The Director’s Column

Dr. Nils Hennig, Program Director

A Happy New Year and a heartfelt welcome to our new students.
You are most welcome! The Graduate Program in Public Health at the Icahn School of Medicine at Mount Sinai is dedicated to improving the health of communities and individuals and is based on the core values of community, sound science, diversity, social justice and engagement.

I am excited to share with you this new issue of The Scoop. Learn about how our students and partners care and are promoting public health and our core values. Our NGO partner at Soft Power Health describes the threat of development to the communities and the fragile ecosystem of the White Nile in Uganda; one of our students writes about her prevention work on diarrheal illness in rural Uganda; another student reflects on addressing child malnutrition in Haiti; learn about our program’s new offering in environmental exposures, risk and public health; get some insight on the Delivery System Reform Incentive Payment Program (DSRIP); learn about Mount Sinai’s Lab100 – a cross between a wellness center and data collecting software; and review our first annual Public Health Professional Development Conference and the latest Public Health Grand Rounds focusing on Native American health and sovereignty.

At the end of 2018, the National Center for Health Statistics reported that, between 2016 and 2017, US life expectancy continues to fall, making it the third consecutive year the US has seen a decrease in life expectancy. Drug overdoses and increasing inequality are the main drivers of this trend. Reflecting on the last year, we have seen multiple additional threats to the public’s health from the current administration. It is actively rolling back policies that aim to curb climate change and limit environmental pollution, and generally threatens to cut federal funding for science and the environment. The administration is naming to the courts opponents of reproductive freedom, food safety, workers’ rights, gun safety and other important public health issues. On our southern border it has created a separation crisis, threatening the well-being of migrant families. On a global level, the current administration tried unsuccessfully to block a World Health Assembly resolution encouraging governments to promote breastfeeding among their citizens. In addition, it intended to remove from the resolution language recommending that countries curb the promotion of food products that may undermine the health of young children, and threatened the resolution’s sponsor, Ecuador, with economic punishment if the changes were not approved. (It is only a few years ago that the Surgeon General’s Call to Action to Support Breastfeeding reviewed the data on the practice and concluded: “Breast milk is uniquely suited to the human infant’s nutritional needs and is a live substance with unparalleled immunological and anti-inflammatory properties that protect against a host of illnesses and diseases for both mothers and children.” A 2016 Lancet study found that universal breastfeeding would save the lives of more than 800,000 children a year, and generate about $300 billion in savings from better economic outcomes and lower associated healthcare costs.)

This administration is prioritizing private interests over the public good, putting the interests of wealth and industry first. These greed-driven policies that attack the structures that keep our air and water clean, our workplaces safe, and our economy fair, have dire consequences for our health. Health is a product of our collective investment in improving the social, economic, and environmental conditions in which we live. When we neglect this investment and place the profits of a few over the well-being of all, we invite poor health for ourselves, our families and future generations.

My main goals for the new year are to continue to support our students in tackling the challenges of the present moment and provide them the tools needed to help create a more just society that generates health for all. There is plenty of work ahead.

At the end of 2018, the National Center for Health Statistics reported that, between 2016 and 2017, US life expectancy continues to fall, making it the third consecutive year the US has seen a decrease in life expectancy.
As a pathway to development, large hydro-dam projects in the developing world have received vast investment. Presently, the government of Uganda, with the support of the World Bank, is constructing a series of five large hydro-dams on the Nile. The second of these projects, known as The Isimba Dam, is nearing completion.

Historically, countries building large dams are laden with enormous debt that they can never repay. An Oxford University study of 235 large-scale hydroelectric projects built since 1934 revealed average cost overruns of 90%. Countries like Uganda rely on the World Bank and recently, China, for financing these dams. But once built, these projects struggle to generate enough money to repay the debt they create. Numerous examples of these failures dot the landscape throughout Africa, South America, China, and Indonesia. Uganda’s experience with the Bujagali Dam (completed 2012) and now Isimba, has put them on this path. Currently over-budget and behind its projected completion date, Isimba has been plagued by poor construction, improper materials and staffing problems.

In one of the great ironies of development, the electricity generated by these mega dams is rarely affordable for those who are most in need. Instead, it is exported and sold as profit for the government and dam financiers.

It has been well-documented that reservoirs formed by large dams in sub-Saharan Africa increase malaria rates in surrounding areas. In Uganda, malaria is the biggest infectious disease killer in the country. Over-burdened Ugandan hospitals are swamped with cases of malaria, and the disease kills more pregnant women and children under five than any other. Dams like Isimba are massive reservoirs, providing ample breeding grounds for mosquitoes that carry malaria.

Hydro-dam projects in Africa also increase the burden of schistosomiasis, a parasitic infection that relies on human and snail hosts to complete its life cycle. Schistosomiasis is found throughout the Nile River, where local people come to bathe, wash clothes, collect drinking water and swim. Schistosomiasis, like malaria, may be fatal if untreated. Unlike malaria it has a slow, insidious and debilitating progression, principally infecting the liver, before ending in death.

With the completion of the Isimba Dam, rates of malaria and schistosomiasis will skyrocket in a portion of Uganda’s most in-need population as well: rural poor residents already suffering from malnutrition. Increasing the burden of these diseases in people suffering with malnutrition will have disastrous consequences on their ability to survive.

Of the 33,000 people treated last year at the Soft Power Health Clinic I founded and have run since 2006, 20% of the patients had malaria, schistosomiasis or malnutrition. Children are those most affected by malnutrition and malaria. Many of these patients come from areas soon to be flooded by Isimba.

Furthermore, these communities have received no compensation for their homes and livelihoods that are soon to be lost. Research shows that displaced people never recover their standard of living — even when compensated. These are the same people that the hydroelectric power generation is supposed to be helping develop. With no obvious positive benefit to the majority of Ugandans, and with the surety that many will be worse off after the dam, why is the World Bank continuing to push large dam projects?
Nama Wellness Community Center, NAWEC as known by the staff and residents, is located along with its sister organization, Komo Learning Center, in the village of Lukojjo, overlooking Kayunga Road. On the other side of the road is a steel-gated door, behind it — my home for two months. This past summer I worked with NAWEC as part of my Global Health Summer Experience. After days filled with public health training and work, I kept my eyes open. I spent my evenings sitting under a mango tree overlooking the side of the road people-watching.

Within a few days I noticed something perplexing. Why was I seeing people walking around with bright yellow plastic containers? How come I didn’t have this container? I saw women from the nearby stores coming to the back of my house, where my neighbors lived. Was it a social visit or something else? One evening, I saw a group of children walking on the side of the road, laughing and carrying yellow containers. I started asking questions and quickly figured out what was going on. The containers, called jerry cans, originally filled with cooking oil, were repurposed for water transport and storage. I had completely missed this essential component of the lives of mostly everyone around me because, due to the rare internal supply of water that we had at our home, I was not experiencing this myself.

In Uganda, about 21 million people living in small towns and rural areas lack access to clean drinking water. A person with limited or no access to quality water, usually from a protected borehole well or municipal supply, will have to go to other sources—such as surface water, unprotected contaminated wells, or vendors selling water of unknown quality. Unsafe practices are widespread, and have an especially devastating effect on child mortality. My supervisor explained that there were many pediatric patients showing at the clinic for diarrhea and dehydration. Was there a connection between quality of drinking water and diarrheal illness? One of the most common causes of diarrhea in infants and young children is rotavirus. It accounts for more than a third of diarrhea deaths in children younger than five years worldwide, with more than half of these deaths in sub-Saharan Africa. A new rotavirus vaccine had just been approved by the Ministry of Health to be distributed by NAWEC, and I had the opportunity to investigate. I conducted a baseline survey to assess the need for the rotavirus vaccine within Nama Sub

Save the White Nile (continued from page 2)

Brazil’s decision halting its Amazon River mega hydro-dam should show the World Bank and the government of Uganda a new way forward. As the equator runs through Uganda, Uganda could concentrate on developing solar energy fields as an affordable alternative to hydropower.

Last year, the World Bank agreed to let the protected Kalagala Offset Area be flooded by Isimba’s reservoir. This unique cultural, spiritual, and biodiverse area on the Nile was created by the World Bank and the government of Uganda in order to move forward with hydroelectric plans. Once gone, it will be irreplaceable.

The time has come for the World Bank to stop financing catastrophic hydro-projects and honor its original charter to lift at-risk populations out of poverty, enabling them to lead healthy and productive lives. In Uganda, they must responsibly compensate these vulnerable populations. If the World Bank won’t stand for the defenseless, who will?

Visit www.savethewhitenile.org, click on the petition, and let your views be known. You will be standing for the thousands that have no voice.
I was born in Haiti, on a small farm where I lived with my grandparents. I speak the languages and understand what it means to live below the poverty line. We had limited resources and lacked the necessities, but my grandmother managed to feed us and her neighbors. Fast-forward seventeen years: my parents and I immigrated to the United States for a better life. Unfortunately, through the years, I have had to watch, often helplessly and from a distance, as natural and man-made calamities made the people in my birth country suffer. Today, Haiti is the poorest country in the Western Hemisphere. Food is scarce and residents suffer from extremely high infant and maternal mortality rates.

After the 2010 earthquake, I went home to visit my country and witness the aftermath. There, I noticed a woman with a shawl wrapped around her body, walking toward my grandmother’s shack. I became curious and followed her inside. She had come to pick some vegetables my grandmother had planted in the garden. She turned around, surprised to see me. “My goodness! Look how tall you’ve grown,” she said. I smiled and hugged her, noticing the small baby swaddled in the shawl.

Marie is a mother of seven kids — three of whom are not her biological children. She was taking care of them because her friend trusted her to do so shortly after her death. Marie confided in me about the struggles to feed and maintain the health of her children. She explained that there were hundreds of women in her position — uncertain of when their next meal will be. I had the pleasure of meeting these women, who lived in an enclosed corridor protected by a piece of bed sheet, functioning as the door. The women said they rely on the unpredictable rainy season and never lose faith in God.

According to the United States Agency for International Development, 22%, or 264,000 Haitian children under five years, suffer from chronic malnutrition (stunting or low height-for-age) and 66 percent, or 792,000 children under five years, suffer from anemia. The country’s political instability and intense poverty leave the residents vulnerable to disasters. The poor infrastructure, food insecurity, natural disasters and burden of communicable infections continue to put Haitians at risk for acute and chronic malnutrition.

The mothers that I saw were clearly struggling, in a way not unlike my grandmother had, years earlier working hard to ensure that I was fed on that small farm. The women of my homeland of Haiti often feel beholden to the despair of malnutrition, unsure of what more to do than hold and comfort their own children, and the children who have already lost their own mothers. It is therefore our duty, as global public health practitioners, to recognize this long-standing issue and continue to tackle it, aiming for improvement and a well-fed population.

In light of Governor Andrew Cuomo’s declaration of Children’s Environmental Health Day on October 11th, the call for understanding environmental health risks is greater than ever. Open to all MPH students, MPH 0516 Environmental Exposures, Risk and Public Health in the Spring II term, will explore occupational and environmental exposure assessment and risk assessment — important topics for the practice of environmental public health.

Environmental pediatrician Lauren Zajac, MD, MPH, FAAP and exposure scientist Homero Harari, ScD, MSc, provide an innovative approach to learning. Lectures focus on community and occupational case studies of environmental exposures, and also include guest speakers from agencies such as the Environmental Protection Agency and the New York City Department of Health. The class delves into explaining how common environmental exposures are identified and measured, and emphasizes the importance of communicating that risk with communities. Students will have the opportunity to review current and relevant exposure scenarios (such as workplaces or community pollution sources) and apply the skills learned through interactive discussions and problem-based assignments.

This combined instruction provides a comprehensive methodology to study environmental health. Moreover, these skills can be translated into a range of Applied Practice Experience opportunities from the World Trade Center study to the New York City Department of Health. Join the course to strengthen your knowledge and understanding of the study of environmental health. These skills will serve as an essential tool in any field!
The Annual Meeting of the American Public Health Association

By Elisabeth Brodbeck, MPH, MA, Associate Director of the Graduate Program in Public Health

The American Public Health Association, the largest membership organization representing the public health profession, hosts its annual meeting once a year in November. More than 15,000 APHA members, including faculty, students, staff, and alumni gather to share new research and trends in public health in over 1,000 different scientific sessions. Additionally, over 700 exhibitors represent various arenas of public health, including representatives from schools and programs of public health. This is an opportune time to learn about best practices, advocate for evidence-based policy, and network with peers. Our program is pleased to have a growing number of its own students, alumni and faculty presenting work in areas such as the mass distribution of insecticidal nets in Uganda and the impact of active design in affordable housing. Two MPH students were also included in APHA’s Student Leadership Institute, two full days of programming dedicated to developing leadership skills in the field. The Program also hosted a networking reception for all Mount Sinai attendees at APHA. We hope more of you will join us next year.

For the last two years I have had the pleasure of serving as one of the representatives to the Governing Council for the Public Health Social Work section. As the representative legislative body of APHA, the Governing Council serves to establish policies and act upon recommendations from the larger organization’s committees and Executive Board. In an effort to advocate for policies across the public health spectrum and to affect change at the national level, APHA releases policy statements to guide the organization. The Governing Council is asked to consider these policy statements using evidence-based and scientific methods of evaluation and vote upon these statements to form APHA’s policy. Additionally, one of the tasks each year is for voting councilor members to decide the theme for future meetings. The 2019 Annual Meeting in Philadelphia will be themed “Creating the Healthiest Nation: For science. For action. For health.” After much debate and narrowing down of ideas, we can expect the Annual Meeting in 2020 in San Francisco to tackle the themes of violence as a public health issue — a critically important and historically underrepresented area of research and practice in our field. We are excited to see the works presented on these topics. Get those abstracts ready!

In the meantime, check out what some of our students have to say about their experience at this year’s conference!

Highlights

“One aspect of APHA that I found surprising was the large number of students who attended. This made me realize that you’re never too young to do research, speak at conferences, bounce ideas off of colleagues, and most importantly, make a difference. Although there were thousands of people at APHA, I never felt overwhelmed or alone at any point. I felt comfortable, and confident that I was part of a like-minded community with similar values and goals. It’s one thing to experience that in a 15-20-person Mount Sinai classroom; it’s another to feel it in a crowded convention hall.” — Erica Palladino, second-year student in the Health Promotion and Disease Prevention Track

“I was able to hear a talk from Aaron Bruce, PhD, Chief Diversity Officer at San Diego State University, who spoke about cultural competence in public health. Because public health isn’t so much of a direct-service type of field, cultural competence isn’t spoken about as much as it would be in similar fields like social work. Regardless of whether or not you are working directly with people, it is definitely important to keep a lens on understanding others’ beliefs and ideas prior to imposing your own. This was an important talk for me to hear because I learned about insecurities regarding cultural competence that professionals were facing, and the discussion ensured that these concerns were addressed.” — Vaidehi Jokhakar, second-year MSW-MPH student in the Global Health Track
DSRIP

By Rachel Rudich, MPH Student in the Health Care Management Track

Avoidable hospital visits and unnecessary emergency department visits are costly, inefficient, and debilitating for patients and healthcare providers alike. The New York State funded Delivery System Reform Incentive Payment Program, better known as DSRIP, has set out to fix this.

For the last four months, I have had the interesting opportunity to work with the Mount Sinai DSRIP team through Mount Sinai Health Partners (MSHP), the entity responsible for patients coming through the Mount Sinai Performing Provider System (PPS).

Our team traverses the network of Mount Sinai Hospitals, meeting with targeted high Medicaid volume practices to incentivize providers to improve proactive care. We build infrastructure to implement innovative programs that will improve population health. DSRIP’s overarching five-year $6.42 billion grant-funded goal (est. 2014) is to improve population and preventative health, thereby reducing avoidable hospital visits by 25%. Our team works to establish a sustainable model for decreased Emergency Department visits, appropriate screenings and use of primary care settings, in a preventive and proactive manner.

Working towards this goal, I had the opportunity to work on three more-specific summer-long projects. They include a utilization management reduction, best practices report for Medicaid patients in urban areas, a post- DSRIP environment analysis from other states, and a DSRIP P4P overview — relevant to providers who participate in the MSHP DSRIP implementation.

Although all are timely, utilization management (UM) has been the most relevant. Technology, as it is used by providers and patients, gains traction more slowly in healthcare than in other professional fields. The use of various technological improvements throughout the healthcare spectrum will improve communication between providers and patients and decrease hospitalization rates. MyChart, the online portal, live video conferencing, and remote patient monitoring are advancements providers are working towards utilizing, and will become the norm in healthcare one day, hopefully in the near future. Similar to the time period when doctors would come to your home for your convenience, doctors can do so again, this time through live videos or messaging through MyChart.

With a basic goal of decreasing hospital visits by 25%, DSRIP works within a complex network of providers, population health specialists and hospitals. This experience continues to provide me with a deeper understanding and appreciation for healthcare management, and the proactive measures that will improve population health for all.
It feels like a glorified apple store. The glass and bright screens surround you, reassuring the sense that you know who ever built this, what they call Lab100, could be as capable as Steve Jobs. When you realize that this space, quietly tucked away in the back of Mount Sinai’s Levy Library, is a new prototype of a doctor’s office, you will be intrigued.

On a hot August day, a kind manager, Sarah Pesce, greeted me by the green chairs of Levy Library and welcomed me into this boxed lab. I met Dr. David Stark, who speaks like he could be a savvy businessman, and his story indicates that, in many ways, he is. Trained as a pediatric neurologist at Harvard, and a data statistician at Stanford, Stark managed to combine his many skills into this one lab.

Lab100 is a cross between a wellness center and a data collecting software. Visitors, preferably not yet patients, enter the box and will meet the nurse practitioner, for a concierge type check-in on the iPad. The nurse practitioner will guide you through various stations. You will have your blood drawn, do a quick aptitude test, and then get scanned by the 3D body mass scanner. You will test your dexterity, flexibility, and balance. And then, by staring up at a wall of screens, that is not unlike a command center, you may find out that your sleep quality is poor or that you are consuming too much sodium and have lower than average balance. The charts displayed on the screen are easily comprehensible and include information on a spectrum, so that you can see how you compare to others — either boosting your ego, or encouraging you to make lifestyle changes.

The purpose of this tailored medicine is not to impress you, but rather to impress upon you the idea that health and wellbeing is a proactive measure. It is imperative to know where your body is lacking - if you need more vitamin C, or better sleep, or if your balance is poor and you are at increased risk of a fall. Lab100 is preventative health. It centers around the public health motive that citizens should be educated so that they do not have to be treated. The idea is to have a preventative health model.

The lab is built to be temporary - it can be dismantled like lego blocks and transported in its entirety, or selectively, to the next medical center or chosen location. The body mass scanner may stand on its own in a sports medicine center, or the blood pressure machine in a local pharmacy. The goal is to implement easily used machines in a wide variety of accessible locations. It can be an inexpensive but effective way to give, and receive information. All of the data that is received, can later be analyzed and used as an indicator of population health. Because it is all digitized, the lab serves as both an immediate service, and an incubator of survey data.

In one year, Dr. Stark built what he set out to do in three. The lab is up and running, though there is a waiting list to be seen. At the Gateway Seminar Conference: Innovation in Health Care Delivery, hosted by Mount Sinai on September 13, Stark requested collaboration. Oncologists and cardiologists asked how they could get involved. This is an exciting project, an unbaked, or partially baked cake. As Dr. Stark and the broader Sinai team connect over the shiny Lab100, there is so much in store for the field of preventative medicine.
Public Health Grand Rounds: The Transition of Tribal Sovereignty

The first talk in the Graduate Program in Public Health’s 2018-2019 Grand Rounds Series was given by Leander “Russ” McDonald, PhD, former Chairman of the Spirit Lake Nation and current President of United Tribes Technical College. His lecture focused on the multi-generational impact of federal assimilation policies on tribal sovereignty, educational services, and population health.

Student Advice Column

By Jennifer Trabucco, first-year MPH student

Remember that first day of high school? Undergrad... and now grad school? Living in a new place, new classes, and meeting new faculty and students can be daunting. And we only have two years to figure it out! To help guide us, I set out to answer some of the questions that first year students have been silently asking themselves since day one. Second year students Htut Naing Soe (Epidemiology Track) and Rachel Rudich (Health Care Management Track) share some answers.

Q: What advice would you give your first-year self?

Htut: Read research articles and learn more about methodology. I wish I applied to the HRTP program (internship from NYSDOH) after Spring I and II.

Rachel: You are more capable than you think. First trimester is the hardest, so don’t stress too far in advance about classes and capstone – if you think too far out, your focus shifts from the tasks currently on hand. Branch out, be open-minded, try an internship that you aren’t sure you’ll love; it may surprise you. Do things you never wanted to, or didn’t get the chance to do before. Go to any and every networking event, especially those run by Kelly Gentry. Go to your professors’ office hours.

Q: How did you find your Applied Practice Experience (APE) or internship?

Htut: I asked my mentor in the environmental health class about clinical research projects. She introduced me to another investigator and I found my APE. Find resources under the APE tab on Blackboard. Be proactive.

Rachel: I found my APE through Friday Finds. I found my current position through a peer who worked there prior to me. Speak to your peers who have interesting jobs and internships. Talk to your professors — they are a great resource.

Q: When should a first-year start thinking about the Culminating Experience?

Htut: You can start thinking about the Culminating Experience near the end of Spring II as you will have learned most of the study design, methods, and data analysis skills you need. For the Epidemiology track, if your APE yields good data, you may be able to build your Culminating Experience on the APE.

Rachel: I don’t think you can start thinking about it until after you do or while doing your APE. Finding an APE that you can create the Culminating Experience off of will make your life easier. Mine is not from my APE, but I have found my peers have had very insightful ideas they pulled from their APE. You will also have to take a capstone class your second year, and that’s when you solidify your topic and get started.