

IMPACT REPORT



RUTGERS

Global Health Institute

ON THE COVER: Rutgers Global Health Institute's five principal faculty members, pictured left to right, are Wilfred Ngwa, Ubydul Haque, Umer Hassan, Gwennyth Lee, and Bobby Brooke Herrera.

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DEAR FRIENDS AND COLLEAGUES:

The end of this year marks the beginning of a yearlong celebration: the 10th anniversary of the creation of Rutgers Biomedical and Health Sciences (RBHS), representing the largest higher education merger in United States history. Most of the schools and institutes from the former University of Medicine and Dentistry of New Jersey were legally integrated into Rutgers on July 1, 2013.

This development actually paved the way for the creation of Rutgers Global Health Institute. The first RBHS strategic plan identified global health as a key component and called for all schools to be involved in global health.

Our institute, established in 2017, now has more than 150 core and affiliate members that represent not only all RBHS schools but also most Rutgers schools and all four of the university's chancellor-led divisions. We also convene the Rutgers Global Health Institute Collaborators Network, which brings together global health offices and global health-related centers from throughout the university.

We continue to recruit faculty in three areas: Cancer Care and Prevention in Sub-Saharan Africa; Global Health; and Health Equity, Social Justice, and Population Health. Through this recruitment effort,

we have hired four new faculty so far: Ubydul Haque, Bobby Brooke Herrera, Gwenyth Lee, and Wilfred Ngwa. These new faculty join Umer Hassan, whom we had previously recruited in partnership with the School of Engineering, as principal faculty members of Rutgers Global Health Institute.

In Africa, the Botswana-Rutgers Partnership for Health continues its focus on addressing the profound disparities Botswana faces in cancer care and prevention. Last fall, the partnership launched Cancer Kitso, a training program aimed at improving cancer care and prevention capabilities throughout Botswana and, eventually, other countries in sub-Saharan Africa. *Kitso* is the word for "knowledge" in Setswana, Botswana's local language.

Of course, global health is also about addressing health disparities at home. Resilient New Jersey is our initiative that began with a focus on helping small, minority-owned businesses navigate challenges related to the COVID-19 pandemic and has evolved into an effort to build long-term community resilience in our low-income and minority communities across the state.

These initiatives, and the work of our members across Rutgers, are crucial to fulfilling RBHS's goal to "engage meaningfully with local and global communities." This 10-year anniversary is the perfect time to reflect on all the people RBHS reaches—whether in another part of the world or just around the block. Together, we are creating a healthier world for everyone.

All the best of health to you and yours,



Richard Marlink, MD
Director, Rutgers Global Health Institute
Henry Rutgers Professor of Global Health



PRINCIPAL FACULTY

In fall 2021, we began recruiting for multiple open-rank faculty positions. As a result of this ongoing search, four new faculty members joined Rutgers Global Health Institute during the past academic year. These new faculty, as well as a former joint hire with the School of Engineering, are known as principal faculty of Rutgers Global Health Institute. Principal faculty are formally appointed as faculty within both Rutgers Global Health Institute and a Rutgers school.



Ubydul Haque's research has focused on infectious diseases, climate change, conflict and war, and natural disasters.

UBYDUL HAQUE

Assistant Professor of Global Health, Rutgers Global Health Institute
Assistant Professor of Epidemiology, Department of Biostatistics and Epidemiology, School of Public Health

Research focus: Ubydul Haque is a geospatial epidemiologist who designs data- and technology-driven solutions for confronting global public health problems. Using data from his original research and existing large datasets that are available via public and private sector sources, Haque creates mathematical algorithms and forecasting models. His research has focused on infectious diseases, climate change, conflict and war, and natural disasters.

Highlights: Following the 2022 publication of Haque's first-of-its-kind study on the health impacts of Russia's invasion of Ukraine, he is working with partners at 12 universities and research institutions in Ukraine to conduct multimodal research on urgent health problems that have been created or exacerbated by the conflict. Studies underway are examining sleep and mental health, effects of energy infrastructure disruptions on health in the cold winter months, impacts on hospitals, doctors' satisfaction with the system of rehabilitation of participants in an anti-terrorist operation, and behavioral factors and levels of anxiety of schoolchildren. For all of these in-progress studies, all data is collected and undergoing analysis.

Since his arrival at Rutgers in January 2023, Haque has published multiple studies related to dengue. One study, published in *Ecological Informatics*, identified and mapped Mexico's dengue fever hotspots; another used modeling to predict the likely geographic ranges of the four dengue virus serotypes in Mexico (*Transboundary and Emerging Diseases*). Both studies have implications for virus control and outbreak preparedness in the country. Another study on the impacts of different dengue serotypes on pregnant women in Mexico, published in *BMC Infectious Diseases*, illuminates the serotypes more likely to result in severe dengue in that population. Two additional studies on the *Aedes aegypti* mosquito, the primary vector for the dengue virus, can help inform dengue fever prevention via vector control efforts. The first study, published in *Engineering Applications of Artificial Intelligence*, used artificially augmented data to improve the detection of mosquito breeding grounds, and the second, in *Parasites & Vectors*, examined the mosquitoes' indoor resting behavior and environments in northeastern Thailand.

Haque also published a study in the journal *Landslides* on community perceptions of risk, vulnerability, and resilience of several landslide-prone areas in eight countries, which can help inform landslide hazard management.

Background: Haque was previously on the faculty of the University of North Texas Health Science Center at Fort Worth, where he was an assistant professor of biostatistics and epidemiology in the School of Public Health. He earned a doctoral degree in climate change and health from Nagasaki University in Japan and was a postdoctoral fellow at Johns Hopkins University. He also received a master's degree in geoinformatics from the Royal Institute of Technology in Sweden and a bachelor's degree in urban and rural planning from Khulna University in Bangladesh.

UMER HASSAN

Assistant Professor, Department of Electrical and Computer Engineering, School of Engineering
Assistant Professor of Global Health, Rutgers Global Health Institute

Research focus: Umer Hassan is an expert in nanotechnology and biological measurement. His laboratory is focused on developing biosensing technologies for infectious disease diagnostics and therapeutics applications for global health care settings, aiming to contribute fundamental knowledge and develop breakthrough engineering tools and methods for personalized and predictive health care.



Umer Hassan's laboratory is focused on developing biosensing technologies for infectious disease diagnostics and therapeutics applications for global health care settings.

Highlights: Hassan has been developing and testing a handheld device and accompanying smartphone app that produce microscopic images and analysis. Using a small drop of blood obtained with a pin prick, this device can quantify and determine the composition of cells. This technology has many possible applications ranging from analyzing cancer cells to quantifying and classifying immune cell responses to an infection. Each device can be produced for as little as \$65 and within about an hour, using a 3-D printer and hand assembly of optical components. This year, Hassan published articles on the technology in the journals *Lab Chip* and *IEEE Access*. He also presented and published his research abstracts at the AVS 68th International Symposium and Exhibition in Pittsburgh, Pennsylvania (November 2022); the Biomedical Engineering Society's Advanced Biomanufacturing (ABioM) Meeting in Hyattsville, Maryland (March 2023), where he also received the ABioM Junior Investigator Research Award; and the Electrochemical Society Meeting in Boston, Massachusetts (May 2023), where he gave an invited talk.

Another product in development in Hassan's laboratory is a biosensor that assesses the phagocytic ability of blood cells, or how effective they are at killing pathogens. This technology is broadly applicable in both critical care and emergency care settings. Currently, there is no tool that can differentiate between viral and bacterial infections, quickly identify the severity of an infection, or determine how effective a treatment is in fighting an infection. This handheld device does all three, with enormous potential to inform treatment decisions and avoid unnecessary prescriptions of broad-spectrum antibiotics—and their contributions to antibiotic resistance. Hassan has published three papers on the technology this year and has a patent pending.

Background: Hassan was Rutgers Global Health Institute's first joint faculty hire. He arrived to Rutgers in September 2018 as an assistant professor in the School of Engineering with a joint appointment at Rutgers Global Health Institute. Before he came to Rutgers, he worked as a research scientist in the Department of Bioengineering at University of Illinois Urbana-Champaign with a research affiliate appointment at Carle Foundation Hospital, Urbana.

BOBBY BROOKE HERRERA

Assistant Professor of Global Health, Rutgers

Global Health Institute

Assistant Professor, Department of Medicine – Division
of Allergy, Immunology, and Infectious Diseases,
Robert Wood Johnson Medical School

Resident Scientist, Child Health Institute of New Jersey,
Robert Wood Johnson Medical School

Research focus: Bobby Brooke Herrera is a research scientist who studies epidemic viruses and infectious diseases, with a focus on developing diagnostic and therapeutic tools to improve disease outbreak preparedness and response. He incorporates approaches in epidemiology, immunology, molecular biology, and virology. He has investigated various dynamics of asymptomatic human infections by mosquito-borne viruses and has developed diagnostic testing related to the SARS-CoV-2 virus and COVID-19 disease, the Zika virus, and Ebola.

Highlights: Since his arrival to Rutgers in October 2022, Herrera has established a laboratory at the university that focuses on understanding adaptive immunity against globally relevant pathogens that cause lethal human diseases and for which there are limited options for treatment or vaccination. His laboratory is studying asymptomatic viral infections, which occur when an individual infected with a virus develops little to no symptoms of disease, to better understand the human antibody and T cell responses in such instances. The knowledge this research generates has the potential to advance the design of diagnostics and vaccines.

Herrera has launched two new research projects. The first is to investigate a T cell-based vaccine against Zika virus. His laboratory will test whether the vaccine can protect against infection in an animal model of Zika virus infection. Another project will develop a rapid antigen test against hepatitis C virus, which is timely given the World Health Organization's goal to eliminate global hepatitis C by 2030.

Herrera recently published an article in *Viruses*, an MDPI open-access journal, demonstrating the development and validation of a rapid screening test for human T-lymphotropic virus type 1 (HTLV-I). The test was evaluated in Salvador, Brazil.

Another article showing robust antibody and cellular immune responses against SARS-CoV-2 in Lagos, Nigeria, was accepted for publication in the August 2023 issue of *Journal of Clinical Virology Plus*. The study found a high percentage of individuals with pre-existing coronavirus immunity, which might help explain why the impact of the COVID-19 pandemic was less severe in Africa than in other parts of the world.

Background: Prior to arriving at Rutgers, Herrera was a visiting scientist at the Harvard T.H. Chan School of Public Health. He cofounded two biotechnology startup companies and was named to the "Forbes 30 under 30" list for health care in 2020. He holds a doctoral degree in biological sciences in public health from Harvard and completed postdoctoral training at Harvard Medical School.

Through international collaborations with research scientists in Brazil, Nigeria, and Senegal, Herrera's academic and industry work has received more than \$9 million in grant funding, including support from the National Institutes of Health and the Bill & Melinda Gates Foundation as well as venture capital financing.



Bobby Brooke Herrera's research on adaptive immunity has the potential to advance the design of diagnostics and vaccines.

GWENYTH LEE

Assistant Professor of Global Health, Rutgers Global Health Institute

Assistant Professor of Epidemiology, Department of Biostatistics and Epidemiology, School of Public Health

Research focus: Gwenyth Lee is a public health researcher with expertise in global disease epidemiology. She has spent years investigating the interrelated roles of various biological, environmental, and social factors on child growth in Latin America. She is particularly interested in exposures that children encounter early in their lives (e.g., undernutrition, poor sanitation, infectious pathogens) and the compounding effects of such exposures on their long-term development. Much of her current research involves longitudinal birth cohort studies in northern coastal Ecuador.

Highlights: Since arriving at Rutgers in September 2022, Lee has published studies on barriers to healthy food choice in the city of Esmeraldas, Ecuador (*Current Developments in Nutrition*); dengue transmission dynamics in both large urban centers and small rural communities (*Emerging Infectious Diseases*); self-reported mosquito bites as a measure of household mosquito abundance in six communities in Ecuador's Esmeraldas Province (*The American Journal of Tropical Medicine and Hygiene*); stool biomarkers as measures of gastrointestinal infections in infants from informal settlements in Addis Ababa, Ethiopia (*PLOS Neglected Tropical Diseases*); and how biological processes influence carbon stable isotope breath test results, which can help further these breath tests as a way of understanding gastrointestinal function in relation to health and disease (*Journal of Pharmacokinetics and Pharmacodynamics*).

She is the principal investigator for a multinational study, funded by the United Nations International Atomic Energy Agency, to determine whether amino acid supplementation impacts protein metabolism in young children at risk of undernutrition. The study involves children between 18 and 24 months of age in Ghana, India, Malawi, Morocco, Peru, Philippines, and Zambia.



Gwenyth Lee studies children's early-life encounters with factors such as undernutrition, poor sanitation, and infectious pathogens, and the compounding effects on their long-term development.

She also is a co-investigator on a project to develop a digital vaccine card to track childhood vaccinations in Kenya. Currently, manual public registration systems and paper vaccination cards are making it difficult for providers to discover and respond to gaps in vaccine coverage. The digital record card will help both caregivers and providers to ensure childhood vaccinations are staying on track. The project is a collaboration with the African Population and Health Research Center and the University of Michigan.

Background: Prior to joining Rutgers, Lee was a research assistant professor at the University of Michigan, where she supported and led community-based child health studies. She has conducted long-term research projects in Ecuador, Kenya, Peru, and the United States. She has a Ph.D. degree and a master of health science degree, both in international health, from the Bloomberg School of Public Health at Johns Hopkins University. She completed a postdoctoral fellowship at Tulane University. She also served in the Peace Corps in Cameroon.

WILFRED NGWA

Professor of Global Health, Rutgers Global Health Institute

Professor, Department of Radiation Oncology, Rutgers Cancer Institute of New Jersey and Robert Wood Johnson Medical School

Research focus:

Wilfred Ngwa is a global oncology researcher and medical physics expert who is developing technologies that integrate with radiation therapy to reduce cancer treatment times and costs. The broad aim of Ngwa's research and global collaboration is to increase access to cancer treatment and reduce health disparities, both in the U.S. and in low- and middle-income countries.



Wilfred Ngwa is developing technologies that can help reduce radiation treatment times and costs, with the aim of increasing access to cancer treatment and reducing health disparities.

Highlights: Among Ngwa's ongoing projects is Comprehensive Cancer Center in the Cloud (C4), a platform that leverages advanced information and communications technologies, including artificial intelligence, to overcome barriers in cancer care, prevention, and research. The C4 platform has numerous applications that provide telehealth and prevention tools for patients, oncology training for providers, and collaboration and mentoring opportunities for researchers.

Ngwa joined Rutgers in January 2023 and is focused on using the C4 platform to establish telehealth kiosks at churches and religious organizations in underserved communities in New Jersey and Africa. The aim is to bring evidence-based, affordable health care interventions and referral pathways to patients, rather than wait for them to come to health care centers, which often occurs only after their cancer has reached advanced stages. This collaboration currently involves Rutgers, Drew Theological Seminary, and more than 30 religious organizations. Ngwa has conducted a pilot of this project at Church of the Good Shepherd in Willingboro, New Jersey. Ngwa also is collaborating on clinical trials supported by the C4 for the use of hypofractionated radiotherapy (HFRT) in prostate cancer in Nigeria, South Africa, Tanzania, and Uganda. The aim is to demonstrate that equivalent results can be achieved using much fewer sessions of radiotherapy, which would free up radiotherapy machines in countries where they are in short supply. The work also will help establish a foundation for further collaborations that involve combining HFRT with immunotherapy delivered with nanoparticle drones that can be injected intravenously.

Ngwa's publications this year include review articles on proton radiotherapy, which is an advanced cancer treatment option that remains inaccessible in many parts of the world (*Lancet Oncology*), and on the potential for smart nanomaterials made with polydopamine to yield improved cancer treatment options (*Nanomaterials*).

GLOBAL HEALTH CATALYST SUMMIT

Another project Ngwa is developing involves the use of biomaterial drones for image-guided drug delivery during radiotherapy. This is a form of radiation treatment that is administered via injection and targets only the parts of the body where cancer is found. The U.S. Food and Drug Administration has approved a Phase 1 clinical trial using this technology in pancreatic cancer.

Since 2019, Ngwa has been the chair of the *Lancet Oncology* commission on cancer in sub-Saharan Africa. He also is an external adviser to the U.S. presidential administration's Cancer Cabinet, convened by President Joe Biden to help establish and make progress on the administration's reignited Cancer Moonshot initiative, and he is a co-chair of the U.S. Cancer Moonshot 2.0 *Lancet Oncology* commission. He is editor of IOP Publishing's scientific series in global health and radiation oncology and an editorial board member for *Journal of Global Oncology*, *Frontiers in Oncology*, and *ecancermedalscience*.

Background: Ngwa is originally from Cameroon, where he studied physics and computer science at the University of Buea, receiving a bachelor of science degree. He earned his master's and doctoral degrees from University of Leipzig in Germany and then completed postdoctoral education and training in radiation oncology at MD Anderson Cancer Center at the University of Texas and at Brigham and Women's Hospital, Dana-Farber Cancer Institute, and Harvard Medical School.

Learn more about our ongoing
faculty recruitment:
globalhealth.rutgers.edu/hiring



Rutgers Global Health Institute principal faculty member Wilfred Ngwa is the founding director of the Global Health Catalyst Summit, an annual event designed to catalyze high-impact international collaborations and initiatives to eliminate health-related disparities in the U.S. and globally. The summit launched in 2015 and continues to receive support from the National Institutes of Health.

This year's summit was held in May 2023 at the University of Pennsylvania. The program highlighted a recent summit outcome: the announcement by the White House to extend the Cancer Moonshot to Africa, with \$200 million in commitments from U.S. departments and agencies and another \$130 million from the private sector. This announcement also highlighted the work of the Botswana-Rutgers Partnership for Health, which Rutgers Global Health Institute director Richard Marlink presented at the summit.

Outcomes from past Global Health Catalyst Summits include the Comprehensive Cancer Center in the Cloud (C4) and the launch of new oncology workforce training programs via the C4's training platform, Global Oncology University. This training platform provides access to online education for trainees in low- and middle-income countries, complemented by practical training at local and regional hospitals. One such program is training radiation oncology medical physicists in Nigeria.

Learn more about the Global Health Catalyst Summit:
globalhealthcatalystsummit.org

MEMBERS

New Additions

Members of Rutgers Global Health Institute are invited by the institute director for a renewable three-year term. Institute membership is a distinction that recognizes people who contribute actively to our mission.

The institute's more than 150 members include seven new core faculty members added this year:

Christina Bergey, School of Arts and Sciences

Ubydul Haque, Rutgers Global Health Institute and School of Public Health

Bobby Brooke Herrera, Rutgers Global Health Institute, Robert Wood Johnson Medical School, and Child Health Institute of New Jersey

Hari Iyer, Rutgers Cancer Institute of New Jersey and Robert Wood Johnson Medical School

Gwenyth Lee, Rutgers Global Health Institute and School of Public Health

Wilfred Ngwa, Rutgers Global Health Institute, Rutgers Cancer Institute of New Jersey, and Robert Wood Johnson Medical School

Yana van der Meulen Rodgers, School of Management and Labor Relations

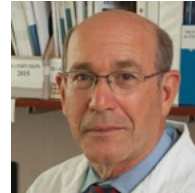
IMPACT COUNCIL

The Rutgers Global Health Institute Impact Council is made up of leaders in global health and health care industries. The council provides key input into the institute's priorities and advancement strategy. The members are:

Joseph Camardo
Brenda Colatrella
John Damonti
Patricia Doykos
Randy Freiberg
Nimesh Jhaveri
Michele Korfin

John McFadden
Betsy McNeilly
James Sapirstein
David Scheer
Jeff Sturchio
Amy Towers

Highlighted Accomplishments



JEFFREY CARSON, the New Brunswick provost for Rutgers Biomedical and Health Sciences, a distinguished professor of medicine, and the Richard C. Reynolds, M.D. Chair in General Internal Medicine at Robert Wood Johnson Medical School,

received the Association for the Advancement of Blood and Biotherapies Landsteiner-Alter Award and Lectureship for 2022. This award recognizes a scientist whose original research has resulted in an important contribution to the body of scientific knowledge and who has an international reputation in transfusion medicine or biotherapies.



CRISTINE DELNEVO and **LESLIE KANTOR**, both professors in the School of Public Health, received 2022–2023 Universitywide Faculty Year-End Excellence Awards. Each year, these awards honor members of the Rutgers community selected by their colleagues for outstanding contributions to teaching, research, and public service. Delnevo, who is the founding director of the Rutgers Center for Tobacco Studies, received the Board of Trustees Award for

Excellence in Research. Kantor, chair of the Department of Urban-Global Public Health, was selected for the Rutgers College Class of 1962 Presidential Public Service Award.



SHRIDAR GANESAN, associate director for translational science and molecular oncology section chief, and **CORAL OMENE**, assistant professor

of medicine, represented Rutgers Cancer Institute of New Jersey in leading a Big Ten Cancer Research Consortium (CRC) Grand Rounds presentation. Their talk was titled "DNA Repair Defects and Genomic Landscape in Breast Cancer." The Big Ten CRC Grand Rounds are monthly educational events hosted live by

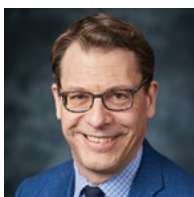
member institutions for faculty investigators, scientists, fellows, residents, medical students, and clinical research staff.





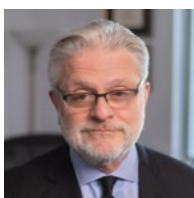
MARIA LAURA GENNARO, a professor of medicine at New Jersey Medical School and a professor of epidemiology at the School of Public Health, has been named a National Academy of Inventors Fellow, which is

the highest professional distinction accorded solely to academic inventors. Gennaro's laboratory has spent many years advancing discoveries related to infectious diseases, especially tuberculosis, contributing to diagnosis and treatment improvements. More recently, she has studied the antibody response to COVID-19.



TOBIAS GERHARD, director of the Institute for Health, Health Care Policy, and Aging Research and founding director of its Center for Pharmacoepidemiology and Treatment Science, was named president of the International

Society for Pharmacoepidemiology (ISPE) in August 2022. ISPE is dedicated to advancing the health of the public by providing a global forum for the open exchange of scientific information and for the development of policy, education, and advocacy for the field of pharmacoepidemiology.



FRANK GHINASSI, president and chief executive officer of University Behavioral Health Care and senior vice president of the Behavioral Health and Addictions Service Line for RWJBarnabas Health, and **MARIAM MERCED**, director of community health promotions for Robert Wood Johnson University Hospital in New Brunswick, were honored as NJBIZ Health Care Heroes during a ceremony in August 2022. The

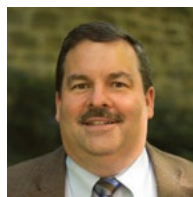


Health Care Heroes program was created to recognize excellence, promote innovation, and honor the efforts of individuals and organizations making a significant impact on the quality of health care in New Jersey. Awardees are nominated by the public and chosen by a panel of independent judges.



ASHLEY GROSSO, an assistant professor in the Department of Urban-Global Public Health at the School of Public Health, was awarded a \$3 million R01 grant from the National Institutes of Health for her study, "Ethics of HIV-related research involving underage key

populations in sub-Saharan Africa." The study aims to increase understanding of ethical challenges and solutions in HIV research with youth who sell sex and adolescent men who have sex with men, helping to reduce barriers to implementing research with the potential to improve health in these populations.



WILLIAM HALLMAN and **ROBERT KOPP** were named fellows of the American Association for the Advancement of Science, the world's largest multidisciplinary scientific society and a leading publisher of cutting-edge research through its *Science* family of journals. It is among the most distinguished honors within the scientific community. Hallman was honored for his contributions to the field of risk analysis, risk assessment, and risk communication, and for educating the public on important scientific issues. Kopp was honored

for distinguished contributions to the field of climate science, particularly using statistical process modeling to estimate sea level change.



UMER HASSAN, an assistant professor in the Department of Electrical and Computer Engineering at the School of Engineering and an assistant professor of global health at Rutgers Global Health Institute, received an Early Career Investigator Award as part

of the Keystone Symposia conference COVID and Beyond: Novel Approaches to Global Infectious Diseases. The award recognized both significant scientific contributions and "dedication to mentorship and leadership of underrepresented scientists." At the conference, held in October 2022 in Bruxelles, Belgium, Hassan presented his research on developing biosensors to quantify immunological biomarkers to be used at the point of care in global health settings.



EMILIA IWU, clinical associate professor in the Division of Nursing Science at the School of Nursing, was appointed as the assistant dean for the school's Center for Global Health.

Iwu is currently funded on a research award from the Institute of Human Virology-Nigeria and a grant from the Foreign Commonwealth Development Office of the United Kingdom, for which she serves as the principal investigator in Nigeria. She is conducting a longitudinal assessment of midwifery education and services, comparing outcomes associated with newly implemented and enhanced midwifery education with outcomes of basic midwifery education in conflict-affected areas of northern Nigeria.



KEVIN LYONS was funded by the State of New Jersey to create the Rutgers Center for Local Supply Chain Resiliency. The center has a statewide mission to connect the product and service needs of large,

New Jersey-based corporations with local suppliers. Lyons's work for the new center is related to his supply chain research, which integrates social, economic, and environmental/climate impacts. His research prioritizes and balances how organizations can develop and measure high performance supply chain systems, which have social and economic responsibility criteria as well as climate neutral aspects.



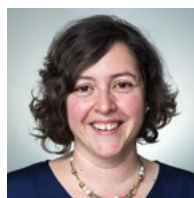
CORAL OMENE, an assistant professor and medical oncologist at Rutgers Cancer Institute of New Jersey, was awarded a \$50,000 grant from the V Foundation for Cancer Research in partnership

with ESPN to increase clinical trial awareness and enrollment of Black women with breast cancer. Efforts include tailored patient education, advocacy, and outreach; patient navigation; and physician engagement and outreach. The project also will serve as a guide for increasing clinical trial participation among Black patients who have other cancers that disproportionately affect this population, including colorectal, lung, and prostate cancers.



PADMINI SALGAME, a professor in the Department of Medicine – Division of Infectious Diseases at New Jersey Medical School, is part of a Rutgers-led consortium conducting crucial research on tuberculosis control and prevention. New Jersey Medical School will receive

\$20 million over five years from the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health, to coordinate research among seven universities and eight nations.



NOA'A SHIMONI, an associate professor in the Department of Family Medicine at New Jersey Medical School, was appointed the university's associate vice president for student health and wellness and associate vice chancellor for student affairs – student

health and wellness at Rutgers University–New Brunswick. In these roles, Shimoni works collaboratively with student health leaders and representatives from across campuses to identify and advance shared health and wellness strategic priorities. This includes leading population and preventive health initiatives as well as directing and coordinating immunization management for the university, with the goal of improving the health and well-being of Rutgers students.

[Learn about all our members:](https://globalhealth.rutgers.edu/members)
globalhealth.rutgers.edu/members

COLLABORATORS NETWORK

Throughout the university, many global health activities emanate from the global health offices and global health-related centers that comprise the Rutgers Global Health Institute Collaborators Network.

MEMBERS OF THE COLLABORATORS NETWORK

Graduate School of Applied and Professional Psychology Global Health Committee

CHAIR: Angelica Diaz-Martinez, associate teaching professor and director of clinical training, Clinical Department

RECENT HIGHLIGHT: The school's new Center for Youth Social Emotional Wellness, led by Joshua Langberg, director, held its Mental Health Equity Summit on April 27 at Rutgers. The goals of the summit, which was aligned with the center's mission to promote youth mental health equity, were to foster collaboration between community agencies and Rutgers faculty and clinicians; connect community agencies with New Jersey-based foundations; develop partnerships and solutions that address mental health needs in the community; and share information about effective strategies and models of integrated care.

New Jersey Medical School Office of Global Health

DIRECTOR: Ziad Sifri, professor and director of the Center for Global Surgery, Department of Surgery

ASSOCIATE DIRECTOR: Harsh Sule, associate professor, vice chair for academic affairs, and director of the emergency medicine residency program, Department of Emergency Medicine

RECENT HIGHLIGHT: Beginning in March, the office collaborated with its longstanding partners in the Department of Internal Medicine and Therapeutics at University of Cape Coast's School of Medical Sciences in Ghana to organize weekly knowledge exchange sessions. Held virtually via Zoom, the sessions featured clinical cases presented by Cape Coast medical residents and attending physicians, with physician specialists from New Jersey Medical School and University Hospital in Newark participating in the educational discussions. Topics covered this year included renal, trauma, infectious disease, ultrasound, and emergency medicine.

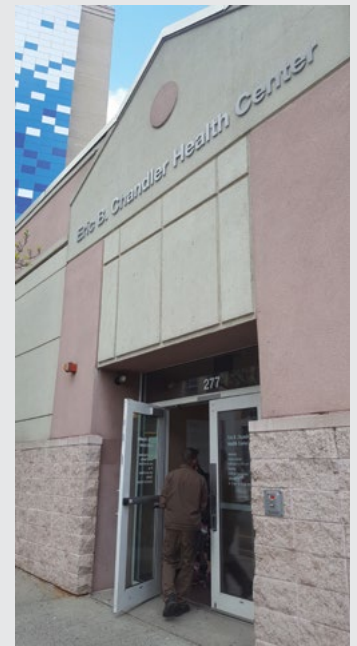
Robert Wood Johnson Medical School Office of Global Health

ASSOCIATE DEAN FOR GLOBAL

HEALTH: Karen WeiRu Lin, professor and director of the Center for Healthy Families and Cultural Diversity, Department of Family Medicine and Community Health

PROGRAM MANAGER: Angela Gitau

RECENT HIGHLIGHT: The Office of Global Health, as part of its ongoing commitment to "glocal" health (a term they use to describe their global health-related efforts in local settings), collaborated with the medical school's Office of Community Health, which is leading the development of the HIPHOP Asylum Clinic. An initiative of the medical school's Homeless and Indigent Population Health Outreach Project (HIPHOP), the asylum clinic aims to make an impact in the lives of people seeking refuge and justice. It was initiated at Rutgers by a student in the medical school's Distinction in Global Health Program in 2022 and is now held at Eric B. Chandler Health Center in New Brunswick, providing pro bono forensic medical and psychological evaluations to clients seeking asylum in the United States. These clients are individuals who are fleeing persecution due to their race, gender, religion, sexual orientation, and/or political affiliation. Through the asylum clinic, teams of medical students and volunteer clinicians from the medical school prepare affidavits supporting the clients' applications for asylum status, a process that is known to significantly increase their chances of being granted asylum. The clinic plans to expand operations over the next year by enhancing legal partnerships and increasing student and faculty involvement.



The HIPHOP Asylum Clinic is held at the Eric B. Chandler Health Center in New Brunswick.

COLLABORATORS NETWORK HIGHLIGHTS

Rutgers Global

VICE PRESIDENT FOR GLOBAL AFFAIRS: Eric Garfunkel, distinguished professor of chemistry and physics

ASSISTANT VICE PRESIDENT FOR GLOBAL AFFAIRS: Ji-Yeung Jang

ASSISTANT DEAN FOR GLOBAL PROGRAMS: Johanna Bernstein

DIRECTOR OF MARKETING AND COMMUNICATIONS: Kathryn Rosko

RECENT HIGHLIGHT: Rutgers Global collaborated with the Center for African Studies at Rutgers' School of Arts and Sciences to create the Access Africa initiative. Officially launched in February, following a donation to Rutgers by the Mad Rose Foundation, Access Africa provides significant financial support to Rutgers undergraduate students who participate in a study abroad program in Africa. Global health-related experiences in Africa offered through Rutgers Global-Study Abroad include global health practica in Ghana and Tanzania; a primatology, wildlife ecology, and conservation program in Kenya; and a public health, environment, and development program in Senegal.



One of the Access Africa programs is Public Health, Environment, and Development in Senegal. Participants gain experience in biomass removal from the Senegal River, shown above.



School of Communication and Information faculty members Maria Venetis (left) and Shawnika Hull, both associate professors of communication, were co-chairs of the school's Symposium on Diversity, Equity, and Inclusion in Patient Engagement and Health Communication.

School of Communication and Information Health and Wellness Cluster

CHAIR: Itzhak Yanovitzky, professor, Department of Communication

AFFILIATE: Charles Senteio, associate professor, Department of Library and Information Science

RECENT HIGHLIGHT: In October, the school organized the Diversity, Equity, and Inclusion in Patient Engagement and Health Care Communication Symposium, which took place in New Brunswick. The symposium featured two keynote speakers, who presented on addressing inequities in cancer clinical trial participation and the role of health care providers' bias in racial health care disparities. Panel discussions, a poster session, and a networking luncheon also took place.

School of Environmental and Biological Sciences Office of Global Engagement

DIRECTOR: Megan Francis

AFFILIATE: Mark Robson, Distinguished Professor of Plant Biology

PROGRAM COORDINATOR: Oi Yin Lo

RECENT HIGHLIGHT: The office supported the development of several faculty-led efforts related to health. Agroecological sustainability in rural Cuba, soil contamination in Vietnam, hurricane forecasting in the Gulf of Mexico, climate impacts on food security in the Pacific islands, and Ayurvedic medicine in India are among the focus areas.

School of Health Professions Global Affairs

ASSOCIATE DEAN FOR GLOBAL AFFAIRS: Riva Touger-Decker, professor, Department of Clinical and Preventive Nutrition Sciences, School of Health Professions, and Department of Diagnostic Sciences, Rutgers School of Dental Medicine

RECENT HIGHLIGHT: The school continued its service to the University of Dodoma in Tanzania by providing lectures and related training to students and faculty in the university's clinical nutrition and dietetics program, which Rutgers faculty helped to establish beginning in 2017. Rutgers faculty gave three lectures—titled “Understanding the Nutrition Care Process and Model,” “Sports Nutrition,” and “Diet and Heart Disease”—and arranged for the University of Dodoma program participants to have access to EHR Go, a technology that offers clinical case simulations and an electronic health record learning platform.

School of Nursing Center for Global Health

ASSISTANT DEAN FOR GLOBAL HEALTH: Emilia Iwu, clinical associate professor, Division of Nursing Science

SENIOR DEPARTMENT ADMINISTRATOR: Shammah Coleman

RECENT HIGHLIGHT: A visiting scholar from Taipei Veterans General Hospital in Taiwan was in residence at the nursing school from November to February. Yu-Shan Kung, an advanced surgical registered/obstetric nurse, came to Rutgers to learn about aspects of nursing in relation to obstetrics and surgery. In Taiwan, Kung is involved with nursing workforce capacity building that includes developing registered nurse first assistant positions. While at Rutgers, she engaged with clinical, administrative, and academic colleagues at Robert Wood Johnson University Hospital in New Brunswick and at Newark Beth Israel Medical Center to gain deeper insights.



Social work student volunteers stand outside the United Nations on the 39th Annual Social Work Day.

School of Public Health Office for Global Programs

ASSOCIATE DEAN FOR EDUCATIONAL PROGRAM DEVELOPMENT AND GLOBAL PROGRAMS: Marian Passannante, professor, Department of Biostatistics and Epidemiology

PROGRAM COORDINATOR: Christine Oller

Department of Urban-Global Public Health

CHAIR: Leslie M. Kantor, professor of urban-global public health

GLOBAL PUBLIC HEALTH CONCENTRATION DIRECTOR: Vince Silenzio, professor of urban-global public health

RECENT HIGHLIGHT: The first cohort of the school's new online master's program in global public health began their studies in September. The 45-credit master of public health degree program educates students on how to approach determinants of global public health in a range of contexts based on five major public health perspectives: systems and policies, epidemiology, biostatistics, environmental and occupational health, and health education and behavioral science. The program offers full- and part-time enrollment options and includes a practicum experience and interprofessional education.

School of Social Work Office of Global Social Work Programs

DIRECTOR: Rebecca Davis, associate professor of professional practice

RECENT HIGHLIGHT: In April, the school cosponsored the 39th Annual Social Work Day at the United Nations, which brought together more than 500 social work students, practitioners, and educators to explore approaches for promoting inclusive and enabling environments for children and adults living with disabilities. The program addressed topics such as disability issues in human rights and developmental contexts as well as visible and invisible barriers that limit access to education, employment, health care, housing, and other social services.

Connect with members of the Rutgers
Global Health Institute Collaborators Network:
globalhealth.rutgers.edu/collaborators-network

BOTSWANA-RUTGERS PARTNERSHIP

Marking five years of formal collaboration between Rutgers Global Health Institute and the Government of Botswana to improve health systems in the country, efforts this year included several firsts as well as enhancements and renewed commitments to continuing priorities.

Cancer care and prevention remain an acute focus in Botswana, where the cancer mortality rate is over 63 percent. This year, the Botswana-Rutgers Partnership for Health launched or furthered multiple oncology workforce training programs, continued the collaborative global oncology fellowship, and published research on access to oncology drug treatments.

In addition, following high-level meetings that took place in New York and in Botswana, the partnership between Botswana and Rutgers is poised to grow in other areas, including engineering and business.

Cancer Kitso Provider Training Launched

A key component of the Botswana-Rutgers partnership's efforts related to cancer care and prevention in sub-Saharan Africa is a new program called Cancer Kitso. An initiative to build knowledge and capacity, Cancer Kitso focuses on proven interventions that can be implemented quickly. It has three broad components: provider training, cancer awareness, and knowledge exchange.

The provider training was launched in September 2022 in Botswana with support from Bristol Myers Squibb. A hybrid training course for health care providers took place in person—at public hospitals in Francistown, Gaborone, Maun, and Serowe—and virtually via Zoom. Medical officers (physicians), nurses, pharmacists, and social workers comprised the 106 attendees who participated in the training course, which was titled Clinical Management – Level 1 and included five sessions:

- Cancer Basics and Navigation, from Symptoms to Treatment Planning
- Cancer Treatment Modalities, Drug Therapies, and Adverse Events (Part I and Part II)
- Chemotherapy in Cancer Treatment and Care
- Palliative Care for Cancer Patients
- Putting It All Together: A Patient's Journey in Oncology Care and Strengthening Health Systems

Leading up to the course, Botswana-Rutgers Partnership for Health formed several working groups that collaborated to design the training curriculum. These groups comprised clinical subject matter experts who are faculty and staff in Botswana's Ministry of Health, Princess Marina Hospital, and University of Botswana and at Rutgers' Ernest Mario School of Pharmacy, Robert Wood Johnson Medical School, Rutgers Cancer Institute of New Jersey, Rutgers Global Health Institute, and School of Nursing. Their work also was facilitated by curriculum development specialists from the University of Botswana.



Several attendees of the first Cancer Kitso training session in Gaborone, Botswana, pose for a commemorative photo.

KITSO means “knowledge” in Setswana, the local language in the sub-Saharan African country of Botswana

WHITE HOUSE ANNOUNCEMENT HIGHLIGHTS BOTSWANA-RUTGERS PARTNERSHIP FOR HEALTH

Efforts to expand Cancer Kitso provider training throughout sub-Saharan Africa also took place this year. Botswana-Rutgers Partnership for Health leaders, including Tendani Gaolathe, Refeletswe Lebelonyane, and Richard Marlink, traveled to Tanzania in January and Lesotho in May to introduce Cancer Kitso for collaborative adaptation in their local settings. In Tanzania, Rutgers School of Nursing colleagues Emilia Iwu and Suzanne Willard joined the partnership team for meetings with longstanding collaborators at the University of Dodoma. They discussed the University of Dodoma's plans to conduct a national cancer care and prevention needs assessment in Tanzania, the results of which could inform the development of a training program similar to Cancer Kitso in the country. In Lesotho, the government's Ministry of Health and the Botswana-Rutgers partnership team organized "train the trainer" sessions to take place in Botswana later in 2023, involving an interprofessional cohort of health care practitioners from Lesotho.

Learn more about Cancer Kitso:
globalhealth.rutgers.edu/cancerkitso



RUTGERS GLOBAL HEALTH INSTITUTE ISSUED DIGITAL BADGES to individuals who fulfilled certain requirements for the Clinical Management – Level 1 training course. Digital badges are used in education and professional development settings to recognize learning and accomplishments.



The Cancer Moonshot is a White House initiative to mobilize resources and speed progress in fighting cancer. It calls for everyone to do their part, including federal agencies and departments, private companies, health care providers, patient groups, philanthropies, educational and research institutions, and others.

For decades, the U.S. has partnered with African nations to meet shared health challenges. The U.S.-Africa Leaders Summit that took place in December 2022 in Washington, D.C., marked an opportunity to announce new actions and renewed commitments from the U.S. and the private sector to combat cancer across Africa.

Among the initiatives highlighted by Cancer Moonshot were two from the Botswana-Rutgers Partnership for Health:

- > The launch of Cancer Kitso, an education and training initiative that responds to Botswana's specialty workforce needs in oncology.
- > The pilot of a rapid "screen and treat" intervention for breast cancer, which is seeking funding to evaluate evidence-based interventions for breast cancer screening in an asymptomatic female population across 10 primary clinics in the country's Serowe region, an effort that also will introduce provider training for nurses to administer clinical breast examinations and educate patients about breast self-care.

Biopsy Training Impacts Diagnostic Capabilities

To support oncology workforce capacity building in Botswana, the Botswana-Rutgers Partnership for Health implemented an in-person, hands-on training workshop for non-surgeon doctors to learn and practice specific biopsy techniques. The workshop objective is to train more medical officers in the country's public health system to perform fine needle aspiration and core needle biopsy procedures as part of a larger aim to improve timely access to care for women in Botswana who have advanced breast cancer.

Such biopsies are a critical component of breast cancer diagnostic procedures; however, they are not performed as readily as would be beneficial because many medical officers are not properly skilled to do them. Because of this gap, patients often must travel to different health care facilities to receive the necessary services leading up to a proper diagnosis—all of which delays patients' treatment, can contribute to worsening medical conditions, and may impact their finances, time, and psychosocial well-being.

The workshop is being offered on an ongoing basis. This year, workshop sessions resulted in 26 medical officers from seven hospitals in the greater Gaborone region being trained. Oncologist Peter Vuylsteke and surgery resident Karabo Ngwako, both of whom are associated with the University of Botswana and the Botswana-Rutgers Partnership for Health, led the workshops, which began with theoretical information followed by demonstrations of biopsy procedures using three different needle types (fine, manual core, semi-automatic core). They demonstrated biopsy procedures on apples and gelatin molds containing olives (to mimic cancerous masses), and the medical officers then practiced on their own with supervision. In some instances, the training demonstrations were performed on a patient who was at the facility for an appointment at the time.



A series of biopsy training workshops are being offered to help non-surgeon doctors learn and practice specific biopsy techniques.

Patient Navigation Training Program Implemented

In September, members of the Botswana-Rutgers Partnership for Health team presented to the Botswana Ministry of Health details of the patient navigation training program that the partnership developed and implemented with funding support from the Union for International Cancer Control. This year, following successful delivery of the training program to 19 individuals (15 nurses and four non-clinical personnel), the team refined and operationalized the monitoring and evaluation components of the program.

They conducted regular site visits to the seven health care facilities where the trained navigators, referred to as nurse navigators and community navigators, work or volunteer: Athlone District Hospital in Lobatse, Bamalete Lutheran Hospital in Ramotswa, Deborah Retief Memorial Hospital in Mochudi, Good Hope Primary Hospital in Good Hope, Kanye Adventist Hospital in Kanye, Princess Marina Hospital in Gaborone, and Scottish Livingstone Hospital in Molepolole. At each location, the partnership team facilitated communication sessions involving hospital superintendents, nursing matrons, and the navigators, who discussed dynamics associated with the patient navigation program as well as plans and opportunities for future directions.

For several months this year, the trained navigators also tracked their related activities and services provided, data the partnership team collected in



Scottish Livingstone Hospital in Molepolole is one of the seven health care facilities that collaborated with the Botswana-Rutgers Partnership for Health to train nurse navigators and community navigators.

December and began to analyze in support of future program development. Early findings indicated that the navigator program likely contributed positively toward more patients making and keeping appointments for oncology evaluations and toward more time-efficient clinical results, outcomes that can lead to more timely diagnoses and more efficient development and coordination of treatment plans for more people. The data also indicated that the patient navigation

program added value during situations when necessary resources were not readily available—for example, core needles for biopsies, chemotherapy drugs, or radiation machines—because the navigators helped patients reschedule appointments.

The partnership team also is engaged with the Ministry of Health, recommending the training program be scaled-up throughout the public health care system in Botswana.

COMPONENTS OF THE PATIENT NAVIGATION TRAINING PROGRAM

TRAINING MODULES:

- 1 Managing the Onset of Cancer
- 2 Breast Cancer Care Coordination
- 3 Barriers that Hamper Health Care and the Effective Management of Breast Cancer
- 4 Ethics and Professional Conduct

INSTRUCTORS:

Ariane Migeotte, medical oncologist at Centres Hospitaliers Jolimont

Tlotlo Ralefala, clinical oncologist and head of the Department of Oncology at Princess Marina Hospital

Norman C. Swart, advance practice registered nurse and lecturer at the University of Botswana

Peter Vuylsteke, oncologist and senior lecturer at the University of Botswana



Global oncology fellow Faheem Farooq, left, worked with Botswana-Rutgers Partnership for Health team members (second from left to right) Morongwa Legwaila, Refeletswe Lebelonyane, and Vusi Ndaba.

Global Oncology Fellowship Continues

The global oncology fellowship program provides Rutgers hematology/oncology fellows with a global experience and plays a key role in the partnership's overall efforts to improve cancer care and prevention in Botswana. Rutgers Global Health Institute co-developed the global oncology fellowship program in 2018 through collaborations with Rutgers Cancer Institute of New Jersey, Robert Wood Johnson Medical School, the University of Botswana, and Princess Marina Hospital in Gaborone, Botswana.

This year's global oncology fellow was Faheem Farooq, a hematology/oncology fellow at Robert Wood Johnson Medical School. Farooq participated in multiple cancer care and prevention initiatives with the Botswana-Rutgers Partnership for Health. While in Botswana during September 2022, he was on rotation in the oncology department at Princess Marina Hospital, the nation's largest referral hospital. He also was an instructor for the Cancer Kitso training session titled "Cancer Basics and Navigation, from Symptoms to Treatment Planning," which took place in Serowe. Farooq also had contributed to the planning and review of the Cancer Kitso curriculum and related educational materials. During his global oncology fellowship, Farooq co-authored a paper titled "Advancing oncology drug therapies for sub-Saharan Africa," which was published in *PLOS Global Public Health* in June. (See the following section for more information.)

Study Calls for Improved Access to Oncology Drug Treatments

Cancer is among the top three causes of premature death in the vast majority of nations in sub-Saharan Africa. Without significant interventions, predictions indicate the number of cancer deaths per year in this region would nearly double by 2030, to about 1 million.

In a study published in June 2023 in *PLOS Global Public Health*, researchers associated with the Botswana-Rutgers Partnership for Health address the need to improve access to oncology drugs in sub-Saharan Africa, where significant disparities exist and inhibit access to therapies that can improve the length and quality of life for cancer patients. In the paper, titled "Advancing oncology drug therapies for sub-Saharan Africa," the study's authors present a review of selected oncology drug therapies for common malignancies in the region, including breast cancer, cervical cancer, Kaposi sarcoma, lung cancer, and prostate cancer. The review also identifies gaps in access to oncology clinical trials in the region and calls attention to cancer therapeutics that should be considered for the World Health Organization Model Lists of Essential Medicines.

All of the study's authors are involved with the partnership: Kirthana Sharma, senior research manager at Rutgers Global Health Institute; Tina Mayer, medical oncologist at Rutgers Cancer Institute of New Jersey and associate director of the hematology/oncology fellowship program at Robert Wood Johnson Medical School; Sharon Li, Sadaf Qureshi, and Faheem Farooq, medical oncologists who participated in the global oncology fellowship that is offered jointly by the medical school and the partnership; Peter Vuylsteke, oncologist and senior lecturer at the University of Botswana School of Medicine; Tlotlo Ralefala, head of the Department of Oncology at Princess Marina Hospital in Gaborone, Botswana; and Richard Marlink, director of Rutgers Global Health Institute.

[Read about this study and other global health research:](https://globalhealth.rutgers.edu/news)
globalhealth.rutgers.edu/news

Revitalizing a Broad Partnership

The Botswana-Rutgers Partnership for Health was launched in 2018 with a focus on improving cancer care and prevention and expanding health care capacity nationally in Botswana. In 2019, the Botswana-Rutgers partnership expanded to other areas, including information technology, higher education and research, entrepreneurship and innovation, and leadership. The collaboration was created to help Botswana transform from a predominantly natural resource-based economy into a knowledge-based one.

When the COVID-19 pandemic necessitated a pause in some of these plans, the partnership continued its efforts in improving cancer care and prevention in Botswana and supported the country's COVID-19 pandemic response, addressing key health information technology gaps in the process.

Over the past academic year, key meetings in New York and in Botswana have reinvigorated expanded collaborations between the nation of Botswana and Rutgers.

Presidential Meeting in New York

President Mokgweetsi Eric Keabetswe Masisi of Botswana and Rutgers University President Jonathan Holloway met in New York on September 22, 2022. The aim of the meeting, which included Botswana's top government officials and many Rutgers leaders, was to discuss the partnership between Botswana and Rutgers while President Masisi was in the city for the 77th session of the United Nations General Assembly.

This was the first in-person meeting between the two presidents, with President Holloway having assumed his position at Rutgers in July 2020, near the beginning of the COVID-19 pandemic. The meeting between

Masisi and Holloway reaffirmed a joint commitment to collaboration and outlined current challenges and opportunities for the partnership and its joint work.

Botswana has served as a model for other African nations in the past—particularly with its response to HIV/AIDS in the early 2000s—and is poised to do so again in other areas. To that point, Masisi said in the meeting that the collaboration is about not only developing Botswana but also helping other countries in the region. Holloway also emphasized Rutgers' commitments to building knowledge and to the common good, calling the partnership "quite a beautiful arrangement."

Rutgers Delegation in Botswana

A delegation from Rutgers visited Botswana in April 2023 to help strengthen relationships and explore specific opportunities to broaden the partnership. Rutgers' delegation included Eric Garfunkel, vice president for global affairs; Ji-Yeung Jan, assistant vice president for global affairs; Can (John) Usley, vice dean for innovation and strategic partnerships at Rutgers Business School–Newark and New Brunswick; Dietrich Tschanz, assistant dean at Rutgers Business School–Newark and New Brunswick; and Richard Marlink, director of Rutgers Global Health Institute. Alberto Cuitiño, dean of the School of Engineering, participated in meetings virtually. The delegation visited the University of Botswana, the Botswana Institute for Technology Research and Innovation, the Botswana International University of Science and Technology, and the Government of Botswana's Ministry of Health and Ministry of Tertiary Education.



President Mokgweetsi Eric Keabetswe Masisi of Botswana and Rutgers University President Jonathan Holloway met for the first time in New York during the 77th session of the United Nations General Assembly.

RESILIENT NEW JERSEY

Rooted in Recovery

Rutgers Global Health Institute has been supporting New Jersey's small businesses since 2020, when the COVID-19 pandemic led a third of them to shut their doors and threatened the survival of many others. Initially, the institute's Equitable Recovery for New Jersey's Small Businesses program focused on low-income and minority communities in the state, coaching them through safe operations and keeping them informed, in multiple languages, of the latest health and safety guidelines and mandates. Over time, the program evolved to help small businesses and their surrounding communities face emerging struggles and grew to serve marginalized communities in Newark, New Brunswick, Perth Amboy, and Trenton.

Three years in, the challenges continue. Long after COVID-19 shutdowns and restrictions ended, there have been supply chain disruptions, cost increases, labor shortages, and ever-evolving economic struggles. Recognizing a need to shift the focus from "recovery" to long-term "resilience," the program was retooled and renamed Resilient New Jersey.

Education and Access to Opportunities

Resilient New Jersey is based on the idea that successful small businesses contribute to healthier communities. Thriving small businesses help create strong local economies and vibrant neighborhoods, addressing many social determinants of health.

The program includes educational events for small business owners that are organized with community partners. These events provide small business owners with access to information that can help them succeed and grow stronger. Together, we have hosted seven events this year.



Among the collaborators involved with Rutgers Global Health Institute's efforts in Trenton are (left to right) Manuel Hernandez, Alejandro Cruz, Kevin Lyons, and Dimas Reyes.

In Newark, the small business events were organized in collaboration with Chase and offered networking opportunities for women-owned businesses, micro lending and business consultations, and a discussion on goals and business planning.

In Trenton, the small business events were organized in collaboration with the Latino Merchants Association of New Jersey. The association hosted the events in its familiar Trenton office, and other community partners delivered the content. Union County Economic Development Corporation, a nonprofit that provides services to help small businesses in many parts of the state, contributed training in social media and website performance analytics. Chase offered a session on financial goal setting. Sessions often were provided in Spanish, based on the needs of attendees.

Kevin Lyons, associate professor of professional practice at Rutgers Business School–Newark and New Brunswick and a core faculty member of Rutgers Global Health Institute, spoke at a February 2023 training session. Lyons runs Rutgers' new Center for Local Supply Chain Resiliency, which works to connect the product and service needs of large, New Jersey-based corporations with local suppliers. At the training session in Trenton, Lyons presented on his anchor program that can help the city's small businesses win big business contracts.

GROWING COLLABORATION

The Center for Local Supply Chain Resiliency has a statewide mission, starting with Rutgers' host cities of Newark, New Brunswick, and Camden, as well as Lyons's own well-established efforts in Jersey City. As a core faculty member who helped Rutgers Global Health Institute form crucial connections in Newark, Lyons is now looking to expand his efforts into Trenton.

Supporting Community Health

In addition to supporting small businesses, Resilient New Jersey includes events that promote the health of the broader community. This year, the program either hosted or participated in 63 community-wide events, including health fairs, workshops on specific topics or for specific populations (e.g., senior citizens or children), and COVID-19 testing and vaccination clinics.

In Newark, a series of health fairs covered overall wellness, blood pressure, breast cancer, diabetes, food and nutrition, mental health, and substance abuse.

In New Brunswick, there were 35 COVID-19 testing clinics, half of which also provided COVID-19 vaccination. These clinics were held at New Brunswick Performing Arts Center, which is within walking distance for many city residents and employees.

In Perth Amboy, community events were tailored to support specific age groups and community needs, providing access and knowledge regarding immunization, employment opportunities, and overall health and wellness.



Resilient New Jersey program team members and partners provided health information and resources at multiple community-wide events. Pictured above, at the Hispanic Heritage Celebration in Perth Amboy, are community partners Gaby Rodriguez and Eliz Rivera Torres, both from the New Jersey Department of Health, with Rutgers Global Health Institute community engagement coordinator Solanggy Guillen.

In Trenton, community health events were planned in collaboration with local partners. The events offered diabetes education, COVID-19 and influenza vaccinations, food, supplies, and other support for families.

Learn more about Resilient New Jersey:
globalhealth.rutgers.edu/resilientNJ

Modeling Community-Focused Strategies

Resilient New Jersey team members shared their community engagement strategies at multiple conferences this year.

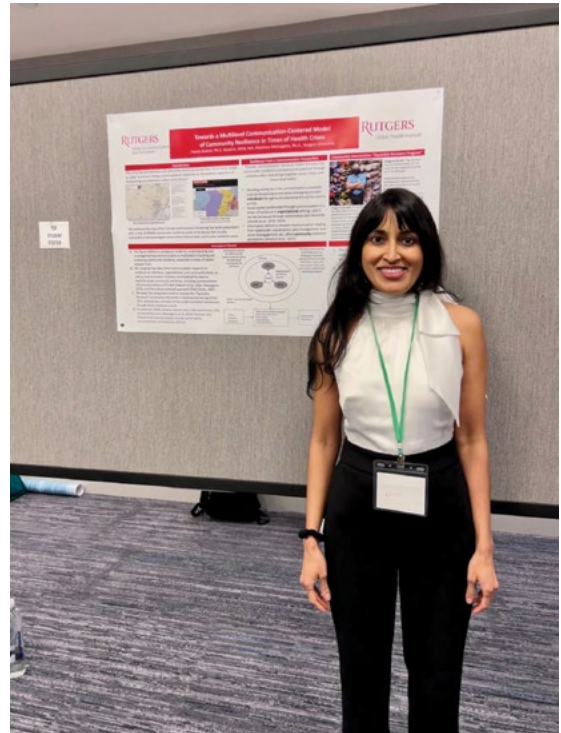
Seventh Biennial D.C. Health Communication Conference, Washington, D.C., April 2023 – Arpita Jindani, manager of health equity and education/training for Rutgers Global Health Institute, gave a poster presentation titled “Towards a Multilevel Communication-Centered Model of Community Resilience in Times of Health Crises,” which incorporated a case study from the institute’s Equitable Recovery program to demonstrate that communication is central to building and sustaining community resilience. She advocated for empowering community stakeholders, particularly those who are typically marginalized, and presented a communication model to help prepare communities for future crises. Also a Ph.D. student at Rutgers’ School of Communication and Information, Jindani won the conference’s top student poster award.

73rd Annual International Communication Association Conference, Toronto, May 2023 – As part of an in-person panel before an international audience, Jindani discussed a community-centered model for community resilience, which she had first presented at the D.C. Health Communication Conference. She also gave a presentation during a preconference session titled “What About Cultural Integrity? Examining Decolonizing Global Health through Computational Social Science Tools.” In that presentation, she advocated for diversity and inclusivity in scholarship, particularly for global health scholars with relevant lived experiences.

National Institute of Environmental Health Sciences National Trainers' Exchange, Indianapolis, May 2023

Rutgers Global Health Institute program coordinators Etphane Barthelus and Licelot Gonzalez led a roundtable discussion titled "Centering Culture in Community Engagement." Their presentation emphasized that culture must be at the center of any intervention among minority populations. They highlighted several strengths of the Resilient New Jersey program:

- Onboarding staff who speak the language and understand the culture
- Partnering with well-established local organizations, faith-based entities, and government agencies
- Bringing information directly to the intended audience through consistent face-to-face engagement
- Disseminating tailored messages through media preferred by the audience
- Developing multilingual content appropriate for low literacy levels
- Providing on-site interpretation services at community events
- Offering tangible incentives to encourage participation among the community



Arpita Jindani, manager of health equity and education/training for Rutgers Global Health Institute, gave a poster presentation at the Seventh Biennial D.C. Health Communication Conference in Washington, D.C.



Rutgers Global Health Institute program coordinators Licelot Gonzalez and Etphane Barthelus led a roundtable discussion at the National Institute of Environmental Health Sciences National Trainers' Exchange in Indianapolis.

GLOBAL HEALTH SEED GRANTS

Our Global Health Seed Grants support collaborative faculty activities that address health inequities in New Jersey and around the world. The following projects were awarded up to \$10,000 each for implementation during the 2022–2023 academic year.

Ectoparasites and Diseases of Poverty in Low-Income Urban Communities

Alvaro Toledo, Department of Entomology, School of Environmental and Biological Sciences

COLLABORATIVE PARTNER: Laboratory of Changlu Wang, Rutgers Department of Entomology

Low-income communities are disproportionately affected by neglected infectious diseases of poverty, such as leptospirosis, trench fever, and rickettsialpox. These diseases are responsible for a hidden health burden in poor communities, but surveillance programs to address their impact are lacking. To advance knowledge in this area, the project team is collecting mice and arthropods from apartment buildings in four New Jersey cities (Jersey City, New Brunswick, Paterson, and Trenton) to screen for zoonotic and arthropod-borne human pathogens. The team is using methodologies that combine urban pest control, insect taxonomy, and molecular techniques to determine the role of arthropods in serving as sentinels to facilitate epidemiologic surveillance and inform disease prevention strategies.

Examining the Influence of Food Environments on Infant and Young Child Feeding among Subsistence Farming Communities in Senegal

Shauna Downs, Department of Urban-Global Public Health, School of Public Health

COLLABORATIVE PARTNERS: Rutgers School of Health Professions; Institut de Recherche en Santé de Surveillance Epidemiologique et de Formation; Cheikh Anta Diop University

Suboptimal infant and young child feeding practices in the first 1,000 days, from the time a child is conceived until they are 2 years old, directly contribute to high rates of malnutrition and child mortality in Senegal. Most Senegalese children (93 percent) are not fed according to international infant and young child feeding (IYCF)



Shauna Downs's project is investigating various dimensions of food environments and their impact on infant and young child feeding in subsistence farming communities in Senegal. These dimensions include the diversity of foods available, prices, and promotion within markets. Pictured above is a food market in Senegal.

guidelines, leading to growth faltering and micronutrient inadequacies. This project assesses dimensions of food environments, such as food availability, affordability, and acceptability, among subsistence farming communities in Senegal to better understand how their environments influence IYCF practices. The project team is using a combination of food environment mapping and tools to assess the diversity of foods available, prices, and promotion within markets. These data will be linked to dietary data being collected via another project in Senegal, providing insight into the environmental barriers to food access among the country's subsistence farming communities. Data collection for this project is now complete, with analysis underway. The findings have the potential to inform interventions and policies aimed at improving the availability, affordability, and acceptability of nutrient-rich foods within communities experiencing a high burden of malnutrition.



Sangita Pudasainee-Kapri is researching how the various challenges mothers face in the postpartum period relate to developmental outcomes in Nepal. The study uses data from immunization clinics at public hospitals in Nepal's capital city, Kathmandu (pictured above).

Impact of Social Factors and Birth Weight on Mental Health, Self-Efficacy, and Parent-Infant Bonding among Postpartum Mothers in Nepal

Sangita Pudasainee-Kapri, School of Nursing–Camden

COLLABORATIVE PARTNERS: Maharajganj Nursing Campus and Maharajgunj Medical Campus, Tribhuvan University; Rutgers School of Nursing–Camden

Mental health issues, such as depression and anxiety, affect approximately 14–30 percent of postpartum mothers in Nepal, a prevalence that is higher than global estimates of 8–17 percent. Such issues may contribute to poor parenting self-efficacy and impaired parent-infant bonding, which are foundational for short- and long-term neurodevelopmental outcomes among children, more specifically among low birth weight and preterm

children. In Nepal, which has the world's third-highest prevalence of low birth weight children, research examining these dynamics is sparse. Knowledge about specific challenges facing mothers during the postpartum period in Nepal also is limited. This project will collect and analyze quantitative and qualitative data about postpartum mothers, as well as infant developmental outcomes, from immunization clinics at public hospitals in Nepal's capital city, Kathmandu. This pilot study will support the need for ongoing evaluation of low birth weight and preterm infants and screening for mental health issues among postpartum mothers in Nepal. It also will offer preliminary data to develop interventions in Nepal for reducing disparities in perinatal mental health and health care and improving the health and developmental outcomes of at-risk children.

Integrative Community Therapy for Intimate Partner Violence Survivors in Quito, Ecuador

Chiara Sabina, Center for Research on Ending Violence, School of Social Work

COLLABORATIVE PARTNER: Muyumpa

In Ecuador, 43 percent of women experience intimate partner violence (IPV) in their lifetime; however, the reach of institutional services for IPV survivors, such as housing shelters and transitional support, is limited there. Alternative services are needed to better respond to IPV in Ecuador. This project aims to establish an integrative community therapy initiative in Quito, the capital city. Integrative community therapy (ICT)

is a group-based, non-hierarchical approach to promote community support and self-empowerment. Through a collaboration with Muyumpa, an ICT training center in Quito, the project team will train 10 IPV survivors to become ICT participant facilitators and conduct 30 dialogue circles in their communities with women at high risk of IPV. Surveys and qualitative interviews will be used to evaluate the initiative's effects, for example, changes in the participant facilitators' feelings of empowerment and leadership and the circle participants' self-esteem, health and well-being, resilience, violence attitudes, and post-traumatic growth. Results from this project will form a strong basis for expanding the training and use of ICT to other populations and locations.



Chiara Sabina's project aims to establish integrative community therapy in response to a high rate of intimate partner violence in Ecuador. The project is taking place in the capital city of Quito (pictured above).

NEW GRANTS AWARDED

Using Machine Learning to Examine Quality of Care: Analyzing Nursing Notes to Investigate Racial Inequity in Brazil

Charles Senteio, Department of Library and Information Science, School of Communication and Information

COLLABORATIVE PARTNER: Universidade Federal do Rio de Janeiro

Racial inequalities and ethnic biases in hospital-based care delivery can influence clinical practice and, ultimately, patient outcomes. In nursing notes about patients, the use of stigmatizing words and phrases – such as addict, non-compliant, crazy, dirty, clean, drug seeker – are considered indicators of nursing providers' beliefs and attitudes toward patients that can impact clinical decision-making and quality of care. This project is using machine learning technology and associated processes to analyze nursing notes in medical records from the federal Clementino Fraga Filho University Hospital in Rio de Janeiro, Brazil. The study's aim is to evaluate the efficacy of these methodologies for identifying potential racial inequities in care in a standardized way. The team also will determine effective algorithms that can be applied to future interventions and clinical support systems to promote patient-centered, equitable health care across stigmatized patient populations.



Charles Senteio is using machine learning technology to analyze nursing notes in medical records from Universidade Federal do Rio de Janeiro in Brazil (pictured above). The study is evaluating the use of such processes for identifying racial inequities.



The following grants were awarded for implementation during the 2023–2024 academic year.

Developing a Rutgers Model for Training a New Generation of Global Health Communication Researchers and Professionals

Matthew Matsaganis, Associate Professor, and Itzhak Yanovitzky, Professor, Department of Communication, School of Communication and Information

Expansion of the Buen Vecino Program to Improve the Health of Mexican Immigrants

Karen D'Alonzo, Associate Professor, Division of Nursing Science, School of Nursing

Latent Tuberculosis Infection ECHO Pilot

Alfred Lardizabal, Executive Director, Global Tuberculosis Institute, New Jersey Medical School

Sexual and Reproductive Health Knowledge, Attitudes, and Behaviors Among Urban Young Adult Women in the Philippines

Jamille Nagtalon-Ramos, Assistant Professor, School of Nursing–Camden

Understanding Underdiagnosis of Dementia in the Context of Indigenous Older Adults: a Community-Engaged Study in Ecuador

Takashi Amano, Assistant Professor, Department of Social Work, School of Arts and Sciences–Newark

IN THE NEWS

A variety of voices from Rutgers Global Health Institute were featured in the media this year.



The New York Times

Ubydul Haque, a geospatial epidemiologist and principal faculty member at Rutgers Global Health Institute, provided expertise for a *New York Times* story titled “Climate Change Can Turn Snow into Rain, Raising Risks in Mountain Zones.” The story was about a June 2023 study, published in the journal *Nature*, demonstrating that as the climate warms and snow turns into rain, mountain regions will get more extreme rainfall than previously thought. The hazards this will produce for humans include more floods, landslides, and soil erosion. Haque, whose related study from 2019 showed that deadly landslides are on the rise worldwide, commented on the “extremely novel” approach of the recent study and confirmed that the highest-risk areas identified are consistent with his previous findings.

The Star-Ledger

In an opinion piece published by *The Star-Ledger*, Rutgers Biomedical and Health Sciences chancellor Brian Strom, who also is a core faculty member of Rutgers Global Health Institute, wrote about the 10-year anniversary of the biomedical and health sciences division’s integration with Rutgers, The State University of New Jersey. “The goal of this integration was multifaceted. Rutgers long had sought a medical school to help it become a comprehensive public research university that was on par with peers like the University of Michigan. Then-Gov. Chris Christie wanted to create economic opportunities and strengthen New Jersey’s health care system in the process. In the decade since RBHS was born, the results have exceeded even the most optimistic forecasts.” Throughout the piece, Strom described the many ways in which the division is “delivering—for Rutgers, for the state, and for our patients.”

“It’s all about human connection and honest conversations.”

ARPITA JINDANI, RUTGERS GLOBAL HEALTH INSTITUTE
MANAGER OF HEALTH EQUITY AND EDUCATION/TRAINING

New Jersey Monthly

In a feature titled “How to Navigate Medical Disinformation: New Jersey Experts Weigh In,” *New Jersey Monthly* magazine highlighted a Rutgers Global Health Institute program, Equitable Recovery for New Jersey’s Small Businesses, in an excerpt about the role of trust in public health communication:

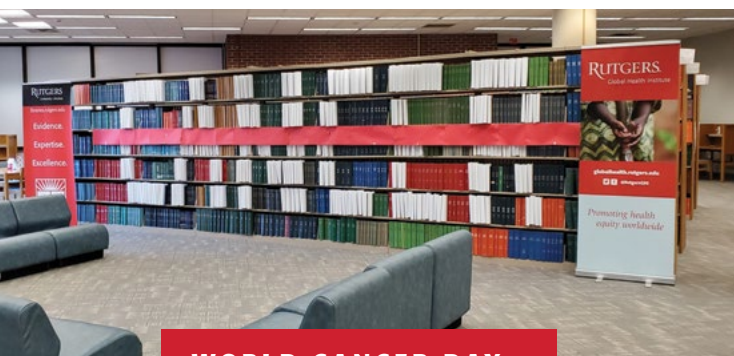
“As part of a program designed to help Newark’s small businesses bounce back from the worst days of the pandemic, Rutgers Global Health Institute looked to the city’s community leaders to help boost vaccination rates. One of those leaders was Micano Evra, whose radio show and West Ward restaurant were popular with Newark’s Haitian population. He agreed to hold a pop-up vaccination clinic at the restaurant, which he promoted on the show, and it turned out to be one of the city’s most successful vaccination efforts. Arpita Jindani, who oversaw the effort, summed up its success: ‘It’s all about human connection and honest conversations.’”

VeryWell Health

Consulted for his expertise regarding asymptomatic viral infections, Rutgers Global Health Institute principal faculty member Bobby Brooke Herrera discussed disease diagnostics with VeryWell Health. "Rapid antigen tests remain effective public health tools in detecting COVID-19 caused by Omicron," he said, referring to a variant of the SARS-CoV-2 virus. It's not that tests can't detect Omicron; rather, it could be that swab sampling for the virus might not be adequate to fully detect asymptomatic infections, he explained.

Health Policy Watch

In an op-ed published on World Cancer Day by Health Policy Watch, Wilfred Ngwa and Richard Marlink of Rutgers Global Health Institute wrote that "the rapidly escalating crisis of cancer" is threatening sub-Saharan African populations to a degree that demands a large-scale response. Ngwa, a professor of global health and radiation oncology, and Marlink, the institute's director, expressed grave concern about global health inequities: "We live in a world that has made remarkable scientific and medical advancements in cancer detection, diagnosis, and treatment, but a person's chances of surviving cancer hinge arbitrarily on where they were born. This is unacceptable."



WORLD CANCER DAY RECOGNITION EVENT

Rutgers Global Health Institute held a World Cancer Day 2023 recognition event in collaboration with Rutgers Health Sciences Libraries. A display of the word "cancer" was spelled out in white books, with a red slash through the word (pictured above). Accompanying the display was an exhibit case with historical cancer reference materials. World Cancer Day is an initiative of the Union for International Cancer Control.

"A person's chances of surviving cancer hinge arbitrarily on where they were born. This is unacceptable."

WILFRED NGWA, PROFESSOR, AND RICHARD MARLINK,
DIRECTOR, RUTGERS GLOBAL HEALTH INSTITUTE

El País

"Socioeconomic status is one of the risk factors for dengue severity in Mexico," said institute principal faculty member Ubydul Haque. Spanish-language news outlet *El País* reported on Haque's public health research efforts to map areas in Mexico where severe dengue outbreaks occur, based on calculations of environmental and socioeconomic risk factors. Among the examples of such factors: in communities that do not have reliable access to running tap water, it is common for people to store drinking water in containers, which can serve as breeding grounds for virus-carrying mosquitoes, Haque explained.

Africa Press

In an article about current affairs in Botswana, *Africa Press* reported on the University of Botswana's interest in advancing collaborations with Rutgers on research and health initiatives. "Long-lasting solutions that would also be relevant to the needs and expectations of communities" would be among the results, said the university's vice chancellor David Norris, according to the article. The University of Botswana is a key collaborator in the existing Botswana-Rutgers Partnership for Health.

ROI-NJ

In an article titled "Efforts launched by Rutgers and Botswana partnership featured during the U.S.-Africa leaders' summit," ROI-NJ reported on the White House announcement that highlighted several public- and private-sector initiatives to improve cancer outcomes in Africa. Two initiatives from the Botswana-Rutgers Partnership for Health were included in the announcement: a rapid "screen and treat" program for breast cancer as well as Cancer Kitso, an oncology workforce training program.

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FACULTY IMPACT AROUND THE WORLD

RUTGERS GLOBAL HEALTH INSTITUTE'S core faculty members are engaged in global health-related education, research, and service projects in more than 100 countries around the globe. Our faculty are drivers of our institute's and Rutgers' impact on health equity worldwide, including right here in New Jersey.

View our global health project map
to explore and connect:

globalhealth.rutgers.edu/projectmap

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