychology and his Ph.D. in anthropology from Princeton University.

Benjamin Rice Postdoctoral Research Fellow

Benjamin Rice is a Presidential Postdoctoral Research Fellow in the Department of Ecology & Evolutionary Biology. He obtained a Ph.D. from the Department of Organismic and Evolutionary Biology at Harvard University focused on malaria ecology and evolution in Madagascar and a B.S. in microbiology and global health from Arizona State University. His postdoctoral research centers on genomic and serological analysis of infectious disease across a wide diversity of community and ecosystem settings in Madagascar.

Rice's research focuses on developing approaches to understand pathogen diversity and its determinants in resource-poor settings. Current research activities include efforts to understand how variation in commonly circulating viruses is shaped by interactions with immune responses and how burdens in vector-borne diseases vary within and between coastal communities in Madagascar.



Esmée Zwiers Postdoctoral Research Associate

Esmée Zwiers is an applied microeconomist working mainly in the fields of labor economics, family economics, and health economics. She is particularly interested in the influence of childhood circumstances in the child's human capital formation, which was also the topic of her dissertation. Zwiers earned her Ph.D. in economics from Erasmus University Rotterdam and the Tinbergen Institute. She also holds B.S. and M.S. degrees in economics from Erasmus University Rotterdam. In 2022, Zwiers joined the Amsterdam School of Economics at the University of Amsterdam as an assistant professor.





Gilbert Collins (pictured center), director of global health programs and associate director of CHW, toured Washington, D.C. with visiting scholars (from left) Vu Thi Quynh Giao, Stephen Dymock, Nguyen Vinh Nam, and CHW Postdoctoral Research Associate Esther Annan.

INTERNATIONAL COLLABORATION BRINGS HEALTH RESEARCHERS TO PRINCETON

Graduate students from Southeast Asia and Australia visited Princeton University last fall through the International Health Research Collaboration, an exchange program sponsored by the School of Public and International Affairs and the Center for Health and Wellbeing (CHW). This new initiative invites foreign graduate students and researchers from CHW partner institutions to campus for one semester. While here, scholars have opportunities to innovate, present their work, audit courses, and integrate into the broader health-focused community at Princeton.

“The Center for Health and Wellbeing has a long history of collaborating with research institutions around the world. Princetonians regularly travel overseas for internships and research projects and bring lessons back to the United States,” stated Gilbert Collins, director of global health programs and associate director of CHW. “This new endeavor allows us to reciprocate, making it possible for international students and stakeholders, often from developing countries, to benefit from Princeton’s vibrant research community and to bring lessons back home with them in turn.”

Fall 2022 Visiting Scholars

In 2022, visitors to Princeton included doctoral candidates Vu Thi Quynh Giao and Nguyen Vinh Nam from the Oxford University Clinical Research Unit (OUCRU) in Hanoi, Vietnam, and Stephen Dymock from the University of Western Australia/Telethon Kids Institute (TKI) in Perth, Australia. These scholars came to Princeton with accomplished backgrounds and ambitious pursuits, in terms of their research and careers.

Vu Thi Quynh Giao is a Ph.D. candidate and lead researcher at OUCRU, where she investigates issues related to farming in northern Vietnam. Her doctoral research project targets the use of antibiotics among the country’s food-animal farmers. Particularly, she counters the narrative of universal antibiotic overuse across Vietnamese agriculture, citing usage variations in northern and southern regions, and investigates alternative strategies for ensuring biosecurity and limiting the transmission of resistant bacteria, such as changes in land management.

During her time at Princeton, Giao audited a data science course that developed her quantitative skills. Specifically, she learned modeling techniques that will help her analyze data that she has collected on agricultural antibiotic utilization and resistance while also supporting her interest in public policy, for which statistics are essential.

Additionally, Ramanan Laxminarayan, senior research scholar and lecturer at High Meadows Institute, exposed Giao to a new research topic: leveraging vaccines to reduce antibiotic use in animals. He also helped her apply for a grant to conduct lab testing on samples from Vietnamese farms, which will contribute to her dissertation.

“Having a philosophical mind and the technical research skills to help others might serve as solid ground for a possible career in public policy,” she said. “Ultimately, I would like to see more truth, justice, and compassion in Vietnamese society.”

Nguyen Vinh Nam, a Ph.D. candidate who is also based at OUCRU, is fascinated by the challenges of antimicrobial resistance (AMR) within the Vietnamese health care system. His doctoral research studies the feasibility of implementing pharmacy-targeted interventions against AMR.

At Princeton, Nam audited two courses that inspired him to think critically and creatively about decision-making in health care. He took a graduate level course covering public policy approaches to health and health care, as well as an undergraduate course that examined global health inequities. Nam found both of these classes rich, diverse, and intensive.

Of special note, Nam valued the mentorship of his faculty sponsor, Janet Currie, Henry Putnam Professor of Economics and Public Affairs, who offered feedback on his work, career advice, and even the opportunity to experience a traditional Thanksgiving dinner.

“The visit has expanded my vision about academics and my Ph.D. project. I’ve learned that there is more than one approach to a problem, and that I should target more research on vulnerable populations, like children and the elderly,” he said. “This broader perspective supports my work aimed at improving pharmacy practice and facilitating future interventions against AMR in Vietnam. I also leave with a stronger appreciation for American history and culture, and renewed commitment to my academic journey.”

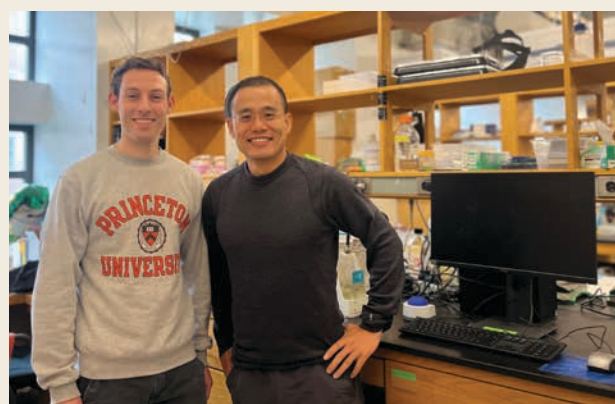
Stephen Dymock is a Ph.D. candidate at the University of Western Australia, where he is based in the Oncogenic Signalling Laboratory at the Telethon Kids Cancer Centre. His doctoral project aims to determine a safer and more efficacious treatment for diffuse midline glioma, the deadliest form of childhood brain cancer.

Several revolutionary studies have shown that brain cancer cells can integrate themselves into neural networks and supercharge brain cancer growth, which has led to the rapidly emerging field of cancer neuroscience. To learn more about this dynamic, Dymock audited a neuroscience course covering neuroanatomy, the biophysics of neurons, and how information is coded within neural networks.

Dymock also worked with cancer researcher Yibin Kang, Warner-Lambert/Parke-Davis Professor of Molecular Biology, and shadowed Ph.D. students and postdoctoral researchers in the lab. These experiences exposed him to novel lab techniques and shed light on the intricate interaction of immune cells with tumor cells, as well as the molecular mechanisms underpinning the metastasis of breast cancer.

“I now have a much greater understanding of neuroscience at both the molecular and systems levels and learned how we can harness the power of the immune system to fight cancer,” he said. “This knowledge will benefit my research on drug candidates for diffuse midline glioma and hopefully will lead to safer, more effective treatments.”

For Dymock, the Princeton visit was as enriching personally as it was academically. He described campus as ‘magical,’ awed by the gothic architecture, autumn foliage, and deer roaming around the Graduate College, and immersed himself in American culture by carving pumpkins for Halloween, feasting on Thanksgiving, and traveling to Washington, D.C.



Stephen Dymock worked in the lab with cancer researcher Yibin Kang, Warner-Lambert/Parke-Davis Professor of Molecular Biology.



(From Left) Faculty Directors Heather Howard and Jessica Metcalf

ACADEMIC PROGRAMS

GLOBAL HEALTH AND HEALTH POLICY CERTIFICATE

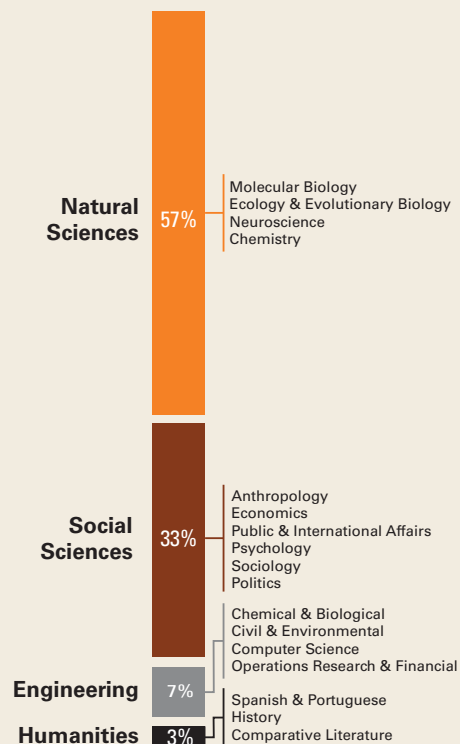
Faculty Directors: **Heather Howard** Professor of the Practice, School of Public and International Affairs (SPIA), and Director, State Health and Value Strategies (SHVS); and **Jessica Metcalf** Associate Professor of Ecology & Evolutionary Biology and Public Affairs

Introduced in 2008, the Global Health and Health Policy (GHP) certificate program has grown into one of the most popular undergraduate certificate programs on campus. The program puts global health under an interdisciplinary lens, emphasizing determinants, consequences and patterns of disease across societies; the role of medical technologies and interventions in health improvements; and the economic, political and social factors shaping domestic and global public health.

Passionate students are attracted to GHP's close-knit campus community where, blending coursework and hands-on experience, issues in global health policy are brought to life by renowned faculty. The program currently enrolls students from 17 diverse departments including Molecular Biology, Anthropology, Ecology & Evolutionary Biology, the School of Public and International Affairs (SPIA), Neuroscience, History, Chemistry, and Spanish and Portuguese, among others.

In order to complete the GHP certificate, students must complete two core courses and four GHP approved health-related electives; conduct an approved field-based or lab-based research project during the summer between their junior and senior year; and write a senior thesis in their department of concentration addressing or relating to global health and health policy in an interdisciplinary manner

2022 GHP Students by Major



GHP CERTIFICATE COURSE HIGHLIGHTS

All GHP certificate students are required to take **Critical Perspectives in Global Health Policy and Epidemiology**. Students also choose four electives from a pre-approved list. Below is a sampling of the 90 elective courses offered by 42 departments and programs this year.



American Deaf Culture
Ancient Greek and Roman Medicine: Bodies, Physicians, and Patients
Antibiotics: From Cradle to Grave
Beyond Tuskegee: Race and Human Subjects Research
Disease Ecology, Economics, and Policy
Diseases in Children: Causes, Costs, and Choices
Ecology and Epidemiology of Parasites and Infectious Diseases
Economics of Health and Health Care
Fat: The F-Word and the Public Body
Health Policy in Low and Middle Income Countries
Health Psychology
Health Reform in the US: The Affordable Care Act and Beyond
History of Anti-Black Racism in Medicine
Immune Systems: From Molecules to Populations
Inequities in Health
Introduction to Water Pollution Technology
Making Post-Pandemic Worlds: Epidemic History and the Future
Mathematical Modeling in Biology and Medicine
Medical Anthropology
Mind, Body, Culture: Clinical Psychology
Modern Genetics and Public Policy
Molecular Basis of Cancer
Multispecies Worlding and Global Health Policies
Pathogens, Pandemics, and Technologies
Psychopathology
Race, Drugs, and Drug Policy in America
Responding to the Pandemic in the Information Age
The Physical Basis of Human Disease
The Sociology of Human Reproduction
Viruses: Strategy and Tactics

GHP STUDENT AWARDS AND ACCOMPLISHMENTS

Samantha Chin '23 Computer Science



Chin received the Spring 2022 “Outstanding IW Award for Computer Science Independent Work” for her junior independent work titled “Associating Early Life Adversity with Functional Methylation Marks in an Ethnically Diverse Cohort.” Her advisor was Barbara Engelhardt, a visiting research scholar at Princeton.

Varun Devraj '23 Molecular Biology



Devraj’s paper titled “Palliative Care in India: Challenges and Opportunities” was published in the Journal of Health Design. His paper explores India’s palliative care challenges, especially in the context of the Covid-19 pandemic and lockdown measures. Furthermore, it addresses possible solutions that take advantage of the flexible nature of palliative care to extend its implementation across India.

Cecilia Kim '23 Chemistry



Kim was awarded the Harvard Immunology Summer Program Scholarship. This internship program provides the opportunity for students to conduct research at Harvard Medical School labs while attending lectures and workshops by faculty members. Kim presented a poster summarizing her research, titled “The Vaginal Microbiome: Examining and Characterizing the Activity of Vaginal Lactobacillus Strains” at the Harvard Immunology Summer Undergraduate Conference.

Arabella Dill-Macky '23 Chemical and Biological Engineering

Dill-Macky is the first author on two abstracts accepted by the American Society of Colon and Rectal Surgeons for podium and poster presentations, respectively, at the



Seattle Conference in June 2023. She is in the process of writing manuscripts for both of these works: “Associating Myoelectric Activity Following Colorectal Surgery with Return of Bowel Function” and “Assessing Views on Myoelectric Activity

Data for Discharge Readiness after Colorectal Surgery.” Additionally, an abstract related to her junior independent work, “3D Printing Bacteria for Understanding Growth and Motility,” has been accepted by the Journal of Visual Experiments, with the video and full manuscript in progress.

Chirag Kumar '23 Chemistry

Kumar co-authored a paper, “SARS-CoV Testing Strategies for Outbreak Mitigation in Vaccinated Populations,” with Ramanan Laxminarayan, lecturer at High Meadows Environmental Institute. Their work was published in PLOS ONE. Another manuscript on the topic of vaccine-avertable neonatal sepsis, also written in collaboration with Laxminarayan, is under review by PLOS Medicine. The research demonstrates how a vaccine could save the lives of 80,000 children globally and reduce antimicrobial use. Kumar also presented a TEDx Talk on using science in service of society and creating cohesive,



organic solutions to health problems. Furthermore, he presented research on Bayesian methods for estimating the burden of bacterial neonatal sepsis at the Global Pervasive Computational Epidemiology yearly meeting.

2022 SENIOR THESIS PRIZE

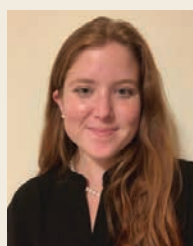
As a capstone experience, all GHP students complete a thesis or final paper centered on a global health theme. The GHP Senior Thesis Prize is awarded in recognition of the most outstanding theses written by students earning the certificate. Three awardees were selected in 2022:

Nathnael Mengistie School of Public and International Affairs



“Telehealth and Health Equity: Analyzing the Impact of State Telehealth Policies on the Use of Telehealth Services Among Vulnerable Populations during the Covid-19 Pandemic.”

Brooke Redwine Molecular Biology



“History is in Our Blood: Systemic Sclerosis in the Oklahoma Choctaw.”

Maddie Winter History



“The Unprotected Public: The Pertussis Vaccine Controversy from 1982-1986.”

GHP STUDENT REPRESENTATIVES

GHP benefits greatly from the contributions of student representatives who offer program feedback, support recruitment efforts and social media outreach, and provide valuable perspective.

Student representatives in 2022 included India Behl '24, Aisha Chebbi '24, Rachel Chen '24, Sean Crites '22, Varun Devraj '23, Maryam Kamel '23, Nathnael Mengistie '22, Sydnae Taylor '23, and Maddie Winter '22.

HEALTH SCHOLARS PROGRAM

CHW Health Scholars, selected through a rigorous application process, receive two years of mentorship, opportunities and financial support. Health Scholars are advised by program faculty and assist in planning health policy seminars and lectures where they meet and interact with distinguished speakers in intimate settings. The students receive financial support to pursue health-related internships or independent research the summer before their senior year. Finally, they are expected to write health policy-related senior theses.

The Class of 2024 joins CHW's returning scholars from the Class of 2023: Nannette Beckley (SPIA), Cecilia Kim (Chemistry), Reed Leventis (Ecology & Evolutionary Biology), Aliha Mughal (Anthropology), Chloe Searchinger (SPIA), and Sydnae Taylor (Anthropology).

The six Class of 2024 Health Scholars are:



India Behl, a SPIA concentrator pursuing a GHP certificate, plans to study how adverse and positive childhood experiences can impact outcomes in adulthood, physically and socially. She hopes this research will demonstrate how these

lasting consequences affect the health care system and will therefore contribute to the development of upstream interventions.



Alaina Joby, a SPIA concentrator pursuing a GHP certificate, plans to study antimicrobial resistance (AMR), possibly examining the similarities and differences of AMR responses associated with tuberculosis and leprosy.

She is interested in studying how policy could facilitate a streamlined care plan in South America, a continent that suffers acutely from both diseases.



Ive Jones, a Politics concentrator pursuing a GHP certificate, plans to explore the impacts of homelessness on public health outcomes. She will examine health burdens placed on this vulnerable population, such as higher risk of

communicable disease infection, violence, mental illness, and chronic health conditions.



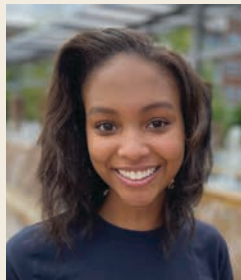
Julia King, a Politics concentrator pursuing a GHP certificate, plans to examine why certain Southern states legislate gun ownership for domestic violence offenders while others do not, and how lawmakers could overcome issue ownership

to pass widely supported legislation. She hopes that her research will help to address the seemingly unsolvable public health crisis of gun violence, particularly in situations of domestic violence.



Bella Moscoe, a SPIA concentrator pursuing a GHP certificate, is interested in factors that influence a country's willingness to adopt universal health coverage and the success of those efforts. Specifically, she would like to study how public

sentiment can impact the speed in which health legislation is passed and the effects such policy has on a population.



Kennedy Walls, an Anthropology concentrator pursuing a GHP certificate, plans to examine the relationships between global health and humanitarian aid by drawing on her work with refugee populations in health

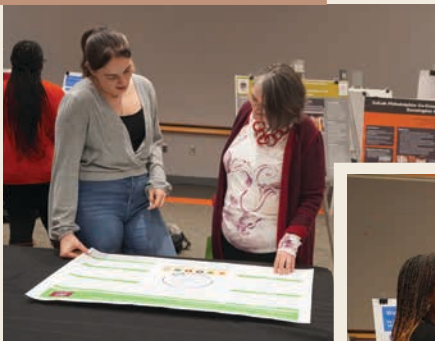
settings. She will explore how research can uplift voices of marginalized migrants excluded from aid structures and distribution.



STUDENTS PRESENT HEALTH-FOCUSED RESEARCH

Students enrolled in the Critical Perspectives in Global Health Policy course presented their health-focused research at a poster session hosted by the Global Health Program (GHP) on December 7, 2022. University faculty, staff, visiting scholars, and peers stopped by Frist Campus Center to view the posters summarizing research related to their final project — a policy recommendation memo on a health-related matter. Students had the opportunity to share their work and answer questions from those who attended.

Critical Perspectives in Global Health Policy is one of two core courses for the Certificate in Global Health and Health Policy. In this class, taught by Professor Heather Howard, students gain tools to critically analyze the key theories and interdisciplinary frameworks underpinning the expanding field of global health policy.



GHP ALUMNI REFLECTIONS

Sarina Shrier '16 was on the pre-med track at Princeton until a university-funded internship opened her eyes to a new way of impacting public health. “I was interested in helping people, I was interested in science, and I grew up with parents in the medical field, so becoming a doctor made sense to me,” she explained. “But I hadn’t yet explored all of the other ways to do that.”

Shrier’s path began to shift after working at a nonprofit health clinic in her hometown of Rochester, New York between her first and second years of college. “It was the first time that I was exposed first-hand to the issue of health equity in this country, and how accessible medical care can affect a person’s health trajectory. I also saw the role that policy, government, and even health clinics can play in providing opportunities for people without health insurance to receive good care.” That summer experience led Shrier to the School of Public and International Affairs and CHW’s Global Health Program, where she acquired a broader understanding of health and discovered other avenues for a health career.

“I saw the Global Health Program as a way to combine my interests in medicine and public policy; it was a perfect marriage of the two,” she said, noting how much she enjoyed GHP’s two core courses, particularly Epidemiology, and learning about different health systems in the U.S. and abroad from a multidisciplinary perspective.



It was the first time that I was exposed first-hand to the issue of health equity in this country, and how accessible medical care can affect a person’s health trajectory.

After graduating from Princeton, Shrier launched her career in the New York City Mayor’s Office of Management and Budget. She started as an assistant analyst and worked her way up the ladder, eventually overseeing the city’s budget and coordinating policy for the entire New York City Health + Hospitals system – the largest municipal health care delivery system in the U.S – and the city’s Medicaid budget. This included funding a robust Covid-19 testing and tracing program during the pandemic, which was especially gratifying.

“I loved working at the local level, especially in New York City, where the work is interesting, fast-paced, and directly impacts millions of people. It was just an amazing place to be,” she noted.

Shrier remained in the Mayor’s Office for five years, at which point she relocated to North Carolina and assumed her current position as a senior consultant in Deloitte’s Government and Public Services division. Moving from the public to private sector offered the chance for Shrier to diversify her skills and learn more about project implementation. For example, she is presently supporting the state of New York in its efforts to allocate federal funding for home- and community-based services. “All of the work I’m doing is focused on improving the health of New Yorkers, by enriching programs and expanding access to care,” she stated.

“My advice for students is to take full advantage of the incredible opportunities at Princeton... the seminars, the lunches, the networking. And don’t be afraid to do something unexpected,” she added. “A different kind of internship or experience could spark a whole new interest and introduce another career path, as it did for me.”



HEALTH & HEALTH POLICY CERTIFICATE

Program Director: **Janet Currie** Henry Putnam Professor of Economics and Public Affairs and Co-Director, Center for Health and Wellbeing

Since 2003, CHW's Health and Health Policy (HHP) certificate program has prepared graduate students for health-related careers in both the public and not-for-profit sectors. The program was developed as part of Princeton's ongoing commitment to teaching and researching health and health policy. HHP leverages the best of what CHW and Princeton have to offer: world-class global and domestic health coursework; partnerships with faculty and thought leaders who are redefining the field; graduate research support; and connection to, and support of, a vibrant, multidisciplinary community through collaboration, conferences, and events.

While most students who join the HHP program are MPA and MPP candidates from the School of Public and International Affairs, the certificate is open to all graduate-level students at Princeton. Future and current medical professionals who have completed the certificate cite the value of examining the drivers of health disparities not taught in medical school. Other alumni, such as Ph.D. scientists, say the program lends richness to their studies.

"2022 exposed and reinforced the critical role health policy, and health policy leaders, play in a well-functioning society," said HHP Program Director Janet Currie. "We are pleased to be playing such an important role in shaping and guiding current and future leaders at Princeton."



Program Director Janet Currie

HHP COURSE SPOTLIGHTS

The HHP curriculum is designed to offer insight into the contexts that create health disparities while exposing graduate students to an interdisciplinary approach by which these issues can be addressed. All HHP students take two core courses: Epidemiology and Public Policy Approaches to Health and Health Care. Certificate candidates also choose from a curated array of approved health-related electives, such as Poverty, Health, and Inequality in the World; Social Determinants of Health; Culture, Controversy, and Policy; Challenges in State and Local Health Policy; and Vaccination Policy and Epidemic Dynamics.

Spotlight: Public Policy Approaches to Health and Health Care

Professor Janet Currie's Public Policy Approaches to Health and Health Care course engages students in a thoughtful examination of the role of public policy in improving health and health care delivery systems. While the main focus of the course is on U.S. health policy, evidence from other countries is frequently discussed to provide a broader international context.

In 2022, several guest lecturers contributed to the course, including:

- **David S. Kountz, M.D.**, co-chief academic officer and vice president for academic diversity at Hackensack Meridian Health and professor of medicine and founding associate dean for diversity and equity at Hackensack Meridian School of Medicine
- **Robert A. Kasdin**, former senior vice president, chief financial officer, and chief operating officer at Johns Hopkins Medicine; and chair of CHW's Advisory Council
- **Boriana Miloucheva**, CHW postdoctoral research associate and incoming assistant professor at the University of Toronto's Institute of Health Policy, Management and Evaluation in the Dalla Lana School of Public Health

- **Judith Glassgold**, clinical psychologist with over 25 years of experience with LGBTQ affirmative therapy and advocacy; and former departmental guest at CHW
- **Mustafa Basij-Rasikh**, professional specialist at CHW and former managing partner at the QARA Consultancy Group in Afghanistan

Among the course highlights, students are required to prepare a policy brief inspired by their expertise and interests. In 2022, students submitted briefs addressing a wide range of health-related topics. A sampling of these topics include: regulating the travel nurse industry after the Covid-19 pandemic; antibacterial resistance in agriculture; reducing the number of unvaccinated children in South Africa; addressing U.S. hospital market concentration; financing health care in Nepal; and reforming Australia's health care system.

The combination of topics, perspectives, and exposure to issues facing health systems builds a solid base from which HHP students can launch their careers.

Spotlight: Policy Workshop

Professor Heather Howard offers a yearly policy workshop, a popular selection among HHP students. Participants are tasked with solving real-life policy, operational, and political challenges in implementing the coverage expansions, delivery system reforms, and other innovations resulting from the Affordable Care Act (ACA). The workshop client is a U.S. state or territory taking a unique approach to an element (or elements) of ACA implementation.

In 2022, eight MPA students researched and produced a report for the United States Virgin Islands focused on the feasibility of a Medicaid buy-in program to extend more affordable health coverage to residents. Students considered fiscal and political realities of health care policy in the U.S. territories, including impacts of the Covid-19 pandemic, economic and budgetary conditions, and federal restrictions on Medicaid funding.

Many alumni cite this course as a pivotal experience, both in shaping their careers and in providing a tangible perspective on how the work they do can shape people's lives.

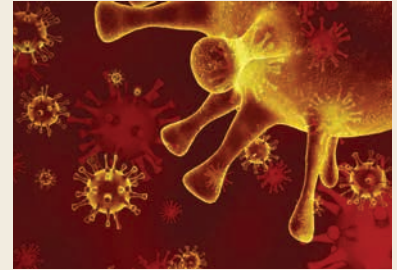


Professor Heather Howard led a field trip to the U.S. Virgin Islands, where HHP students presented their recommendations to government officials and other stakeholders.



DISEASE GROUP

A multidisciplinary Disease Group invites Princeton students, faculty, and visiting scholars to discuss the ecology and evolution of infectious disease and their public health consequences. Bi-weekly meetings feature updates on current infectious disease issues, discussions about particular problems and data sources, and research presentations. For example, Postdoctoral Research Associate Esther Annan shared her extensive work on dengue fever severity in Mexico. Other topics have included canine distemper virus in the African wild-dog and the connection between body mass index and systemic inflammation.



The group receives funding from the Center for Health and Wellbeing and is coordinated by two graduate students concentrating in Ecology & Evolutionary Biology.

BOOK CLUB: CONTINUING THE CONVERSATION

Scholars are typically fueled by an insatiable appetite for learning, collaboration, and thought-provoking discussion. Katie Comando MPA '23, the 2022 HHP student representative, had that in mind when she formed a new Book Club for graduate students early last year. "I noticed that many of us tended to hang around in the hallway after class to talk about the day's lecture," explained Comando. "The Book Club allows us to gather in a different setting and continue the conversation."



Since its inception, the forum has expanded to include all kinds of activities. Participants discuss books and other supplemental readings, as well as films, podcasts, and anything else addressing timely issues in global health. For example, after the passing of Dr. Paul E. Farmer, a physician, anthropologist and advocate for health equity, they watched a film about his work. They also read the book "Just Health: Treating Structural Racism to Heal America" by Dayna Bowen Matthew and have invited guest speakers on various topics of interest.

The group meets at least once each month and is open to all graduate students interested in public health and health policy.



HHP Student Representative

Katie Comando MPA '23 served as the 2022 HHP Student Representative. In that role, she supported the graduate certificate program by providing feedback on course offerings, recruiting students, proposing and organizing events, and representing the program to stakeholders.

HEALTH POLICY CAREER EVENTS

In 2022, CHW hosted two virtual career events featuring Princeton alumni. The programs were designed to help current graduate and undergraduate students explore career possibilities within the realm of public health policy. One event highlighted international careers while the other highlighted careers with a domestic focus.

Panel participants discussed their backgrounds, career pathways, and perspectives on a myriad of topics, from current roles and responsibilities, to challenges and opportunities at various levels of government, to health equity and other policy issues. They also offered practical advice on what to expect in the workforce, and explained how students can leverage their Princeton education and experiences to attain their career goals and advance public health.

Invited guests included:

International Health Policy Careers Panel

Mariandrea Chamorro MPA '10, regional vice president of Europe, Asia and Latin America, Abt Associates

Rachel Cohen MPP '10, regional executive director, Drugs for Neglected Diseases Initiative (DNDi) North America

Alex Costa Ph.D '04, program specialist, Global Health Program group, UNICEF

Erin Ferenchick '00, primary health care advisor, the Global Fund to Fight AIDS, Tuberculosis, and Malaria; assistant clinical professor of medicine, Columbia University Medical Center.

Moderated by **Alyssa Sharkey**, lecturer, School of Public and International Affairs

International Health Policy Careers:
Perspectives and Advice from Four Princeton Alumni

Four Princeton alumni discuss their international health policy career paths and offer advice to current students

Moderator:
Alyssa Sharkey, Lecturer, School of Public and International Affairs, Princeton University

Mariandrea Chamorro, MPA '10
Regional Vice President of Europe, Asia and Latin America for the development consulting firm Abt Associates. Extensive work on malaria prevention and control, maternal and child health, and health systems strengthening.

Rachel Cohen, MPP '10
Regional Executive Director for the Drugs for Neglected Diseases Initiative North America. Past experience working for Doctors Without Borders, Housing Works, and the US Global Medical Project.

Alex Costa, Ph.D '04
Program Specialist in the UNICEF Global Health Program group, focusing on antimicrobial resistance and vaccine diagnostics. Past experience at the World Health Organization and Clinton Health Access Initiative. Doctorate in Molecular Biology.

Erin Ferenchick '00, M.D.
Primary Health Care Advisor at the Global Fund to Fight AIDS, Tuberculosis, and Malaria, also Assistant Clinical Professor of Medicine at Columbia University Medical Center. Past experience with Princeton in Africa, the World Health Organization and Gates, the Vaccine Alliance.

Registration link: tinyurl.com/ahmshbqpanet

Domestic Health Policy Careers Panel

Ellie DeGarmo '17, joint JD/MPH degree candidate, Georgetown University Law Center and Johns Hopkins Bloomberg School of Public Health

Matthew Richardson MPA '18, government affairs manager, National Service Office for Nurse-Family Partnership and Child First

Alex Sheff MPA '16, director of policy and government relations, Health Care For All (HCFA)

Sarina Shrier '16, senior consultant, Deloitte's Government and Public Services practice

Moderated by **Heather Howard**, professor of the practice, School of Public and International Affairs

Health Policy Careers Panel:
Perspectives and Advice from Four Princeton Alumni

Four Princeton alumni discuss their domestic health policy career paths and offer advice to current students

Moderator:
Heather Howard, Co-Director of the Center for Health and Wellbeing, Global Health Program and Director of State Health and Value Strategies

Ellie DeGarmo '17
Joint JD/MPH degree candidate at Georgetown University Law Center and Johns Hopkins Bloomberg School of Public Health. Former Project Fellow at the New York Academy of Medicine focusing on health policy, research, and evaluation.

Matthew Richardson, MPA '18
Government Affairs Manager for the National Service Office for Nurse-Family Partnership and Child First, focusing on social determinants of family health. Past experience covering health policy for US Senator Chris Christie.

Alex Sheff, MPA '16
Director of Policy and Government Relations at Health Care For All (HCFA). Past experience working as the Senior Program Manager for Medicaid Strategies at Mass General Brigham and as the Senior Health Policy Advisor to US Senator Debbie Stabenow.

Sarina Shrier '16
Senior Consultant for Deloitte's Government and Public Services practice. Past experience working at the New York City Mayor's Office of Management and Budget leading local oversight and policy coordination for the NYC Health + Hospitals system and Medicaid program.

Registration link: tinyurl.com/Health-carePanel

HHP STUDENT REFLECTIONS

Katie Comando MPA '23

grew up in a rural, agricultural community on the east end of Long Island, New York. Those small-town roots influenced her life in more ways than one, inspiring a burgeoning curiosity about the “big world” and establishing the foundation for a career in public health.



Comando received her undergraduate education at State University of New York College Geneseo, where she majored in International Relations and French. “College opened doors to places that I had never experienced before. It allowed me to learn more about the history of the U.S. and other countries, and to dig deeper into what international relations means from the perspective of a wealthier, influential United States,” she noted. “Learning languages was a natural way to further that connection.”

“The HHP program has confirmed my desire to work in an innovative health policy space that promotes equitable, accessible, quality health care.”

Comando studied in France and interned at the Costa Rican State Department before entering the workforce as an AmeriCorps volunteer. In that capacity, she jumped at the chance to return to her hometown, directly supporting migrant seasonal farmworkers at a community health center. “That experience was formative in my conception of health in the United States,” she explained. “I started to recognize the gaps in care and barriers to accessing basic services, which were resulting in poor health outcomes unnecessarily. And I became curious about measures that would help to close those gaps.”

One year later, Comando joined New York’s largest federally qualified community health center network, Sun River Health, eventually becoming its director of government affairs & advocacy. Regular trips to Albany and

Washington, D.C. exposed her to all levels of government. “I was able to really sink my teeth into health policy issues,” said Comando. “The work got me thinking about what we can do to advance positive health outcomes across the country, and how I could contribute to those efforts.”

With growing interests in federal policy and public health, Comando completed a fellowship at George Washington University’s Milken Institute School of Public Health before pausing her career to pursue an MPA and a certificate in Health and Health Policy (HHP) at Princeton’s School of Public and International Affairs.

Though her studies focus on domestic policy, Comando balances that track with global coursework and experiential learning. She values the mentorship of her professors and opportunities to explore such topics as social determinants of health and reproductive justice, in the classroom and beyond. Highlights have included Professor Heather Howard’s health policy workshop, through which she visited the U.S. Virgin Islands to tackle Medicaid buy-in, and a maternal and child health policy internship in Washington, D.C. Additionally, Comando supported the New Jersey Wealth Disparity Task Force as a graduate fellow, examining health disparity issues with government officials and other stakeholders.

“The HHP program has confirmed my desire to work in an innovative health policy space that promotes equitable, accessible, quality health care,” she said. Comando is eyeing Capitol Hill but is also amenable to working for a nonprofit organization or other groups invested in public health. By focusing on social and structural barriers to care, she hopes to find sustainable solutions that reduce disparities and improve health outcomes for all.



Katie Comando MPA '23 registers agricultural workers for an AmeriCorps “Day of Health” event.

HHP ALUMNI REFLECTIONS

Rachel Cohen MPP '10 has dedicated more than 25 years to the field of global health. She describes her career as a long and winding road, though each chapter reflects her unwavering vision for a world in which there is less disease and more equitable access to life-saving treatments and care.



At the start of her journey, as an undergraduate at Bates College, global health was a less established academic discipline. Nevertheless, after spending a semester in Latin America, a self-described “political awakening” around issues of inequality nudged Cohen in that direction, along with the confluence of two meaningful experiences. Although her ambitions were not initially focused on health, her first job was with the U.S.+Cuba Medical Project, facilitating shipments of medical aid to Cuba and advocating for an end to the U.S. trade embargo. These efforts revealed the embargo’s devastating impact on the health of the Cuban population.

Simultaneously, Cohen watched the HIV epidemic unfold worldwide. “HIV was killing millions of people as a result of a political failure rather than a ‘technical’ failure,” she noted. “The combination of militant AIDS activism and scientific innovation had resulted in the advent of antiretroviral therapy, transforming HIV from a certain death sentence to a chronic, manageable illness. But only a fraction of the people who needed treatment, primarily those in wealthy countries, could access it. That was the defining injustice of the era, and it put me on the path to global health, fighting to get treatments for HIV and a range of other diseases to the people who need them while also fighting for more durable policy change.”

With that mission in mind, Cohen served as the director of foundation & corporate giving at Housing Works, the largest grassroots AIDS service organization in the U.S., and then joined Doctors Without Borders/Médecins Sans Frontières (MSF), holding numerous positions in the organization’s New York office and in southern Africa. This work was deeply rewarding for Cohen, particularly her work in Lesotho, where she headed up an MSF HIV program.

Impassioned and determined, Cohen returned to the U.S. and decided to pursue a mid-career Master’s in Public Policy with a Certificate in Health and Health Policy at Princeton’s School of Public and International Affairs. “I felt it was the right time to take a breath, take stock, and sharpen the tools in my toolbox,” she stated. “My Princeton experience was extraordinary as were the people I met there. I loved the academic challenge, deepening my knowledge, and debating with classmates who thought differently than me, all of which made me a more effective advocate for the communities and policies I care about.”

Cohen returned to southern Africa after her year at Princeton to help shape another ambitious HIV project in South Africa, which aimed to not only accelerate access to HIV treatment but also reduce the incidence of new HIV infections. Shortly after returning from South Africa, Cohen joined the Drugs for Neglected Diseases initiative (DNDi), a global nonprofit research and development organization that was an outgrowth of MSF. She served for 12 years as a regional executive director before stepping into her current role as global senior advisor. Here, she is focused on ensuring equitable, world-wide access to treatments and biomedical innovation for often neglected communities.

“As we have seen during the Covid-19 pandemic, science can deliver at unprecedented speed, yet the majority of people in the world do not benefit from this progress,” she added. “In the global health field, it’s important to listen to communities, learn lessons from the past, and use privilege, knowledge, and resources in a way that benefits the poorest, most marginalized, most forgotten people.”

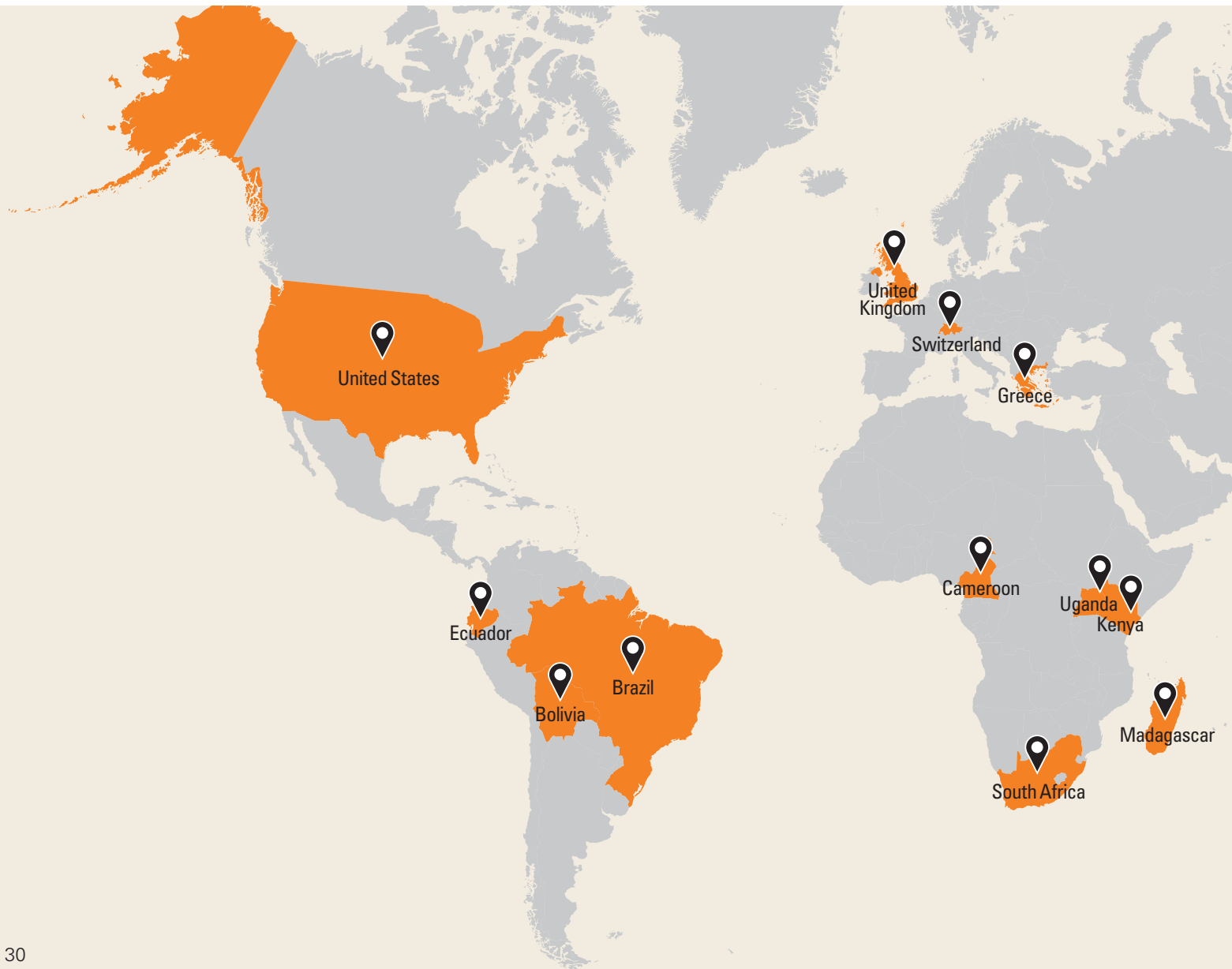


Rachel Cohen MPP '10 reunites with two former MSF colleagues during a trip to South Africa.



Kira Emsbo '23 learns about ancestral farming techniques and terracing during her internship with Partners in Andean Community Health in Riobamba, Ecuador.

INTERNSHIP PROGRAMS





Kennedy Walls '24 conducts a field visit with the Telethon Kids Institute in Western Australia.



Aisha Chebbi '24 in the offices of Gavi, The Vaccine Alliance in Geneva, Switzerland.

CHW sponsors a robust Internships in Global Health program, encouraging students to probe a myriad of health topics affecting the developed and developing world, from antimicrobial resistance to brain cancer therapies, barriers to childhood immunizations in low- and middle- income countries, and the impact of Covid-19 on mental health.

In 2022, CHW funded 91 opportunities for research, senior thesis projects, and other health-focused endeavors. While a few internships were remote, nearly all were on-site as we entered a new phase in the pandemic and students were permitted, once again, to travel domestically and internationally.



Sampling of Host Sites

Rutgers Cancer Institute of New Jersey
New Brunswick, New Jersey

UNICEF South Africa
Pretoria, South Africa

University of Sunderland
Sunderland, England

Task Force for Global Health, Health Campaign Effectiveness Coalition
Atlanta, Georgia

University of Malaya
Kuala Lumpur, Malaysia

World Bank Group
Washington, D.C.

SUMMER INTERNSHIP HIGHLIGHTS: IN THEIR OWN WORDS

Through GHP's many worldwide partnerships, students gain hands-on experience with leading global health researchers and practitioners. Whether supporting a collaborative institutional study or conducting independent research, the students find these opportunities transformative and often life-changing. The following narratives highlight a few of their endeavors during the summer of 2022.

Kaleb Boyd '24 Anthropology

Mpala Research Centre (Funded by the CHW Africa Health Research Initiative)

This summer I undertook an internship at Mpala Research Centre in Kenya. My research project investigated how lifestyle transitions and water quality impact gut microbiome variation among the Turkana, a traditionally semi-nomadic pastoralist community living in the hot, dry desert environment of northern Kenya.

From their diet and water availability to their extreme climate conditions, the Turkana have lived a very unique lifestyle, and thus, their bodies and genomes have been shaped to withstand this specific environment. However, as a result of urbanization, Turkana people have been able to transition to the very different lifestyles of urban areas, which has increased their risk of chronic disease. The main objective of this project was to understand how water quality and lifestyle differences drive microbiome variation among Turkana individuals. In order to achieve this, there were three main processes: collecting water and fecal samples, extracting bacterial DNA from the samples, and sequencing the DNA to then analyze the variation in the water and gut microbiomes. Most of my time was spent in the lab extracting DNA. The samples were sent back to Princeton for sequencing.

Overall, I achieved much of what I wanted to accomplish through this internship, regarding both my research and the experience of immersing myself in a new place and culture. Although we are not yet able to see the end results of the project, I learned so much, and it was inspiring to be a part of research that will be so helpful to understanding how environmental and social determinants impact health, and thus, what steps can be taken to mitigate these negative health outcomes.



The best parts of my experience were working with, getting to know, and learning from my research team and, also, being able to explore Kenya in various ways. Ultimately, the internship had a major impact on my future academic plans. As an anthropology major on the medical track, this research was very relevant to my field of study, and therefore gave me an idea of the kind of independent research project I would want to pursue for my junior paper and senior thesis.

Johnson Lin '25 Ecology & Evolutionary Biology

Fiocruz (Funded by the CHW Pandemic Preparedness and Response Initiative)

When I initially applied to this internship as a first-year undergraduate student, my intention was to explore the confines of public health and possibly bridge this area of study with environmental science in hopes of gaining a clearer view of future career opportunities. The main objective and delineated goal that my supervisor and I discussed was to develop a strong understanding of ecological importance in public health through the lens of the Anthropocene; in order to do so, we essentially performed a historical survey of Brazil's unified health care system "Sistema Único de Saúde" (SUS) through various visitations across Fiocruz's many campuses and affiliate locations. Moreover, my supervisor also emphasized cultural immersion as a tool to learn the public dynamic and perhaps procure a Brazilian perspective on community that could then provide an alternative lens on public health.

Most of my work centered around readings, discussions, and technical visits. I directly engaged with people from numerous fields, from professors to garden maintenance workers to the local population, to fully understand how the SUS is able to future-proof and strengthen its health influence while maintaining its core values of equity and sustainability.

Overall, this research provided a broad picture of SUS and revealed the ever-growing presence of the Anthropocene in public health discussions. I definitely achieved the goal of figuring out the intersectionality between public health and environmental science while engaging in meaningful cultural interactions that enriched my internship experience and built a broader understanding of Brazil's SUS.

As a visiting student, it was difficult not to be overly impressed by the wide scope of Brazil's public health structure and immediately draw comparisons with the U.S. In order to disregard



these bias issues, I focused on the community work at hand and observed key services that either health care system lacked rather than comparing the two systems. I looked at what could be improved in contemporary U.S. health care infrastructure by drawing upon different aspects and inspirations from international models, such as SUS.

By the end of the internship, I had solidified my decision to major in Ecology & Evolutionary Biology and pursue a certificate in Global Health and Health Policy. I developed a strong interest in the public health field, particularly in the realm of environmental public health and possibly academia. Not only was this internship enlightening with regard to my career goals, but I also gained a strong appreciation and reverence for the Brazilian culture and community. I would definitely like to visit the country again in the future!



Johnson Lin '25 enjoys local sightseeing with fellow interns at Fiocruz.



NEW CHW INITIATIVES FUND INTERNSHIPS

The Center for Health and Wellbeing (CHW), with generous financial support from the School of Public and International Affairs, has launched two initiatives as part of the broader *Internships in Global Health Program*.

Africa Health Research Initiative

The Africa Health Research Initiative offers supervised, health-focused research experiences for Princeton undergraduate and graduate students with partner institutions in Africa, including the Mpala Research Centre in Kenya. These research visits take place over the summer and during the University's two-week January Wintersession period. In 2022, the program funded five Princeton students' research activities as well as an on-site research coordinator at Mpala Research Centre.

Pandemic Preparedness and Response Initiative

The Covid-19 crisis has underlined the importance of effective preparedness and response to pandemic disease. With this in mind, CHW introduced a new program to support the academic and professional development of the next generation of global health leaders addressing epidemiological threats. The initiative, available to both undergraduate and graduate Princeton students, funds experiential opportunities focused on the biological, economic, political, social, and cultural dimensions of pandemic preparedness and response.

In 2022, this initiative sponsored five summer internships with the following host institutions:

- **One Health Trust** – Bangalore, India
- **The Oswaldo Cruz Foundation (Fiocruz)** – Rio de Janeiro, Brazil
- **NYC Health + Hospitals Special Pathogens Unit** – New York, New York
- **Oxford University Clinical Research Unit** – Hanoi, Vietnam
- **The Global Fund to Fight AIDS, Tuberculosis and Malaria** – Geneva, Switzerland

Naomi Frim-Abrams '23 Sociology
University of Sunderland

This summer, I worked with the Health Sciences Department at the University of Sunderland to explore the role of the arts in health and wellbeing among Sunderland residents. At first, these topics might seem somewhat disparate. However, the impressive work happening throughout the area has shown me the integral role that arts and culture play in bringing together community, supporting mental health and overall wellness, and overcoming medical stigmas.

My work involved visiting with local arts and health organizations and assisting them with ongoing projects. This allowed me to learn about the most pressing health-related issues in Sunderland, as well as existing resources within local communities. I discovered a few major differences between the U.S. and U.K. health care systems – the most obvious being the existence of socialized medicine in the U.K. in the form of the National Health Service (NHS). I quickly realized that this system did not always run as smoothly as fact sheets on the NHS's website might boast. Doctors were extremely overburdened and patients were sometimes left waiting months or years for procedures. Those with the means could pay to use privatized health services, leaving primarily disadvantaged communities to bear the brunt of inadequately delivered health care.

One of the proposed solutions to the stress on the U.K. health care system is social prescribing, a concept that was unfamiliar to me at the beginning of the summer. Social prescribing was created as a way to assist overburdened general medicine practices by providing non-medical interventions for psychosocial needs. I spent time shadowing social prescribers to see how they use art classes and other supplementary treatments for social isolation, mental illness, drug addiction, and more.

I learned that having a network between non-profits and health care providers, along with strong community relationships, is one of the best ways to ensure that individuals are connected to available resources. Over the course of the summer, I advanced many projects focused on building community trust and engagement. I also conducted research on health inequalities in Sunderland



Naomi Frim-Abrams '23 explores the United Kingdom with fellow University of Sunderland interns.

as well as evaluations of social prescribing organizations. That project persuaded me to consider social prescribing as a possible topic for my upcoming thesis project.

Overall, my work was fun, fulfilling, and eye-opening for me to learn about health care in such a different context. One concept that really struck me is the notion of patient- and community-centered care. In Sunderland, communal art practices provide keys to thinking about and exploring how communities can evolve and build together through art, and how individuals can strengthen their confidence and self-esteem through creating. Equally important are the networks that come through learning (and failing) together. This is how communities grow, and art is a great facilitator.

Katie Kopp '23 Ecology & Evolutionary Biology
Senior Thesis Research

This summer, I worked in Baltimore, Maryland and Kalisizo, Uganda, researching age-disparate relationships and HIV transmission in rural Uganda.

Age-disparate relationships are relationships in which the age difference between two partners is at least five years. Existing studies have found these relationships to be associated with risky sexual behaviors, such as unprotected sex, transactional sex, concurrent partnerships, and substance use before sex. Despite this, the literature has come to mixed conclusions about whether or not age disparity in sexual partnerships is a risk factor for HIV transmission. My summer research aimed to address this critical gap in the literature by assessing HIV infection risk as a function of



age, sex, partner age, and relationship age gap in the study population between the ages of 15 and 49 in the rural Rakai district of Uganda. This involved analyzing data from the Rakai Community Cohort Study (RCCS), which is part of the Rakai Health Sciences Program (RHSP).

While I was in Baltimore, I reviewed literature about age-disparate relationships and HIV risk in sub-Saharan Africa, and I performed a basic analysis and cleaning of the RCCS data that will be included in my study. I also worked on the development of a statistical model to predict the probability of HIV infection as a function of age, sex, partner age, and relationship age gap. The study's results will enable me to evaluate the significance of partner age and relationship age gap in determining HIV infection risk.



A day at work for Katie Kopp '23 at the Rakai Health Sciences Program in Kalisizo, Uganda.

In Uganda, I was able to ground and expand my theoretical work by meeting people involved with RCCS data collection and evaluation as well as observing where the data was collected. I interviewed RHSP staff members about the societal perceptions and practices surrounding age-disparate and cross-generational relationships, and I learned about the local Ugandan culture through food, language, and conversation, which proved to be both a fun experience and an integral element of my global health research. I also examined national and local policies and campaigns that specifically aimed to decrease the prevalence of cross-generational relationships. I will be able to use this knowledge to look for any changes in age-mixing patterns over time that may correlate with the dates

of these campaigns. Finally, my field observations and conversations with RCCS survey interviewers provided me with critical insights into how partner age data is collected, and what biases exist in this collection process.

Overall, this work gave me an invaluable opportunity to gain interesting, impactful public and global health research experience that provides a solid foundation for my senior thesis project. I hope to continue my research in the coming year and eventually produce a published research article. Additionally, this internship affirmed that I want to continue with public health and health care in the future, particularly in the field of sexual and reproductive health.

Yonit Krebs '24 Molecular Biology

*Research Assistant with Elizabeth Armstrong,
Associate Professor of Sociology and Public Affairs*

My summer project attempted to engage with the discussion of maternal mortality—pregnancy-related deaths—by investigating news media coverage of three Black female celebrities who experienced near-miss maternal mortality events. In light of reports showing increased rates of maternal mortality in the United States between 2018 to 2020—a trend shared with few other countries across the globe—there has been increased focus on the issue. Additionally, multiple investigations have shown racial disparities in these rates; Black women are significantly more likely to experience a maternal mortality event than white women. Studies have even shown that this disparity persists, despite controlling for economic status. Black women with the highest degrees of education experience rates of maternal mortality similar to white women who have not completed a high school degree. Several theories of the cause of this disparity have been proposed, including racial biases in health care as well as disparities in health care access and other social inequalities.



For my study, I analyzed celebrity near-miss maternal mortality experiences by five American newspapers (Los Angeles Times, New York Times, USA Today, Wall Street Journal, and Washington Post). The celebrities researched were Serena Williams, Beyoncé, and Allyson Felix.

Using the Proquest Newsstream Database, I searched for articles using the celebrity name along with relevant search terms during the time period September 1, 2017 - June 1, 2022. In total, my data set was comprised of 95 articles. I noted the extent of the article's focus on the following topics: maternal mortality, celebrity, infant/child mortality, racial disparity, and connection to abortion. Unsurprisingly, I found that articles that focused intensely on maternal mortality tended to discuss racial disparities to a greater extent. On the other hand, articles that focused minimally on maternal mortality were mainly about the celebrity as a person and their life, rather than the issues that their experience represents. Most articles did not discuss abortion, which was surprising given that news coverage following the *Dobbs v. Jackson Women's Health Organization* ruling that overturned *Roe v. Wade* connected the two issues.

This project was one of the first instances where I put my statistical skills to use, utilizing R to analyze the data I had collected. I also developed an interest in the subject matter, namely the fields of medicine and public health, and the intersection between these two fields, where the maternal mortality crisis lies.

Evelyn Wong MPA '23

The World Bank Group

My summer internship was hosted by the Innovation in Service Delivery team within the Health, Nutrition, and Population global practice at The World Bank Group. As part of the Service Delivery Innovation (SDI) team, I supported team goals and portfolio objectives, namely in designing and operationalizing human-centered design (HCD) methodologies and supporting capacity strengthening programs.



I worked on two major projects: the Future of Health Systems for Leaders Program developed by the SDI team, and an article on the importance of embedding systems and design thinking mindsets in health leadership teams for submission to *The BMJ*, a leading journal for medical and public health professionals.

For the former, I helped the team strategize and execute the closing stage of a two-year journey, from project



Evelyn Wong MPA '23 interned at The World Bank Group's headquarters in Washington, D.C.

conception to the graduation of the inaugural cohort of health leaders from six states in Nigeria. This included drafting communications to a large community of learners and subject matter experts, building the closing session, designing endline surveys, and collating feedback to inform future iterations of the program. For the latter, I worked closely with program leadership to crystallize their thinking on the importance of building complexity thinking capabilities aimed at improving quality of care in LMIC health systems, and to convey this information compellingly and accessibly to an international audience of medical professionals.

My contributions to both projects were valued and integrated into the final team deliverables. In addition, I was exposed to other projects at World Bank – further technical assistance discussions for the Futures Program, health projects in West Africa, and a new course collaboration with Parsons School of Design.

The internship exposed me to the depth and breadth of the work at World Bank and enriched my understanding of the international development field. Going through the Future of Health Systems for Leaders Program materials was a unique privilege. I am excited about this flagship program and its potential for transforming health leadership teams to realize people-centered, equitable primary health care. I also enjoyed the deep dive into HCD and systems thinking, which gave me new frameworks and methodologies for finding solutions to complex and dynamic challenges.

Additionally, I used this period to reach out to many World Bank staff and consultants, to understand what they do and how they moved into their current roles. This provided me with new connections that I hope to maintain as I progress in my career in international development.



RESEARCH & ADVOCACY

CHW-FUNDED RESEARCH

The Center for Health and Wellbeing funds innovative and groundbreaking health-focused research in the natural sciences, social sciences and humanities. Both affiliates and graduate students are eligible to apply for funding. Following is a list of projects supported in 2022, with additional details about a few of these endeavors.

2022 CHW-Funded Affiliate Projects

“Art Hx: Visual and Medical Legacies of British Colonialism”

Principal Investigator: **Anna Arabindan-Kesson** African American Studies and Art & Archaeology

“Catarina’s Dictionary: Wellbeing in Vernacular Narrative Medicine” and “The Judicialization of Covid-19 in Brazil”

Principal Investigator: **João Biehl** Anthropology

“Socio-Cognitive Strategies to Change Health-Relevant Beliefs and Behaviors”

Principal Investigator: **Alin Coman** Psychology and SPIA

“Optimizing Covid-19 Vaccination Distribution in Low Income Settings: Madagascar as a Case Study”

Principal Investigator: **Jessica Metcalf** Ecology & Evolutionary Biology and SPIA

“Randomized Controlled Clinical Trial of the Efficacy of Internet-Delivered Cognitive-Behavioral Therapy (iCBT) for Children and Adolescents with Anxiety Disorders”

Principal Investigator: **Yael Niv** Psychology

“Validation of Telomere Length Measurement as a Biomarker of Chronic Stress in a Model Organism” and “Understanding Chronic Traumatic Encephalopathy: Characterizing Tau and Mediators in an in vitro Repetitive Injury Cell Model of Brain Injury”

Principal Investigator: **Daniel Notterman** Molecular Biology

“Combating Fetal-Maternal Mortality Caused by Enterically Transmitted Viral Hepatitis” and “Understanding the Role of RNA Structure in Flaviviruses Virulence”

Principal Investigator: **Alexander Ploss** Molecular Biology

“What Enabling Factors Prevent Disruptions in Health Services During Crisis? A Case Study of Afghanistan Post August 2021”

Principal Investigators: **Alyssa Sharkey** and **Mustafa Basij-Rasikh** SPIA

“Multiplexed Detection of Immune-Stimulatory Viral RNAs Implicated in Disease”

Principal Investigators: **A.J. te Velthuis** and **Cameron Myhrvold** Molecular Biology

“Debating DNA: Exploring the Health and Social Implications of the Genomic Revolution”

Principal Investigator: **Sam Trejo** Sociology

Project Spotlights

“Art Hx: Visual and Medical Legacies of British Colonialism”

Principal Investigator: **Anna Arabindan-Kesson** African American Studies and Art & Archaeology

Art Hx is a digital humanities research project that explores the interconnected nature of the development of medicine, constructions of race, and image-making across the British Empire and the United States. While Art Hx initially began as an online database, it is transitioning into a digital community hub. In this new configuration, the theme for the 2022-23 academic year revolves around “Policy.” This theme probes how health and medicine are politicized, and how medicine and medical knowledge shape policy and vice versa. CHW funding has played a crucial role in helping the Art Hx team emphasize the role slavery, colonialism, and art have played in informing medicine and medical knowledge as they work to illuminate and dismantle oppressive structures that produce inequities in medical access and care.



“Socio-Cognitive Strategies to Change Health-Relevant Beliefs and Behaviors”

Principal Investigator: **Alin Coman** Psychology and SPIA

In a series of NSF-funded projects from Coman’s lab, researchers have shown that people update their health beliefs following exposure to evidence and social norms. For example, telling people that more than 800,000 children under the age of five die every year due to pneumonia (i.e., evidence) makes them update their belief about how significant a problem pneumonia is for global health. Similarly, telling people that a large majority of health experts believe that pneumonia is a significant problem of our time (i.e., norms) also makes them update their beliefs. So far, these intervention strategies have been tested separately. CHW provided a seed grant to empirically test whether the conjunction of both evidence and social norms might be more impactful than either one of these strategies alone. Additionally, Coman and his research team seek to improve on existing investigations by assessing the impact of these interventions over time and on behavior change. The project will speak to debates in psychology about the precursors of behavior change and help efforts to efficiently formulate health messages for maximal impact across communities.



“Understanding Chronic Traumatic Encephalopathy: Characterizing Tau and Mediators in an In Vitro Repetitive Injury Cell Model of Brain Injury”

Principal Investigator: **Daniel Notterman** Molecular Biology

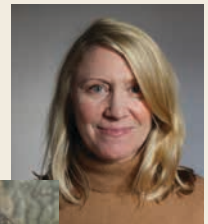
Every three seconds, someone in the world receives a diagnosis of dementia, a syndrome defined by loss of cognitive functioning and which is currently the seventh leading cause of death worldwide. Care for those with dementia exceeds \$1 trillion dollars globally each year and poses a large global health burden on the health care system. Among the leading contributors are Alzheimer’s disease (AD) and chronic traumatic encephalopathy (CTE), which share molecular and clinical characteristics. While both diseases have limited therapeutic options and no cure, CTE may have critical points at which clinicians and policymakers may intervene. This study explores that possibility by investigating a protein called Tau, one of the main players in both AD and CTE, which may play a direct role in damaging neurons and other brain cells. Notterman’s central hypothesis is that repeated head trauma leads to changes in Tau and its related proteins, potentially initiating the transition to CTE. This research will inform researchers and policymakers as they deploy resources to prevent and potentially treat CTE.



“What Enabling Factors Prevent Disruptions in Health Services During Crisis? A Case Study of Afghanistan Post August 2021”

Principal Investigators: **Alyssa Sharkey** and **Mustafa Basij-Rasikh** SPIA

During 2022, Sharkey led a research team investigating the extent to which service disruptions happened in selected settings in Afghanistan following the change in government in August 2021. Specifically, the team examined which factors (both in the environment and health system) and service delivery models may have facilitated continuous service delivery throughout the crisis. This analysis will help researchers understand why these factors and service delivery models were effective in preventing disruptions and supporting continued care in spite of the crisis. The findings will be used to examine the implications for health policy in other fragile, conflict-affected, and vulnerable settings and will help to identify priority areas for future research.



“Multiplexed Detection of Immune-Stimulatory Viral RNAs Implicated in Disease”

Principal Investigators: **A.J. te Velthuis** and **Cameron Myhrvold** Molecular Biology

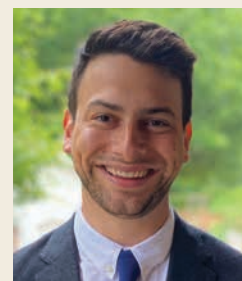
Influenza and coronaviruses produce small aberrant RNAs that can induce strong innate immune response and may play a role in human disease. In this project, researchers aim to develop a multiplexed CRISPR-Cas13-based assay to rapidly detect these RNAs in clinical samples, follow patients over time, develop a better understanding of these immune-stimulatory RNAs in disease, and develop better models for disease prognosis.



“Debating DNA: Exploring the Health and Social Implications of the Genomic Revolution”

Principal Investigator: **Sam Trejo** Sociology

Over the past two decades, scientific and computational advances have led to an explosion of molecular genetic data and subsequent genomic discoveries. This study will be a multi-year collaboration with Daphne Martschenko, assistant professor in the Center for Biomedical Ethics at Stanford University, who facilitates research efforts that promote socially responsible communication and community engagement with social genomics. Through an academic book, “Debating DNA,” and peer-reviewed articles, the research will examine social, ethical, and policy issues related to the DNA revolution. Trejo and Martschenko will synthesize recent findings regarding the genetics of social outcomes, unpack key disagreements, and make novel policy recommendations.



2022 CHW-Funded Graduate Research Projects

“The Effects of Improved Public Healthcare on Patient and Informal Provider Outcomes”

Principal Investigator: **Patrick Agte** Economics

“Health Effects from Artificial Fertilizer and Pesticide Use on Indo-Fijian Farms in the Sigatoka Valley”

Principal Investigator: **Ipsita Dey** Anthropology

“The Role of Mitochondrial Dynamics in the Formation of Aberrant Tau and its Effect on Chronic Traumatic Encephalopathy Neurodegeneration in Drosophila Melanogaster”

Principal Investigator: **Nicole Katchur** Molecular Biology

“Indigenous ‘Living Labs’: Pluralizing Taiwanese Health through Participatory Design”

Principal Investigator: **Aaron Su** Anthropology

“Translational Regulation in Escherichia Coli Under NO Stress”

Principal Investigator: **Mike Wan** Chemical and Biological Engineering

Project Spotlight

“The Effects of Improved Public Healthcare on Patient and Informal Provider Outcomes”

Principal Investigator: **Patrick Agte** Economics

This research project investigates the equilibrium effects of the health and wellness center reform in Rajasthan, India. The key element of the reform is the conversion of remote maternal and child health centers to basic outpatient care facilities through the posting of a new mid-level provider, a so-called community health officer. The completed study will provide an analysis on how improved public primary healthcare affects patient outcomes and the informal health care sector.



Other 2022 CHW-Funded Projects

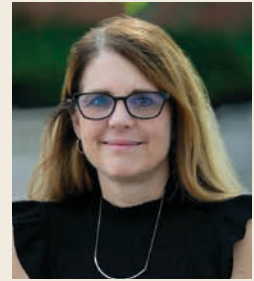
“Anonymous was the Data”

Principal Investigator: **Chanika Svetvilas** Ida B. Wells Just Data Lab, Artist-in-Residency Program

“Intellectual Disability and Adult Health-Related Outcomes”

Principal Investigator: **Kelly Noonan** Economics

The purpose of this study is to examine adult outcomes of youth with low intellectual ability. The investigation uses data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), which initially surveyed youth ages 11 to 19 in 1994-1995. During 2008 (wave 4 of the survey), the original respondents were young adults (ages 24 to 32). In this study, measures of intellectual disability were constructed using alternative cut-offs of the standardized scores of the Add Health Picture Vocabulary Test, which is correlated with other measures of intelligence. The project investigates a range of adult health-related outcomes, including general health status, overweight/obesity, fast food consumption, insurance status, routine medical and dental visits, motor vehicle accidents, smoking, alcohol/drug use, fertility, and unintended pregnancy.



Active Graduate Projects

“Study of Patient and Physician Education and Communication Surrounding Intrauterine Devices (IUDs)”

Principal Investigator: **Katie Donnelly** Sociology

“How Will Climate Change Drive Plant Pathogen Evolution?”

Principal Investigator: **Ian Miller** Ecology & Evolutionary Biology

“The Effect of an Algorithmic Toll on Child Welfare Decision Making”

Principal Investigator: **Chris Mills** Economics

“Risky Behaviors and Moral Judgments in a Politicized Pandemic”

Principal Investigators: **Taylor Winfield** and **Janet Xu** Sociology

“Epidemiological and Evolutionary Impacts of Broadly-Protective Influenza Vaccines”

Principal Investigator: **Qiqi Yang** Ecology & Evolutionary Biology

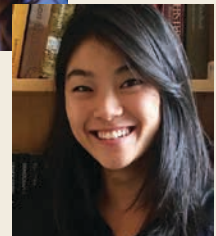
Graduate Research Spotlight

“Risky Behaviors and Moral Judgments in a Politicized Pandemic”

Principal Investigators: **Taylor Winfield** and **Janet Xu** Sociology

During the Covid-19 pandemic, actions that were once value-neutral and apolitical, such as wearing masks or attending social gatherings, took on new salience, connotations of risk, and moral valence. New opportunities to make moral judgments about desirable traits and actions emerged, with implications for stigma and intergroup relations. This study explores how Americans across the political spectrum define and moralize newly-risky health behaviors, and to what extent evaluations of risk and moral judgments are determined by the behavior itself versus who is performing the behavior. Investigators conducted a survey experiment in which respondents were randomly assigned a vignette featuring social behaviors of varying risk: eating indoors at a restaurant, attending a large social gathering, and traveling in an airplane.

Preliminary findings suggest that although political groups may have dissimilar overall assessments of how risky or moral a behavior is, the way they relate risk to morality is strikingly similar, which challenges dominant theories. Accordingly, Winfield, Xu, and co-investigators Hunter York and Kalyani Jayasankar conclude that efforts to curb behaviors may be more effective if they are framed around the risks to others, rather than risk to self or the morality of the behavior.





Janet Currie with President Joe Biden at the White House

Currie Briefs White House on Lead Remediation

Janet Currie, CHW co-director and Henry Putnam Professor of Economics and Public Affairs, briefed President Joe Biden, Vice President Kamala Harris, and members of the President's economic team at a meeting focused on the economics of infrastructure investments.

Her remarks underscored the detrimental effects of lead exposure on children, sharing research that revealed how testing and remediation efforts can help children with future life outcomes. Both the Infrastructure Investment and Jobs Act and the President's Build Back Better framework include historic investments to reduce lead exposure.

Currie spoke alongside Edward Glaeser, the Fred and Eleanor Glump Professor of Economics and chair of the Department of Economics at Harvard University. The meeting was jointly organized by Cecilia Rouse, chair of the Council of Economic Advisers (CEA), who is on public service leave from the Princeton School of Public and International Affairs; Brian Deese, director of the National Economic Council; and Heather Boushey, a member of the CEA.

President Biden will continue to meet with experts like Currie and Glaeser from various fields in the months ahead as he continues to execute an economic strategy that delivers for the American people.

Source: Princeton School of Public and International Affairs



STATE Health & Value STRATEGIES

Driving Innovation Across States



STATE HEALTH & VALUE STRATEGIES PROGRAM

Program Director: **Heather Howard** School of Public and International Affairs

The Robert Wood Johnson Foundation (RWJF) awarded a new \$10.6 million grant to the State Health and Value Strategies (SHVS) program in 2022. Based at CHW, SHVS is a nationwide health policy technical assistance consortium that works with state governments to transform their health and health care systems. The program connects states with experts in the field, providing technical support as they test and implement new innovations. Furthermore, when SHVS helps individual states achieve policy goals, their experiences are shared—via workgroups, webinars, convenings, and publications—to facilitate success in other states.



In 2022, SHVS focused on the following key domains: Medicaid, health equity; health care access and coverage; affordability; and operational excellence.

Preparing for the End of Medicaid Continuous Coverage Requirement: Highlights and Accomplishments

Medicaid enrollment increased by nearly 19 million (or 26.5%) from February 2020 through June 2022 across all states, driven by the Covid-19 pandemic. A significant contributor to these gains in coverage is the Families First Coronavirus Response Act's "continuous coverage requirement," which prohibits states from disenrolling individuals from Medicaid during the pandemic. When this requirement expires, an estimated 15 million people will be disenrolled, making this the largest coverage event since the Affordable Care Act (ACA).



In 2022, SHVS assisted states in preparing for this unprecedented transition, advising them on the technical aspects of redetermination, providing tools on how to communicate with enrollees, and sharing strategies to maximize continuity of coverage for consumers.

Projects in this area included:

Convening for states on the unwinding of the Medicaid continuous coverage requirement – SHVS sponsored a workshop, hosted by the National Association of Medicaid Directors, to discuss challenges related to the unwinding of the Medicaid continuous coverage requirement and to share strategies for preparing for this event. Forty states participated.

Communications outreach to stakeholders and consumers – SHVS offered ongoing support to state officials on how to effectively communicate about the end of the Medicaid continuous coverage requirement. Tools and resources included a social press kit, a planning guide to organize phases of a state’s communication plan, English and Spanish templates for communicating with enrollees about upcoming changes, and a message guide (available in English and 10 other languages) to help consumers maintain health insurance coverage. SHVS also provided recommended, research-based consumer terms to use in direct-to-consumer communications.

Targeted outreach to “high risk” enrollees – SHVS guided state efforts to develop targeted outreach strategies for individuals in treatment for chronic or life-threatening diseases and/or who would face particular health risks if medical treatment were to be interrupted.

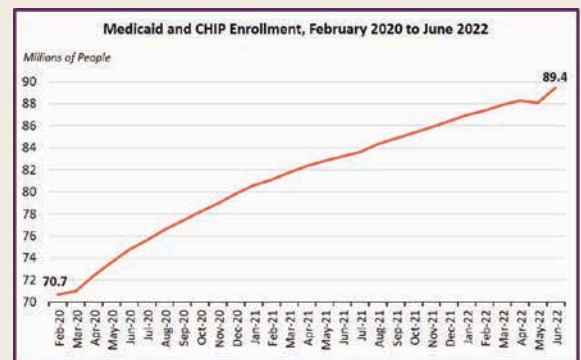
Centering equity in planning for the end of the public health emergency – Black, Latino/a, and other people of color are overrepresented in the Medicaid program and are more likely to experience volatility and instability in employment and housing as a result of longstanding structural racism. Consequently, they are at greater risk of losing Medicaid coverage at the end of the continuous coverage requirement. SHVS offered strategies to minimize coverage loss, such as partnerships with community-based organizations and use of trusted messengers.

Coordinating Medicaid and Marketplace efforts to provide greater continuity of coverage and a smoother transition – SHVS hosted a meeting in Minneapolis that convened Medicaid and Marketplace officials from 14 states to plan for unwinding the Medicaid continuous coverage requirement. Following that meeting, SHVS created an affinity group to facilitate ongoing partnerships and implement effective communications strategies.

Improving *ex parte* rates to support unwinding –

As states plan for the transition back to regular eligibility and enrollment operations, many are focused on strengthening their redetermination and renewal processes. SHVS has supported this effort by helping states improve *ex parte* rates to mitigate coverage loss for eligible individuals when the PHE ends. As part of this process, SHVS hosted a virtual working session for state officials, connecting them with experts to answer questions related to this challenge. Representatives from 44 states attended the program.

Monitoring Medicaid enrollment trends – The lack of publicly available, timely Medicaid data impacts states’ ability to determine who is losing coverage and why. In 2022, SHVS offered guidance on existing Medicaid enrollment reports and identified indicators based on state-level Medicaid application activity, eligibility and enrollment statistics, and call center volume. SHVS also provided information on federal reporting requirements and best practices for developing a data dashboard. Moreover, SHVS compiled a 40-state databook of Medicaid enrollment trends.



Striving for Health Equity: Highlights and Accomplishments

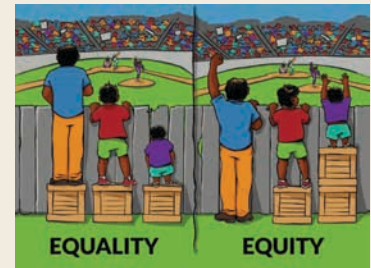
SHVS programming supported states' efforts to make health care more accessible and equitable. Initiatives focused on identifying and reducing disparities and creating a sustainable health infrastructure.

2022 projects included:

Centering health equity in Medicaid Section 1115 demonstrations – One key strategy employed by states to test new or innovative ideas related to health equity in their Medicaid programs is Section 1115 demonstrations. SHVS provided states with analyses of specific strategies for advancing health equity through each demonstration lifecycle stage.

Addressing health-related social needs as part of Medicaid managed care procurement – SHVS developed a toolkit to help states measure and incentivize Medicaid managed care entities to address unmet social needs that can contribute to poor health outcomes, lower quality care, and higher medical expenditures.

Social care performance measurement in Medicaid – SHVS published findings from a two-part research project related to measuring social care performance. The first part, conducted by the Social Interventions Research and Evaluation Network at the University of California San Francisco, explored ways to scale and sustain social care across the health care sector. The second part was based on a series of interviews with Medicaid leaders from 13 states about selecting monitoring mechanisms for social programs.



Affordable Health Coverage for Non-Citizen Populations: Highlights and Accomplishments

State policymakers are increasingly focused on strategies to ensure access to and affordability of health care coverage for immigrant populations, especially in light of the significant burden that the Covid-19 pandemic has placed on those who are uninsured.

SHVS developed a number of programs, toolkits, and resources for states:

Ensuring affordable health coverage and health equity for immigrant populations – SHVS published a series of briefs examining strategies for extending health insurance coverage to non-citizen populations. The series included:

- An analysis of considerations related to state-funded affordable coverage programs for low-income individuals who do not qualify for subsidized health insurance under the ACA or other public programs due to immigration status
- A review of how states can provide pregnancy-related care through the Children's Health Insurance Program (CHIP) to targeted low-income children from conception to birth, regardless of immigration status
- Strategies to connect eligible immigrants and their families to affordable coverage, addressing their concern that enrolling in Medicaid/CHIP, Marketplace, and other public health insurance programs could jeopardize their immigration status.



Toolkit of communication resources – SHVS created a messaging toolkit of resources, *Reaching Non-Citizen Communities: Resources to Support State Outreach and Education to Drive Healthcare Enrollment*, which included editable versions of flyers, social media posts and graphics, and other materials for engaging individuals and enrolling them in health coverage.

New affinity groups exploring affordable health coverage options for non-citizens – SHVS created two affinity groups that convened regularly: one group focused on Marketplace options for subsidized coverage for non-citizen populations, and the other group broadly explored state strategies for pursuing a range of affordable health coverage options for non-citizens.

Expanding coverage in Colorado to 10,000 Non-Citizens – SHVS Deputy Director Dan Meuse worked with Colorado to develop the state’s section 1332 waiver. This waiver was instrumental in the approval of the Colorado Option, which provided coverage for 10,000 non-citizens.

Highlighting innovative practices in California – A growing number of states view extending affordable health coverage to lower-income residents, regardless of immigration status, as a critical step towards narrowing the gap in health coverage, advancing health equity, and improving the overall health and wellbeing of all residents. SHVS published a state spotlight on California, showcasing it as a valuable case study. The report details the state’s approach to expanding coverage to the state’s 3.2 million uninsured residents, of which 65% are undocumented.

Maternal Health: Highlights and Accomplishments

Compendium of state strategies to improve maternal health and promote health equity – In recognition of the increasing rates in maternal morbidity and widening health disparities for birthing individuals of color, state policymakers have increasingly focused on improving and protecting the health and wellbeing of their pregnant/postpartum residents, infants, and families. SHVS published a compendium that provides strategies for this effort and synthesizes research about the national state-of-play across four domains: maternal health models, quality improvement, workforce and benefits, and eligibility and enrollment/coverage expansion.



Maternal health roundtable – SHVS hosted a maternal health roundtable with officials from five states to facilitate the sharing of ideas and insights on the types of programs, care delivery models, and activities that states can deploy to improve maternal health outcomes and advance health equity.

Using the American Rescue Plan Act to extend postpartum coverage – SHVS published a resource addressing policy and operational considerations for states considering the American Rescue Plan’s option to extend Medicaid and CHIP postpartum coverage for one year following birth.

Other SHVS Initiatives

Marketplace and insurance innovations – SHVS provided support for the annual Health Insurance Exchange conference hosted by the Leonard Davis Institute of Health Economics at the University of Pennsylvania. Adjacent to that conference, SHVS convened Marketplace and insurance officials from 16 states to discuss challenges, priorities, and innovative practices.

Budget neutrality – Longstanding federal policy requires that 1115 waivers are “budget neutral” to the federal government. During the summer of 2022, the Centers for Medicare & Medicaid Services began to roll out a series of changes to budget neutrality policy through state waiver approvals. SHVS published a brief that explored the key policy changes established through the Oregon and Massachusetts waiver renewals (and reinforced through the Arizona and Arkansas approvals) and discussed key implications for states.



As part of Professor Heather Howard's Graduate Policy Workshop, MPA students traveled to the U.S. Virgin Islands to present recommendations for a Medicaid buy-in program.

SHVS Thought Leadership on Health Care Reform

SHVS Director Heather Howard and her team, in collaboration with Princeton students and alumni, continued to drive transformational change in the U.S. health system through leadership, service, and advocacy.

2022 activities included:

- Howard and Christine Zizzi MPA '22 co-authored an opinion piece in *The Star-Ledger* titled "*Millions are about to lose health care. Will we be able to help them?*" The piece applauded the resiliency of the Affordable Care Act for narrowing racial health disparities, protecting those with pre-existing conditions, and serving as a lifeline during the Covid-19 pandemic. They also cautioned states to prepare for the expiration of the Medicaid continuous coverage requirement.
- Howard and SHVS staff collaborated with the National Governors Association to help state officials prepare for the unwinding of the PHE. They shared key considerations and requirements for state Medicaid/CHIP agencies, and offered technical assistance to help states prevent administrative denials and preserve Medicaid coverage.
- In collaboration with Manatt Health, Howard co-authored two blog postings for *Health Affairs Forefront* related to the Centers for Medicare & Medicaid Services' changes to budget neutrality policy. She discussed new opportunities for states to finance and sustain innovative programs addressing health-related social needs.
- Howard participated in a briefing for Michigan state legislators and staff on the unwinding of the Covid-19 PHE. At the event, hosted by Michigan State University's Institute for Public Policy and Social Research and the Institute for Health Policy, she provided a national perspective on the impact of this policy change and discussed state strategies for mitigating health insurance coverage losses.
- Howard served on the RWJF Medicaid Innovation Prize Advisory Panel, organized by the National Academy for State Health Policy. The advisory panel developed criteria for recognizing state innovations in Medicaid and selected winners for advances in access to care, initiatives to address social determinants of health, care coordination initiatives for historically marginalized populations, and health disparities.
- Howard testified before the Health Working Group of New Jersey Governor Phil Murphy's Wealth Disparity Task Force, sharing SHVS' work, *Making Medicaid Estate Recovery Policies More Equitable: State Toolkit*, and highlighting policies New Jersey can adopt to reduce the burden on families of color.
- Howard gave the keynote presentation at a legislative symposium hosted by the Washington State Health Care Authority, speaking to state legislators and staff about the national landscape of health care costs and affordability initiatives.



CHW LAUNCHES PRINCETON PULSE PODCAST

Last fall, CHW introduced “The Princeton Pulse Podcast,” a new podcast series exploring the power and possibilities of evidence-informed health policy. Hosted by Heather Howard, professor of the practice and former New Jersey Commissioner of Health and Senior Services, the show brings together scholars, policymakers, and other leaders to examine today’s most pressing health policy issues – domestically and globally.

“I’m excited to host this podcast and shine a light on the vital connections between health research and policy,” stated Howard. “Research is a critical tool for crafting, implementing, and evaluating the effectiveness of policy interventions. Our show offers an opportunity to take a closer look. We cover the latest policy trends, discuss how research is informing policies to improve health outcomes, and elevate partnerships with policymakers.”

During the inaugural episode, titled “Closing the Racial Divide in Maternal-Infant Health,” New Jersey First Lady Tammy Murphy, Princeton Sociology Professor and CHW affiliate Elizabeth Armstrong, and Howard discussed how the state is tackling maternal and infant health disparities. The episode addressed social determinants of health, national trends in insurance coverage, the value of doulas and nurse-family partnerships, and other solutions for improving the U.S. maternity care system.

The second podcast, which aired in November 2022, explored the effectiveness of levies on sugar-sweetened beverages, comparing experiences from South Africa and Philadelphia. Howard was joined by two guests who were instrumental in the adoption of soda taxes: Dr. Karen Hofman, a pediatrician and research professor at the University of Witwatersrand, who helped South Africa become the first sub-Saharan African country to implement this kind of tax; and Dwayne Wharton, a health equity advocate behind Philadelphia’s beverage tax.

“The Princeton Pulse Podcast” is available on all major podcast platforms and CHW’s website.





Dr. Eugene Richardson from Harvard University lectures about coloniality, global health, and reparations.

EVENTS

The Center for Health and Wellbeing (CHW) hosts and co-sponsors many domestic and international health events for the benefit of the Princeton community and the general public.

CHW SEMINAR SERIES

In 2022, CHW presented several engaging seminars on global health and development research topics led by researchers from Princeton and beyond:

The Effect of Depression Screening on Diagnosis, Treatment, and Health: Evidence from Medicare

Speaker: Hui Ding, CHW postdoctoral research associat

The Making of a Public Sector Worker: The Causal Effects of Temporary Work Assignments to Poor Areas

Speaker: Patrick Agte, Ph.D. student in Economics, Princeton University

Collective Climate Action: Air Pollution, Child Outcomes, and Inequality

Speaker: Kjell G. Salvanes, professor in labor economics, Norwegian School of Economics

Successes and Challenges of South Africa's Health Promotion Levy - Sugary Beverage Tax

Speaker: Dr. Karen Hofman, research professor and founding director of the SAMRC Centre for Health Economics and Decision Science/PRICELESS SA, University of Witwatersrand in Johannesburg, South Africa

Who Bears the Burden of Rising Health Care Costs in the U.S.?

Speaker: Zack Cooper, associate professor of health policy and economics, Yale University

Children's Health and Household Labor Decisions

Speaker: Boriana Miloucheva, CHW postdoctoral research associate

GHP COLLOQUIUM SERIES

Among its most anticipated offerings, CHW sponsors an annual Global Health Program Colloquium Series, where students, faculty, researchers, and the general public can hear about innovative approaches to current global health issues.

Colloquium topics in 2022 included:

‘If We Build It/They Will Come’ and Other Fallacies Concerning Covid-19 Vaccines in the U.S.

Speaker: Monica Schoch-Spana, Johns Hopkins University

Covid-19 Vaccine Policy-Making—Evidence, Values, and Expert Advice

Speaker: Jason L. Schwartz, associate professor of public health (health policy); associate professor in the history of medicine; associate professor, Institution for Social and Policy Studies; affiliated faculty, Yale Institute for Global Health

Vaccine Champions: The Importance of Expanding Frontline Communicators

Speaker: Syra Madad, senior director, System-Wide Special Pathogens Program, NYC Health + Hospitals

Coloniality, Global Health, and Reparations

Speaker: Eugene Richardson, M.D., assistant professor of global health and social medicine, Harvard University

Social Medicine from the South: Lessons for the Age of Global Health

Speaker: Abigail H. Neely, associate professor of geography, Dartmouth College



CONFERENCES

The Architecture of Confinement Conference

Co-sponsored by CHW; the Department of Art & Archaeology; School of Architecture; Department of African American Studies; Center for Collaborative History Humanities Council; Princeton Mellon Initiative in Architecture, Urbanism, and the Humanities; Prison Teaching Initiative; Program for Community-Engaged Scholarship; and the University Center for Human Values

This conference explored the materialization of spaces of confinement. Activists, survivors, scholars from history and law, as well as architects, designers, and artists shed light on questions of time, site, care, and the individual.



Conference on Prevention, Early Detection, and Response to Antimicrobial Resistance Pandemics

Co-sponsored by CHW and the High Meadows Environmental Institute

This comprehensive workshop addressed the complexity of antimicrobial resistance, a major threat to global health, and the need for a multi-disciplinary solution.

CHW Mini-Conference

Sponsored by CHW

The following Princeton professors and lecturers presented current research: Anna Arabindan-Kesson, African-American Studies and Art & Archeology; Rebecca Carey, Psychology; Niraj Jha, Electrical and Computer Engineering; and Alyssa Sharkey, School of Public and International Affairs.

OTHER EVENTS

Covid-19 Vaccine Apartheid: Global Inequality & the International People's Vaccine

Co-sponsored by CHW, the Ida B. Wells Just Data Lab, Health Justice Commons, Immigrant Defense Project, and the People's Vaccine Alliance

Speaker: **Leah Smith '22**, Princeton University

Discussion with Erin Ferenchick, M.D.

Co-sponsored by the Princeton School of Public and International Affairs and CHW

Speaker: **Erin Ferenchick, M.D.**, Global Fund to Fight AIDS, Tuberculosis and Malaria

Saving Rainforests with Health Care

Co-sponsored by CHW and High Meadows Environmental Institute

Speaker: **Dr. Kinari Webb**, Founder of Health In Harmony

Moderator: **Ramanan Laxminarayan**, senior research scholar, High Meadows Environmental Institute

'We Are Not Guinea Pigs': The Effects of Negative News on Vaccine Compliance

Co-sponsored by the Center for Policy Research and the Environment, CHW, and High Meadows Environmental Institute

Speaker: **Belinda Archibong**, assistant professor of economics, Barnard College, Columbia University

Origin: What Genetics Tells Us about the Peopling of the Americas

Co-sponsored by the Department of Anthropology, CHW, and the Lewis-Sigler Institute for Integrative Genomics

Speaker: **Jennifer Raff**, associate professor of anthropology, University of Kansas

Data Science: The New Frontier in Global Health and Development

Co-sponsored by CHW and the Data Driven Social Science Initiative

Speaker: **Uyi Stewart**, chief data and technology officer, data.org



EVENT HIGHLIGHT

Conference on Causes and Consequences of Child Mental Health

Concerns about child mental health issues have taken a prominent place in national conversations, especially following the stresses associated with the Covid-19 pandemic. But CHW researchers have been instrumental in showing that these conditions were common even prior to the pandemic, and that they often have more negative consequences for children's lives than many physical health conditions. This conference, hosted by CHW and sponsored by the NOMIS Foundation, featured cutting edge research on a diverse range of topics within the realm of children's mental health, including the effects of family economic circumstances, the impact of maternal depression and domestic violence, the effect of bullying, and several types of interventions in school settings. The conference papers will be published together as a special issue of the Journal of Human Resources to bring more attention to this important area for ongoing research.



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