Annual Impact Report

2 0 2 2



Icahn School of Medicine at **Mount** Sinai Arnhold Institute for Global Health

Content Development Ashante Patterson Amanda Misiti

Editor Veronica Hilbring

Design David Rojas-Leon

Photography

Arnhold Insititute for Global Health Archive Unsplash Wikimedia Commons

February 2023

Table of Contents



About the Arnhold Institute for Global Health

Letter from the Chair and Director

Rachel Vreeman, MD, MS DIRECTOR, THE ARNHOLD INSTITUTE FOR GLOBAL HEALTH PROFESSOR & CHAIR



Dear colleagues,

The Arnhold Institute for Global Health at Mount Sinai has had a vision for how deep, equitable global health partnerships could be the central strategy for advancing lasting global health impact. Through lasting partnerships, we can build stronger, resilient health systems that provide quality care to the world's most vulnerable people. 2022 was a year where the Arnhold Institute began to see that vision come to fruition.

We saw those partnerships take critical steps forward as we gathered in Kenya with the leaders of Mount Sinai's global partnerships in Nepal, Ghana, Kenya and New York. Together, we witnessed how the 30-year-old AMPATH-Kenya partnership has improved the public health system serving over 12 million people in western Kenya, while growing into a world leader in research, education, and public health innovation. Our teams eagerly built connects and made plans for the next steps of each of our partnerships in the same model. We signed an official memorandum of understanding establishing a long-term, institutional partnership between Mount Sinai and the Kathmandu University School of Medical Sciences and Dhulikhel Hospital in Dhulikhel, Nepal, joined by more than 20 representatives of Mount Sinai's research, clinical, and education communities and hundreds of representatives of the Nepali healthcare system, educational institutions, and government. We also gathered in Indianapolis for a global gathering of the entire Academic Model Providing Access to Health (AMPATH) consortium of more than 16 academic medical institutions for our Mount Sinai - Nepal partnership to become an official part of the AMPATH consortium. In each of these moments of significance, we recommitted ourselves to supporting global partnerships that are equitable and of mutual benefit, that are led by our partners and the priorities of the communities we serve, and that achieve health impact at large scale.

Throughout our research, planning, and program implementation, the Arnhold Institute continued to strive to put anti-racism, decolonizing global health, and

"In each of these moments of significance, we recommitted ourselves to supporting global partnerships that are equitable and of mutual benefit, that are led by our partners and the priorities of the communities we serve, and that achieve health impact at large scale."

gender equity principles at the center of our work. Our institute and department recruited several new faculty and staff members, including two physicians who will be our onthe-ground partnership leads in Nepal and in Kenya, Rose House, MD and Wan-Ju Wu, MD respectively. The long-term presence of faculty in Nepal and Kenya makes it possible for us to equitably expand our care and training global footprint, while also allowing these innovators in global health to advance new models of healthcare delivery, education, and research. Our global leadership in youth health was reflected with the addition of new research faculty such as Dr. Lonnie Embleton, a technical collaboration with the Mount Sinai Adolescent Health Center, advancing global youth health initiatives in western Kenya, Nepal, and Guyana, and new Institute staff to grow these initiatives. In the second half of 2022 we were invited by the government of Guyana to partner with the Guyana Ministry of Health to advise on their national health strategy and walk with them to strengthen their primary health systems, health information systems, and workforce development.

The Arnhold Institute's commitment to building partnerships around institutions builds shared capacity and opens greater opportunities for mutual benefit. It results in greater impact, more equity, and a health care landscape that is resilient and continuously improving. In each of the innovations, system changes, and research endeavors led by our faculty, we see the promise of better global healthcare systems.

For examples, in 2022, our programs, partnerships, and research ensured:

- 15,000 Kenyan adolescents living with HIV received care and peer support at the Rafiki Clinic and through our adolescent-friendly clinical care programs in 400+ public health clinics across western Kenya
- 21 doulas who speak 10 different languages from the Queens community were recruited and trained to provide support for birthing persons and their families that should improve birth outcomes
- 43 community health workers provided frontline care to nearly 60,000 households in rural Nepal
- 10 countries across six global regions launched a prospective, clinical research cohort for adolescents and young adults living with HIV that will provide critical evidence to improve HIV-related outcomes globally

 50+ peer-reviewed publications added to the evidence base helping improve care and shape global health policy

All of these accomplishments were thanks to the hard work and talents of our partners, supporters and teams. It is my privilege to walk with each of you on this journey. Our growing impact reflects the intentional steps taken to build better partnerships, innovate, and scale up evidence-based care models that improve health. In the face of challenges ranging from ongoing epidemics to economic instability and systemic racism, we continue to believe that building equitable and sustainable global health partnerships is the best way to improve health for all. Thank you to each supporter and collaborator who joins us in this effort! We hope to accomplish even more in this New Year with all of you.

I wish you and yours a healthy, safe, and joyous 2023! Warmly,

Radul Vum

Rachel Vreeman, MD, MS Chair, Department of Global Health and Health System Design Director, Arnhold Institute for Global Health

Our Vision



Better global partnerships building a healthier world for all.



Our Mission



Mount Sinai's Arnhold Institute for Global Health seeks to build deeper, more effective, and innovative global academic partnerships. Through stronger partnerships, we can build stronger, resilient health systems that provide quality care to our world's most vulnerable people.

We do this by unlocking the diverse pool of knowledge, expertise, and resources found in our academic and health system partners to strengthen healthcare delivery systems that are then able to understand, adapt, and grow to meet the health needs of the communities and populations our partners serve. We work across our tripartite mission to *deliver high quality care*, to *educate healthcare providers*, and *improve care through research*.

Our Values



Integrity



Impact



Justice

Commitment to Being an Anti-Racist Institute

Since its inception in 2020, The Anti-Racism Task Force has made great strides in its aim to dismantle racism, improve knowledge and understanding of Black culture, increase the number of Black leaders and faculty within the department, cultivate humility and enhance communication.

More than 95 percent of the department is engaged in anti-racism task force work.

In 2023, we plan to assess the current needs and revise the plan accordingly.





2022 Accomplishments

21

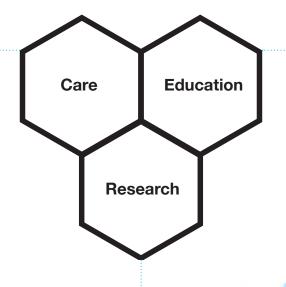
recruited and trained doulas speaking 10 different languages in Queens, New York

15,000+

adolescents living with HIV receive comprehensive care in Western Kenya

800,000+

people impacted with a strengthened health system in Guyana



trainees provided with global health training opportunities in 2022

3

15

faculty placements to support bilateral teaching and exchange

39%

increase in grant funding as compared with 2021



received in funding



50+

publications in peer-reviewed journals

Welcoming New Faculty

Lonnie Embleton, PhD, MPH

Assistant Professor and Adolescent Health Advisor, Arnhold Institute for Global Health, Icahn School of Medicine at Mount Sinai



Lonnie Embleton, PhD, MPH is an Assistant Professor and Adolescent Health Advisor at the Arnhold Institute for Global Health at Mount Sinai and for the Department of Global Health and Health System Design. She is responsible for conducting research addressing the health and needs of adolescents and youth, specifically underserved and marginalized people. Her research based in Kenya has focused on street-connected children and youth and orphaned and vulnerable children, emphasizing sexual and reproductive health, HIV, human rights, gender equity, and structural and social determinants of health. In both of her roles as Adolescent Health Advisor and Assistant Professor she supports efforts to improve adolescent health with the Department and Institute's global partners. Dr. Embleton also strengthens and develops our adolescent health programs, and the collaborative care, education, and research partnerships focusing on adolescent health in Kenya.

Dr. Embleton's research focuses on addressing structural and social determinants of adolescent health inequities and seeks to redress these health inequities using implementation science to improve access, uptake, and delivery of health services to young people. She aims to improve health services and advance health equity for underserved and marginalized adolescents in Kenya and New York, by conducting collaborative, inclusive, and participatory global health research. She previously served as a Postdoctoral Research fellow for the Centre for Global Health at the Dalla Lana School of Public Health. Dr. Embleton has had work published in various journals such as *Jama Pediatrics* and *AIDS and Behavior*. She has had many achievements in her career, including being nominated for the Canadian Women in Global Health list, and receiving the prestigious Vanier Canada Graduate Scholarship and the Doctoral Research award from the International Development Research Centre.

Dr. Embleton holds two bachelor's degrees from Ryerson University and Brock University, along with receiving her master's degree in Public Health from Dalla Lana School of Public Health at the University of Toronto. She also holds a PhD in Medical Science from the University of Toronto. In her spare time, she enjoys cycling and exploring New York City by bike and cooking. "At AIGH as the Adolescent Health Advisor, I work collaboratively with our global partners to advance adolescent health equity through research, education, and care. My global health research is motivated by the desire to ensure everyone, particularly the most vulnerable young people, have the right to health."

Rose House, MD, MS

Nepal Partnership Director & Associate Professor at Icahn School of Medicine at Mount Sinai

Dr. Rose House is an Associate Professor for the Icahn School of Medicine for the Departments of Emergency Medicine, Pediatrics, and for the Department of Global Health and Health System Design. She also serves as the Nepal Partnership Director for the Arnhold Institute for Global Health. In her role as Nepal Partnership Director, she works alongside Nepal colleagues to develop and support the Mount Sinai partnership with Dhulikhel Hospital and Kathmandu University School of Medical Sciences. As an Associate Professor, she mentors faculty and learners that are engaged in global health and provides education and clinical care in emergency medicine and pediatric emergency medicine. She also supports engagement of Mount Sinai faculty, staff, and learners in advancement of care, education, and research.

Dr. House's research interests include addressing leading causes of death in children under five in low-middle income countries. For her earlier research in Kenya, she started noticing children dying from diarrhea-related dehydration and more recently, children dying from pneumonia. Her work focused on implementing World Health Organization rehydration protocols and improving rehydration therapy. Her research has since shifted to Nepal where she focuses on improving diagnosis of pneumonia to provide appropriate treatment.

Her work has been published in various medical journals such as Annals of Emergency Medicine and International Journal of Emergency Medicine. She has received several awards, including an academic emergency medicine award for top global emergency medicine research article.

She holds a bachelor's degree from DePauw University. She also holds a medical degree from Indiana University School of Medicine and completed her residency in emergency medicine and pediatrics from Indiana University School of Medicine. Rose completed a global health fellowship which included a master's in clinical research at Indiana University. She participated for several years in AMPATH Kenya, serving as the Emergency Medicine Team Leader.

Dr. House enjoys team sports, hiking, playing games, exploring other places and cultures. She also has an appreciation for music, arts, and theater.

"It's been refreshing and encouraging to work in our department, alongside others with a similar priority to achieve equity in health for all people worldwide. I am excited to continue to learn and grow together with colleagues within AIGH, Mount Sinai, and our strategic partnerships.

I decided to work in global health during my sophomore year in college while serving on a medical team, providing health education and basic clinical services among remote islands in the Philippines. *I* was struck by the socioeconomic disparities and lack of access to care, but even more impacted by the people and their culture – their joy for life, generosity, love of karaoke, and ability to help this Indiana kid appreciate seafood. I felt so connected to the people I met, appreciative of life, and grieved by the health *disparities. It was that experience* and my Filipino friends who inspired me to pursue a career in global health. I'm so grateful."



Wan-Ju Wu, MD, MPH

Assistant Professor, Arnhold Institute for Global Health, Icahn School of Medicine at Mount Sinai



Wan-Ju Wu, MD, MPH is an Assistant Professor in the Arnhold Institute for Global Health and in the Department of Obstetrics, Gynecology, and Reproductive Science. She serves as the Kenya Partnership Adolescent Health and Reproductive Health Team Leader and an attending physician in the Department of Obstetrics and Gynecology at Elmhurst Hospital.

Her research interests are in community-based interventions to improve reproductive health, safe abortion and family planning, and adolescent sexual and reproductive health. Dr. Wu is a Reproductive Health Advisor for the non-profit organization *Possible* and supports reproductive health implementation science research projects. She previously worked at Boston Medical Center as a generalist OBGYN attending. During that time, she supported a family medicine residency program in Lesotho and was the co-director of the Refugee Women's Health Clinic.

She holds a bachelor's degree from Brown University, and a Master of Public Health degree from Boston University School of Public Health. She completed her residency in Obstetrics and Gynecology from Oregon Health and Sciences University, and her fellowship in family planning and global women's health from Harvard Medical School. "It has been exciting and humbling to work for an organization that is striving to improve health from a systems perspective and strives to build more equitable, bi-directional global health partnerships. (This refers both to the AMPATH model and Arnhold). I am privileged to be working alongside my Kenyan colleagues to dream up and implement a comprehensive model for adolescent health. In the next year, we look forward to starting an adolescent pregnancy clinic and strengthening OBGYN resident education specifically in simulation and laparoscopy."

Advising on the Guyanese Public Health Strategy

In 2022, AIGH began a new consulting agreement with the **Ministry of Health in Guyana** to support the development of their national health strategy.

With support from the Government of Guyana and the Hess Corporation, AIGH is helping advise the Ministry of Health on the development of a national health information system, health workforce planning and development, and service delivery and systems strengthening. Additionally, we are working closely with partners from Mount Sinai International who are working with the Ministry to strengthen and improve care delivery at the Georgetown Public Hospital Corporation and develop a plan for the delivery of specialty care. Our work supports the Government of Guyana's goal to give everyone in Guyana the best possible opportunity for a healthy and long life. Together with our Ministry partners, we are seeking to advance Guyana's sustainable development goals, foster private investment and development in healthcare and other sectors, support the educational development and professional growth of Guyana's health workforce and citizens, and encourage members of the Guyanese diaspora to return to live and work in Guyana.



Global Health Education

Global Health Education

Our global health education program is focused on the department's principles of equity and decolonizing global health. We believe in the core tenet that global health education must include training opportunities for our partners, not only North Americans. We will resume hosting trainees from our partner institutions at Mount Sinai in 2023. Based on the needs of our partners, this will range from medical students to physicians seeking specialty training. We have established a working group with other global health education stakeholders at Mount Sinai to standardize processes and establish best practices around bilateral exchanges.

In 2022, under the Global Health Summer Research Program twelve students were engaged in collaboration with our partners. The Ghana partnership hosted two students and the New York City partnership hosted ten students. In addition, two pediatric residents did clinical rotations with our AMPATH Kenya partnership. A triple board resident conducted research in Kenya focused on adolescent mental health. The Director of Global Health Education, Diana Lee, MD, has also collaborated with the departments of internal medicine and psychiatry to expand global health opportunities for their trainees at AMPATH Kenva.



Mary Weng, MD, MPH Assistant Professor at Icahn School of Medicine at Mount Sinai



"As a resident with prior experience in Global Health in various settings and locations, I can confidently say that our time in Eldoret and at MTRH was one of the best and most fulfilling experiences I have ever had. During our 7 weeks, I grew both professionally and personally, and deepened my understanding of what Global Health looks like in practice.

Clinically, I was challenged by pathologies I had never treated in the United States, severe presentations of illness, far greater volumes of patients, and limitations in available resources. We were faced with difficult decisions daily that, in retrospect, honed our skills in clinical decision making, triage, cost-effectiveness, and teamwork. We were wholeheartedly welcomed by the medical team (residents, attendings, pharmacists, nurses, and medical students), and despite working within a completely foreign health system and culture, there was an incredible exchange and sharing of information and practices that took place.

Personally, we call this experience our "reverse burnout" rotation. As a third-year pediatrics resident whose intern year was interrupted by the start of the COVID-19 pandemic, I was a little nervous at the start of this rotation - wondering if I was prepared enough, or if I was up for the challenge. This experience reminded me of all of the reasons I went into medicine in the first place. Though we were working hard, I was thrilled to be learning so much and felt energized and excited to go to work each day. The community at IU House was one of the best parts of the experience. For every meal, we sat next to residents and attendings from all different specialties (OB/Gyn, Orthopedics, Internal Medicine) and from all over the United States, and these people became the people we traveled on the weekends with, and our lifelong friends. The Wednesday night fireside chats were also a highlight, where we discussed topics ranging from the culture and history in Kenya to ethical challenges in Global Health - it was so clear that we were surrounded by a group of people with the same passion for learning and serving this community in Eldoret."



Masih A. Babagoli, MS. MD Candidate, Class of 2025, Icahn School of Medicine at Mount Sinai



"I am extremely grateful to have had the opportunity to work with Dr. Heller (AIGH) and Drs. Aborigo and Nonterah (NHRC) this past summer on the COMBINE study, which sought to test if community level healthcare providers could be trained to provide chronic disease care in rural communities of Navrongo, Ghana. The opportunity to be in Navrongo and visit the individual community clinics multiple times allowed me to connect with the healthcare providers at each facility, see in realtime how to run and troubleshoot a research study, and better understand the communities in which the study was being implemented. Meanwhile, being immersed at the Navrongo Health Research Center allowed me to develop relationships with Ghanaian researchers leading important studies in non-communicable disease care - an area of research that I would like to continue pursuing. These relationships will hopefully grow into future research collaborations and bidirectional exchange across institutions that I believe are the most important and rewarding aspects of global health."



Tsion Tmariam MD Candidate, Class of 2025, Icahn School of Medicine at Mount Sinai

"Working with the NYC Partnership team as a student has been an amazing learning experience. I was able to connect with many community based organizations and stakeholders within the Queens/Elmhurst area. Dr. Sheela Maru, Kanwal Haq, and Payal Ram were very hands-on with my learning and allowed me to take on a multitude of projects that elevated my learning not only as a medical student, but as someone interested in being a community advocate. Their work is invaluable and it shows in the community they have integrated within each and every project."



Strategic Global Partnerships

Strategic Global Partnerships





2

QUEENS, NEW YORK

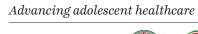
 $Building \ resilient \ health \ systems \ with \ H+H$



NAVRONGO, GHANA

Hts Elmhurst

Improving chronic disease management



WESTERN KENYA



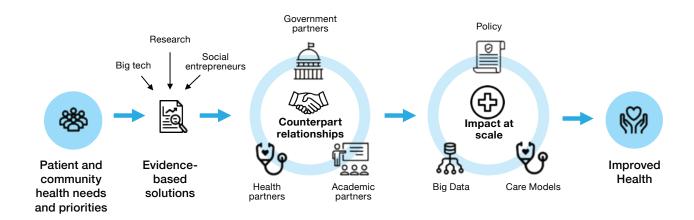


3

DHULIKHEL, NEPAL Transforming rural community health

DHULIKHEL HOSPITAL

Our Partnership Model



In our model of partnership, we start with the needs and priorities of the community and partner with academic medical centers, health systems, and government partners to build deep equitable partnerships capable of delivering high quality care, training the next generation of care givers and health innovators, and developing and scaling health innovations with positive global impact on people's health. Rooted in strong individual counterpart relationships, our model builds deep institutional relationships that strengthen capacity, provide mutual benefit, are equitable, and resilient.

ANNUAL REPORT 2022 24

We envision better global partnerships that build a healthier world for all.

Mount Sinai's Arnhold Institute for Global Health seeks to build deeper, more effective, and innovative global academic partnerships. Through stronger partnerships we can build stronger, resilient health systems that provide quality care to our world's most vulnerable people.

We do this by unlocking the diverse pool of knowledge, expertise, and resources found in our academic and health system partners to strengthen healthcare delivery systems that are able to understand, adapt, and grow to meet the health needs of the communities and populations our partners serve. We work across our tripartite mission to deliver high quality care, to educate healthcare providers, and improve care through research.

Who We Serve

Our focus is on improving the health of the world's most vulnerable people. Each of our partnerships include a primary health system and academic partner committed to providing care to communities that are the most in need in Ghana, Kenya, Nepal, and New York. Each of our partnerships include health system partners that provide care to catchment areas of 1 million or more people. In total, our partner network is responsible for caring for more than 12.5 million people worldwide. Our patient populations encompass both rural and urban patients many of whom survive on less than \$2 per day. Together with our health system and academic partners, we work to improve population health by empowering individuals and communities to be able to access affordable healthcare where they live. We work to improve population health by empowering individuals and communities to be able to access affordable healthcare where they live.

C These

"Lead with care; then do more."

2022 Updates

In 2022, significant progress was made in building our global partnership network. After nearly two years of preparation, visits, and stakeholder engagements, we officially launched the AMPATH Nepal partnership with Dhulikhel Hospital and Kathmandu University School of Medical Sciences with the signing of a Memorandum of Understanding in October 2022. We also welcomed our new in-country Director, Dr. Rose House, who will help lead the on-the-ground development of our partnership in Nepal. This partnership will provide a new platform for Mount Sinai faculty, students, and staff to engage in collaborative care, education and research initiatives with partners in Nepal.

Each of our partnerships made significant progress as well. In Ghana and Kenya, we were able to host global health trainees again and begin work on expanding our research programs to support community based care for non-communicable diseases. Throughout the pandemic, our New York City partnership has been able to offer many students global health experiences and that continued in 2022. In Kenva, we welcomed our first Adolescent Health Team Leader, Dr. Wan-Ju Wu, who is working to strengthen and expand our clinical care support for youth in Kenya and support the engagement of our learners. In New York, we completed a strategic planning effort to align our work with community health needs and priorities, continued to build collaboration through our pilot research program, and expanded access to doula care for birthing persons in Elmhurst and Queens.

Broadly speaking, we organized a large number of in-person events to engage partners and build meaningful collaboration. In May, we hosted senior leaders from the Nepal partnership in New York for meetings with Mount Sinai's senior leadership in preparation for the launch of our partnership. In June we organized a learning visit to AMPATH Kenya with representation from all of our global partners. This helped our partners to better understand the AMPATH approach and to envision different possibilities for their organizations. In October, more than 20+ of Mount Sinai senior leaders from ten Mount Sinai departments, the AMPATH Secretariat and AMPATH Kenya leadership joined us in Nepal for the official launch of our partnership.

ANNUAL REPORT 2022 26

Nepal

With our partners at Dhulikhel Hospital and Kathmandu University School of Medical Sciences, we are building an equitable, longlasting global health partnership focused on improving care, education and research. This partnership is among the Academic Model Providing Access to Healthcare (AMPATH) consortium's official replication efforts. This dramatically expands the opportunities for collaboration and impact.

One of the foundational steps we made this year was to strengthen relationships across our institutions. The Nepal partner leadership team visited the United States multiple times in 2022. Together we planned a number of initiatives to improve health in Nepal including the development of proposals to support school based care for adolescents in Nepal and fellowship training programs that would leverage expertise from across our partnerships in Ghana, Kenya, and New York.

At the end of 2022, a delegation of more than twenty senior staff from Mount Sinai, AMPATH Kenya and the AMPATH Secretariat joined for the signing ceremony and a weeklong learning visit in October. In conjunction with this visit, we launched a pilot grant program to foster collaboration between Mount Sinai, Dhulikhel Hospital, and the Kathmandu University School of Medical Sciences. This program will award three \$20,000 awards to support collaborative projects that will advance care, education, or research in Nepal. We received nearly 120 letters of intent – a strong indicator of the level of enthusiasm and interest from Mount Sinai and our partners – and will finalize the awards in early 2023.

Archana Shrestha, PhD, MPH Associate Professor, Department of Public Health, Kathmandu University School of Medical Sciences, Dhulikhel, Nepal



"To me, AMPATH Nepal is unique because of our shared respect, intent, and determination to co-create an equitable health care model in Nepal while contributing to moving science forward and building local capacities. In my decade long global health experience, this is the only time I remember starting the conversation with building a holistic partnership rather than achieving a project goal or research objective. Of course, projects, research and grants will follow. I feel the energy and vibes that push all us together in the same direction, and this is the most motivating aspect for me."



Rose House, MD, MS Nepal Partnership Director, Arnhold Institute for Global Health Associate Professor at Icahn School of Medicine at Mount Sinai



"The engagement and interest from multiple departments between Mount Sinai and our Nepal partners has been remarkable. Having so many departments involved this early is unique in global health partnerships. Working together as institutions creates more support and synergy to build capacity and improve our education and healthcare systems."



New York City

The New York City partnership is a collaboration between the Arnhold Institute for Global Health and the New York City Health and Hospitals Elmhurst and Queens Hospital. The partnership focuses on community health needs with a particular focus on improving birthing person's care, improving research capacity and COVID-19 research.

Doulas help birthing persons navigate their care and serve as an advocate in the most challenging moments. Dr. Sheela Maru and her team have collaboratively developed a model with doula non-profits informed by best practices to provide care for a year in the pre-, birth and post-birth periods. They recruited and trained more than 21 doulas who speak more than 10 different languages. Together, the doulas have already served more than 110 birthing persons, and plan to reach many more with an expanded doula team in 2023. With support from the Helmsley Foundation, the team is developing a new model to provide justice-affiliated and housing insecure individuals with comprehensive doula care. They have also received funding for this work from the Robin Hood Foundation and the New York State Health Foundation.



Ghana

In Ghana, we partner with the Navrongo Health Research Centre, a renowned government institute. We aim to bring chronic disease care to the doorsteps of people in rural Ghana. In 2022, we successfully launched a hypertension and depression pilot initiative which leveraged community health workers to screen patients and nurses to provide medication and counseling. This has resulted in more than ninetypercent of patients participating in our pilot programs being linked to care services and their conditions being controlled.

In 2023, we hope to expand this work to serve more than 500 individuals. This model is innovative and highly adaptable to a range of other chronic conditions. Given the immense—and growing—burden of chronic disease around the world, there is great potential to scale this model and serve people around the world.

We were excited to have trainees return to Navrongo in 2022. As part of the global health education summer program, two trainees assisted with research focused on non-communicable diseases in Ghana.

Kenya

As part of the long-lasting AMPATH Kenya partnership with Moi University and the Moi Teaching and Referral Hospital, Mount Sinai leads the AMPATH Consortium's efforts to improve the health of youth and adolescents in Kenya. This work includes improving customized and comprehensive care for 15,000+ HIV-positive adolescents at the Rafiki Clinic. We continued a strategic planning process to prioritize goals for expanding care for youth as part of the AMPATH program. This planning effort will culminate with an Adolescent Health Summit in early February 2023.

Dr. Wan-Ju Wu joined our Kenya team as the Adolescent Health Team Leader. In this role, Dr. Wu is leading efforts to improve care for pregnant adolescents and is working to re-start an adolescent pregnancy clinic in early 2023. In 2022, trainees returned to Kenya. We hosted two pediatric residents and a triple board resident focused on adolescent mental health.

This partnership's research portfolio focuses on improving care outcomes for adolescents living with HIV through improving care delivery and policy changes. Specifically, this includes improving medication adherence, addressing drug resistance and decreasing stigma. The partnership published more than 24 peer-reviewed articles in 2022 alone.



CURE-19 Pilot Grants

As part Since 2020, we have awarded eight pilot grants totaling \$100,000 with the goal of building research capacity in our New York City partnership.

In 2022, after a competitive award process, a selection committee comprised of senior Mount Sinai, Elmhurst and Queens' hospital leadership awarded the following four pilots with \$25,000 each to conduct important research on drivers of health disparities, the long-term impact of COVID-19 and potential for innovative music therapy to mitigate post-COVID symptoms. As part of the Global Health Summer Research Program, 9 students worked on research projects with the New York City partnership. An obstetrics and gynecology resident also assisted with the New York City women's health research portfolio.

A visioning process was completed with stakeholders and Community Advisory Boards at Elmhurst and Queens Hospital for the next three years. One continuing priority was expanding research capacity which resulted in developing a research submission guide and trainings in informed consent.

5 2022 Publications

Publications

Our primary faculty are making significant scholarly contributions to the field of global health. Our research is improving care for people living with chronic conditions, HIV and cancer. We are also working to improve maternal and child health and the equitable extension of services into remote communities. This is a sampling of our 2022 publications.

Embleton L, Shah P, Apondi E, Ayuku D, Braitstein P. "If they had a place to live, they would be taking medication": a qualitative study identifying strategies for engaging street-connected young people in the HIV prevention-care continuum in Kenya. In press. 2022. Journal of the International AIDS Society

Ballard M, Olsen HE, Whidden C, Ressler D, Metz L, Millear A, Palazuelos D, Choudhury N, Munyaneza F, Diane R, Lue K, Bobozi PÉ, Raut A, Ramarson A, Andrianomenjanahary M, Finnegan K, Westgate C, Omwanda W, Wang L, Citrin D, Rogers A, Aron MB, Christiansen M, Watsemba A, Adamjee R, Yembrick A. Lessons from an eight-country community health data harmonization collaborative. Glob Health Action. 2022 Dec 31;15(1):2015743. doi: 10.1080/16549716.2021.2015743. PMID: 35114900; PMCID: PMC8820809.

Zaveri S, Romanoff A, Hirt L, Thompson L, Pisapati KV, Weltz C, Schmidt H, Port E. Choice of Mastectomy May Increase the Extent of Axillary Surgery in Women with Breast Cancer. Am Surg. 2022 Nov;88(11):2686-2694. doi: 10.1177/00031348221074236. Epub 2022 Jan 26. PMID: 35081002.

O'Shea AMJ, Baum A, Haraldsson B, Shahnazi A, Augustine MR, Mulligan K, Kaboli PJ. Association of Adequacy of Broadband Internet Service With Access to Primary Care in the Veterans Health Administration Before and During the COVID-19 Pandemic. JAMA Netw Open. 2022 Oct 3;5(10):e2236524. doi: 10.1001/jamanetworkopen.2022.36524. PMID: 36251295; PMCID: PMC9577674.

Zaveri S, Romanoff A. ASO Author Reflections on "Racial Disparities in Time to Treatment Persist in the Setting of a Comprehensive Breast Center". Ann Surg Oncol. 2022 Oct;29(11):6704. doi: 10.1245/s10434-022-12024-y. Epub 2022 Jun 22. PMID: 35731359.

Zaveri S, Nevid D, Ru M, Moshier E, Pisapati K, Reyes SA, Port E, Romanoff A. Racial Disparities in Time to Treatment Persist in the Setting of a Comprehensive Breast Center. Ann Surg Oncol. 2022 Oct;29(11):6692-6703. doi: 10.1245/ s10434-022-11971-w. Epub 2022 Jun 13. PMID: 35697955.

Zaveri S, Nevid D, Ru M, Moshier E, Pisapati K, Reyes SA, Port E, Romanoff A. ASO Visual Abstract: Racial Disparities in Time to Treatment Persist in the Setting of a Comprehensive Breast Center. Ann Surg Oncol. 2022 Oct;29(11):6705. doi: 10.1245/s10434-022-12114-x. PMID: 35902501. Maskew M, Technau K, Davies MA, Vreeman R, Fox MP. Adolescent retention in HIV care within differentiated servicedelivery models in sub-Saharan Africa. Lancet HIV. 2022 Oct;9(10):e726-e734. doi: 10.1016/S2352-3018(22)00137-0. Epub 2022 Sep 8. PMID: 36088915.

Griffee K, Martin R, Chory A, Vreeman R. A Systematic Review of Digital Interventions to Improve ART Adherence among Youth Living with HIV in sub-Saharan Africa. AIDS Res Treat. 2022 Sep 26;2022:9886306. doi: 10.1155/2022/9886306. PMID: 36199816; PMCID: PMC9529528.

Nyandiko W, Chory A, Baum A, Aluoch J, Ashimosi C, Scanlon M, Martin R, Wachira J, Beigon W, Munyoro D, Apondi E, Vreeman R. Multi-media teacher training and HIV-related stigma among primary and secondary school teachers in Western Kenya. AIDS Care. 2022 Sep 5:1-8. doi: 10.1080/09540121.2022.2119473. Epub ahead of print. PMID: 36062364.

Ballard M, Odera M, Bhatt S, Geoffrey B, Westgate C, Johnson A. Payment of community health workers. Lancet Glob Health. 2022 Sep;10(9):e1242. doi: 10.1016/S2214-109X(22)00311-4. PMID: 35961344.

Lim SW, Brown N, Lee D, Smith D, Silver EJ. Associations of Pediatric Symptom Checklist Scores with Sexual Activity and Sexually Transmitted Infections in Urban Adolescents. J Health Care Poor Underserved. 2022 Aug;33(3):1543-1554. doi: 10.1353/hpu.2022.0128. PMID: 36245179.

Embleton L, Logie CH, Ngure K, Nelson L, Kimbo L, Ayuku D, Turan JM, Braitstein P. Intersectional Stigma and Implementation of HIV Prevention and Treatment Services for Adolescents Living with and at Risk for HIV: Opportunities for Improvement in the HIV Continuum in Sub-Saharan Africa. AIDS Behav. 2022 Jul 30. doi: 10.1007/s10461-022-03793-4. Epub ahead of print. PMID: 35907143.

Choudhury N, Tiwari A, Wu WJ, Bhandari V, Bhatta L, Bogati B, Citrin D, Halliday S, Khadka S, Marasini N, Pandey S, Ballard M, Rayamazi HJ, Sapkota S, Schwarz R, Sullivan L, Maru D, Thapa A, Maru S. Comparing two data collection methods to track vital events in maternal and child health via community health workers in rural Nepal. Popul Health Metr. 2022 Jul 27;20(1):16. doi: 10.1186/s12963-022-00293-4. PMID: 35897038; PMCID: PMC9327361.

Olaniran A, Briggs J, Pradhan A, Bogue E, Schreiber B, Dini HS, Hurkchand H, Ballard M. Stock-outs of essential medicines among community health workers (CHWs) in low- and middle-income countries (LMICs): a systematic literature review of the extent, reasons, and consequences. Hum Resour Health. 2022 Jul 15;20(1):58. doi: 10.1186/s12960-022-00755-8. PMID: 35840965; PMCID: PMC9287964

McCarthy K, Maru S, Nowlin S, Ram P, Glazer KB, Janevic T. The validity of self-reported SARS-CoV-2 results among postpartum respondents. Paediatr Perinat Epidemiol. 2022 Jul;36(4):518-524. doi: 10.1111/ppe.12874. Epub 2022 Mar 7. PMID: 35257392; PMCID: PMC9115458.

Posada R, Waldman R, Chory A, Martin R, Cohen A, Chiacchia S, Childs J, Enane LA, Vreeman R. Longitudinal impacts of the COVID-19 pandemic on adolescents living with HIV in New York City. AIDS Care. 2022 Jun 27:1-5. doi: 10.1080/09540121.2022.2090491. Epub ahead of print. PMID: 35761785.

Toromo JJ, Apondi E, Nyandiko WM, Omollo M, Bakari S, Aluoch J, Kantor R, Fortenberry JD, Wools-Kaloustian K, Elul B, Vreeman RC, Enane LA. "I have never talked to anyone to free my mind" - challenges surrounding status disclosure to adolescents contribute to their disengagement from HIV care: a qualitative study in western Kenya. BMC Public Health. 2022 Jun 4;22(1):1122. doi: 10.1186/s12889-022-13519-9. PMID: 35658924; PMCID: PMC9167528.

Ngwa W, Addai BW, Adewole I, Ainsworth V, Alaro J, Alatise OI, Ali Z, Anderson BO, Anorlu R, Avery S, Barango P, Bih N, Booth CM, Brawley OW, Dangou JM, Denny L, Dent J, Elmore SNC, Elzawawy A, Gashumba D, Geel J, Graef K, Gupta S, Gueye SM, Hammad N, Hessissen L, Ilbawi AM, Kambugu J, Kozlakidis Z, Manga S, Maree L, Mohammed SI, Msadabwe S, Mutebi M, Nakaganda A, Ndlovu N, Ndoh K, Ndumbalo J, Ngoma M, Ngoma T, Ntizimira C, Rebbeck TR, Renner L, Romanoff A, Rubagumya F, Sayed S, Sud S, Simonds H, Sullivan R, Swanson W, Vanderpuye V, Wiafe B, Kerr D. Cancer in sub-Saharan Africa: a Lancet Oncology Commission. Lancet Oncol. 2022 Jun;23(6):e251-e312. doi: 10.1016/S1470-2045(21)00720-8. Epub 2022 May 9. PMID: 35550267; PMCID: PMC9393090.

Humphrey J, Triedman M, Nyandiko W, Sang E, Kemboi E, Alera M, Novitsky V, Manne A, Jepkemboi E, Orido M, Apondi E, Vreeman R, Wools-Kaloustian K, Kantor R. A Challenging Knowledge Gap: Estimating Modes of HIV Acquisition Among Adolescents Entering HIV Care During Adolescence. Glob Pediatr Health. 2022 May 31;9:2333794X221101768. doi: 10.1177/2333794X221101768. PMID: 35664047; PMCID: PMC9160889.

Bogaert K, Kaplowitz E, Wagner S, Carroll-Bennett R, Fernando D, McVane B, Maru S. Gynecologic care utilization in asylum-seeking women in New York City. J Migr Health. 2022 May 29;6:100116. doi: 10.1016/j.jmh.2022.100116. PMID: 35677659; PMCID: PMC9168178.

Ballard M, Olsen HE, Millear A, Yang J, Whidden C, Yembrick A, Thakura D, Nuwasiima A, Christiansen M, Ressler DJ, Omwanda WO, Lassala D, Palazuelos D, Westgate C, Munyaneza F. Continuity of community-based healthcare provision during COVID-19: a multicountry interrupted time series analysis. BMJ Open. 2022 May 11;12(5):e052407. doi: 10.1136/bmjopen-2021-052407. PMID: 35545397; PMCID: PMC9096055.

Oduro AR, Francke J, Ansah P, Jackson EF, Wak G, Phillips JF, Haykin LA, Azongo D, Bawah AA, Welaga P, Hodgson A, Aborigo R, Heller DJ. Social and demographic correlates of cardiovascular mortality in the Kassena-Nankana districts of Ghana: a verbal post-mortem analysis. Int J Epidemiol. 2022 May 9;51(2):591-603. doi: 10.1093/ije/dyab244. PMID: 34957517; PMCID: PMC9308395.

Ballard M, Johnson A, Mwanza I, Ngwira H, Schechter J, Odera M, Mbewe DN, Moenga R, Muyingo P, Jalloh R, Wabwire J, Gichaga A, Choudhury N, Maru D, Keronyai P, Westgate C, Sapkota S, Olsen HE, Muther K, Rapp S, Raghavan M,

Lipman-White K, French M, Napier H, Nepomnyashchiy L. Community Health Workers in Pandemics: Evidence and Investment Implications. Glob Health Sci Pract. 2022 Apr 29;10(2):e2100648. doi: 10.9745/GHSP-D-21-00648. PMID: 35487542; PMCID: PMC9053152.

Manne A, DeLong A, Nyandiko W, DeLong AK, Vreeman R, Novitsky V, Ngeresa A, Sang E, Chory A, Aluoch J, Jepkemboi E, Orido M, Ashimosi C, Sang F, Hogan JW, Kantor R; RESPECT (Resistance in a Pediatric Cohort) Study. Real-Life Feasibility of HIV Drug Resistance Testing Using Dried Filter Analytes in Kenyan Children and Adolescents Living with HIV. Microbiol Spectr. 2022 Apr 27;10(2):e0267521. doi: 10.1128/spectrum.02675-21. Epub 2022 Apr 7. PMID: 35389242; PMCID: PMC9045389.

Knapp GC, Wuraola FO, Olasehinde O, Romanoff A, Kingham PT, Alatise OI. The out-of-pocket cost of breast cancer care at a public tertiary care hospital in Nigeria: an exploratory analysis. Pan Afr Med J. 2022 Apr 5;41:272. doi: 10.11604/pamj.2022.41.272.24610. PMID: 35784593; PMCID: PMC9206173.

Oyungu E, El Kebbi O, Vreeman R, Nyandiko W, Monahan PO, Tu W, Khaitan A, Desta Z, Slogrove AL, Humphrey JM, Were E, Patel RC, Carlucci JG, Wools-Kaloustian K, McHenry MS. Predicting neurodevelopmental risk in children born to mothers living with HIV in Kenya: protocol for a prospective cohort study (Tabiri Study). BMJ Open. 2022 Apr 4;12(4):e061051. doi: 10.1136/bmjopen-2022-061051. PMID: 35379648; PMCID: PMC8981283.

Mango VL, Olasehinde O, Omisore AD, Wuraola FO, Famurewa OC, Sevilimedu V, Knapp GC, Steinberg E, Akinmaye PR, Adewoyin BD, Romanoff A, Castle PE, Alatise O, Kingham TP. The iBreastExam versus clinical breast examination for breast evaluation in high risk and symptomatic Nigerian women: a prospective study. Lancet Glob Health. 2022 Apr;10(4):e555-e563. doi: 10.1016/S2214-109X(22)00030-4. PMID: 35303464; PMCID: PMC9102465.

Embleton L, Wachira J, Kiplagat J, Shah P, Blackwell-Haride V, Gayapersad A, et al. An intersectional analysis of sociocultural identities and gender and health inequities among children and youth in street situations in western Kenya. International Journal on Homelessness. 2022 Mar 31;2(2):133-51. doi: 10.5206/ijoh.2022.1.13716. Enane LA, Apondi E, Liepmann C, Toromo JJ, Omollo M, Bakari S, Scanlon M, Wools-Kaloustian K, Vreeman RC. 'We are not going anywhere': a qualitative study of Kenyan healthcare worker perspectives on adolescent HIV care engagement during the COVID-19 pandemic. BMJ Open. 2022 Mar 30;12(3):e055948. doi: 10.1136/bmjopen-2021-055948. PMID: 35354627; PMCID: PMC8968109.

Bozack A, Pierre S, DeFelice N, Colicino E, Jack D, Chillrud SN, Rundle A, Astua A, Quinn JW, McGuinn L, Yang Q, Johnson K, Masci J, Lukban L, Maru D, Lee AG. Long-Term Air Pollution Exposure and COVID-19 Mortality: A Patient-Level Analysis from New York City. Am J Respir Crit Care Med. 2022 Mar 15;205(6):651-662. doi: 10.1164/rccm.202104-0845OC. PMID: 34881681.

Deathe AR, Oyungu E, Ayaya SO, Ombitsa AR, McAteer CI, Vreeman RC, McHenry MS. Preventive Health Service Coverage Among Infants and Children at Six Maternal-Child Health Clinics in Western Kenya: A Cross-Sectional Assessment. Matern Child Health J. 2022 Mar;26(3):522-529. doi: 10.1007/s10995-021-03271-8. Epub 2021 Oct 29. PMID: 34714463.

Collaborative Initiative for Paediatric HIV Education and Research (CIPHER) Global Cohort Collaboration, Jesson J, Crichton S, Quartagno M, Yotebieng M, Abrams EJ, Chokephaibulkit K, Le Coeur S, Aké-Assi MH, Patel K, Pinto J, Paul M, Vreeman R, Davies MA, Ben-Farhat J, Van Dyke R, Judd A, Mofenson L, Vicari M, Seage G 3rd, Bekker LG, Essajee S, Gibb D, Penazzato M, Collins IJ, Wools-Kaloustian K, Slogrove A, Powis K, Williams P, Matshaba M, Thahane L, Nyasulu P, Lukhele B, Mwita L, Kekitiinwa-Rukyalekere A, Wanless S, Goetghebuer T, Thorne C, Warszawski J, Galli L, van Rossum AMC, Giaquinto C, Marczynska M, Marques L, Prata F, Ene L, Okhonskaya L, Navarro M, Frick A, Naver L, Kahlert C, Volokha A, Chappell E, Pape JW, Rouzier V, Marcelin A, Succi R, Sohn AH, Kariminia A, Edmonds A, Lelo P, Lyamuya R, Ogalo EA, Odhiambo FA, Haas AD, Bolton C, Muhairwe J, Tweya H, Sylla M, D'Almeida M, Renner L, Abzug MJ, Oleske J, Purswani M, Teasdale C, Nuwagaba-Biribonwoha H, Goodall R, Leroy V. Growth and CD4 patterns of adolescents living with perinatally acquired HIV worldwide, a CIPHER cohort collaboration analysis. J Int AIDS Soc. 2022 Mar;25(3):e25871. doi: 10.1002/jia2.25871. PMID: 35255197; PMCID: PMC8901148.

Nyandiko W, Holland S, Vreeman R, DeLong AK, Manne A, Novitsky V, Sang F, Ashimosi C, Ngeresa A, Chory A, Aluoch J, Orido M, Jepkemboi E, Sam SS, Caliendo AM, Ayaya S, Hogan JW, Kantor R; Resistance in a Pediatric Cohort (RESPECT) Study. HIV-1 Treatment Failure, Drug Resistance, and Clinical Outcomes in Perinatally Infected Children and Adolescents Failing First-Line Antiretroviral Therapy in Western Kenya. J Acquir Immune Defic Syndr. 2022 Feb 1;89(2):231-239. doi: 10.1097/QAI.00000000002850. PMID: 34723922; PMCID: PMC8752470.

Wilkinson R, Garden E, Nanyonga RC, Squires A, Nakaggwa F, Schwartz JI, Heller DJ. Causes of medication nonadherence and the acceptability of support strategies for people with hypertension in Uganda: A qualitative study. Int J Nurs Stud. 2022 Feb;126:104143. doi: 10.1016/j.ijnurstu.2021.104143. Epub 2021 Nov 28. PMID: 34953374.

Myers C, Apondi E, Toromo JJ, Omollo M, Bakari S, Aluoch J, Sang F, Njoroge T, Morris Z, Kantor R, Braitstein P, Nyandiko WM, Wools-Kaloustian K, Elul B, Vreeman RC, Enane LA. "Who am I going to stay with? Who will accept me?": family-level domains influencing HIV care engagement among disengaged adolescents in Kenya. J Int AIDS Soc. 2022 Feb;25(2):e25890. doi: 10.1002/jia2.25890. PMID: 35192747; PMCID: PMC8863355.

Callen G, Chory A, Sang F, Munyoro D, Aluoch J, Scanlon M, Enane L, McHenry M, Wools-Kaloustian K, Apondi E, Vreeman R. A Qualitative Examination of Perceived Stigma and its Sources Among Adolescents Living With HIV in Western Kenya. Glob Pediatr Health. 2022 Jan 6;9:2333794X211065335. doi: 10.1177/2333794X211065335. PMID: 35024383; PMCID: PMC8744199.

Oliver K, Raut A, Pierre S, Silvera L, Boulos A, Gale A, Baum A, Chory A, Davis NJ, D'Souza D, Freeman A, Goytia C, Hamilton A, Horowitz C, Islam N, Jeavons J, Knudsen J, Li S, Lupi J, Martin R, Maru S, Nabeel I, Pimenova D, Romanoff A, Rusanov S, Schwalbe NR, Vangeepuram N, Vreeman R, Masci J, Maru D. Factors associated with COVID-19 vaccine receipt at two integrated healthcare systems in New York City: a cross-sectional study of healthcare workers. BMJ Open. 2022 Jan 6;12(1):e053641. doi: 10.1136/bmjopen-2021-053641. PMID: 34992113; PMCID: PMC8739539

Martin R, Ashimosi C, Nyandiko W, Chory A, Aluoch J, Scanlon M, Vreeman R. A systematic review of interventions to reduce HIV-related stigma among primary and secondary school teachers. AIDS Care. 2022 Jan;34(1):1-6. doi: 10.1080/09540121.2021.1960264. Epub 2021 Jul 30. PMID: 34330183; PMCID: PMC8758510.

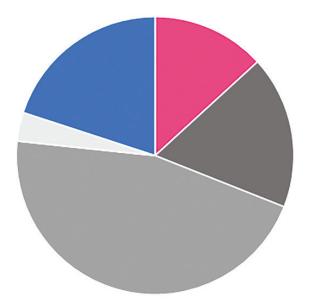
Chory A, Callen G, Nyandiko W, Njoroge T, Ashimosi C, Aluoch J, Scanlon M, McAteer C, Apondi E, Vreeman R. A Pilot Study of a Mobile Intervention to Support Mental Health and Adherence Among Adolescents Living with HIV in Western Kenya. AIDS Behav. 2022 Jan;26(1):232-242. doi: 10.1007/s10461-021-03376-9. Epub 2021 Jul 22. PMID: 34292429; PMCID: PMC8295454.

Annual Budget and Giving

Annual Budget

In 2022, AIGH continued to build support for its efforts with nearly US\$ 3.9 million in new sponsored awards. Overall, between our endowment, sponsored

programs, and generous donor support, we maintained a total portfolio of US\$23 million to support our care, education, and research initiatives.



Funding Total= \$23 Million USD

- Endowment, 46%
- Institutional Consulting Revenue, 20%
- Gifts and Others, 18%
- Sponsored Projects, 13%
- MSSM Internal Support, 3%

If you are interested in making a global impact, please click the link below to donate!

http://giving.mountsinai.org/goto/AIGHFund





Icahn School of Medicine at **Mount** Sinai

Arnhold Institute for Global Health

Arnhold Institute for Global Health

1216 Fifth Avenue Fifth Floor, Room 556 New York, NY 10029

Tel: 212-824-7950 arnholdInstitute@mssm.edu www.arnholdinstitute.org