



FOGARTY INTERNATIONAL CENTER • NATIONAL INSTITUTES OF HEALTH • DEPARTMENT OF HEALTH AND HUMAN SERVICES

NIH requests input on climate change and health

Extreme weather events, rising sea levels and other aspects of climate change pose substantial threats to human health. Addressing these has been identified by the Biden Administration as an urgent priority that requires “a whole-of-government approach.” At the NIH, a working group has been meeting to consider how the agency can enhance research on the health implications of climate change in the U.S. and globally. More than nine Institutes, Centers and Offices are participating in the effort, which is co-chaired by NIEHS and Fogarty. The committee is inviting stakeholder input to inform the process.

In a Request for Information (RFI) published in the NIH Guide, respondents are asked to provide advice on six research priorities related to climate change and health—innovative approaches, scientific infrastructure, partnerships to address environmental injustice, rapid response capacity, training needs to build a diverse climate change and health research work force, and dissemination and translation of research findings into strategies that protect health.



The NIH is requesting advice on how to best advance six research priorities related to climate change and health.

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The RFI notes that climate change threats influence a broad range of health concerns including communicable and noncommunicable diseases, injuries, hazardous exposures, mental health and death. Some impacts are

immediate—from hurricanes, heat waves, floods and droughts—while others result from more gradual changes, such as rising sea levels. In the U.S. and globally, structural racism and discrimination place communities of color, under-resourced, health disparity populations and other historically disadvantaged communities at higher risk from the health impacts of climate change. Understanding the health implications—including potential health benefits—of actions to prevent, mitigate and adapt to climate change offers opportunities

to improve the social and environmental determinants of health, especially for at-risk communities.

Responses to the RFI must be e-mailed to NIEHS-RFI-CCHH@niehs.nih.gov by Sept. 17, 2021. The RFI is available at https://bit.ly/NIH_CChealth.

1.5M children have lost a caregiver to COVID-19

More than 1.5 million children around the world are estimated to have lost at least one parent, custodial grandparent, or grandparent who lived with them due to COVID-19-related deaths, according to a study published in *The Lancet*. The research—which covered the first 14 months of the pandemic—highlights orphanhood as an urgent and overlooked consequence of COVID-19 and emphasizes that providing evidence-based psychosocial

and economic support to children who have lost a caregiver must be a key part of responding to the pandemic.

The analysis used mortality and fertility data to model rates of COVID-19-associated orphanhood and deaths of custodial and co-residing grandparents from March 1, 2020 to April 30, 2021, across 21 countries. This study was funded in part by the NIH’s National Institute on Drug

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FOCUS



Scientists craft US-Latin American research agenda on child obesity

- Migration, exercise, food and social environments require study
- Better measurement tools and systems-based solutions are needed
- Research capacity, implementation science should be strengthened

Read more on pages 6 – 9

NIH awards \$100M for global HIV data analysis



The NIH has renewed grants to seven regional centers that form the International epidemiology Databases to Evaluate AIDS (IeDEA) program and plans to award about \$100 million in total over five years. The 15-year-old IeDEA program efficiently advances knowledge about HIV by pooling and analyzing de-identified health data from more than two million people with HIV on five continents to answer research questions that individual studies cannot address.

The program addresses local, national and global questions about illness and death in people with HIV to accelerate progress toward ending the pandemic. The initiative also provides data to international partners such as the WHO and UNAIDS to inform global health policy. In addition, IeDEA builds global health research infrastructure to help the next generation of scientists address questions important to their geographical regions. Finally, the program works to improve the quality of international health data by identifying gaps in both data

and analytical methods and determining how to fill them. The new funding will enable the program to add a Sentinel Research Network (SRN) to prospectively collect cardiovascular, cancer, lung, metabolic, substance use and mental health data to characterize the sizeable impact of noncommunicable diseases on people with HIV today. The program's Fogarty-IeDEA Mentorship Program will continue to help competitively selected early-stage investigators formulate hypotheses, conduct analyses, write papers and participate in scientific meetings.

Half of the new funding for IeDEA comes from the NIH's National Institute of Allergy and Infectious Diseases. The other half comes from NIH funding partners including Fogarty; the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development; the National Cancer Institute; the National Institute on Alcohol Abuse and Alcoholism; the National Institute of Diabetes and Digestive and Kidney Diseases; the National Institute on Drug Abuse; the National Heart, Lung, and Blood Institute; and the National Institute of Mental Health.

More information is available at IeDEA.org.

1.5M children have lost a caregiver to COVID-19

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Abuse (NIDA). Traumatic experiences, such as the loss of a parent or caregiver, are associated with increases in substance use, mental health conditions, and other behavioral and chronic health conditions. NIDA supports research aimed at understanding the impact of trauma on young people, preventing substance use after experiencing hardship and treating substance use in populations that experience trauma.

"Studies like this play a crucial role in illuminating the COVID-19 pandemic's long-lasting consequences for families and the future mental health and wellbeing of children across the globe," said NIDA Director Dr. Nora D. Volkow. "Though the trauma a child experiences after the loss of a parent or caregiver can be devastating, there are evidence-based interventions that can prevent further adverse consequences, such as substance use, and we must ensure that children have access to these interventions."

To estimate pandemic-associated orphanhood and caregiver deaths, the study used excess mortality and COVID-19 mortality data for 21 countries that accounted for 77% of global COVID-19 deaths during 2020 and early 2021. These include Argentina, Brazil, Colombia,

England and Wales, France, Germany, India, Iran, Italy, Kenya, Malawi, Mexico, Nigeria, Peru, Philippines, Poland, Russian Federation, South Africa, Spain, United States and Zimbabwe.

The authors estimate that 1,134,000 children lost a parent or custodial grandparent due to COVID-19-associated death. Of these, 1,042,000 children were orphaned of a mother, father or both. Overall, 1,562,000 children are estimated to have experienced the death of at least one parent or a custodial or other co-residing grandparent.

The countries with the highest numbers of children who lost primary caregivers include South Africa, Peru, United States, India, Brazil and Mexico. Countries with rates of COVID-19-associated deaths among primary caregivers greater than one per 1,000 children include Peru, South Africa, Mexico, Brazil, Colombia, Iran, United States, Argentina and Russia.

The study found that for every country, COVID-19 associated deaths were greater in men than women, particularly in middle- and older-ages. Overall, there were up to five times more children who lost a father than who lost a mother.

mHealth app reduces LMIC pregnancy, delivery risks

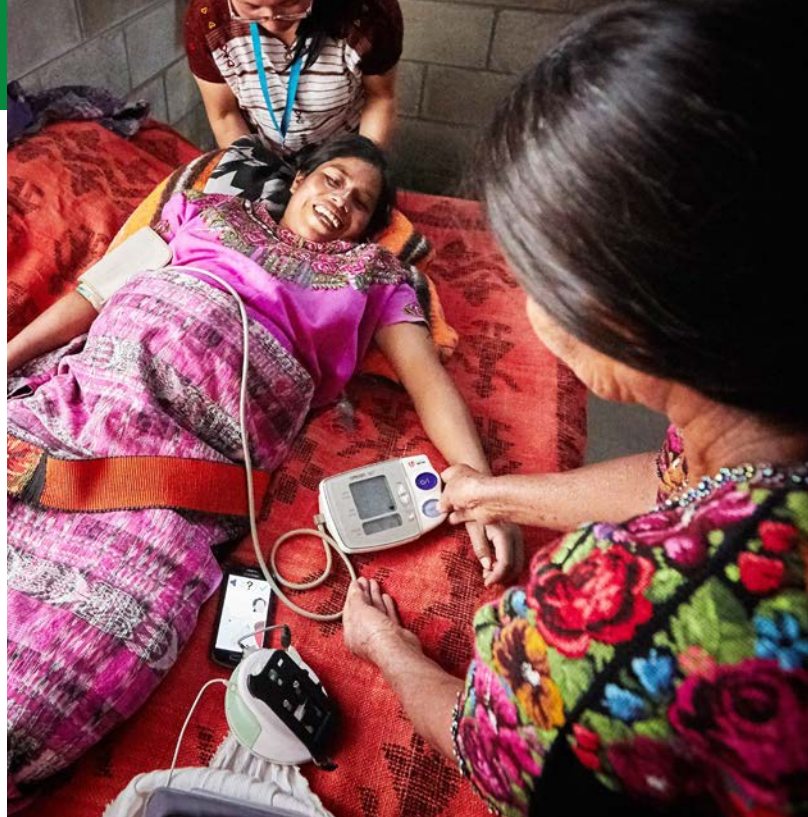
Pregnancy and childbirth are especially risky in rural Guatemala where about half of Indigenous Maya women deliver their babies at home with the assistance of midwives. With little capacity to screen for complications—combined with language issues and the systemic discrimination Maya women face navigating health care facilities—the result is higher maternal and infant mortality rates than elsewhere in the country.

NIH-funded researchers have developed and tested a mobile health solution that is helping to change that. By combining a \$10 ultrasound device, blood pressure cuff and pulse oximeter that feed directly into a smartphone, Emory University's Dr. Gari Clifford and colleagues have produced a screening and referral tool that enables midwives to spot issues and make referrals to health care facilities. Working closely with a local organization, the team developed an app to guide low-literacy midwives through a pictographic checklist of common complications. A positive indication triggers automatic communication with an on-call clinical team. Vital sign abnormalities also spur text message alerts. The app includes audio instructions for how to deal with different scenarios recorded in the local Kaqchikel language for those who cannot read.

During a one-year randomized control feasibility study involving about 800 pregnancies, use of the screening app resulted in “a significant increase” in emergency referrals to care facilities and demonstrated the technology was feasible for use in the low-resource setting. The results were so impressive, the tool has been adopted as standard of care and used in several thousand births over the last five years.

One recent patient diagnosed with pre-eclampsia by a midwife using the mHealth app said she owes her life to the program. Her midwife used the app to connect her with a care navigator from a local organization, who accompanied her to the hospital where she delivered a healthy baby via cesarean section.

The intervention's success is the result of close collaboration with the local organization, Wuqu' Kawoq (Maya Health Alliance). The Alliance recruited the necessary Guatemalan health care institutions and providers plus midwives to partner on the project. “Our work is important because we are one of the only groups to really understand the social determinants of health for Indigenous communities in rural Guatemala,” said Dr. Peter Rohloff, its chief medical officer and co-investigator. Throughout the study, he built these relationships, navigated the public health regulatory environment and facilitated the participation of the midwives in the design process.



NIH-funded researchers have developed and tested a mobile health screening tool in rural Guatemala that enables midwives to screen pregnant Maya women for complications and make referrals to health care facilities.

“We’re talking so much about decolonizing global health and shifting power dynamics and I think this is how you do it,” observed co-investigator Dr. Rachel Hall-Clifford, an anthropologist at Emory. “The co-design process—developing the program and the app with the women and implementing it—is so deeply meaningful and essential for creating sustainable programs.”

The project was largely funded by the *Eunice Kennedy Shriver* National Institute for Child Health and Human Development through Fogarty's mHealth program. Since 2013, Fogarty has been working to catalyze mHealth innovation through multidisciplinary research that addresses global health problems, develop an evidence base for mHealth and strengthen research capacity. In Guatemala, 44 midwives were trained to diagnose and monitor key pregnancy complications as defined by the WHO. Several personnel involved received mentorship in research study design, technology development and scientific writing.

The scientists believe the program could be scaled up across Guatemala and holds potential for other low-resource settings. The team is currently building a new collaboration with Morehouse School of Medicine to adapt the program to serve an African American population in Georgia. “In global health, we are eager to get stuff done and start saving lives,” noted Hall-Clifford. “But it's important to take a breath, and work with stakeholders to build long-term partnerships.”

RESOURCES

https://bit.ly/mHealth_births

PROFILE

Fogarty Fellow studies benefits of police education program in Tijuana, Mexico

Tijuana is a border city in Mexico with a thriving red-light district that is a popular destination for drug and sex tourists traveling from the U.S. This to-and-fro traffic has contributed to an HIV epidemic, with prevalence as high as 10% among people who inject drugs (PWID). Policing practices such as syringe confiscation and arrest can be significant drivers of infection risk, while police referrals to treatment and other services can improve health and reduce drug-related harm. An innovative police education program is attempting to protect officers from occupational needlestick injuries while simultaneously harmonizing law enforcement and public health priorities. During his Fogarty fellowship, Dr. Javier Cepeda began studying the program's results and evaluating whether changing policing practices through police education is cost effective, in terms of reducing HIV incidence. If so, he and his colleagues believe it may hold promise as a strategy to reduce HIV transmission among people who inject drugs in locations around the world.

Cepeda said he hopes his work will inform evidence-based decisions. "I thought economic modeling would be a really good way to bridge the science with policymaking." By providing a cost-effectiveness analysis, the public health value could be demonstrated. "You can make the logical argument that if you change policing behavior—so they're no longer confiscating syringes and instead referring people to drug treatment instead of prison—here's the impact you would have on HIV transmission, which would drop because drug users are no longer sharing syringes and can get treated for substance use," he noted. Policymakers can compare the cost of the intervention versus the disease burden if no action is taken.

As a first step, Cepeda and his colleagues conducted a baseline survey of 1,319 police officers who had reported syringe contact in Tijuana, where possession of syringes has never been illegal. Nearly half said they always or sometimes confiscated syringes, about 43% had made arrests for heroin possession and 37% had referred drug users to health and social programs. The officers' knowledge of drug laws was low, with more than a third incorrectly believing syringe possession was a criminal offense and nearly three-quarters unaware that possession of small amounts of heroin had been decriminalized.



Javier Cepeda, PhD, MPH

Fogarty Fellow:	2016-2017
US Institution:	University of California, San Diego
Foreign Institutions:	Xochicalco University and Secretario de Seguridad y Protección Ciudadana de Tijuana
Research area:	Cost analysis of a police education program

Cepeda said the mathematical modeling and economic evaluation skills he acquired during his Fogarty fellowship are now being applied to other settings. "For instance, in the U.S., there are interesting decriminalization proposals being discussed in Baltimore—if low-level drug offenders are no longer incarcerated, how much could be saved and spent on public health instead? The skills can be quite broadly applied, and that was very much thanks to Fogarty."

The fellowship also helped him develop as a manager, Cepeda observed. Overseeing his first independent research project was like running a small business. He is now applying those lessons learned in key leadership roles. In March 2021, he was appointed assistant professor at Johns Hopkins and serves on the *International Journal of Drug Policy's* editorial board and on the Lancet Commission on Health and Human Rights.

Using the Fogarty fellowship data and training as his foundation, Cepeda went on to secure funding from the NIH's National Institute on Drug Abuse (NIDA) to continue his work in Tijuana, which has also been supported by the NIH's National Institute of Allergy and Infectious Diseases. More recently, he has been funded by NIDA to study HIV stigma in Kyrgyzstan.

"It's important to step outside your comfort zone," he said, adding that he advises his mentees to apply for the year-long Fogarty Fellowship. "You'll be so much better as a researcher with more skills plus you'll become a more resilient person as well. When you're out in the field, you're driving a lot of the work and you have to learn how to be really independent."

RESOURCES

https://bit.ly/Cepeda_police

ANDREW KAMBUGU, MBCHB, MMED

Dr. Andrew Kambugu is the Sande-McKinnell Executive Director of the Infectious Disease Institute (IDI) in Kampala, Uganda. He is also honorary lecturer at Makerere University and associate professor at the University of Minnesota. Kambugu earned his basic and residency medical degree from Makerere with Fogarty support and then received advanced training in infectious disease research in the U.S. Since then, he has been a principal investigator on numerous NIH grants involving topics such as Kaposi's sarcoma and cervical cancer, in addition to a Fogarty training grant that is helping to enhance HIV research capacity in East Africa.



Tell us about your early career.

After five years of medical school and then my internship—all sponsored by the Ugandan government—I was surprised to find no openings for doctors in government departments, so I became a research assistant for projects at Makerere University. I was then selected as one of the first Ugandan trainees under Fogarty's AIDS International Training and Research Program (AITRP) grant and my life has never been the same. In life there are significant forks in the road and this was one for me. My training in the U.S. was transformative. That's when I began to have an inkling that I might have a propensity for research even though I loved clinical medicine.

How did you benefit from Fogarty training?

During my time at Case Western Reserve University in the U.S., I honed my clinical and research skills. This was my baptism into research, from conception of the idea, undertaking a literature review to shape it into a good research question, writing up the full proposal and navigating it through the research ethics approval process. I then made all the logistical arrangements to undertake the study and to collect the relevant data, analyze it and write the paper. It gave me a good grounding in the nuts and bolts of research.

How did you progress on the research track?

When I returned to Uganda, I was asked to lead IDI's prevention, care and treatment program. After seven years in that role, I became head of research and have been leading the entire Institute for three years now. I transitioned to research because of my conviction that the visibility of African leadership in research should be enhanced at IDI. We created a program that supports African scientists—many who are women—over the longer term so they can truly become independent research thought leaders. Another area of focus is implementation science. We were generating a lot of data from our HIV programs and I recognized we needed to use that information in crafting evidence-based interventions.

I also served as principal investigator on a CDC-funded national study that examined whether well-trained nurses could perform as well as doctors with respect to initiating and monitoring patients on antiretroviral therapy. The resulting data was published and helped influence government policy. I am also a member of HIV advisory groups, which influence our health ministry's development of treatment protocols. Finally, I have been principal investigator on several NIH research grants and am currently PI on a Fogarty grant focusing on HIV and co-infections. I began as a Fogarty trainee and evolved into a Fogarty PI, where I help cultivate the next generation of research leaders.

What are your priorities for the future?

The institute is keen to continue contributing to HIV knowledge through our research innovations and evidence-based programming. During a strategy planning meeting, we saw that the IDI has done a really good job of identifying people with HIV, putting them in care and making sure they adhere to medication. What else can we do? If you look at a map of Africa, Uganda is near a hotspot where there is a lot of human-animal interaction that could give rise to emerging infectious diseases. In 2016, we began to establish a global health security program by piecing together a growing portfolio of projects, including infection treatment and antimicrobial resistance. When COVID-19 appeared, we felt vindicated for making an investment in emerging infectious diseases. Data science is also a focus area for IDI, which has become a center of excellence in this space. I want to create an environment where younger scientists can build their careers as I have. Fogarty can take pride in seeing African research leaders like me, who had their initial exposure to global public health through their programs, now mentoring the next generation.

RESOURCES

<https://bit.ly/Kambugu>

Scientists craft US-Latin American research agenda on child obesity

The prevalence of childhood obesity within the United States is at an all-time high, particularly among Latino populations where more than a quarter of children ages 2 to 19 are obese. This rising trend is mirrored across the entire Latin American region. Childhood obesity negatively impacts quality of life and significantly increases the risk of adult obesity, leading to increased morbidity and mortality.

To identify common research questions and strategies to address this problem, Fogarty's Center for Global Health Studies, in collaboration with eight NIH partners, convened a workshop in November 2019 that brought together researchers from the U.S. and Latin America. One outcome is a collection of articles examining cross-cutting areas relevant to both regions, recently published as a special issue of *Obesity Reviews*, guest edited by Drs. Rafael Perez-Escamilla, Abby King and Juan Rivera.

Latin American countries have many commonalities, the authors observed. The region continues to have stark inequalities, with widespread poverty and associated conditions such as undernutrition, sanitation problems and infectious diseases. This, coupled with political instability and conflict, has caused multiple waves of local, regional and global migrations over the past century. At the same time, Latin American countries have undergone several interrelated, rapid transitions, particularly economic, resulting in high levels of disease. Meanwhile, over a third of all U.S.-based Latinos are foreign-born and so come from this background. This context is important for understanding the drivers of childhood obesity in the region, as well as among U.S. Latinos.

At both national and local levels, Latin America and the U.S. have been implementing innovative policy interventions to tackle obesity and noncommunicable diseases, including taxes on sugar-sweetened beverages and food warning labels. However, the authors noted, studies and programs are too often siloed, resulting in a fractured response to a highly interconnected region-wide issue. The publication highlights the many research



Researchers in the U.S. and Latin America are collaborating on strategies to reduce childhood obesity, a growing global health problem.

synergies between Latin America and Latino populations in the U.S. and is focused on nine cross-cutting areas of special concern: the food, social and built environments; migration; endocrine disruptors; implementation science; measurement challenges; capacity building and systems solutions.

The NIH has launched a variety of initiatives aimed at developing innovative approaches to help children eat well and stay fit. One example is the U.S. Environmental influences on Child Health Outcomes (ECHO) Program, which supports longitudinal studies to investigate environmental exposures on child health and development. NIH has also joined with the CDC, the Department of Agriculture, and the Robert Wood Johnson Foundation to form the National Collaborative on Childhood Obesity Research (NCCOR), which promotes improved methods, sustainable interventions and better surveillance across multiple relevant sectors. And, the NIH's National Cancer Institute, Office of Disease Prevention and Fogarty are supporting the Latin American Congress of Physical Activity and Health Research, the first research-focused scientific conference of its kind.

In addition, a dozen institutes at NIH have funded 140 projects in childhood obesity over the last five years, of which 110 supported research in the U.S. among Latino populations, while 30 supported research in Latin America. Still, there remains a pressing need to evaluate policy and environmental changes that potentially influence childhood obesity, the authors concluded. Continued support for cross-border research and training throughout the region and encouragement of partnerships between researchers in Latin America and in the U.S. working with Latino populations will help to generate evidence for innovative tools and interventions that can have a broad impact across both regions. Breaking out of country-specific silos will allow researchers to tackle a global health challenge that has no borders.

Researchers study factors influencing child obesity

Food environments

Children living in Latin America and the U.S. have a high intake of sugar-sweetened beverages and other ultra-processed foods, all key contributors to obesity, noncommunicable diseases and mortality. The dimensions of food environments—the overall conditions that influence a person's food and beverage choices—include availability, quality, cost, social norms and preferences. The authors of one study reviewed the literature seeking an optimal policy package to improve food environments and help curb growing childhood obesity levels in Latin America and among Latino children in the U.S. Some countries have been leaders in implementing policies to improve food environments. Mexico was the first to tax sugar-sweetened beverages and ultra-processed foods, while Chile developed the world's first mandatory front-of-package warning label system.

Physical activity

To prevent obesity among Latino youth in the U.S. and Latin America, it is necessary to understand the specific context and interplay of physical activity (PA) and the built environment (BE). The authors of another study explored how interventions targeting the BE and PA prevent childhood obesity. They found that to be effective, interventions intended to transform the environment must also impact youth social structures, including families, schools and other organizations in which children participate. School setting interventions that aim to promote physical activity require simultaneous implementation of programs for healthy food environments, both within and outside school. Additionally, rural areas are often neglected and need to be included when considering school interventions.

Social environment

A child's social environment—including family members, peers, and teachers—influences their risk for childhood obesity through, among other factors, a child's weight-related behaviors such as eating and physical activity. Authors of another study reviewed the evidence on social environmental factors and the prevention and control of childhood obesity among Latino children in the U.S. and children in Latin American countries. They found evidence to support interventions targeting parenting and family factors, and the home environment. Other promising though less-studied contexts that deserve further evaluation include childcare, education, health-care and neighborhoods. Yet, researchers and practitioners also need to examine how best to reach groups that are more collectivistic and family-oriented since the problem of overweight and obesity is not separate from context.

Regional migration

All migrants undergo a process of acculturation and past research links this to overweight and obesity, the authors of another paper began. The community energy balance framework (CEB), an ecological model, explores acculturation as a dynamic process by which a group or individual culture is modified through continuous, first-hand contact with a different culture. To elucidate how migration impacts childhood obesity, the authors used the framework to analyze data from the Mexican Family Life Survey. They found that children embedded in migrant networks are at greater risk of developing overweight or obesity relative to children with no network ties to the U.S. This suggests that the influence of migration on the nutritional behaviors of children remaining in the origin country can be strong and detrimental as families are major channels for cultural transmission.

Endocrine disruptors

Exposure to persistent organic pollutants (POPs) during the pre- and perinatal periods has been associated with lower birthweight and lower percentage of neonatal fat mass. Meanwhile, certain phthalates have been associated with higher birthweight in the presence of maternal hyperglycemia, while in utero organophosphate pesticide exposure has been related to higher birthweight in a single study, though only among infants of mothers with a specific genotype. All together, this evidence suggests that the origins of Latino childhood obesity may be linked to the endocrine disrupting chemicals found in everyday products, according to the authors of an analytical review.

The food environment is one aspect researchers are studying in their effort to reduce childhood obesity.



Network considers actions to combat child obesity

Valid measurement tools

Valid, reliable and culturally sensitive measurements are needed to address childhood obesity, yet the right tools depend on a project's purpose, the population of interest, the age of participants and various practical concerns. Greater efforts to engage the public in identifying critical factors influencing behavior and designing measures are needed, the authors of another study stated.

Nutrition and obesity have been the topics of substantial work across the Americas, and Latin American countries have carried out a variety of health surveys concerning diet, physical activity and other factors influencing childhood obesity. The explosion of mobile health applications and devices holds promise for improving individual and population-level accuracy in the physical activity area and may even be applied to other health behaviors, including diet. However, information about the surveillance systems of specific countries can be difficult to access and is not always readily available. In addition, some of these mobile tools are expensive, may be less acceptable for certain subgroups and often require significant training.

Many of the measures available have been developed largely to serve the interests of the research community and English language measurements dominate. Most instruments that assess parenting styles, feeding styles and parenting practices were developed for white American or European populations. Yet, a study measuring parental influences on childhood obesity showed variability dependent on ethnicity, such as Mexican Americans vs. Dominican Americans. Additionally, many of the instruments used to measure feeding practices were developed with mothers only and so underrepresent fathers, whose role has changed in parallel with shifts in maternal employment.

Culturally relevant instruments, including adapting existing measures for different countries and populations, should be used to assess the effects of parenting styles, parenting methods and feeding practices among groups of different backgrounds because these factors have serious implications for interventions, the authors concluded.

Systems-based solutions

High levels of childhood obesity among Latin American populations can be conceptualized as the result of a complex system encompassing the food, school and transport systems, sociocultural and environmental influences, and numerous other interacting factors, another paper in the series stated. Yet it is known that complex systems tend to settle in stable states and resist



Better tools are needed to measure factors such as physical activity to aid efforts to reduce childhood obesity.

Photo by David Snyder for Fogarty

disruptions that push them towards a new regime. Efforts to reconfigure the system tend to trigger a response against the intervention itself, often resulting in resistance to change and so resistance to new policies.

Childhood obesity prevention efforts that need to operate within complex adaptive systems would attain better results though some application of systems science theory and methods. The study authors proposed an action-oriented framework, essentially a roadmap, which incorporates systems science methods for designing, implementing, evaluating and sustaining changes to prevent childhood obesity. The framework consists of six steps: foster multisectoral team; map the system, its context, and drivers; envision system-wide changes; effect system-wide changes; monitor, learn, and adapt; and scale and sustain. The authors suggested that new ways of working based on systems thinking would be a much more sustainable model of addressing childhood obesity than traditional siloed models.

Growing evidence and interest support applications of this type of systems-based, action-oriented framework to reduce childhood obesity given the limited progress that has been achieved, the authors noted. Cross-sectoral and cross-disciplinary collaborations, training opportunities, a research culture open to embracing systems science and funding mechanisms that support the application of the framework are needed to advance public health efforts to stem the rise in obesity in US Latinx and Latin American populations and promote health equity.

Research capacity building

Latin American countries and the U.S. could greatly benefit from developing a cohesive, unified childhood obesity research agenda that prioritizes multi-directional capacity building as a key pillar, suggested authors of a study devoted to the topic. For Latin American countries, this offers the potential to access otherwise limited funding and to learn from and work with leading U.S. experts. Early-career researchers could not only gain skills and technical expertise, but also expand their networks and increase opportunities to co-author scientific manuscripts stemming from these large international studies. By improving research capacity, locally relevant evidence would become available to guide effective policy action in Latin American countries, while in the U.S., this type of research would provide useful insights for understanding and resolving the childhood obesity epidemic among U.S. Latino populations.

In Latin America, Brazil, Mexico and Chile continue to be the leading producers of childhood obesity-related publications, and are, with Colombia, the countries most engaged with cross-national collaborations, according to the study. Its authors identified 612 childhood obesity-related articles eligible for analysis: 505 from Latin America and the remainder from U.S., excepting 17 north-south collaborations. The numbers of published articles focusing on either obesity, nutrition or physical activity are similar in north and south, yet complementary research areas—such as sedentary behavior, systems science and policy studies—are uncommon in Latin America. Added to that, sleep research is nascent despite the WHO now including sleep recommendations as part of its movement behavior guidelines for children.

Publications are only one component of research capacity, the authors noted. Physical activity researchers were less likely than obesity- or nutrition-centered researchers to be included in childhood obesity research teams, and have fewer funding opportunities, high-quality graduate programs and networking opportunities. Most researchers reported higher availability for nutrition-only research funding in Latin American countries, while international training was not accessible for most students seeking advanced degrees.

Given the importance of capacity building, progress

should be tracked systematically and periodically across the region, the authors concluded. The complex, multi-causal nature of childhood obesity urgently demands multidisciplinary, systems-oriented approaches for childhood obesity prevention. Finally, new cross-national childhood obesity research initiatives should begin to focus more on intervention, policy and implementation science.

Implementation science

To understand the potential barriers and facilitators of implementing childhood obesity prevention and control policies and programs, the authors of another study examined various case studies on childhood obesity interventions implemented in different countries using

the RE-AIM framework. One case study looked at front-of-pack warning labels in Mexico and Chile. A second focused on *Cicloviás*, or “open streets,” in Colombia and the Play Streets program in San Francisco, both of which close streets to cars and other vehicles. The third explored the Baby-Friendly Hospital Initiative (BFHI), which promotes among other things early breastfeeding, in Brazil and the U.S.

Across the case studies the authors found that evidence-based advocacy, political will and

evidence of scalability and impact are key to successful launch and implementation of policies and programs. They also concluded that individual countries benefit by examining the practices in other nations. For instance, Mexico could learn from regulations enforced in Chile to protect minors against the marketing of unhealthy foods and beverages, while Chile and other countries could gain from the experiences of two Mexican states that banned the sale to minors of products with non-nutritive sweeteners.

Still, context matters when implementing policies and programs. Successful interventions have necessarily followed different pathways of adoption in different countries. Implementation science makes an important contribution to the production of transferable lessons across Latin America and the U.S. and should be used for research and evaluation during policy and program development and application, the authors concluded. Future analysis is needed to understand the value of different implementation science systems frameworks that can inform policy decision-making, context fit, equitable impact and cost-effectiveness.



Some Latin American countries have levied taxes on sugary beverages as a means of lowering child obesity.

Photo by David Snyder for Fogarty

Research vital to inform humanitarian crises response



With tens of thousands of refugees fleeing Afghanistan, earthquake survivors struggling to survive in Haiti and terrible wildfires burning across Greece, we are reminded that humanitarian crises touch us all and can cause severe health consequences. For example, forced migration can result in malnutrition, flooding can lead to polluted water that

causes infections and illness, and smoke from fires can exacerbate asthma and other lung conditions.

As the number of people experiencing humanitarian crises continues to climb worldwide, Fogarty's Center for Global Health Studies has been leading an effort to examine how research can be done in the midst of these emergencies to improve response effectiveness.

Although each disaster may involve different health factors, they share many common characteristics that make research difficult.

Recently, the humanitarian project team commissioned and published a collection of case studies to highlight scientific studies conducted in the context of crises—such as armed

conflicts, natural disasters, forced displacement and disease outbreaks. Unlike traditional research papers, the project examples go beyond what research was conducted to explain why the research was important and how it was conducted in these extremely challenging settings. The papers also identify scientific areas of high public health significance that can best be addressed through research during these events.

Together with our partners from across NIH, NGOs and academia, we are exploring how we can further support this critical type of research. We presented highlights of the article collection during a recent Fogarty advisory board meeting, where it sparked a robust discussion. We were encouraged to consider the mental health aspects of crises, as it is most often the case that people who are already vulnerable are the ones who suffer the most. It was also suggested that we help address the communication challenges that can arise due to power and cell service disruptions during disasters. It was noted that researchers

must proceed with care during crises and consider forming partnerships with organizations that have built up community trust and best understand local needs. Finally, we observed that investigators must remain cognizant of the purpose of their research and who it is intended to benefit. Governments require not only evidence but real-time, real-world applications that can immediately reduce suffering and save lives.

The group also agreed that research in humanitarian crises taps into two key areas where Fogarty has substantial expertise—ethics and implementation science. Conducting research in this context poses unique ethical issues making it important to recognize the power differential that exists between scientists and vulnerable populations. Also, there may be greater than normal potential for risk

of suicide, physical or sexual abuse, or other harm. Researchers must anticipate and plan how to respond to these risks before their studies begin. They might establish community advisory boards to better understand cultural norms and gain input to help them shape the studies. Informed consent is another complex issue that requires careful consideration when working with vulnerable populations.

Researchers must also consider how they will deal with requests for medical or other assistance that may come during data collection.

Of course, once best practices have been developed, they must be adapted to suit the individual circumstances, local culture and available resources. We call this implementation science (IS), or the study of methods to promote the adoption of evidence-based practices, interventions and policies. Fogarty has been building research capacity and the knowledge base for IS for decades now so brings substantial expertise to this effort.

The next step under this initiative is a networking and mentorship forum that will be held in November 2021 to help build a cadre of researchers capable of tackling these difficult issues. That's never been more relevant, as the humanitarian crises we face are becoming more common, complex and interrelated.

UN Photo/Luke Powell



RESOURCES

<https://bit.ly/HumanCrises>



Geneticist Lander named White House science advisor

Dr. Eric Lander has been confirmed as the new head of the White House Office of Science and Technology Policy, which has been elevated to a cabinet-level position. A geneticist, Lander was most recently the president of the Broad Institute of MIT and Harvard.



Mathematician and hydrologist Kabat to lead HFSP

The international Human Frontier Science Program Organization has announced Prof. Pavel Kabat as its new Secretary-General. Previously, Kabat was research chief of the U.N.'s World Meteorological Organization and head of the International Institute for Applied Systems Analysis in Austria. He remains professor of global water and climate systems at Wageningen University.



Nicole Lurie to direct CEPI's US activities

The Coalition for Epidemic Preparedness Innovations (CEPI)—a foundation focused on vaccines—has appointed Dr. Nicole Lurie as its new U.S. director. Since 2017, she has led CEPI's emergency response efforts, including for COVID-19. Lurie previously served as HHS Assistant Secretary for Preparedness and Response.



Abdool Karim to advise UN on technology

Dr. Quarraisha Abdool Karim of the Centre for the Aids Programme of Research (CAPRISA) in South Africa is among 10 eminent scientists selected to advise the UN on unleashing the power of technology for development. A longtime Fogarty grantee, Abdool Karim holds positions at Columbia University and the University of KwaZulu-Natal.



Global health advocate Tachi Yamada dies suddenly

Dr. Tadataka "Tachi" Yamada, former president of global health at the Bill and Melinda Gates Foundation, has died. Following an early career as a physician-scientist and professor at UCLA and the University of Michigan, Yamada was chairman of Research and Development at GlaxoSmithKline, and chief medical and scientific officer at Takeda Pharmaceuticals.



Former MEPI principal investigator Olayeye has died

Renowned Nigerian virologist Dr. David Olaleye has died. As a principal investigator at the University of Ibadan, he helped establish the Medical Education Partnership Program, which was managed by Fogarty. In addition, he was a member of the PI Council of AFREhealth and adjunct professor at Northwestern University in Chicago.



Vivian Pinn receives distinguished service award

Fogarty Senior Scientist emerita Dr. Vivian Pinn has been honored by the Association of Pathology Chairs with its 2021 Distinguished Service Award, in recognition of a lifetime of achievement. Pinn was the first African American woman to chair an academic pathology department in the U.S., at Howard University.

NIH unveils its 2021-2025 strategic plan

The NIH's new five-year strategic plan includes an emphasis on minority health and health disparities, research across the lifespan and data science. The plan also supports continuing and strengthening global partnerships such as the Health-Professional Education Partnership Initiative, AFREhealth and the Global Alliance for Chronic Diseases.

Website: <https://bit.ly/2UXJZBq>

Comments requested on women's health

In preparation for an upcoming conference on women's health, the NIH is inviting comments to assist in identifying related research gaps and pitfalls in clinical practices. Input will be used to inform discussion and help shape the direction and scope of the meeting. The deadline is Sept. 15, 2021.

Website: https://bit.ly/NIH_women

UC launches new global health journal

UC Press is developing a new publication to showcase the latest research devoted to improving worldwide health outcomes, with a particular focus on studies conducted by scientists in low- and middle-income countries. The open-access, online journal, *Advances in Global Health*, will be edited by Fogarty grantee Dr. Craig R. Cohen.

Website: <https://online.ucpress.edu/agh>

WHO suggests ethical principles for AI

Artificial Intelligence (AI) holds great promise for improving the delivery of healthcare and medicine worldwide, but only if ethics and human rights are put at the heart of its design, deployment, and use, according to new WHO guidance. The report examines the ethical and governance issues posed by AI.

Report: https://bit.ly/WHO_AI

Vaping is growing threat, WHO says

A new WHO tobacco control report finds that many countries are making progress in the fight against tobacco but e-cigarettes and related products pose an emerging health threat. The study estimates there are about 1 billion smokers globally, around 80% of whom live in low- and middle-income countries. Tobacco is responsible for the death of 8 million people a year, including 1 million from second-hand smoke.

News release: https://bit.ly/WHO_tobac

Funding Opportunity Announcement	Deadline	Details
Global Infectious Disease (GID) Research Training D71 Clinical Trials Not Allowed	Oct 28, 2021	http://bit.ly/IDtraining
Mobile Health: Technology and Outcomes in Low and Middle Income Countries R21 Clinical Trials Optional R33 Clinical Trials Optional	Nov 15, 2021	https://bit.ly/NIH_mHealth
Ecology and Evolution of Infectious Diseases (EEID)	Nov 17, 2021	http://bit.ly/EEIDNIH
HIV-associated Noncommunicable Diseases Research at LMIC Institutions	Dec 8, 2021	https://bit.ly/FogartyHIVNCD
International Research Scientist Development Award K01 Independent Clinical Trials Required K01 Independent Clinical Trials Not Allowed	Mar 9, 2022	https://bit.ly/IRSDAK01

For more information, visit www.fic.nih.gov/funding

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NIH Director's Blog

Zooming in on global health research



In past years, Roger Glass (top left), director of NIH's Fogarty International Center (FIC), and I have taken an in-person group photo with the FIC fellows and scholars. This year, due to the international health and travel challenges posed by the global COVID-19 pandemic, a Zoom composite of some of the young researchers will have to do! I spoke to the group on the morning of July 13 as part of FIC's week-long Global Health Program for Fellows and Scholars. The program provides collaborative, mentored global health research training in low- and middle-income countries. Individual students, postdoctoral fellows, or faculty from the U.S. and abroad apply for a 12-month placement at a participating global institution. The meeting has brought together 122 fellows and scholars (U.S. and international), seven Fulbright Fogarty Fellows, 16 alumni, and many others to the event. As you can see in my photo, I had to be out of town this year, and I spoke to everyone buckled up while returning to the Washington, D.C. area. But I didn't want to miss this opportunity to share my vision for global health research and point to some of the many opportunities available in global health for young academics from the U.S. and other nations.

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