

WHO says 20 million children missing essential vaccines . . . p. 12



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

Farrar addresses global health in a changing world

Global health has been a phenomenal success story, according to Dr. Jeremy Farrar, director of the Wellcome Trust. “Over the last few decades the transformation in people’s lives around the world has been nothing short of remarkable.” However, to continue to make progress and spur significant advances as seen with malaria and HIV, for example, Farrar believes 21st century scientists are going to have to look and think differently.

“We have to appreciate the world is changing,” Farrar said, which was his theme for the David E. Barmes Global Health Lecture he recently presented at the NIH. The event is sponsored by Fogarty and NIH’s National Institute of Dental and Craniofacial Research, where Barmes served, and honors his dedication to improving health in low-income countries.

Farrar, a clinical scientist and leader in infectious diseases, spent 18 years at the helm of a Wellcome-supported clinical and public health research unit in Vietnam, and was on the front lines of avian influenza and SARS outbreaks. Now, he is in his second term as Wellcome’s director, guiding the London-based independent global foundation that supports thousands of researchers and works closely with the NIH.

In introducing Farrar, NIH Director Dr. Francis S. Collins called his friend and colleague a wonderful contributor to Wellcome’s agenda and “to all of us that care deeply about global health.”

Both Collins and Farrar acknowledged the value of the relationship between their organizations, exemplified by the jointly funded Human Heredity and Health in Africa (H3Africa) project that has stimulated genomics research at institutions across the continent.

Malaria research advances are another success story,

Photo by Marleen Van den Neste



Wellcome Trust Director Dr. Jeremy Farrar presented the David E. Barmes Global Health Lecture and addressed global health in a changing world.

Farrar said, with “staggering” progress. About 700 million cases and more than 3 million deaths have been averted since the beginning of this century. He said that’s the result of science—the development and implementation of effective bed nets and artemisinin combination therapy.

Turning to HIV, Farrar paid tribute to NIH for helping transform it from a death sentence into a manageable condition but encouraged scientists to continue to push forward. “I believe...in the absence of a vaccine, we will see transmissible, untreatable HIV.”

Drawing on his personal and professional experiences, Farrar talked about changes taking place in the world and the challenges they pose for global health.

. . . continued on p. 2

FOCUS



Fogarty-led project aims to advance emergency care in LMICs

- Studies needed to adopt interventions for low-resource settings
- Training required to develop expertise in emergency care research
- Policymakers lack data for evidence-based decisions

Read more on pages 6 – 9

Farrar addresses global health in a changing world

. . . continued from p. 1

“I think people who are at earlier stages in their career perhaps than I am are going to see unbelievable changes in society in the next 20- to-30 years in ways that we cannot predict but will be very disruptive,” he said. “Whether that’s in the environment, in the way people come together, the way societies work, the way cities work, urbanization, migration, conflict around the world—that’s the new global health.”

Looking at Ebola, Farrar noted that when the virus was first discovered in 1976 in a rural area of what is now the Democratic Republic of Congo, a person with the virus might come across seven to nine other people during their infectious period. In the devastating 2014-2016 outbreak in West Africa, someone with Ebola could encounter 200 people. The virus and genetic backbone of the population hadn’t changed but the society in which it occurred had, he explained. “Ebola in an urban setting is a completely different infection than in the rural setting of 1976. And that change is what is driving Ebola in the DRC at the moment,” said Farrar, who recently traveled there to see the situation for himself.

The rise in cancer and other non-communicable diseases will require health systems to shift their economic model and training from dealing with acute infections to chronic diseases. And he said we need to figure out how advances such as cancer immunotherapy can be more affordable and accessible.

“This is not a political point, but climate change is happening and

it’s manmade,” Farrar said. The health impact will be profound, and warning signs are there, he said, pointing to air pollution and new environments favorable to mosquitoes. “I think re-linking climate change and human health and animal health and agriculture and nutrition is an absolute nexus that we have to bring back together because the impacts of climate change are not just going to happen in 2050, they’re happening today.”

Another global challenge Farrar noted is the growing inequality between the haves and have-nots, which he said has to be addressed in order for science and innovation to reach as many people as possible.

Achieving the maximum benefit of science and innovation requires a third component—society—and Wellcome aims to bring all three together, Farrar said.

Citizens are increasingly skeptical of scientific advances. Farrar cited the results of the recent Wellcome survey of 140,000 people in 140 countries regarding their attitudes toward health and science. When asked about vaccines, only 33% of participants in

France believed they are safe, while almost everyone surveyed in Rwanda and Bangladesh reported confidence in them.

If anti-vaccine sentiment is exported from the U.S. and western Europe to other countries, Farrar said, the impact on health will be enormous. He sees those findings, especially at a time of progress, as a harbinger of more questions and challenges from the public.

“As a scientific community, I think we have been complacent that people would accept scientific advances and they would just thank us for it,” he said. “And I think as a community, we’ve got to engage much better than we have done in the past in order to bring society with us.”

To meet the public health demands of the future, Farrar said more clinical scientists—adept at treating patients as well as making new discoveries in the lab—are needed. Recognizing it’s an intense and costly career path, he intends to seek NIH input as he explores how to cultivate that workforce. Scientists also must recognize the value of data and genomics, he said. And they have to break out of siloes and incorporate social sciences such as anthropology and communications.

In an increasingly convergent world, it’s not local vs. global health, he observed. They are one and the same.

“The lessons you’ve learned here, good and bad, will benefit other countries, and other countries will benefit the system here,” he said. “In the end, the world will be a better place if we break down those barriers and we break down that sense of here or there. It’s about all of us.”

Photo by Marleen Van den Nestle



NIH Director Dr. Francis S. Collins and Fogarty Director Dr. Roger I. Glass joined hundreds of audience members to hear Wellcome Trust Director Dr. Jeremy Farrar deliver the David E. Barmes Global Health Lecture.

RESOURCES

<http://bit.ly/Barmes2019>

World Report shows scant research conducted in Middle East region

There is a scarcity of globally funded research being conducted in the Middle East and North Africa (MENA) region, according to a data analysis conducted using World Report information. The online database and mapping tool provides free information on active research projects supported by leading international funders, including the NIH.

The analysis—compiled by researchers affiliated with the Arab Community Center for Economic and Social Services (ACCESS)—said the 22-country region poses numerous challenges for scientists. “The ongoing political turmoil has eroded existing systems and prevented the development of novel programs to build an infrastructure that can enable greater research collaborations focused on health equity in the MENA region,” the authors said.

While the number of MENA research projects is rising, it is still “extremely low” for a region with 22 countries, the analysis found. World Report data from 2014 show that 14 of 22 MENA countries had no research activity. Three years later, nine countries still had no grants and two countries had only one award each. While 89 institutions received research grants in 2017, up from 37 in 2015, the majority were concentrated in six countries—Egypt, Morocco, Sudan, Lebanon, Saudi Arabia and Tunisia.

Full report: <http://bit.ly/ACCESSonWReport>

WHO uses funding data in its analyses

The world’s leading research funders should give more consideration to the rising burden of noncommunicable diseases (NCDs) in low- and middle-income countries (LMICs), according to a recent commentary in the *WHO Bulletin*. Using data in the World Report platform, an analysis showed that globally, almost three-quarters of all grants in 2016 were for NCDs (72%; 40,035), followed by communicable, maternal, perinatal and nutritional conditions (20%; 11,123) and injuries (6%; 3,056). Yet when these data are analyzed in LMICs, the findings are reversed, with roughly three-quarters of grants awarded for research into infectious diseases, maternal health and nutritional conditions.

Responding more effectively and equitably to the health-care needs of people with NCDs, and influencing public policies in sectors outside health that tackle shared risk factors, such as tobacco use, unhealthy diet and physical inactivity, could prevent most premature deaths from NCDs, according to the article. “Addressing these needs through locally relevant research questions would contribute to halting this increasing burden of largely preventable diseases.”

The WHO’s Global Observatory on Health Research and Development was established in January 2017 to assist partners in coordinating and prioritizing new investments in health research and development.

See the full article: http://bit.ly/WHO_NCDfunding

BIO Ventures examines global cancer research funding

Cancer remains one of the leading causes of death globally and is a particular concern in Africa, where cancer mortality is predicted to double by 2040, according to a commentary by Jennifer Dent, president of BIO Ventures for Global Health.

By using the World Report research funding database, Dent discovered about one-third of all project entries included a reference to cancer. Nearly 1,500 of the grantees were located in the U.S., Canada and Mexico, while only 266 were located in Africa. With the death toll from cancer nearly equal between Africa and North

America, the data highlight the disparity in funding allocations, Dent said.

While research on cancer conducted in high-income countries and largely focused on Caucasian patients may generate discoveries that improve health across the globe, it creates knowledge gaps. “If we do not study the particular clinical challenges of diagnosing and treating cancer in low-resource settings, nor the efficacy of those interventions in populations of non-European descent, health and survival disparities will persist,” Dent noted.

Full blog post: <http://bit.ly/BIOonWReport>

PROFILE

Fogarty Fellow studies impact of gardens on health in Peru slum

By Shana Potash

For Dr. Leann Andrews, a Fogarty fellowship gave her the opportunity to pilot a program and watch it grow—literally. As the first landscape architect in the Global Health Program for Fellows and Scholars, she launched a project to establish gardens to improve health in a slum community in Iquitos, Peru.

Andrews worked in a neighborhood called Claverito located in the Amazon River floodplain. The roughly 280 residents, families that migrated from the jungle to the city, live in a collection of 50 homes built on large logs, so the structures float during the months the river is high, then rest on the ground the remainder of the year. Because Claverito is an informal settlement that is not recognized by the government, residents do not have access to electricity, clean water and other municipal services.

The research team consisted of specialists from the University of Washington and universities in Peru, along with local experts, and represented 17 disciplines, including doctors, nurses, biologists, anthropologists and landscape architects. Using a One Health approach, they surveyed the health of Claverito's residents, as well as the flora and fauna, before and after the landscape intervention.

The study used community-participatory design techniques that included residents throughout the process. They helped design and build a garden at the community entrance, filling it with plants for food, medicine, beautification and habitat. Foliage that acts as a water filtration system was planted and new concrete stairs with handrails were installed to replace unsafe wood and mud steps. And customized, individual gardens were created for the 28 households in the study.

Working with families at their kitchen tables to plan their gardens, Andrews said she was struck by the fact that everyone chose at least one plant solely for aesthetics. "It shows the intuitive understanding that beauty is part of your life and it does improve your quality of life."

Among the findings from the first year of the project, the percentage of families with moderate to severe food insecurity dropped from 89% to 56%, and people



Leann Andrews, M.L.A, Ph.D.

Fogarty Fellow: 2016-2017

U.S. Institution: University of Washington

Foreign Institution: Universidad Nacional de la Amazonia Peruana

Research topic: Landscape architecture and global health

reporting mild to severe depressive symptoms decreased from 70% to 44%. Aquatic vegetation reduced *e.coli* in the water and there was far less trash at the community's entrance, which had provided a breeding ground for disease-carrying mosquitoes.

Because health research is not common in landscape architecture, the fellowship gave Andrews entrée into clinical research, and provided her with the baseline skills needed to design studies and collect and analyze data. She also gained experience leading a transdisciplinary team and solving problems, like building gardens in a city that doesn't have nurseries where you can simply order soil and plants.

The fellowship enabled Andrews and her Peruvian colleague and Fogarty Fellow alumnus Coco Alarcón to jumpstart a long-term design, research and training program. Now in its third year, their InterACTION Labs program has designed parks, gardens and a community center, and trained about 95 faculty and students.

"The Fogarty program was really my ticket," Andrews said. She is exploring opportunities for other NIH-funded research and training and looking for people to join her in the field of global health landscape architecture.

"When you hear the stories, when you see kids playing on the things you've built, when you see butterflies land on the flowers, those are things that really help you understand the work you do is meaningful and valued," she said.

JEROME SINGH, LLM, MHSC, PHD

Jerome Singh became head of ethics and law at the Centre for the AIDS Programme of Research in South Africa (CAPRISA) after completing a year-long training program in bioethics, supported by Fogarty's AIDS International Training and Research Program (AITRP). In addition to his role at CAPRISA, he teaches at the University of Toronto's school of public health and serves as a consultant to several U.N. entities including the WHO, UNAIDS and UNICEF. Also a co-chair of the HIV Prevention Trial Network's ethics working group, Singh serves as a consultant on health law to the South African Law Reform Commission.



How did Fogarty training affect you?

The AITRP fellowship was life-changing. After the year-long fellowship at the University of Toronto's Joint Centre for Bioethics in 2002-03, career opportunities abounded. Even before returning to South Africa, I was asked to lead the ethics department at CAPRISA, which focuses on research into HIV prevention, pathogenesis, and TB/HIV treatment. Within a year of finishing the training, the University of Toronto offered me a faculty position. I've worked with global organizations like the Bill & Melinda Gates Foundation, Médecins sans Frontières and the U.N. None of these opportunities would have been possible without the Fogarty fellowship. It's been a fantastic journey.

Thanks to the training, I've also helped build capacity in others over the years. It's safe to say I've trained thousands of people, from short-term courses sponsored by Fogarty's Medical Education Partnership Initiative (MEPI), all the way to Ph.D. supervision. I wouldn't have been able to do capacity building at that level had I not undergone the immersive AITRP training.

What is your role at CAPRISA?

I review CAPRISA protocols and make sure they comply with national and international research ethics standards. I also draft policies, data-sharing agreements, memoranda of understanding, etc. Separately, I make the case for why certain science should or should not be done. Let's say you wanted to do an HIV pre-exposure prophylaxis, or PrEP, study on adolescents. Because of regulatory ethics concerns, such as disclosure obligations, they are a difficult population to study and, as a result, are often under-researched. My job involves putting together an ethics case, a legal case or a human rights case to show why it would be ethical to conduct research on adolescents, or unethical not to. I've also done scholarship on why unreasonable or irrational government policy is a violation of human rights, illegal or unethical, and on the fact that, even if something is in accordance with the tenets of human rights and is lawful, it isn't necessarily ethical.

Can ethics influence government policy?

They can and, in South Africa, they have. When I started at CAPRISA, Thabo Mbeki was president. He questioned the link between HIV and AIDS and resisted rolling out antiretrovirals, or ARVs. It was a difficult time to do science in South Africa. But an ethics-focused argument combined with a tactic of shaming the government morally, and a constitutional court judgement helped to change things.

The ethics argument was that while the government wasn't acting unlawfully, its inaction was unethical. Civil society activists argued that not providing treatment to people with HIV violated their human rights. When the Constitutional Court of South Africa ordered that pregnant women be provided with nevirapine, the government began moving slowly toward the universal roll out of ARVs. Eventually, South Africa went from being a country where irrational executive decision-making denied us ARVs to having the biggest rollout program of ARVs globally. Ethics helped achieve that.

How does LMIC training benefit the U.S.?

Providing research grants and capacity building programs in low- and middle-income countries (LMICs) is diplomacy you can't put a monetary value on. It creates research opportunities that aren't possible in the U.S., and the U.S. government gets the prestige factor of being associated with major breakthroughs. While some countries give LMICs infrastructure loans to build bridges or shopping malls, the U.S. invests over the long term in the health of people of the developing world and the knowledge-base of LMIC scientists. Bridges can collapse in 10 years, malls come and go, but this U.S. investment helps scientists on both sides advance their careers, allows people in LMICs to live longer, healthier lives, and endears Americans and the U.S. government to people in those countries. It's a win-win situation.

RESOURCES

<http://bit.ly/SinghHIVethics>

FOCUS

Fogarty-led project aims to advance emergency care research in LMICs

When someone suffers an injury, heart attack, stroke or other illness that requires emergency care, every minute and decision can affect their chance of survival or the quality of the life they'll continue to lead. Conducting research in that setting in low- and middle-income countries (LMICs) may seem daunting, but it is possible and it's critical for improving global health, according to the authors of a new publication organized and supported by Fogarty.

Time-sensitive emergencies or acute illnesses and injuries account for about half of the total burden of disease in LMICs. Yet emergency care research and research training are often overlooked and under-funded, the authors noted.

To help advance the field and raise awareness among scientists, clinicians, academic institutions, policymakers and funders, Fogarty's Center for Global Health Studies (CGHS) initiated a project called the Collaborative for Enhancing Emergency Care Research in LMICs (CLEER). The initiative brought together nearly 40 experts from 16 countries, some of whom are investigators supported through Fogarty's trauma and injury research program. The result was a series of six articles published as a supplement to the *BMJ Global Health* journal, which provides compelling reasons for investing in emergency care research and capacity building, and addresses the unique challenges developing countries face in this area of medicine.

"It's an opportune time to identify research priorities and opportunities that can inform and enhance emergency care," said CGHS Director Nalini Anand. With noncommunicable diseases on the rise, more people will require urgent treatment for coronary diseases or stroke, for example. Traumatic injuries, both intentional and unintentional, are rising especially among young people. Infectious disease epidemics, the increasing frequency of natural disasters and heat waves—fueled by the changing environment—typically take the biggest toll on the poorest communities, as noted by CLEER project lead Dr. Junaid Razzak, a professor of emergency medicine at



A man and woman push a stretcher holding an injured man through the streets of Chandigarh, India.

Johns Hopkins Medicine. "Based on the changing disease burden and evolving health challenges, I believe, the need for research and the strengthening of emergency care systems is going to be much higher in the future than it is today or ever was in the past."

Research critical for progress

Improving the quality of care provided in the first minutes and hours of an illness or injury in LMICs is a "public health imperative," according to the authors, and will require research and capacity building. By enhancing emergency care systems to include data gathering and research functions, they can help prevent spread of infectious diseases, offer a setting for clinical trials, and serve as a source of epidemiological data to develop disease and injury prevention programs. High-functioning emergency departments (ED) can do more than just provide critical care. They can also help to avert future health issues by engaging with patients who may not otherwise see a health provider.

"A smoker comes in for an ankle sprain and that's probably the only contact they have with the health system," said Razzak. "Engaging them around smoking and advising them on exercise is a major plus for health systems."

Building capacity in emergency care can provide surveillance data to help prevent the spread of infectious diseases, such as Ebola and Zika, and guide governments and health facilities in disaster preparedness and response. This not only contributes to global health security but also helps advance progress in achieving the U.N.'s Sustainable Development Goals.

The authors point out the need to conduct research and research training in the LMIC context, since high-income solutions often do not work well. Patients in developing countries tend to be sicker on arrival to the ED than those in developed countries where primary care, ambulance service and emergency medical technicians

are the norm. Additionally, LMIC patients experience different diseases and respond differently to treatment. “It’s not clear why this is,” Razzak said. “It is possibly related to genetic factors and also nutritional status.”

Training needs detailed

The greatest barrier to progress is lack of human resources, the authors agree. In many LMICs, there is a shortage of hospital personnel with specialized emergency care training, said Dr. Olive Kobusingye, a surgeon at Makerere University College of Health Sciences in Uganda and supplement co-author. Research to demonstrate the value of such training could help make the case to policymakers that it would be a wise investment, she said.

“Quite often emergency room patients have very poor outcomes because the people that care for them are trained to care for general patients, but they don’t have the skills to pick up on what’s going on in this patient in the next so many minutes and what they need to do to save their life,” according to Kobusingye.

Few academic institutions in LMICs have emergency medicine departments, which also means there is little leadership for the field. One article highlighted a Fogarty-funded trauma and injury research training program in Pakistan, which has produced high-quality research and enhanced the pool of local researchers. Razzak, who spends a significant part of his time in the country, is among the principal investigators on the project. “If such programs as Fogarty’s didn’t exist, I wouldn’t have been able to create a specialty in Pakistan or push along the development of research and education together.”

Data required to inform policy

Because emergency care surveillance and detailed registries with longitudinal data are largely absent in LMICs, policymakers and health facilities have little science-based information to guide their decisions on how to allocate resources and what services to provide.

Data on the causes, risk factors, treatment, outcomes and costs of emergencies can support public health in multiple ways, according to the CLEER working group that focused on surveillance and registries. In their article, they note the information has the potential to define the burden of emergency conditions and variations within and between countries; describe the prevalence of modifiable risk factors; outline the process of care and its impact on access and outcomes; and evaluate the cost-effectiveness of interventions, for example.

Different patients put different demands on the health system, said Kobusingye. “One trauma patient could use resources that maybe would go to 10 malaria patients.”

She said it’s important to provide relevant information to the authorities who plan services.

The authors provide a framework for conceptualizing opportunities for surveillance and registries that divides care into three phases: pre-hospital, facility-based emergency care and post-emergency care. And they suggest possible sources of data beyond that collected at a health facility, such as ambulance records for road traffic injuries, police records for interpersonal violence, and insurance and labor information on workplace injuries.

Given that paper records are still common in LMICs, and an over-burdened ED staff may be frustrated by data collection, the authors suggest identifying and prioritizing what is most important to the emergency system and using standardized clinical documentation.

Because emergency care surveillance and detailed registries with longitudinal data are largely absent in LMICs, policymakers and health facilities have little science-based information to guide their decisions.

Research needed in LMIC context

Clinical research in emergency care in LMICs is rare, but the investment will make care “more effective, responsive and appropriate for the population,” the authors noted.

What works for patients in developed countries may not translate to the LMIC context. For example, the authors note a Fogarty-supported study that found guidelines for treating sepsis in a high-income country protocol had harmful effects when used in Zambia.

Research and research training are needed to advance the field of emergency care science, according to a series of journal articles organized by Fogarty.



Photo by David Snyder for Fogarty

Several constraints to conducting clinical research were identified, including a lack of consistently applied, relevant and reproducible metrics. Leveraging technology represents a “promising” opportunity to improve emergency care, the authors suggested. Tablet-based data collection tools, text messaging for rapid patient follow up and telemedicine for improved patient diagnoses all hold potential. Distance learning and other non-traditional media should be studied to see if they can be efficiently implemented for research training.

Unique ethics questions posed

Research in any emergency situation raises ethical questions. The concerns are heightened in LMICs where ED patient volume is high, staff is overburdened, health infrastructure is weak and populations are especially vulnerable. Despite all that, it is “possible and essential to global health,” to conduct ethical emergency care research in developing countries, according to the CLEER working group that focused on ethics and produced a paper outlining several distinctive challenges.

Assessing the risks and benefits of an intervention may be complicated by the fact that LMIC patients are often sicker when they arrive at the ED than those in HICs, and may also have underlying concerns such as malnutrition. The global standard of care may not be available or is too expensive. In the urgency of the ED, there may not be time to clearly differentiate the role between the clinician providing care and the researcher seeking consent. Researchers and research ethics committees need to be mindful of the multiple ways in which potential participants may be vulnerable, the authors suggested.

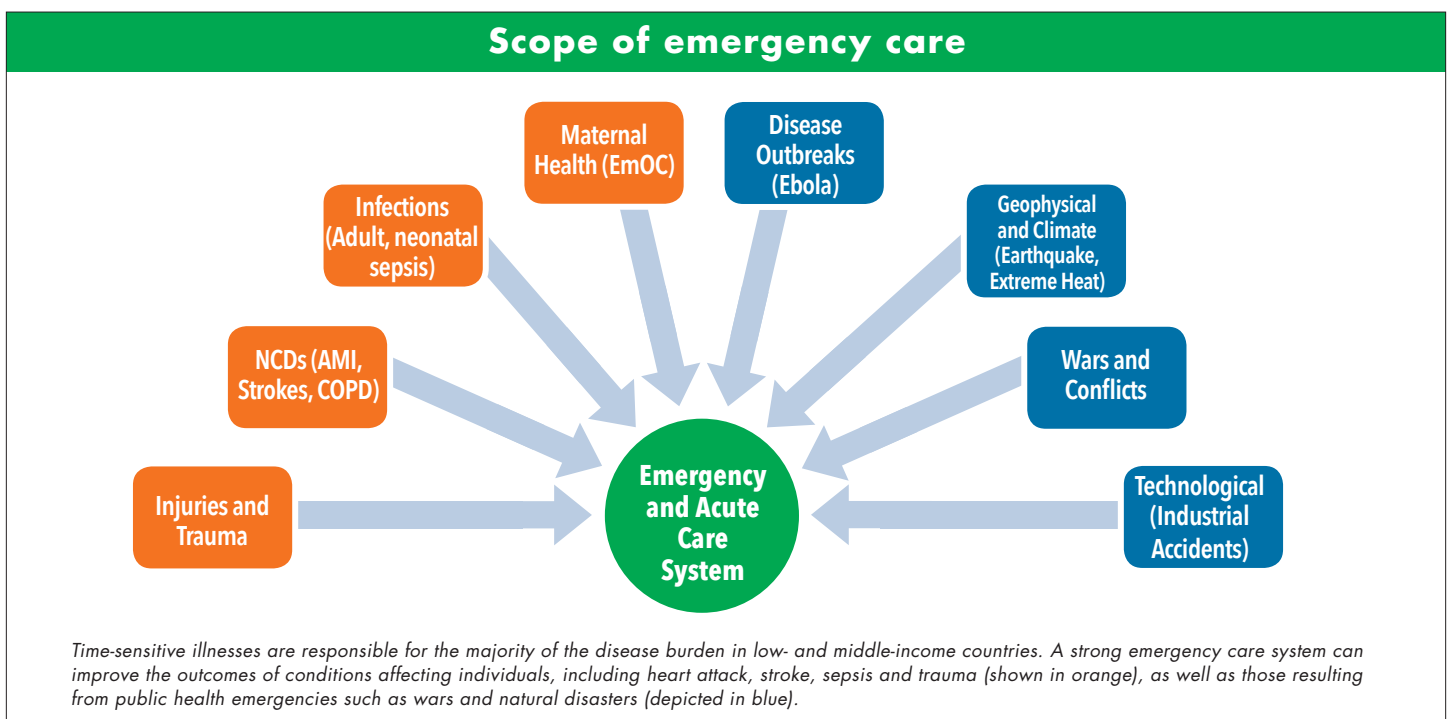
For example, can they make their own decisions, or do they require extra privacy because of a stigmatizing issue? Excluding vulnerable populations raises another set of concerns—will that bias recruitment or deny people potential benefits? Obtaining quality, fully informed consent from patients or families, or waiving consent, is another ethical challenge. Engaging the community in the research process may provide some protections.

The ethics working group reviewed human subject research regulations in a dozen LMICs and found they vary between countries, but most would allow for a substantial amount of emergency care research. However, there are no internationally accepted guidelines for the ethical review of this research and much of the bioethics literature focuses on issues relevant to HICs. As a first step, the authors proposed an international conference to set an agenda for harmonizing emergency care research ethics practice in LMICs.

Demonstrating the economic value

Emergency care delivery systems, unlike other health care components, must be available to people 24 hours a day, seven days a week. If they are not well organized or adequately financed, it can lead to catastrophic health spending that can impoverish families.

In an article exploring the economics of emergency care, authors note that when people can’t access quality emergency care—either because it’s unavailable or unaffordable—they delay or forgo care, which leads to



higher morbidity and mortality. That then takes a larger toll on society because of lost wages, lower productivity and higher costs of long-term care.

A growing body of evidence demonstrates that emergency care interventions can be a wise investment, the authors said. Their literature review produced 15 examples of research that demonstrate the cost effectiveness of a variety of interventions studied in LMICs.

More research is needed and the authors identify several priority areas that include: the methodology of economic evaluation for emergency care interventions; understanding the interplay of various health financing mechanisms on financial protection for unexpected catastrophic illness; interpreting the societal effects of poor coverage protection; identifying the health and economic impact of emergency care interventions; and defining the place of emergency care financing among other competing social priorities.

Ensuring high-quality delivery systems

Emergency care systems (ECS) in LMICs are fragmented—lacking coordination and accountability, according to supplement authors. Recognizing the complexity of these systems, the publication contains a proposed framework to approach conducting ECS

Many developing countries lack resources to effectively provide emergency care.

© 2012 David Davies-Deis, Courtesy of Photostore



A traffic accident in Abuja, Nigeria.

research. The co-authors also identified a series of priorities and point to a selection of studies from the limited research that's been done in LMICs.

While there are challenges, the authors agreed “the potential impact of research that uses such a framework on evolving ECS in LMICs could have a tremendous impact optimizing systems to impact morbidity and mortality.”

Issuing a call to action

Looking ahead, the CLEER participants believe emergency care research holds much potential. They call for strengthening emergency care research capacity, providing opportunities for collaboration and networking, increasing support for research and training from funders and philanthropic organizations, standardizing definitions of outcomes and exploring the use of technology for emergency care research.

The co-authors see the CLEER initiative as the first step in a much-needed effort to build and sustain a community of emergency care researchers, committed to working together to advance the field. Razzak also hopes that the supplement will help broaden support for LMIC emergency care research among the 27 Institutes and Centers at NIH, since so many of the research questions are cross-cutting.

“The challenge is how this movement can be sustained over the next few years,” he said. “If you bring the right people together, good things will happen because everyone is so passionate.”

Photo courtesy of Dr. Junaid Razzak



Diversity strengthens global health science



Diverse perspectives are essential to advancing science, especially in the global health arena where regional, gender and cultural experiences can be quite different. I applaud NIH Director Dr. Francis S. Collins on his recent announcement that he is committed to inclusiveness and believes it is time to end the tradition of all-male speaking panels at

scientific meetings. I and the Fogarty International Center staff enthusiastically join him in this effort.

As Dr. Collins pledged, “Too often, women and members of other groups underrepresented in science are conspicuously missing in the marquee speaking slots at scientific meetings and other high-level conferences. Starting now, when I consider speaking invitations, I will expect a level playing field, where scientists of all backgrounds are evaluated fairly for speaking opportunities. If that attention to inclusiveness is not evident in the agenda, I will decline to take part.”

We at Fogarty echo his concerns and will make these criteria part of our own consideration of speaking engagement invitations, for it is critical that we ensure the full participation of a diversity of voices in discussions intended to advance global health research.

A recent WHO study examined the unique barriers females face in global health and found that while care is largely delivered by women, the field is led by men. The gender gap is pervasive in academic medicine, where the report indicated only about 20% of deans at top global schools of medicine are women and about 70% of all publications are authored by men.

We’ve seen some signs of progress in that women are entering the global health career pipeline in greater numbers than ever, and are making significant contributions to academia and public health. In addition to providing them equal opportunities to highlight their expertise, voice their opinion, and influence the direction of research projects, we all must also work harder to ensure they have the opportunities needed for career advancement.

Here at NIH, 10 of the 27 Institutes and Centers have women directors—the highest number ever. My colleague Dr. Patti Brennan, Director of the National Library of Medicine, has captured their perspectives in a blog post titled, *The Power of 10: Women Leaders of NIH*.

As she put it, “Engaging with women leaders in partnership with our male colleagues sends a powerful and strong message. It’s not that we stand apart, it’s that we stand among...We subtly but persistently bring perspective into the conversation at the NIH leadership table.”

Here at Fogarty, we benefit from the astute input of our female leaders. Three of our four division directors are women, all of whom were promoted from other positions at NIH. As we work to nurture the next generation of global health leaders it is auspicious that this year’s cohort of Fogarty and Fulbright global health fellows includes 64 women and 52 men.

I’m also encouraged that there are two groups helping women advance in global health careers. Women in Global Health now has six chapters worldwide working to achieve gender equality in global health leadership through a variety of activities. Meanwhile, I continue to endorse the initiative begun by our former Fogarty board member, Dr. Michele Barry, to advance this agenda through the Women Leaders in Global Health (WLGH) organization and annual conference. The 2019 meeting will be held in Rwanda on Nov. 9–10.

For us at Fogarty, we also greatly value inclusion of geographic, economic and cultural diversity of presenters when conferences or consultations are convened. We will continue to make diversity at all levels a priority as we plan our own meetings and will include it in the decision-making criteria we use to consider speaking invitations from others.

We all benefit when global health conversations include diverse voices, representing different points of view. I hope you will join me in working to support this worthy goal.

RESOURCES

<http://bit.ly/NIHdiversity>



Lancet editor Horton receives Roux Prize

The Lancet editor Dr. Richard Horton received the 2019 Roux Prize and was recognized as one of the world's most "committed, articulate and influential advocates for population health." The annual prize, administered by the Institute for Health Metrics and Evaluation, honors people on the front lines of global health innovation in data science.



Health attaché role for NIH's Siddiqui

Dr. Sophia Siddiqui will be the new U.S. health attaché in South Africa. Siddiqui has been with NIH's National Institute of Allergy and Infectious Diseases since 2002, where she led development of an infectious diseases network in Indonesia and directed implementation of an investigational Ebola drug in Mali.



Longtime grantee van der Horst dies

HIV researcher and Fogarty grantee Dr. Charles van der Horst died in June during a marathon swim event in New York's Hudson River. Before retiring from the University of North Carolina, van der Horst held grants through Fogarty's Global Health Fellows and Scholars program and the AIDS/TB research training program.



New opportunity for Eye Institute director Sieving

Dr. Paul A. Sieving retired from the NIH in July to launch and direct a new Center for Ocular Regenerative Therapy at the University of California, Davis. Sieving led NIH's National Eye Institute for almost 20 years and is known internationally for studies of retinal and macular neurodegeneration diseases.



Global health research recognition for Patel

Dr. Vikram Patel will receive the 2019 John Dirks Canada Gairdner Award for Global Health. A Harvard professor whose work is funded by NIH's National Institute of Mental Health, Patel has developed and evaluated ways to bridge the treatment gap in low- and middle-income countries, where there's a lack of trained providers.



Global malaria platform taps Diallo as CEO

The RBM Partnership to End Malaria tapped Dr. Abdourahmane Diallo as its CEO. Diallo previously was minister and health advisor to the President of Guinea. Diallo has developed health and supply chain systems in more than 20 countries. The RBM Partnership is the largest global platform for coordinated action against malaria.

Heatwave guide for cities is launched

A new resource has been developed to help city authorities reduce human health dangers during extreme heat waves. Produced by the Red Cross Red Crescent Climate Center, the guide recommends establishing early warning systems, setting up cooling centers and preserving green spaces. News release: <http://bit.ly/IFRCheat>

CGD reports on leveraging Africa's capacity

Sub-Saharan African institutions must take the lead in providing research solutions to local problems, according to a study by the Center for Global Development. The report explores three possible models for Africa-based, African-led institutions—a multi-stakeholder funding platform, an integrator organization model and a scale model. Full report: http://bit.ly/CGD_AfricaResearch

WHO: number of smokers still rising

While more countries have implemented tobacco control policies, the number of smokers continues to grow worldwide, according to the 2019 WHO report on the global tobacco epidemic. There are now 1.1 billion smokers, around 80% of whom live in low- and middle-income countries. News release: http://bit.ly/WHO_tobacco

New program will help train African PhDs

A new initiative aims to provide training and support for 1,000 African Ph.D. students over the next ten years. Developed by the Federation of African Immunological Societies, the project intends to provide a bridge between basic and translational immunology, and drive scientific discoveries. Website: <https://faislegacyproject.com>

CUGH offers free e-learning resource

To address the deficit of skilled scientists and health care workers in low-income countries, the Consortium of Universities in Global Health has created an online forum to connect trainers with the educational resources they need. Website: www.cughcapacitybuilding.org

WHO updates essential meds, diagnostics

The WHO has issued new guidance on the essential medicines and diagnostic tests it recommends countries prioritize, and make widely available and affordable in their health systems. The two lists focus on cancer and other global health challenges, with an emphasis on effective solutions, smart prioritization and optimal access. News release: http://bit.ly/WHO_EM2019

Funding Opportunity Announcement	Details	Deadline
Fulbright-Fogarty Fellows and Scholars in Public Health	http://bit.ly/Fulbright-Fogarty	Oct 8, 2019
Global Brain and Nervous System Disorders Research Across the Lifespan R21 Clinical Trial Optional R01 Clinical Trial Optional	http://bit.ly/NIHGlobalBrain	Nov 7, 2019
Emerging Global Leader Award K43 Independent Clinical Trial Required K43 Independent Clinical Trial Not Allowed	http://bit.ly/NIHGlobalLeader	Nov 7, 2019
Noncommunicable Diseases and Disorders Research Training Programs in LMICs D43 Clinical Trial Optional	http://bit.ly/NCDtrain	Nov 12, 2019
Reducing Stigma to Improve HIV/AIDS Prevention, Treatment and Care in LMICs R21 Clinical Trial Optional	http://bit.ly/NIHstigmahiv	Nov 12, 2019
Ecology and Evolution of Infectious Diseases Initiative (EEID) R01	http://bit.ly/EEIDNIH	Nov 20, 2019
Global Noncommunicable Diseases and Injury Research R21 Clinical Trial Optional	http://bit.ly/NIHncds	Dec 13, 2019

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

Global Health Matters

July/August 2019

Volume 18, No. 4 ISSN: 1938-5935

Fogarty International Center
National Institutes of Health
Department of Health and Human Services

Managing editor: Ann Puderbaugh
Ann.Puderbaugh@nih.gov

Writer/editor: Shana Potash
Shana.Potash@nih.gov

Web manager: Anna Pruett Ellis
Anna.Ellis@nih.gov

Designer: Carla Conway

All text produced in Global Health Matters is in the public domain and may be reprinted. Please credit Fogarty International Center. Images must be cleared for use with the individual source, as indicated.

SUBSCRIBE:
www.fic.nih.gov/subscribe



**READ
DOWNLOAD
SUBSCRIBE**

20 million children worldwide missing essential vaccines

20 million children worldwide—more than 1 in 10—missed out on lifesaving vaccines such as measles, diphtheria and tetanus in 2018, according to new data from WHO and UNICEF. Globally, since 2010, vaccination coverage with three doses of diphtheria, tetanus and pertussis (DTP3) and one dose of the measles vaccine has



stalled at around 86%. While high, this is not sufficient, according to the report. Ninety-five percent coverage is needed—globally, across countries and communities—to protect against outbreaks of vaccine-preventable diseases.

“Vaccines are one of our most important tools for preventing outbreaks and keeping the world safe,” said WHO Director-General Dr. Tedros Adhanom Ghebreyesus. “While most children today are being vaccinated, far too many are left behind. Unacceptably, it’s often those who are most at risk—the poorest, the most marginalized, those touched by conflict or forced from their homes—who are persistently missed.”

Photo courtesy of PAHO

RESOURCES

<http://bit.ly/WHOvax2019>