Volume 4 | Issue 4
July 2018

Delaware Journal of Public Health

A publication of the Delaware Academy of Medicine / Delaware Public Health Association

Global Health

Special Section, Fogarty International Center at 50, see page 40

DELAWARE ACADEMY of MEDICINE
DPHA DELAWARE PUBLIC HEALTH ASSOCIATION
www.delamed.org | www.delawarepha.org

APHA AMERICAN PUBLIC HEALTH ASSOCIATION
For science. For action. For health.

Delaware Journal of
Public Health

July 2018
Volume 4 | Issue 4

A publication of the Delaware Academy of Medicine / Delaware Public Health Association

www.delamed.org | www.delawarepha.org

3 | In this Issue
Omar A. Khan, M.D., M.H.S., Timothy E. Gibbs, M.P.H., NPMc

4 | Global Maternal and Child Health
Richard J. Derman, M.D., M.P.H., Shivaprasad S. Goudar, M.D., M.H.P.E., Frances J. Jaeger, A.M., M.P.H, Ph.D., Omar Khan, M.D., M.H.S.

14 | Rwanda Health and Healing Program
James Plumb, M.D., M.P.H., Ellen J. Plumb, M.D., Desmond McCaffery

20 | What the Global Health Community Can Learn from Africa
Debora Kamin Mukaz, M.S., Melissa Melby, M.Phil., Ph.D.

26 | 88th Annual Meeting of the Delaware Academy of Medicine/Delaware Public Health Association

34 | Jewish Family Services of Delaware's Response to the Global Refugee Crisis
Lourena Gboeah

40 | Fogarty International Center at 50

56 | Global Health's Grand Challenge: Achieving Healthy Populations and a Sustainable Planet
Keith Martin, M.D., P.C

58 | Perspective: Hurricane Maria–Global Disaster, Local Response
Timothy E. Gibbs, M.P.H., NPMc

66 | Travelers Should Continue Taking Measures to Prevent Zika and other Diseases.
Sean Dooley

70 | Teaching Global Health at an Academic Health Center in Delaware
Ellen Plumb,, M.D. M.P.H., Karla Testa, M.D, Omar Khan, M.D. M.H.S. F.A.A.F.P.

74 | Study Abroad for Pre-health Profession Students
Donald C. Lehman, Ed.D., Kathryn Goldman, M.A.

80 | Vaccines and Global Health
Kate Smith, M.D., M.P.H.

84 | For Delaware's primary care doctors, exciting times are ahead
Adrian Wilson, D.O., F.A.A.F.P.

86 | You Can Prevent Colon Cancer by Getting Screened
Stephen S. Grubbs, M.D.

88 | Global Health Lexicon of Terms

89 | Global Health Resourses

94 | Index of Advertisers

95 | From the history and archives collection
Kate Lenart, M.A.

COVER

Global Health is about worldwide health improvement and surveillance, and the understanding that problems and disease may transcend national borders. Often, global health interventions and research leverage the power of collaboration and collective action.

The Delaware Journal of Public Health (DJPH), first published in 2015, is the official journal of the Delaware Academy of Medicine / Delaware Public Health Association (Academy/DPHA).

Submissions: Contributions of original unpublished research, social science analysis, scholarly essays, critical commentaries, departments, and letters to the editor are welcome. Questions? Write ehealy@delamed.org or call Liz Healy at **302-733-3989**.

Advertising: Please write to ehealy@delamed.org or call **302-733-3989** for other advertising opportunities. Ask about special exhibit packages and sponsorships. Acceptance of advertising by the Journal does not imply endorsement of products.

IN THIS ISSUE

Omar A. Khan, M.D., M.H.S.
President and Editor-In-Chief

Timothy E. Gibbs, M.P.H., N.P.Mc.
Executive Director

Everything global is local, and vice versa - such is the premise of the field of Global Health, and the foundational notion of this issue of the Delaware Journal of Public Health. Indeed, the field of global & community health shares common antecedents in both the biological and social sciences, and is best seen as a continuum between geographies rather than 2 distinct entities.

On a daily basis, the issues of the rest of the world impact the U.S. and vice versa. Does the health and well-being of people living in Sub-Saharan Africa, Asia, or the Middle East impact our health and resource allocation here at home in the United States?

Zika – originated in Uganda
SARS – originated in China
MERS – originated in Saudi Arabia

Does pollution on the other side of the globe influence our weather and health here at home?

China surpassed the United States as the greatest emitter of greenhouse gases in 2006. It is science, not conjecture, that greenhouse gases affect our ozone layer, with significant downstream impacts.

Does U.S. policy on trade, immigration, international development and diplomacy affect other countries? It is easy to argue that no other country affects the global stage more substantially. Most recently, refugees to the U.S. from numerous locales have been the focus of both thoughtful action, and less rational invective. As a signatory to the Universal Declaration of Human Rights, we in the U.S. strongly support the rights of individuals, including migrants, from several perspectives: legal, humanitarian, and economic. We support the integration of all those who become productive members of our society, which strengthens our broader fabric as an immigrant nation. ***E Pluribus Unum.***

We should also not forget the hundreds of thousands of Americans who work (or are deployed) across the globe. Their health and wellbeing is impacted by the conditions within which they work and live, and when they return home, that impact, behavioral and physical, can travel with them.

At the 2018 Annual Meeting of the Academy/DPHA we honored our commitment to local and global health, which are both part of our core mission. We are proud of our colleagues at Jewish Family Services of Delaware, who received the 2018 Public Health Recognition for their work in our community, in particular resettling refugees resettling in our area through the RISE program. We applaud their efforts and encourage you to learn about and support this work.

The 2018 Lewis B. Flinn President's Award was accepted by Nicholas J. Petrelli, M.D., F.A.C.S. on behalf of the Christiana Care Helen F. Graham Cancer Center and Research Institute. We honor his leadership, and the outstanding work of all the HFGCCRI colleagues who work hard every day to prevent and treat cancer and related conditions in Delaware. As a result this work, Delaware's cancer mortality rate is now dropping twice as fast as the national rate.

We are fortunate in the Delaware community to be so connected with global & community health. As home to the Delaware Health Sciences Alliance (DHSA- www.dhsa.org), we engage in education, research and academic endeavors that affect the lives of all our communities. The Christiana Care Global Health Curriculum has several residency tracks, and is among the most robust such programs in the country. The Academy is a proud co-sponsor of this lecture series which engages learners from throughout our community. We have a 7-year track record of co-sponsoring the DHSA Global Health Symposium, which hosts top leaders from around the country to engage with our colleagues on matters of local and global importance. Our staff are engaged in projects of international significance; including helping edit the next edition of the APHA Control of Communicable Diseases Clinical Manual. And we now introduce our partnership with the National Institutes of Health – Fogarty International Center on page 40. As with the American Public Health Association and the National Academy of Medicine, we are helping promote the Fogarty Center's message of health; making their opportunities for funding and research more visible to Delawareans; and help connect our local environment to the larger world around us.

As always, we welcome your feedback and comments, and hope you enjoy this issue.

Global Maternal and Child Health:

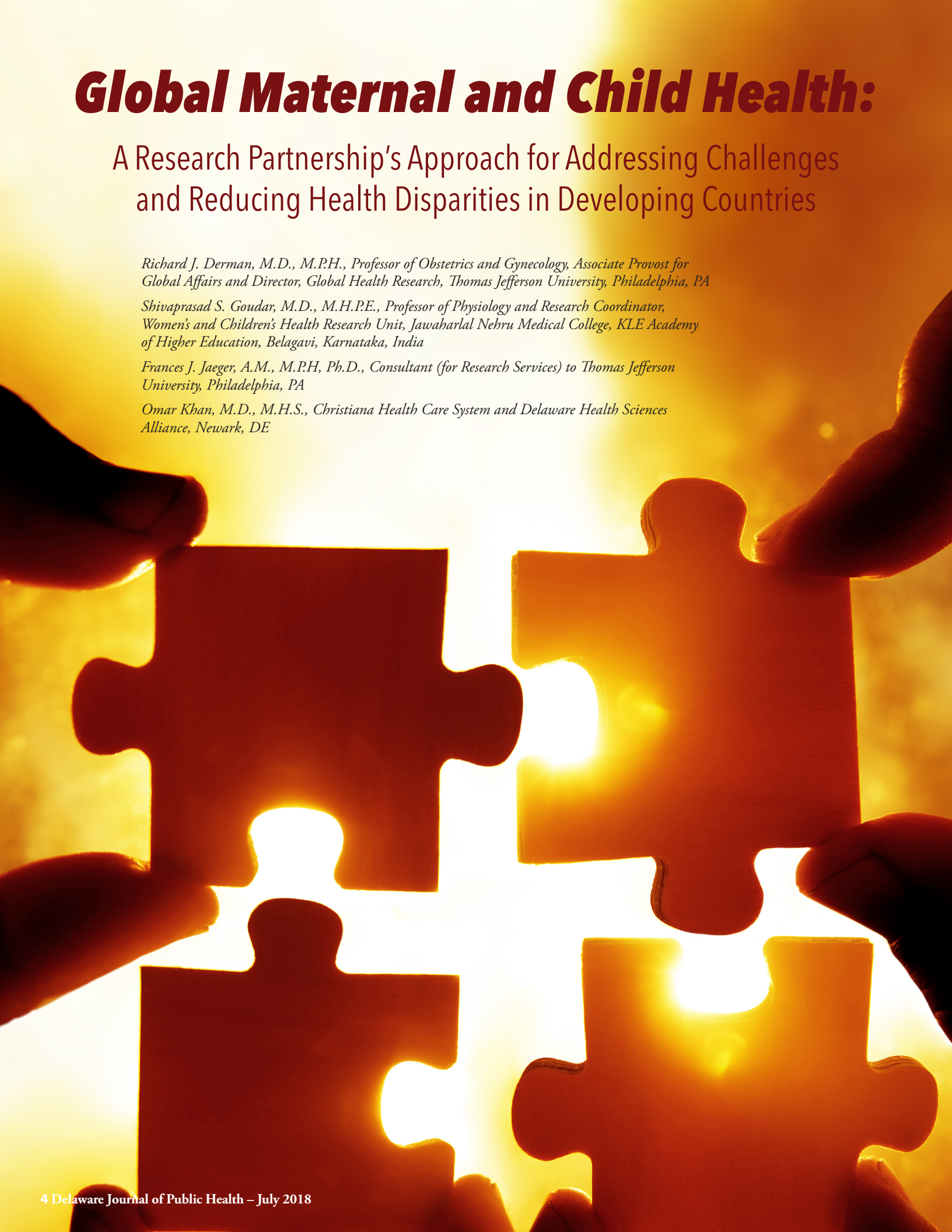
A Research Partnership's Approach for Addressing Challenges and Reducing Health Disparities in Developing Countries

Richard J. Derman, M.D., M.P.H., Professor of Obstetrics and Gynecology, Associate Provost for Global Affairs and Director, Global Health Research, Thomas Jefferson University, Philadelphia, PA

Shivaprasad S. Goudar, M.D., M.H.P.E., Professor of Physiology and Research Coordinator, Women's and Children's Health Research Unit, Jawaharlal Nehru Medical College, KLE Academy of Higher Education, Belagavi, Karnataka, India

Frances J. Jaeger, A.M., M.P.H, Ph.D., Consultant (for Research Services) to Thomas Jefferson University, Philadelphia, PA

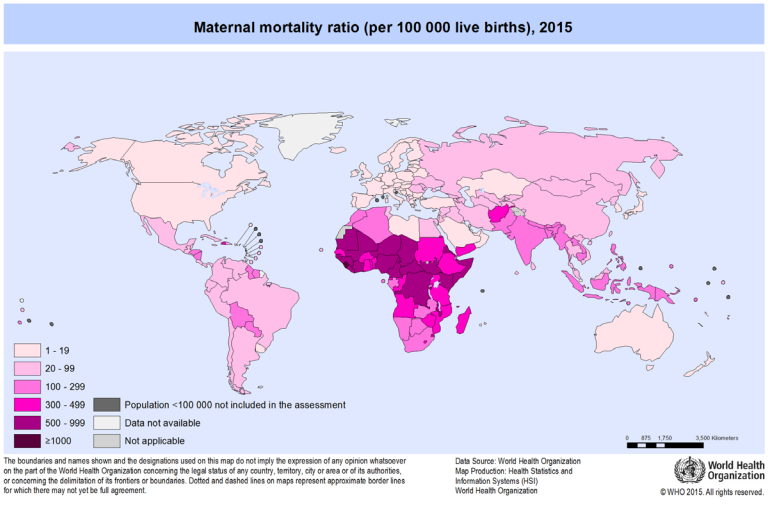
Omar Khan, M.D., M.H.S., Christiana Health Care System and Delaware Health Sciences Alliance, Newark, DE



Background

In the midst of significant maternal and child health (MCH) challenges in the United States, it is sobering that the vast majority of MCH deaths occur in developing countries. A report published by the World Health Organization (WHO) on maternal mortality for the period 1990-2015 stated that an estimated 99% of global maternal deaths in 2015—or approximately 302,000 of an estimated 303,000 deaths worldwide -- took place in developing countries. The number of deaths among infants and other children under 5 occurring in developed countries in the same year was estimated as 80,000 by the UN Inter-agency Group for Child Mortality Estimation (UN IGME); but the group estimated that the comparable number for developing regions was 5,865,000 (or 98.6% of the global total). It is tragic that such disparities exist, and it is particularly disheartening that most maternal and under-5 deaths are associated with preventable causes.

The world's estimated MMR, or the number of deaths per 100,000 live births, for 2015 was 216. This global ratio, however, masks the massive difference between the MMR of developed countries (12) and that of countries classified as developing (239). For example, Sub-Saharan African countries, with a mean MMR of 546, bear the disproportionately large burden of maternal deaths.



South Asia, while statistically a distant second with an MMR of 176, nevertheless experiences significant, unnecessary mortality. In countries with relatively large populations, the burden of the absolute number of MCH deaths can be staggering despite MMRs lower than the global ratio. In 2015, India's population of more than 1.3 million was second highest in the world, and the 45,000 maternal deaths occurring that year resulted in India achieving second place for such deaths. India followed only Nigeria, which had 58,000 maternal deaths. Together these two countries accounted for approximately one-third of global maternal deaths in 2015.[1]

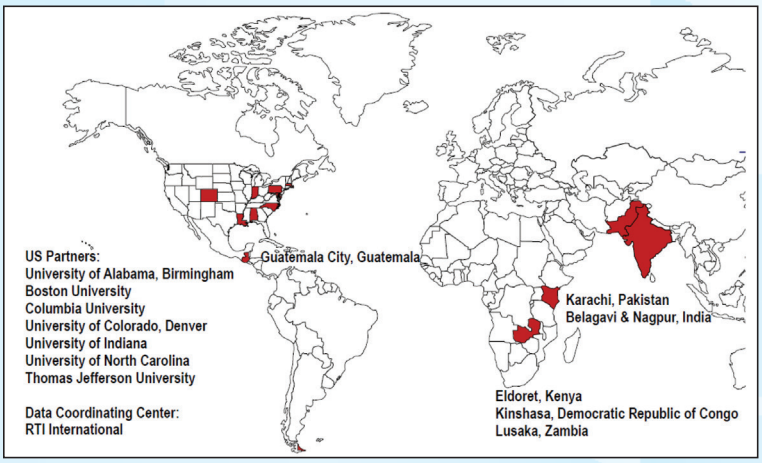
The under-5 mortality rate (U5MR) reflects the probability of a child (including an infant) dying before age 5, expressed per 1,000 live births based upon the current age specific mortality rates.[2,3] While under 5 deaths are trending downward, the 2017 report with UN IGME child mortality estimates indicated a 2016 global U5MR of 41 deaths per 1,000 live births. However, the least developed countries had a U5MR of 68 compared to a U5MR of 6 for highly developed countries. The U5MR of 79 for Sub-Saharan African countries means that nearly 8 (or 7.9%) of 100 babies born live in the region die before their 5th birthday.[3] Those of us in the US would consider most of these under 5 deaths to be unnecessary, preventable and treatable by means available in any developed country setting.[4]

Hemorrhage, hypertensive disorders and sepsis cause more than half of the maternal deaths worldwide. Certainly, lack of access to safe pregnancy termination services and safe/hygienic services in general affect the incidence of maternal mortality, as does lack of access to primary health care, including prenatal care.[5] When accounting for under-5 deaths, the link to maternal health is clear. In 2016, the major causes of under-5 deaths identified in the 2017 UN IGME report, based upon provisional estimates of the WHO and the Maternal and Child Epidemiology Estimation Group, included preterm birth complications (18 %), intrapartum related events (12 %), and neonatal sepsis (7 %). Other major causes of under-5 deaths included pneumonia (16 %), diarrhea (8 %), and malaria (5 per cent).[3] Clearly, an integrated approach to maternal, neonatal, and child health (MNCH) is warranted. Interventions directed at ensuring healthier pregnancies and safer delivery can benefit pregnant women and mothers and have favorable effects on the offspring--certainly immediately at the time of delivery, most likely during early childhood, and quite possibly on a long-term basis as the interventions may impact survival and development.

The Global Network Mission

In 2001, the National Institutes of Health (NIH), specifically the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), in collaboration with the Bill & Melinda Gates Foundation, funded the Global Network for Women's and Children's Health Research. The objective of this initiative was to expand scientific knowledge, develop sustainable research infrastructures, and improve health outcomes for pregnant women and young children in developing countries. Since the initial selection of partnerships between a Principal Investigator based at a US institution and researchers based in a developing country, several Global Network re-competitions have occurred. Currently, 7 sites in the US are paired with research sites in Central America (Guatemala); Sub-Saharan Africa (the Democratic Republic of the Congo, Kenya and Zambia); and South Asia (two locations in India and one in Pakistan) [see figure 1]. The funding mechanism is a cooperative

Figure 1: Current Global Network Membership



agreement that requires substantial involvement of NICHD researchers and program officials in Global Network research-related activities. Additionally, RTI International serves as the Global Network Data Coordinating Center.

While single-site studies were conducted by the early partnerships, priority shifted to the funding of multi-site clinical trials addressing major causes of maternal and newborn morbidity and mortality in low and lower middle-income countries. Substantial US federal funds have flowed to partner institutions since inception of the Global Network, and the success in building solid research infrastructures at Global Network foreign sites has resulted in financial support for studies consistent with the research agenda characterized in Table 1. Financial resources have been provided by a variety of sources, including (but not limited to) other NIH agencies, governmental and non-governmental organizations of other countries, the World Health Organization, private foundations, health professional organizations, and for-profit businesses supporting research initiatives.

Table 1: Global Network Research Agenda

Maternal Issues
• Postpartum Hemorrhage
• Hypertensive Disorders of Pregnancy
• Maternal Nutrition
Newborn Issues
• Birth Asphyxia
• Preterm Birth
• Infant Neurodevelopment
Maternal and Newborn
• Emergency and Neonatal Care

Highlights of Women's and Children's Health Research Implemented by Global Network Partnerships

This section discusses a selection of the many studies carried out by Global Network sites as well as women's and children's health research unique to the partnership with which three authors of this editorial are associated—i.e., the partnership between Thomas Jefferson University, Philadelphia and Jawaharlal Nehru Medical College (JNMC), Belagavi (also known as Belgaum), Karnataka, India. A Web site (https://globalnetwork.azurewebsites.net/) is maintained by RTI International that summarizes completed and active research carried out by partners under the sponsorship of the Global Network for Women's and Children's Research.

Global Network
for Women's & Children's Health Research

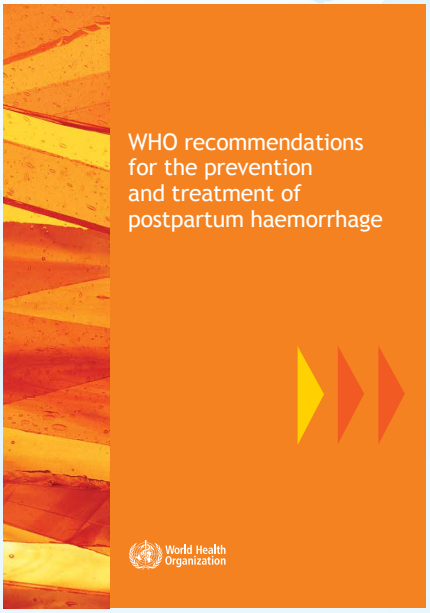
Maternal Newborn Health Registry (MNHR):

The Registry is a prospective, population-based observational study to quantify trends in pregnancy outcomes, including stillbirths and neonatal and maternal mortality rates, in geographically defined low-resource areas. It has operated since 2008, enrolling all pregnant women residing in defined study clusters and tracking birth outcomes through 6 weeks post-delivery. The average number of pregnant women enrolled each year by all participating Global Network research sites is more than 60,000 women. Thus, the MNHR Monthly Report prepared by RTI International in early January 2018 reflected more than 604,000 Registry records with delivery outcomes and more than 596,000 records with outcomes at 42 days post-delivery.[6] Since birth and death registration systems are often deficient in developing countries, the MNHR has been an essential component of the Global Network, facilitating the

evaluation of the impact of Global Network research and identifying the factors that support or impede improved maternal and perinatal outcomes.

Misoprostol and Other Uterotonics to Prevent Postpartum Hemorrhage:

Initially, the National Institute of Child Health and Human Development (NICHD) selected ten partnerships for Global Network membership and funding. The Research Unit established in India in cooperation with Jawaharlal Nehru Medical College (JNMC) was designated *Site 8*; this numerical reference has been maintained although there presently are only 7 partnerships. The JNMC research team, under the leadership of the partnership's Principal Investigator and his sponsoring institution (at the time, the University of Missouri-Kansas City), implemented the partnership's first Global Network study within the Belgaum District of Karnataka. The study, the first ever community-based randomized, placebo-controlled clinical trial of oral misoprostol, was designed to determine if administration of misoprostol after delivery could decrease postpartum hemorrhage (PPH), a leading cause of maternal death in developing countries. Prior to delivery, the Site 8 research team enrolled 1,620 pregnant women in the study. When the trial was implemented, almost all deliveries occurred in the home and many were assisted by traditional birth attendants. However, per the study protocol, an auxiliary nurse midwife (ANM) was called to the home when a subject was about to deliver. The ANM administered either 600 µg of misoprostol in tablet form or a placebo. Misoprostol was selected as the study drug because, unlike the preferred uterotonic used in hospitals (oxytocin), it did not require refrigeration and could be carried in the ANMs delivery bag and easily administered orally in the home setting. This trial resulted in nearly a 50% decrease in PPH and an 80% decrease in severe PPH.[7] Study findings supporting the effectiveness of misoprostol for PPH reduction provided the critical evidence for the inclusion of misoprostol on the WHO Model List of Essential Medicines[8] in 2011 as well as identification of misoprostol in a UN Commission on Life-Saving Commodities 2012 report, which stated that thousands of maternal lives could be saved if barriers to misoprostol use were removed.[9] Site 8's misoprostol study has been referenced in seven systematic reviews per a PubMed sidebar notation for the trial's abstract.[10] And importantly, the study stimulated registration and expansion of misoprostol use, at low-cost, for PPH prevention, and resulted in the design and use of a drape (the BRASSS-V drape) for measurement of blood loss following delivery.[11] The drape was made available to public sector health facilities in Karnataka State, included in delivery kits, and used in subsequent PPH research in India and elsewhere.



Following publication of findings, the misoprostol trial led to implementation of other studies to reduce, if possible, the reported side effects of misoprostol (fever and shivering) and to compare different primary and secondary approaches for managing PPH. JNMC researchers conducted a subsequent misoprostol trial that found secondary prevention of PPH with misoprostol to be non-inferior to universal prophylaxis based on the primary outcome of postpartum hemoglobin and the finding that the rate of PPH and the need for patient transfer were no worse in secondary prevention clusters than in primary prevention clusters.[12] The JNMC research team also participated in a WHO-sponsored, multisite, randomized-controlled trial that concluded that the prophylactic administration of a uterotonic within 1 minute of birth of the baby is perhaps the most important of the three components of the active management of the third Stage labor.[13]

The quest to find an "ideal uterotonic" matching the efficacy of oxytocin and lacking the need for refrigeration continued as a WHO-sponsored randomized trial was conducted in partnership with Merck for Mothers and Ferring Pharmaceuticals. The study, involving a total of 12 countries, was designed to evaluate a new, proprietary uterotonic--a room-temperature stable (RTS) formulation of carbetocin.[14] Notably, the Belagavi Research Unit led the trial in six centers spread across different regions of India and contributed nearly a quarter (or 7,100 subjects) of the total sample size of approximately 30,000 subjects. If the results of the study indicate that RTS carbetocin is a safe and effective alternative to oxytocin, and if this form of uterotonic can be produced and made available for those women that could benefit from its use, the study could have a substantial impact on the prevention of postpartum hemorrhage and maternal survival worldwide.

Community Level Interventions for Pre-Eclampsia:

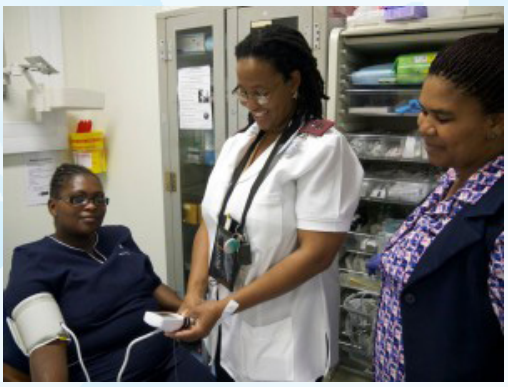
The JNMC research team became engaged in a series of studies collectively referred to as the Community Level Interventions for Pre-Eclampsia (CLIP) Trials that included a study to determine baseline rates of preeclampsia in Karnataka State,[15] an assessment of community health worker knowledge and management of preeclampsia,[16] and a community-based cluster randomized, controlled trial (RCT) to determine if a community-based package of care for women with hypertensive disorders of pregnancy can improve maternal and neonatal outcomes.[17] The Site 8 Research Unit enrolled nearly 15,000 Karnataka State subjects in the RCT, which was implemented in India during the period of February 1, 2014 to October 31, 2016. Table 2 presents several successes identified by the JNMC research team and associated with the India RCT. Data analysis was recently completed for the RCTs of all participating sites. Therefore, publications and dissemination meetings are planned to share study results.

Table 2: CLIP India Randomized Control Trial Successes

- ✓ Registration of all eligible pregnancies
- ✓ Improved early detection of pregnancy hypertension
- ✓ Community health workers (ASHAs) demonstrated ability to task share
- ✓ Increased referral and timely intervention
- ✓ Safe community administration of MgSO4 and methyldopa
- ✓ Improved vertical integration of health system
- ✓ Continuous professional development activities
- ✓ Recognized benefit to the community

CRADLE Trial:

India and other countries with unacceptably high maternal mortality recognize the need for earlier detection and prompt treatment of pregnancy complications responsible for maternal deaths. The Microlife CRADLE is a semi-automated device that was used in the CLIP Trial for detection of hypertension. The device is now being tested in rural Africa and within India by the JNMC and King's College, London collaborative research team to further develop the device as an accurate and low-cost means to improve antenatal detection of pre-eclampsia as well as hypotension associated with postpartum hemorrhage and sepsis.[18] Further adaptation of existing tools for blood pressure measurement will help ensure proper use by frontline health care providers working in communities and at first-level clinics. Wider use of dependable and easy-to-use devices in low and middle-income countries will increase the availability of blood pressure measurements and facilitate referrals of high-risk women to facilities capable of providing higher level care, thereby improving pregnancy outcomes for both the mother and infant.



The CRADLE Trial in India is co-funded by the United Kingdom's Medical Research Council and the Government of India, Department of Biotechnology. Notably, the India trial received the Newton Prize for excellent research and innovation. The Newton Prize is an annual £1 million fund designed to incentivize researchers and innovators to participate in the Newton Fund as partners with the UK, and to work on the most important global challenges facing Newton Fund associated countries.

Maternal Nutrition:

Among those concerned with maternal and child health, it is common to hear the phrase *"Healthy mothers, healthy babies."* Thus, the Global Network partnership between the University of Colorado/Denver and Guatemala developed a trial to assess the benefits to the offspring of ensuring optimal maternal nutrition using micro and macro nutrient supplementation prior to conception compared to initiating the same supplementation beginning at 13 weeks of pregnancy and to providing pregnant women only standard of care without nutritional intervention; a second study phase is now active and designed to assess growth and development of offspring at various age intervals to 24 months. Four Global Network sites (Belagavi, India; Guatemala; the Democratic Republic of the Congo; and Pakistan) have been participating in this study funded by the Bill & Melinda Gates Foundation. Data collection for the maternal nutrition phase of the study is complete and currently being analyzed for the primary outcome of the

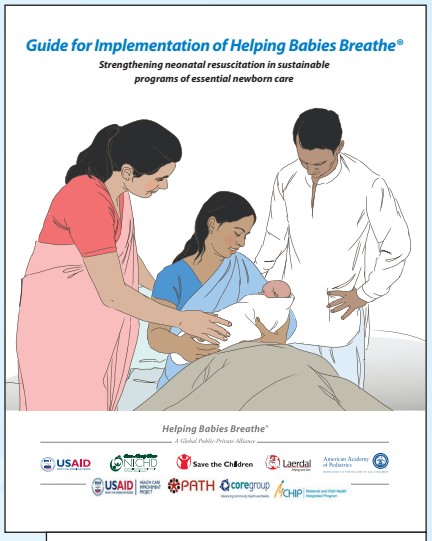
study—infant length at birth. Not all infants born to mothers in one of the three study arms have yet reached 24 months of age; thus, the study is ongoing.

Studies Designed to Combat Asphyxia and to Help Babies Breathe:

Between 2005 and 2008, the *First Breath Trial* used the World Health Organization's *Essential Newborn Care* (ENC) program to train almost 4,000 birth attendants from 100 Global Network communities with more than 150 deliveries. To date, this is the largest trial for the training of community-based birth attendants, including traditional birth attendants, in neonatal resuscitation using bag and mask ventilation. Following ENC training, birth attendants participated in *Neonatal Resuscitation Program* (NRP) training in clusters randomized to this intervention (based upon the American Academy of Pediatrics' training program). Although ENC training did not result in significant reduction from baseline in the rate of neonatal death from all causes in the 7 days after birth or in the rate of perinatal death, there was a significant reduction in the rate of stillbirth. Likewise, the additional training in the Neonatal Resuscitation Program failed to significantly affect the neonatal, perinatal, or stillbirth rates.[19] However, when data for the Belagavi, India site was analyzed, this site demonstrated significant reduction in early neonatal mortality and in stillbirth and perinatal mortality rates.[20]

A sub-group of asphyxiated and resuscitated babies (from India, Pakistan and Zambia) were randomized to a parent-provided early developmental intervention (EDI) or a control group and compared with normal infants not requiring resuscitation at birth and randomized to the EDI or control group. At 12 months, there was no evidence of a significant difference between the resuscitated infants and the non-resuscitated infants based upon Mental Development Index (MDI) scores (using Bayley Scales of Infant Development-II) and other neurodevelopmental outcomes.[21] But importantly, assessments at 24 and 36 months provided evidence of a positive EDI effect regardless of whether children were exposed to birth asphyxia, preterm birth, or an essentially healthy birth, or different maternal age or education, child gender, or country.[22]

JNMC was one of the five sites selected by AAP for field testing the *Helping Babies Breathe* (HBB) curriculum. Subsequently, HBB was incorporated into the neonatal resuscitation training curriculum of the basic newborn care and resuscitation program of the Government of India called "Navjaat Shishu Suraksha Karyakram" (basic newborn care and resuscitation). Further, JNMC and two other Global Network partnerships (Nagpur, India and Kenya) participated in a study known as *Evaluation of HELPING BABIES BREATHE in Belgaum, Kenya and Nagpur: Does Implementation of HELPING BABIES BREATHE Save Lives?* Helping Babies Breathe (HBB) and Essential Newborn Care (ENC) trainings occurred in 71 facilities in the Global Network research areas. The pre-post evaluation study was designed to test the impact of HBB on perinatal mortality (fresh stillbirths or early neonatal deaths) among births >1500 grams. The trainings were not associated with consistent improvements in mortality among all neonates ≥ 1500 grams; however, differential improvements in survival of infants <2500 grams occurred within the Site 8 (Belagavi) site.[23] This study suggested the need for careful implementation of HBB training with attention to the target population, data collection, and ongoing quality monitoring activities. Since the conclusion of the Global Network HBB study in 2013, improvements have been made in the curriculum and the AAP issued *Helping Babies Breathe* 2nd **Edition**, **which includes** scientific updates, expanded educational advice, strengthened implementation guidance and new quality improvement resources. Qualitative and quantitative data generated by the Global Network HBB study and other related studies informed the 2nd edition updates.

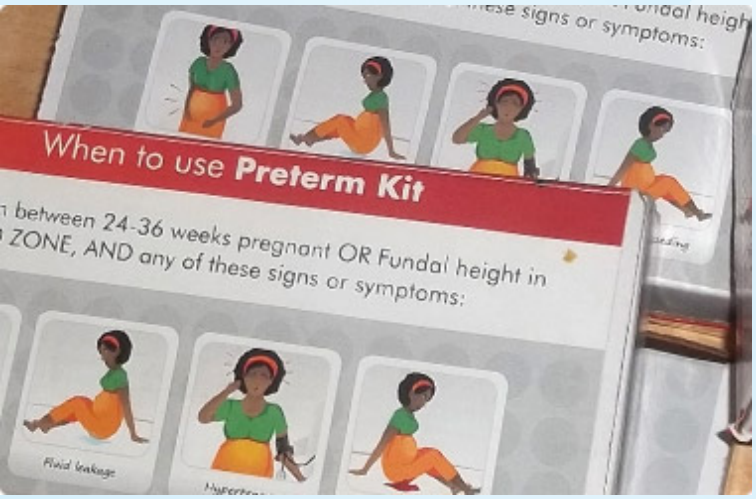


Studies Designed to Reduce Preterm Births:

All research sites active in the Global Network in 2011 implemented the *Trial of the Use of Antenatal Corticosteroids in Developing Countries (ACT Trial)*

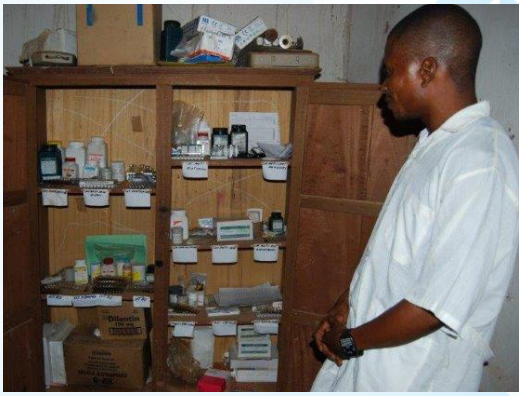
between October 2011 and March 2014. The trial was designed as an 18-month, cluster randomized study but sites began and ended the study at variable times within the indicated period. The study's purpose was to assess the feasibility, effectiveness, and safety of a multifaceted intervention designed to increase the use of antenatal corticosteroids among women at risk for preterm birth at all levels of health care in low-income and middle-income countries. Although it was expected that the intervention would reduce neonatal mortality associated with prematurity, the study had both disappointing and unexpected results. A Network total of 2,520 infants <5th percentile birthweight (used as a proxy for preterm birth) from 51 intervention clusters and 2,258 such infants from 50 control clusters were assessed; despite increased use of antenatal corticosteroids in low-birthweight infants in the intervention group, neonatal mortality did not decrease in this group, and increased in the population overall; for every 1,000 women exposed to this strategy, an excess of 3·5 neonatal deaths occurred, and the risk of maternal infection increased.[24]

Issuance of findings from the Global Network's ACT Trial resulted in questioning whether there was enough evidence to support antenatal corticosteroid use in the late preterm perio d and whether the results from other studies suggesting benefits of antenatal corticosteroids were generalizable to use in low-resource settings. Recognition that more research was needed led to a decision by the Bill & Melinda Gates Foundation to support two trials—*WHO ACTION-I and ACTION-II (Antenatal CorticosTeroids for Improving Outcomes in preterm Newborns) Trials.*[25] The Belagavi, Site 8 Research Unit is an implementing partner for both trials and serves as the coordinating center for three participating hospitals in India. ACTION-I aims to determine whether antenatal corticosteroids are safe and efficacious for women and newborns when given in hospitals in resource-limited settings to women with a live fetus/es at risk for imminent, early preterm birth (26 weeks 0 days - 33 weeks 6 days gestation). Besides the three hospitals in India, hospitals in Bangladesh, Kenya, Nigeria, and Pakistan ae participating in ACTION-I. ACTION-II has the same objective of assessing safety and efficacy of antenatal corticosteroid but when given in hospitals to women with a fetus/es at risk for imminent, preterm birth (34 weeks 0 days to 36 weeks 0 days gestation).



The Belagavi site also implemented a randomized placebo-controlled study, *Clindamycin to Reduce Preterm Birth in a Low Resource Setting*, which was funded by the Thrasher Research Fund to assess if pregnant women with high vaginal pH levels and treated with clindamycin were less likely to deliver preterm infants than pregnant women, also having high pH levels, who received a placebo. Publication of findings is pending for this study.

An ongoing Global Network study directed at the problem of preterm births is known as *Aspirin Supplementation for Pregnancy Indicated Risk Reduction in Nulliparas (ASPIRIN).*[26] All 7 Global Network partnerships are participating in this study which will achieve a subject total of 11,920 nulliparous, pregnant women. Consenting subjects meeting eligibility criteria will be randomized and take a daily tablet of low-dose (81 mg) aspirin or a placebo beginning in the first trimester of pregnancy and continuing to 36 weeks gestation to determine if subjects taking aspirin are less likely to deliver a preterm infant than the control group of women taking a placebo. Recruitment for this study will be completed during Summer 2018 and results will be available mid-year 2019. If the study achieves the desired outcome of a 20% reduction in preterm births in the intervention group and if the intervention is proven safe and generally without serious side effects, then the study will provide the basis for a recommendation that low-dose aspirin be used to decrease the risk of preterm delivery among nulliparous pregnant women who are at higher risk for a preterm birth than multiparous women.



Emergency Obstetrics and Neonatal Care (EmONC) Trial: EmONC is a Global Network, multi-site trial that was implemented during 2008-2011 as a cluster randomized

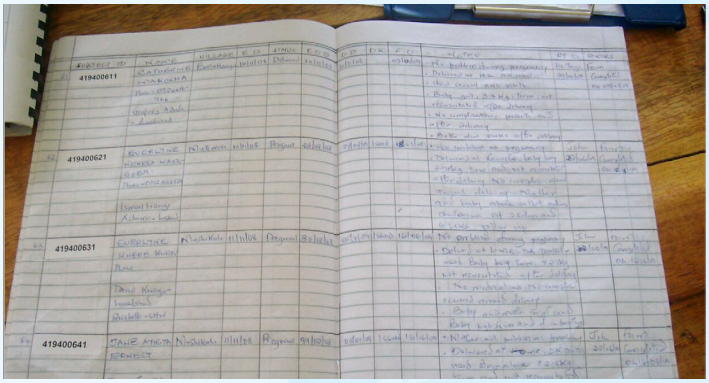
controlled trial to evaluate an intervention package, including community mobilization, to establish and sustain mechanisms of transport and payment and to foster client-oriented emergency obstetrical and neonatal care. It was hypothesized that this complex study would reduce perinatal and neonatal mortality rates within participating Global Network research areas. However, EmONC did not achieve detectable impact on pregnancy outcomes and participating researchers concluded that achieving improvement in such outcomes will require substantially more infrastructure for obstetric and neonatal care than was available at facilities in study area.[27] However, a separate analysis of Site 8's data was completed. Compared to data for a baseline period, JNMC's data for the last 6 months of the study indicated that the neonatal mortality rate was lower in the intervention vs. control clusters as was the perinatal mortality rate. However, the differences associated with these rates did not achieve statistical significance.[28] Nevertheless, the findings associated with Site 8's findings suggest that longer-term implementation of the intervention package might have resulted in statistically significant improvement in outcomes.

Conclusions

Global Network partnerships have been very productive during nearly two decades of research designed to decrease adverse pregnancy outcomes and improve the health status of mothers, infants and young children. Not all studies have achieved the desired primary and secondary outcomes; however, every study has increased knowledge and an understanding about what works and what doesn't in low-resource settings. Often studies have suggested new hypotheses and stimulated additional research.

The opportunity to implement MCH research has provided the stimulus for Global Network research units, which are geographically based within the foreign partner's university or research institute, to develop strong alliances with local health care providers and stakeholders and to engage community participants in the initiatives to improve women's and children's health. Such interactions frequently result in benefits (e.g., improved health practices) beyond direct benefits resulting from the studies conducted. Further, the research infrastructures at the foreign sites have developed and grown over time, and the research teams based at these sites are well-regarded for the research skills and knowledge inherent in team members.

The Maternal Newborn Health Registry has been valuable for monitoring trends and causes of mortality, and it has been the source for numerous secondary analyses and publication of findings in journals focused



on global health. The Registry has also facilitated the identification of priorities for future research. For example, Registry data was recently used to assess the prevalence and seriousness of anemia during pregnancy and to associate this problem with poorer pregnancy outcomes. As a result, the site 8 partnership is designing research to test a new treatment approach for reducing maternal anemia; and other Network sites may participate assuming resources are identified for study implementation. While the Global Network has a fair and equitable process for prioritizing studies for use of federal funds funneled through NIH (and specifically NICHD, the primary institute), it is likely that other financial sponsors will offset a substantial percentage of the research costs of future studies designed collaboratively by participating Network sites; and this is consistent with Global Network policy and intent.

No Network partnership has yet ended the MCH disparities discussed in this article. However, indicators of the burden of MCH mortality—e.g., MMRs and U5MR, are trending downward worldwide and generally

in the countries participating in the Global Network for Women's and Children's Health Research. Likely, the research initiatives of Global Network partnerships have positively influenced the trends by advancing practical knowledge and linking the acquired knowledge to health care delivery and public health practice. For this reason, the authors of this article are optimistic that continuation of the Global Network will yield even greater future success.

Acknowledgements

SG, RD and FJ gratefully acknowledge financial support for implementation of the studies mentioned in this editorial from—

- The American Academy of Pediatrics
- The Bill & Melinda Gates Foundation
- Laerdal Medical
- The Medical Research Council of the United Kingdom,
- The National Institutes of Health, including the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the Fogarty International Center, the National Cancer Institute, and the National Institute of Neurological Disorders and Stroke
- The Norwegian Agency for Development Cooperation
- The Thrasher Research Fund
- The World Health Organization and especially its Department of Reproductive Health and Research

Abstracts of this work have been presented at invited sessions of the annual meeting of the American Public Health Association (APHA) between 2013 and 2017. We thank the APHA and the International Health section for hosting these sessions.

Richard J. Derman, M.D., M.P.H., Professor of Obstetrics and Gynecology, Associate Provost for Global Affairs and Director, Global Health Research, Thomas Jefferson University, Philadelphia, PA

Shivaprasad S. Goudar, M.D., M.H.P.E., Professor of Physiology and Research Coordinator, Women's and Children's Health Research Unit, Jawaharlal Nehru Medical College, KLE Academy of Higher Education, Belagavi, Karnataka, India

Frances J. Jaeger, A.M., M.P.H., Ph.D., Consultant (for Research Services) to Thomas Jefferson University, Philadelphia, PA (not shown)

Omar Khan, M.D., M.H.S., F.A.A.F.P., is the Editor-in-Chief of the Delaware Journal of Public Health, as well as the President of the Delaware Public Health Association, and the President-Elect of the Delaware Academy of Medicine. He is also the CEO of the Delaware Health Sciences Alliance and is the physician leader for Partnerships and Academic Programs at Christiana Care. He is also the Co-Director for the Community Engagement & Outreach component of the multi-site NIH funded DE Clinical & Translational Research program (ACCEL).

Pediatric Perspectives 2018:
Issues in Pulmonology, Infectious Diseases and Newborn Care

September 7 – 9, 2018

Atlantic Sands Hotel and Conference Center
Rehoboth Beach, Delaware

This program is designed for pediatricians, family medicine physicians, PAs, APNs, physicians in training, nurses and other allied health professionals. This conference is designed to convey new perspectives on pediatric infections, pulmonary diseases and newborn care.

TOPICS INCLUDE:

- Nodes, Nodules and Cysts, OH MYPart 1: Non-malignant Lesions of the Pediatric Lung and Airway
- What is New in NICU Care
- Babes in the Microbial Wood
- Mycoplasma 101
- The RespiratoryEffects of Obesity in Pediatric Patients Molecular
- Diagnostics in Your Practice: Learning a New Language
- The Late Preterm Infant
- What's New with Flu: What You Should Do

Course Registration: Advance registration is required and should be received by August 10, 2018. All registration received by this date will be confirmed in writing.

The registration fees are as follows: $360 for physicians, $300 for nurses and allied health professionals, and $125 for residents and students. This fee includes all course material, refreshments and meals as noted on the schedule. Registration is limited and will be honored in the order of the date received.

Site: The program will be held at the Atlantic Sands Hotel and Conference Center, on the Boardwalk in Rehoboth Beach, Delaware. The hotel offers an oceanfront pool, fitness room, spa services, restaurant /lounge and complimentary on-site parking.

Please visit the website for more information on the hotel at www.atlanticsandshotel.com.

Accreditation: This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Nemours and Christiana Care Health Service, Inc. Nemours is accredited by the ACCME to provide continuing medical education for physicians.

Nemours designates this live activity for a maximum of 14.25 *AMA PRA Category 1 Credits™.* Physicians should only claim the credit commensurate with the extent of their participation in this activity.

Application for CME credit has also been filed with the American Academy of Family Physicians. Determination of credit is pending.

Commercial Support: This program may be supported in part by unrestricted educational grants in accordance with ACCME Standards. At the time of this printing, a list of commercial supporters was not available. Appropriate acknowledgement will be given to all exhibitors and supporters in conference materials at the time of the meeting.

For more detailed conference information and to register, please go to PedsUniversity.org.

If you have any questions about the conference, or registration, please contact Karen Supplee, (302) 651-6758, or karen.supplee@nemours.org.

CHRISTIANA CARE HEALTH SYSTEM

Nemours. Alfred I. duPont Hospital for Children

Rwanda Health and Healing Program

James Plumb, M.D., M.P.H., Thomas Jefferson University Hospital
Ellen J. Plumb, M.D., Christiana Care Health System
and Desmond McCaffery, Thomas Jefferson University Hospital

Background

In 2005, Thomas Jefferson University (TJU) medical students and faculty from the Department of Family and Community Medicine (DFCM) initiated the Rwanda Health and Healing Project, a community oriented health project in two rural villages in Rwanda. Since its inception, over 80 students and faculty from TJU have traveled to Rwanda to work with these villages on a variety of public health and income generating projects[1]. As part of this program, a partnership was formed with the Rwanda Village Concept Project (RVCP), a Rwandan medical student driven public health and community development organization.

In 2007, a group of dedicated Jefferson students from the student organization Jeff HEALTH worked with faculty from the DFCM to establish an exchange program to bring RVCP medical students to Jefferson. Through the Jeff HEALTH-RVCP partnership, Jefferson selects 2-3 Rwandan students per year through a rigorous essay and interview process for two-month long TJU rotations focused on primary care, community health, and public health. Since 2007, thirty-one Rwandan students have successfully completed this exchange program.

The curriculum for this exchange has become increasingly formalized in response to changes in medical curriculum requirements in Rwanda and feedback from participants. Directed by an interdisciplinary group of resident and faculty global health clinical mentors across the Jefferson Departments of Pediatrics, Family and Community Medicine, Emergency Medicine, and Obstetrics and Gynecology, the current curriculum is designed to introduce the students to the many dimensions of clinical practice, health systems, and medical education in the United States.

As Rwanda's population faces a rapidly increasing burden of chronic disease, there is a growing need to train all general practitioner level physicians, nurses, and community health workers in the prevention, diagnosis, and management of diabetes, hypertension, obesity, and cardiovascular disease. Therefore, one of the main educational focuses of the exchange program is to expose Rwandan students to different clinical and community-based approaches to addressing these medical and public health challenges. Through working with clinicians during individual office-based patient visits, observation of DFCM's diabetes group visit program, and participating in TJUH's Center for Urban Health chronic disease community screening and education programs, students are exposed to potential models for chronic disease prevention and care in Rwanda.

Over the years, students and residents have completed several program evaluations aimed at exchange program improvement. The last program evaluation was completed in 2017 as part of a TJU College of Population Health independent clerkship. This evaluation focused exclusively on the experiences of the Rwandan students completing their clinical experience in Philadelphia. The exchange Program Directors were particularly interested in laying the foundation for an assessment of the potential social and professional impact of exchange alumni networking.

Methods

In order to evaluate the Rwandan exchange, a survey was designed to obtain feedback on program effectiveness in terms of leadership capabilities, alumni interactions, and overall program quality. Based on thematic analysis from a previous survey of RVCP exchange alumni completed in 2009, the survey focused on the key areas of global public health, comparative health systems, clinical skills, management of non-communicable diseases, advocacy, and cultural awareness. In addition to the survey, Program Directors used semi-structured in-depth interviews to capture authentic narratives about the experiences of RVCP alumni. These interviews focused on motivations for medical careers, experiences at TJU, current professional involvement, and future aspirations. Surveys were web-based and interviews were conducted in-person in Rwanda during the Spring of 2017.

Results

In total, twenty-five alumni completed the survey. As evidenced by the responses listed in Table 1, through the exchange Rwandan alumni increased their knowledge and understanding of the US healthcare system, strengthened advocacy and communication skills, and improved confidence in their clinical abilities. Additionally, alumni demonstrated leadership competencies through experiences in their respective career fields and volunteering with organizations focused on healthcare. As summarized in Table 2, the experiences ranged from mentor to board member to department head.

Table 2

Leadership Position	number of alumni*
Mentor	8
Committee Member	12
Board Member	7
Department Head	6
Clinical Director	1
Chief Resident	1
Other	6

** In some cases, alumni held multiple position*

Five in-depth interviews were completed with alumni. Although the interviews are still being analyzed, the main themes that have emerged include: health systems, professional development, self-determination, collaboration, community, influence, advocacy, and disease.

Discussion

Through extensive involvement and engagement with their communities, the alumni demonstrate a profound commitment to improving the overall quality of healthcare in their country for the benefit of all Rwandans and more specifically the most vulnerable populations. The commitment to the health and wellbeing of those less fortunate and the determination to improve the quality of life of these individuals was apparent in each personal account.

One specific example that highlights alumni involvement in their communities is the role that an alumnus played in the Rwandan organization Young Professionals Chronic Disease Network (YP-CDN). YP-CDN is an independent, non-profit, non-governmental, global multidisciplinary community organization dedicated to policy analysis, advocacy and social change for non-communicable diseases (NCDs). One month after returning from the RVCP-Jeff Health exchange, driven by their exchange experience, one alumnus became a committee member of YP-CDN with the aim to identify the main gaps in the management and prevention of NCDs in Rwanda, continuing with advocacy to address those identified gaps. Because mortality rates for breast and cervical cancer are high in Rwanda, YP-CDN started advocating for change in health policy around cervical cancer screening for women over the age of forty.

Survey results indicate a high level of perceived effectiveness of the program. Educational areas of the exchange that are gradually becoming more formalized and need improvement include research, population health, and physician advocacy. As part of a global trend in medicine, research is becoming an increasingly important requirement of academic scholarship and medical training in Rwanda. However, there exists very little in-country guidance for students conducting research. Given that the RVCP students selected for exchange have extensive backgrounds in community health programming, program coordinators hope to build a practical and targeted research curriculum focused on basic biostatistics, program development and evaluation, and community-based participatory research methods. In addition, DCFM faculty are also working with medical educators in Rwanda to better align the exchange curriculum with the National University of Rwanda's required community and population health curriculum

As demonstrated by this survey, the RVCP exchange students now populate the private, public, and non-profit health sector of Rwanda--functioning as clinicians, researchers, educators, and health administrators. The expanding personal and professional networks that have emerged as a result of this unique program of global health education have provided the foundation for an important model of interdisciplinary peer mentorship across multiple levels of learners. These preliminary results suggest that this model of bi-directional global health education has the potential to build local and international global health capacity in a way that is fundamentally more equitable, inter-professional, and relevant to the future practice of global health.

References

Plumb E. et al. The Use of International Service Learning Initiatives for Global Health Education: Case Studies from Rwanda and Mexico. Health Promot Pract May 2013, Vol 14 (3): 334-342.
Available at: http://hpp.sagepub.com/content/14/3/334.abstract

James Plumb, M.D., M.P.H. is a family medicine doctor at Thomas Jefferson University Hospital.

Ellen J. Plumb, M.D., specializes in family and community medicine at Christiana Care Health System. She joined Christiana Care from Thomas Jefferson University in Philadelphia, where she was an assistant professor and primary care physician leader advancing global health, human rights and refugee health care.

Desmond McCaffery is a Manager of Management Monitoring Excellence at GlaxoSmithKline

Table 1

Program Effectiveness	Extremely	Very	Moderately	Somewhat	Not at all
How effective was the program in increasing your knowledge and understanding of global public health (e.g. clinical and public health practice)?	48%	44%	8%	0%	0%
How effective was the program in increasing your knowledge of and understanding of the U.S. health system?	48%	32%	20%	0%	0%
How effective was the program in increasing your knowledge of the role of primary care physicians in a health system?	76%	24%	0%	0%	0%
How effective was the program in increasing your knowledge of the prevention and management of non-communicable diseases?	64%	20%	16%	0%	0%
How effective was the program in demonstrating physician advocacy?	32%	64%	4%	0%	0%
How effective was the program in helping you feel more confident in your communication skills?	60%	36%	4%	0%	0%
How effective was the program in helping you feel more confident in your advocacy skills?	32%	60%	8%	0%	0%
How effective was the program in helping you feel more confident in your clinical skills and abilities?	28%	56%	16%	0%	0%

Student Reflection

As part of my Master's of Public Health (MPH) clerkship, I had the opportunity to work on the Rwanda Health & Healing Project (RHHP) directed by Thomas Jefferson University (TJU) Department of Family and Community Medicine (DFCM) faculty. As part of an update program evaluation, I helped develop a survey but we also wanted to capture authentic narratives about the experiences of RVCP alumni. Coincidentally, two TJU family medicine residents were going to Rwanda for two weeks in late April, splitting time between doing clinical work at a district hospital, teaching/meeting with RVCP physician students, and looking at the state of primacy care in Rwanda. Interestingly, I lived in Rwanda in 2014 and I was eager to make a return trip. While I was only in Rwanda for less than one week, the insight I was able to glean from face to face time with these individuals about their remarkable journeys, motivations, and persistence in the face of challenge was an invaluable element of the authentic narratives which we relied upon as a primary source to inform our thematic analysis. During the interviews, I encountered a few unanticipated challenges.

First and foremost, was my inability to detach emotionally from the subject matter. I didn't think much in advance about where the direction of conversation could lead given the open-ended style of the questions. I realized shortly into my first interview where I heard a first-hand account of parents being murdered and being "hunted to death" and the "miraculous" story that ensued that I probably could've better prepared myself to hear harrowing accounts of motivations to become a doctor given experiences living through the 1994 Rwandan genocide. The interviews I conducted were awe-inspiring, not only because of the stories and experiences they shared on their remarkable journey to RVCP-Jeff HEALTH but because of the absolute commitment and dedication they have to improving the health of their fellow citizens. The trust and confidence that these individuals had in me to listen to their stories and capture the essence of their motivation and influence contributed significantly to my ability to understand, communicate, and interact with people across cultures further developing my attitudes toward cultural differences.

2018 Delaware APA Regional Conference

in partnership with the DE Academy of Medicine / DE Public Health Association

Atlantic Sands Hotel, Rehoboth Beach, Delaware | October 23-24, 2018

Overview

This two-day conference will feature exemplary planning efforts in Delaware, the surrounding region, and beyond. The theme for 2018's conference is:

Planning 360: Economy, Environment and Public Health.

Sponsored by the Delaware Chapter of the American Planning Association, in partnership with the Delaware Academy of Medicine / Delaware Public Health Association, this conference is one of the best learning experiences for APA/AICP members and public health practitioners in the region. New for this year, its focus will expand to embrace public health and healthcare practitioners. The conference features two days of high quality, hands-on and interactive sessions, mobile workshops, planning law and planning ethics presentations, member networking, vendor contacts, plus a few surprises!

The conference will run several parallel tracks with 90-minute sessions. There will be no published conference proceedings, but presentation graphics will be posted on our web site. The audience will consist primarily of professionals from the public and private sectors working in planning (city, county, and state), public health, and healthcare related jobs.

Whether you are an APA member, an AICP member, an Academy/DPHA member, a student, or a person with an interest in the practice of Planning, this conference always delivers something for everyone!

Call for Presentations

The Conference is now accepting proposals for presentations.

Eligible submissions can cover a broad range of topics related to technological advances and their impacts on infrastructure planning, design, operations, and management related to the conference theme. Subjects may include those related to Economic Development, Environmental Quality, Public Health, or Planning-related Communications.

We are accepting proposals for full 90-minute sessions, for individual presentations within a session, and for Mobile Workshops. Research-based sessions highlighting promising emerging and innovative research ideas, best practices, or case studies are encouraged.

The submission deadline has been extended to July 31, 2018.
CLICK HERE for Information, or here to submit an abstract

Sponsorship Opportunities

To host a conference of this magnitude, we rely on a variety of sponsorships and contributions. These sponsorships not only benefit our organizations but also the sponsors whose message will be before planning professionals (including land use planners, landscape architects, engineers, architects, GIS professionals, etc.), other local and state government decision makers, interested residents, and, this year, given our topic, health care and public health professionals.

More information on the conference in general, on the Call for Presentations, and on sponsorship opportunities is available on the Chapter's website: http://delawareapa.org.

The DPH Bulletin

From the Delaware Division of Public Health *June 2018*

Free HIV tests available on June 27

On June 27, 2018, National HIV Testing Day, the Division of Public Health (DPH) will offer free Human Immunodeficiency Virus (HIV) tests to individuals ages 12 years and older.

In New Castle County, DPH will provide HIV tests at the Porter State Service Center, located at 511 W. 8th St. in Wilmington, between 10 a.m. and 2:30 p.m. In Sussex County, HIV tests will be provided at the Shipley State Service Center, located at 350 Virginia Ave. in Seaford, from 8 a.m. to noon and 1 p.m. to 3:30 p.m. Walk-ins are welcome.

DPH urges all Delawareans to know their HIV status to protect their health and prevent its spread to others. The Centers for Disease Control and Prevention (CDC) recommends routine testing for HIV infection in health care settings for persons ages 13 to 64 years, and testing at least annually for those at high risk, according to its *Morbidity and Mortality Weekly Report, Volume 66*. High risk behaviors include injecting drugs, having unprotected sex, and men having sex with other men. Treatment lessens the risk of illnesses and sexual transmission.

For more information about testing, contact the Porter Center at 302-777-2860 or the Shipley Center at 302-628-6772.

"Stopping the Bleed" at Legislative Hall

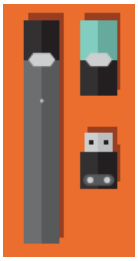
Hospital trauma teams held a "Stop the Bleed" training in Legislative Hall on May 10, 2018. Representatives from each hospital taught first aid skills for use when a victim is bleeding profusely, such as how to pack dressings, apply ample pressure, and wrap tourniquets.

At left, Bruce Pearce, Sergeant-At-Arms of the Delaware Senate, applies a tourniquet to the arm of Brian King, NRP, Flight Paramedic at Christiana Care Health System (CCHS) as Heather Panichelli, APRN, Clinical Nurse Specialist, CCHS, observes. At right, Megan Williams, vice president of the Delaware Healthcare Association, applies a tourniquet to a computerized simulated limb under the instruction of Janet Hammond, BSN, RN, Bayhealth/Milford Trauma Coordinator.

The Delaware Healthy Mother and Infant Consortium (DHMIC) presented the 2018 Community Health Champion Awards at its April 17 conference in Wilmington. Jessica Baxter, FNP of Nanticoke Family Practice in Georgetown, at left, received the individual award for assisting a longtime patient who had lost her health insurance coverage. Mawuna Gardesey of DPH delivered the award to Jessica. At right, the Society of St. Vincent DePaul, Council of Wilmington, received the group award for providing home visits, food, utility assistance, rent/mortgage help, prescriptions, and medical transportation. Pictured in the group photo, from left, are DPH Director Dr. Karyl Rattay, Lynne Betts and LaVaida Owens-White of the Society of St. Vincent DePaul, and Dr. David Paul of DHMIC.

Tobacco's latest risk: JUULing

DPH warns teachers, parents, and guardians about a trending nicotine product among middle and high school students. An increasingly popular e-cigarette, called JUUL, looks identical to a USB flash drive and delivers a high dose of nicotine. Nicotine is highly addictive and can harm adolescent brain development. The CDC advises that tobacco use in any form is unsafe. For tips for talking to youth, visit: https://e-cigarettes.surgeongeneral.gov/resources.html. For cessation resources featuring the Delaware Quitline, visit www.healthydelaware.org.



CDC

Peers select Phelps, Wyatt as top nurses

Two DPH nurses are featured in the May issue of *Delaware Today* magazine as Top Nurses for Public Health. Lisl Phelps, MSN, RN, Nurse Consultant in the Office of Public Health Nursing; and Jessi L. Wyatt, MSN, MBA, RN III of the Child Development Watch program, were selected through a survey of nursing professional peers. Visit http://www.delawaretoday.com/Delaware-Today/May-2018/Top-Nurses-2018/.

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

What the Global Health Community Can Learn from Africa

Debora Kamin Mukaz, M.S. and Melissa Melby, M.Phil., Ph.D.

Introduction

"...We would like to express our extreme concern over the attitude of the medical profession, particularly the student body, towards elective periods spent abroad in developing countries. The misconception that the purpose of an elective is to practice one's unpolished skills on an unsuspecting 'bunch of natives', before returning to begin properly, is widespread within the student community. Some even go as far as to assume that the recipient countries ought to be grateful for the help provided by elective students."
(Holt & Adams, 1987)

This quote from St. George's Hospital Medical School in London summarizes the somewhat fraught relationship Western medicine has had with the rest of the world including Africa. Indeed, the history of medicine in Africa is one that is entrenched in colonialism; global health efforts on the continent have often secured and continue securing Western interests. European medicine was often used to enforce Western hegemony by lessening the resistance of colonized African populations (Good, 1991). Unfortunately, the legacy of medical colonialism still lingers; for instance, there exists a real concern as to the efficacy of short-term experiences in global health (STEGHs) offered to undergraduate, medical and postgraduate students who might lack the necessary technical skills and cultural competency to positively affect local community health systems in host countries (Melby et al., 2016). By failing to recognize the agency and medical knowledge of African nations, the international community has often exacerbated health conditions on the continent. Moreover, it has become clear that the global disease burden can only be reduced if Western countries recognize the active participation of Africa. Therefore, to counter arguments of Africa's incompetence and neediness, this paper will highlight two different yet important health-related successes on the continent: Rwanda's efforts to eradicate cervical cancer, and Elimination 8 (E8), a project to eliminate malaria in 8 African countries (Angola, Botswana, Mozambique, Namibia; South Africa, Swaziland, Zambia and Zimbabwe).

Rwanda: Cervical Cancer Eradication

To appreciate why Rwanda's goals to reduce cervical cancer incidence to zero are just short of a miracle, it is necessary to understand its history. A small Eastern country of roughly 11 million, Rwanda was colonized by Belgium, which imposed a framework whereby Tutsis, one of the main ethnic groups, were considered racially and culturally superior to the two other major groups, Hutus and Twas. During that period, Tutsis were afforded economic and socio-political advantages, creating a strong resentment in their Hutu counterparts (National Institute of Statistics of Rwanda (NISR), Ministry of Finance and Economic Planning (MINECOFIN), 2012; Newbury, 1998).

Upon independence in 1959, Hutus gained more political power and, throughout the years, strengthened their rule by crushing Tutsi-led dissents. In 1994, matters came to a head when the plane of Juvénal Habyarimana, the then president, was mysteriously shot. Feeling vindicated in their hatred of Tutsis, extremists Hutus went on to massacre Tutsis and moderate Hutus (Kuperman, 2000). Hundreds of thousands of Tutsis and moderate Hutus were systematically killed and, the Tutsi population suffered a 77% decline (Verpoorten, 2005).

The genocide exacerbated an already troubled Rwandan health sector; international aid from UN agencies and other NGOs was therefore welcome. Yet, the health services provided by those agencies were often unstainable, cost-inefficient and inappropriate since they failed to account for the Rwandan socio-economic and political context (Eriksson et al., 1996). Feeling the need to protect its population, the Rwandan government went on to create one of the best healthcare systems in the developing world, the national Mutuelle de Santé, which by 2010 covered more than 90% of the population (Makaka, Breen, & Binagwaho, 2012). Similar coverage rates have been achieved in the United States (US), where 91.2% of the population was insured in 2016 (Barnett & Edward R. Berchick, 2017). Through this well-oiled machine, Rwanda is on its way to eradicating cervical cancer, one of the most common forms of cancer among women (Franco, Duarte-Franco, & Ferenczy, 2001).

Human papillomavirus (HPV), which causes one of the most common sexually transmitted diseases, has been associated with the development of cervical cancer in women (Burd, 2003). About 70% of all cervical cancer cases are caused by HPV strains 16 and 18 (Crosbie, Einstein, Franceschi, & Kitchener, 2013). In 2012, there were 527,600 cases of cervical cancer worldwide and, 99,000 cases were in Africa. Almost half of all new cases on the African continent were found in East Africa. Additionally, 28,200 deaths out of the 60,100

deaths due to cervical cancer in Africa were concentrated in the same region (Ferlay et al., 2015). In Rwanda, cervical cancer is the most prevalent form of cancer among all women (de Sanjosé et al., 2012). In 2012, cervical cancer incidence was 41.8 per 100,000 while the mortality rate was 26.2 per 100,000 (Ferlay et al., 2013). To lessen the burden of the disease on the Rwandan female population and eventually eradicate it, the government decided to implement prevention, care and control programs (Binagwaho et al., 2013).

In 2011, the Rwandan Ministry of Health in cooperation with Merck, initiated an intensive HPV vaccination campaign that reached 93,888 girls in the sixth grade (Binagwaho et al., 2012). By 2012, 96.6% of all eligible girls in the country were able to receive the 3-dose Gardisil vaccine (Binagwaho et al., 2013). The campaign was effective because the Rwandan healthcare sector had a proven record of tackling infectious diseases (Binagwaho et al., 2012; Ministry of Health (MOH) [Rwanda], and ICF International, 2012). To allow for a smoother implementation of the vaccination program, a multidisciplinary approach was adopted. Different sectors of Rwandan socio-political life (educators, community leaders, health workers…) were involved and, the US Center of Diseases Control (CDC) and the International Center for AIDS Care and Treatment (ICAP) provided technical support (Binagwaho et al., 2012). Furthermore, cheaper HPV and cervical cancer screening methods were used for early detection (Binagwaho et al., 2013; Ruzigana, Bazzet-Matabele, Rulisa, Martin, & Ghebre, 2017). Detecting cancer at earlier stages allowed for the use of more affordable and effective treatment methods such as loop electrosurgery excision procedure and cryotherapy (Binagwaho et al., 2013; Sherris et al., 2009).

Another essential aspect of HPV and cervical cancer prevention programs is the sexual education of school-aged children and adolescents. Early age at first intercourse, the number of sexual partners and a previous history of STDs are associated with an increased risk of HPV transmission and cervical cancer (Bosch, Lorincz, Muñoz, Meijer, & Shah, 2002). Health education that promotes safe sex measures including condom use has been shown to reduce the risk of transmission (Stanley, 2007). In 2016, the Rwandan Education Board implemented a comprehensive sexuality educational curriculum to empower the youth in making appropriate choices regarding their sexuality (Rwanda Education Board, 2015). In comparison, the US favors and heavily funds "abstinence only until marriage" despite evidence of its inefficacy in limiting unsafe sexual behaviors (Hall, McDermott Sales, Komro, & Santelli, 2016).

By working tirelessly towards eliminating cervical cancer in the country, Rwanda has become an example to follow for developing and developed countries alike. From 2008 to 2012, the rate of cervical carcinomas in women in the US was 7.4 per 100, 000. Disparities were even more pronounced by ethnicity, with white women (7.1 per 100,000) being less likely to have cervical cancer compared to black (9.2 per 100,000) and Hispanic women (9.7 per 100, 000) (Viens et al., 2016). From 2006-2010, the incidence rate of cervical cancer in Delaware was 8.9 per 100,000 (Delaware Health and Social Services, Division of Public Health, 2014). Interestingly, despite HPV vaccines being safe and available, in 2011, only 34.8 % of adolescents between the ages of 13-17 in the country and 46.8% in Delaware received ≥3 dose of the vaccine (Delaware Health and Social Services, Division of Public Health, 2014; Stokley et al., 2014). The US and other nations could definitely benefit from Rwanda's strategic approach to vaccinating school girls given Rwanda's achievement of more than 90% of coverage within a limited amount of time and with modest resources.

Elimination 8: Towards a malaria-free Southern Africa

In 2016, an estimated 216 million people suffered from malaria worldwide; the vast majority (90%) of those cases were found in Africa. In 2016, almost all cases of malaria in Africa (99%) were attributed to Plasmodium falciparum (World Health Organization, 2017). P. falciparum, the deadliest type of malaria-

causing parasites, can cause complications such as renal dysfunction, seizures and lactic acidosis (Crutcher & Hoffman, 1996; Francis, Sullivan, & Goldberg, 1997). Consequently, 91% of all deaths due to malaria are found in Africa (World Health Organization, 2017). Considering the severity of the effects of the disease on the continent, the African Union (AU) launched a campaign to eliminate malaria on the continent. That same year, the Southern African Community (SADC), an intra-governmental organization comprised of 15 Southern African states, joined the AU in its pledge to eradicate the disease in the region. Thus, Elimination 8 (E8) was created (SADC facts & figures.2012; Elimination 8, 2015).

E8 is a regional partnership whose vision is to have a malaria-free Southern Africa by reducing local transmission to zero in 4 countries (Botswana, Namibia, South Africa and Swaziland) by 2020. In fact, the World Health Organization (WHO) considers Botswana, South Africa and Namibia to be E-20 countries because they are on the verge of eliminating malaria by 2020 (Elimination 8, 2015; World Health Organization, 2017). Understanding the realities of geography and human migratory patterns, E8 paired the 4 frontline countries, which have been successful in reducing malaria rates with 4 highly endemic neighboring countries, namely Angola, Mozambique, Zambia and Zimbabwe. A successful elimination of malaria within these 8 countries will lay the foundation for a gradual eradication of the disease within the SADC region (Elimination 8, 2015).

To achieve sustainability, E8 has positioned the organization as donor-independent, financing itself through the private sector, development of endowment funds and dedication of tax revenues to the organization (Elimination 8, 2015). So far, the strategy seems to work; over the years, Botswana, Namibia, South Africa and Swaziland's funding of malaria endeavors became less reliant on international aid. In fact, from 2014 to 2016, the large majority of monies dedicated to malaria in those 4 countries were of national origin. On the health-related front, in 2016, Botswana and South Africa were on the verge of attaining a 20-40% reduction by 2020. In contrast, Namibia and Swaziland seem to struggle: the number of cases increased by 45 fold from 2010 to 2016 in Namibia, and Swaziland experienced a 30% increase during that same timeframe (World Health Organization, 2017). These results strengthen the argument for stronger regional cooperation to avoid resurgence and decrease transmission in neighboring countries. Indeed, despite tremendous reduction in other regions of the country, Namibia has witnessed a concentration of malaria cases in the northern border region with Angola (Smith Gueye et al., 2014). In its 2016, E8 recognized that eradication was lagging behind schedule. As a result, E8 aims for better surveillance, prevention and treatment programs. E8 also seeks to prevent cross-border transmission by using a more aggressive approach to controlling and preventing the disease in secondline countries (Angola, Mozambique, Zambia and Zimbabwe). Additionally, E8 encourages a greater participation of African scientists in the development and administration of novel control and therapeutic methods (Elimination 8, 2016).

Conclusions

Over time, Africa has come to recognize the need for political and societal commitment to eradicate diseases. Rwanda's approach to get rid of HPV-associated cervical cancer provides valuable lessons about incorporating all aspects of society to solve healthcare problems. Though accessible and affordable prevention and treatment options are paramount to eradicating STDs, sexual education should be the first line of defense against them. Sadly, Rwanda, with its comprehensive sexuality education, seems to be miles ahead of the US in educating its youth about the benefits of a healthy and responsible sexuality. The fact that wealthy nations like the US are still not HPV- and cervical cancer-free should have them reevaluate their strategies and, potentially, use Rwanda's approaches as a blueprint.

Additionally, E8 creation demonstrates the need for more globalist and cooperative approaches to fighting diseases. Limiting the sharing of resources and restricting movement of populations do not lower transmission. The SADC through E8 demonstrated that developing a more human solution to migrant health issues is critical. The ongoing success of E8 shows that Africa can be self-reliant when Africans work collaboratively with adequate resources. These case studies demonstrate the need for

the general discourse around African healthcare to move beyond the stereotypical narratives of dependency and mismanagement. The global health community should acknowledge the enormous potential of the continent and understand that it has much to learn from it. Only then will there be a path towards global disease elimination.

References

Barnett, J. C., & Edward R. Berchick. (2017). Health insurance coverage in the United States: 2016. (). Washington, DC: U.S. Government Printing Office.

Binagwaho, A., Ngabo, F., Wagner, C. M., Mugeni, C., Gatera, M., Nutt, C. T., & Nsanzimana, S. (2013). Integration of comprehensive women's health programmes into health systems: Cervical cancer prevention, care and control in Rwanda. Bulletin of the World Health Organization, 91(9), 697-703.

Binagwaho, A., Wagner, C. M., Gatera, M., Karema, C., Nutt, C. T., & Ngabo, F. (2012). Achieving high coverage in Rwanda's national human papillomavirus vaccination programme. Bulletin of the World Health Organization, 90(8), 623-628.

Bosch, F. X., Lorincz, A., Muñoz, N., Meijer, C. J., & Shah, K. V. (2002). The causal relation between human papillomavirus and cervical cancer. Journal of Clinical Pathology, 55(4), 244-265.

Burd, E. M. (2003). Human papillomavirus and cervical cancer. Clinical Microbiology Reviews, 16(1), 1-17.

Crosbie, E. J., Einstein, M. H., Franceschi, S., & Kitchener, H. C. (2013). Human papillomavirus and cervical cancer. Lancet, 382(9895), 889-899.

Crutcher, J. M., & Hoffman, S. L. (1996). Malaria. In S. Baron (Ed.), Medical microbiology (4th ed.,). Galveston, TX: University of Texas Medical Branch at Galveston.

de Sanjosé, S., Serrano, B., Castellsagué, X., Brotons, M., Muñoz, J., Bruni, L., & Bosch, F. X. (2012). Human papillomavirus (HPV) and related cancers in the global alliance for vaccines and immunization (GAVI) countries. A WHO/ICO HPV information centre report. Vaccine, 30 Suppl 4, D83.

Delaware Health and Social Services, Division of Public Health. (2014). Cancer incidence and mortality in Delaware, 2006-2010.

Elimination 8. (2015). Elimination 8 strategic plan: 2015–2020. Windhoek: Elimination 8.

Elimination 8. (2016). Elimination 8 annual report 2016. (). Windhoek: Elimination 8.

Eriksson, J., Adelman, H., Borton, J., Christensen, H., Kumar, K., Suhrke, A., . . . Wohlgemuth, L. (1996). The international response to conflict and genocide: Lessons from the Rwanda experience synthesis report.

Ferlay, J., Soerjomataram, I., Ervik, M., Dikshit, R., Eser, S., Mathers, C., . . . Bray, F. (2013). GLOBOCAN 2012 v1.0, cancer incidence and mortality worldwide: IARC CancerBase no. 11. . Lyon, France: International Agency for Research on Cancer. Retrieved from: http://globocan.iarc.fr, accessed 25/2/2018.

Ferlay, J., Soerjomataram, I., Dikshit, R., Eser, S., Mathers, C., Rebelo, M., . . . Bray, F. (2015). Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. International Journal of Cancer, 136(5), E386.

Francis, S. E., Sullivan, D. J., & Goldberg, a. D. E. (1997). Hemoglobin metabolism in the malaria parasite plasmodium falciparum. Annual Reviews in Microbiology, 51(1), 97-123.

Franco, E. L., Duarte-Franco, E., & Ferenczy, A. (2001). Cervical cancer: Epidemiology, prevention and the role of human papillomavirus infection. Canadian Medical Association Journal, 164(7), 1017-1025.

Good, C. M. (1991). Pioneer medical missions in colonial africa. Social Science & Medicine (1982), 32(1), 1-10.

Hall, K. S., McDermott Sales, J., Komro, K. A., & Santelli, J. (2016). The state of sex education in the United States. Journal of Adolescent Health, 58(6), 595-597.

Holt, T. A., & Adams, T. J. (1987). Medical colonialism. Journal of Medical Ethics, 13(2), 102.

Kuperman, A. J. (2000). Rwanda in retrospect. Foreign Affairs, 79(1), 94-118.

Makaka, A., Breen, S., & Binagwaho, A. (2012). Universal health coverage in rwanda: A report of innovations to increase enrolment in community-based health insurance. The Lancet, 380, S7.

Melby, M. K., Loh, L. C., Evert, J., Prater, C., Lin, H., & Khan, O. A. (2016). Beyond medical "missions" to impact-driven short-term experiences in global health (STEGHs): Ethical principles to optimize community benefit and learner experience. Academic Medicine: Journal of the Association of American Medical Colleges, 91(5), 633-638.

Ministry of Health (MOH) [Rwanda], and ICF International. (2012). Rwanda demographic and health survey 2010. Calverton, Maryland, USA: NISR, MOH, and ICF International.

National Institute of Statistics of Rwanda (NISR), Ministry of Finance and Economic Planning (MINECOFIN). (2012). Rwanda fourth population and housing census. Thematic report: Population size, structure and distribution. Rwanda.

Newbury, C. (1998). Ethnicity and the politics of history in rwanda. Africa Today, 45(1), 7-24.

Ruzigana, G., Bazzet-Matabele, L., Rulisa, S., Martin, A. N., & Ghebre, R. G. (2017). Cervical cancer screening at a tertiary care center in rwanda. Gynecologic Oncology Reports, 21, 13-16.

Rwanda Education Board. (2015). Competence-based curriculum: Curriculum framework: Pre-primary to upper secondary 2015. Kigali, Rwanda: Rwanda Education Board/ Republic of Rwanda Ministry of Education.

SADC facts & figures. (2012). Retrieved from http://www.sadc.int, accessed on 2/27/2018

Sherris, J., Wittet, S., Kleine, A., Sellors, J., Luciani, S., Sankaranarayanan, R., & Barone, M. A. (2009). Evidence-based, alternative cervical cancer screening approaches in low-resource settings. International Perspectives on Sexual and Reproductive Health, 35(3), 147-154.

Smith Gueye, C., Gerigk, M., Newby, G., Lourenco, C., Uusiku, P., & Liu, J. (2014). Namibia's path toward malaria elimination: A case study of malaria strategies and costs along the northern border. BMC Public Health, 14, 1190.

Stanley, M. (2007). Prevention strategies against the human papillomavirus: The effectiveness of vaccination. Gynecologic Oncology, 107(2), S23.

Stokley, S., Jeyarajah, J., Yankey, D., Cano, M., Gee, J., Roark, J., . . . Markowitz, L. (2014). Human papillomavirus vaccination coverage among adolescents, 2007-2013, and postlicensure vaccine safety monitoring, 2006-2014 - United States. Morbidity and Mortality Weekly Report, 63(29), 620-624.

Verpoorten, M. (2005). The death toll of the rwandan genocide: A detailed analysis for gikongoro province. Population, 60(4), 331-367.

Viens, L. J., Henley, S. J., Watson, M., Markowitz, L. E., Thomas, C. C., Thompson, T. D., . . . Saraiya, M. (2016). Human papillomavirus-associated cancers - united states, 2008-2012. Morbidity and Mortality Weekly Report, 65(26), 661-666.

World Health Organization. (2017). World malaria report 2017. Geneva.

Debora Kamin Mukaz, M.S. is a doctoral candidate in the department of Medical Laboratory Sciences at the University of Delaware. She holds a Bachelor of Arts degree in French and Biology from Luther College and, a Master of Science degree in Biological Sciences from the University of Delaware. Her work focuses on the association between acculturation and cardiovascular diseases (diabetes) in African migrants to the US.

Melissa Melby, M.Phil., Ph.D. is an associate professor of Anthropology at the University of Delaware, and Coordinator for Population Health Initiatives. She holds degrees in Chemistry, Geography (Environment and Development) and Anthropology. Her work focuses on biocultural factors influencing health differentials across the life span.

APHA
AMERICAN PUBLIC HEALTH ASSOCIATION
For science. For action. For health.

HIGHLIGHTS FROM
The NATION'S HEALTH
A PUBLICATION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

July 2018

Highlights from The Nation's Health

Online-only news from The Nation's Health newspaper

•**Wanted: 1 million people to help transform precision medicine**
The National Institutes of Health is working to transform the status quo in biomedical research with the All of Us Research Program, an ambitious venture to enroll at least 1 million U.S. adults in the largest precision medicine initiative to date. The program, which officially launched May 6, seeks to expand precision medicine — medical care and prevention that explore the genetic, lifestyle and environmental influences on health — by including a more representative sample of Americans.

•**Public health working to fight misinformation through trust, relationships**
Despite best public health efforts, misinformation about health can spread wildly — often faster than factual information. It is a problem public health both recognizes and is struggling near-constantly to combat. That is why the relationships health providers and community health workers have with individuals and communities have never been more important.

•**Health departments placing stronger emphasis on equity**
First in a series on health equity, which ties into the theme of APHA's 2018 Annual Meeting and Expo: "Creating the Healthiest Nation: Health Equity Now."
As research increasingly shows a clear link between poor health, life expectancy and social determinants such as poverty, racism, housing and education, more and more public health departments are moving health equity from guiding theory to daily practice.

•**Health care providers can help parents overcome HPV vaccine hesitancy**
Health care providers can encourage even skeptical parents to get their children vaccinated, two recent studies show.

•**Sudden wealth loss after 50 linked to higher death risk**
"Wealth shock" most likely to affect women, minorities and people who have lower household incomes and net worth and have worse health.

•**Kids lacking sleep face obesity risk**
Among children, poor sleep has also been associated with behavior problems, including issues in school.

•**Chicago shifts to equity to tackle roots of persistent disparities**
Chicago has made progress on a number of critical health metrics.

•**Public health extras**
Americans support single-payer health care; a new coronavirus has been identified.

•**Newsmakers**
Check out who's who in public health.

•**Resources**
New tools and publications in public health.

•**Healthy You: How to talk to your partner about STDs**
Even if you don't know exactly how to go about it, talking about STDs doesn't have to be a source of anxiety for you or your partner. Here's how to get started, this month in **Healthy You**.

Read Healthy You **online**.

Visit our website to read more news, share articles on social media and download our free app. Need to contact us? Send an email.

Does your library or organization receive The Nation's Health? Keep your colleagues and students informed about what's happening in public health by subscribing to APHA's newspaper.

88th Annual Meeting & Awards Ceremony

DELAWARE ACADEMY of MEDICINE

DPHA

DELAWARE PUBLIC HEALTH ASSOCIATION

We managed to gather a few (but hardly all) of the board of directors for a quick shot. Pictured starting in back row, left: Dr. Little, Dr. Bercaw, Dr. Eppes, Dr. Kestner, Dr. Malhotra, Dr. Swanson. Front row from left: Dr. Kayne, Dr. Gregory, Dr. Khan, Dr. Meara, and Dr. Bartoshesky (who is actually a member of the DPHA advisory council).

The 88th Annual Meeting of the Delaware Academy of Medicine / Delaware Public Health Association occurred on May 11, 2018 at the Chase Center on the Riverfront in Wilmington. The presidency passed from Daniel J. Meara, M.D., D.M.D. to Omar A. Khan, M.D., M.H.S. for the 2018-2020 term of office. New board members, Rita Landgraf (now with the University of Delaware, formerly the Cabinet Secretary for the Department of Health and Social Services during Governor Markel's administration), and Stephen Eppes, M.D. were introduced to the assembled members and guests. Following those official business items, two awards were presented:

The work of Jewish Family Services of Delaware was honored with the 2018 Public Health Recognition. The award was accepted by their CEO, Basha Silverman.

Started by the Delaware Academy of Medicine in 2010, the Public Health Recognition Award is given to a Delaware nonprofit organization who has shown outstanding leadership and dedication to the improvement of our community.

Previous awardees include:

- 2010 The Heart Truth Delaware
- 2011 Delaware Breast Cancer Coalition
- 2012 Immunization Coalition of Delaware
- 2013 St. Michael's School and Nursery
- 2014 Vietnam Veterans of America, Chapter 83, Gold Star Program
- 2015 Gift of Life Donor Program
- 2016 Hon. Jack Markell – Governor of Delaware 2009-2017
- 2017 American Lung Association of the Mid-Atlantic

Jewish Family Services of Delaware (JFS) is multi-faceted social service organization that embraces and fulfills a mission to strengthen individuals, families, and the community by providing counseling and support services. Our services include outpatient therapy, case management, workforce development, refugee resettlement, adoption, and prevention education. Our work has been accomplished person-by person, need by need and always with compassion, skill and commitment to individual integrity.

As a result, our agency today is strong and stable. Our programs and policies are designed to remove barriers that may inhibit people in vulnerable situations from accessing needed support. We are all responsible for one another. Inspired by this fundamental Jewish value, Jewish Family Services assists individuals and families through life transitions, helping youth and children grow stronger, and ensuring the safety and dignity of older adults. JFS supports families of all backgrounds as they deal with basic human needs, life transitions, and mental health issues. JFS has the unique privilege of representing the tzedakah (justice), compassion, and loving kindness of the Jewish people to the broader community. Many JFS clients are not Jewish, but all of them learn what it means to be Jewish: the beauty of our traditions and our commitment to tikkun olam, building a better world.

Basha Silverman, Chief Executive Officer of Jewish Family Services of Delaware, has an exemplary career of over 16 years in non-profit social services and Jewish communal service.

Prior to joining JFS, Basha was the Vice President of Strategic Expansion at Jewish Family & Children's Services of Philadelphia where she was responsible for driving the Agency's program development and visions for growth as well as generating revenue by leading a robust initiative. A native Delawarean, Basha has deep personal and professional connections in the First State. She spent 12 years at Brandywine Counseling and Community Services, serving in many capacities. She is founder of Delaware's first coalition aimed at designing a gender specific, health focused response to victims of trauma, and has developed programs for HIV/AIDS, substance abuse, and mental health in Delaware and Pennsylvania. She was named 2013 Power Woman of the Year by Main Line Magazine.

Next Dr. Nicholas Petrelli was honored with the Academy's highest award named in honor of Lewis B. Flinn, first president of the Academy of Medicine.

Over the past 18 years, Dr. Petrelli has been a nationally recognized leader in the fight against cancer and developed the Helen F. Graham Cancer Center & Research Institute into a national model of cancer care, prevention, outreach and research.

Thanks to Dr. Petrelli's leadership and partnerships with others in the state and elsewhere, Delaware's cancer mortality rate is now dropping twice as fast as the national rate. The state is outpacing the nation in reducing deaths from a number of cancers, including breast cancer and colorectal cancer. The State has gone from number one in cancer mortality to number 18.

Among his many accomplishments:

- Established the Helen F. Graham Cancer Center & Research Institute as one of the first cancer centers in the nation selected for the National Cancer Institute Community Centers Program that helped to shape the way cancer care is delivered across the country.
- Through an unprecedented public-private partnership, the Helen F. Graham Cancer Center & Research Institute was integral in making sure all people in Delaware receive care for cancer no matter their income level or health insurance status.
- Led the development of 14 multidisciplinary disease site centers and selection as one of three community cancer centers to participate in the Cancer Genome Atlas Project.
- Achieved one of the highest National Cancer Institute clinical trials participation rates in the country at 24 percent, well above the national rate of 4 percent.
- Developed the first statewide High Risk Family Cancer Registry, consisting of 7,000 families with more than 250,000 individuals and the recruitment of seven full-time genetic counselors.
- Established an historic research partnership with The Wistar Institute of Philadelphia, the first time an NCI-designated basic science center has aligned with an independent academic community cancer center on translational cancer research with the aim of bringing the latest discoveries in cancer research to cancer patients in our community.
- Established the Center for Translational Cancer Research, 7,000 sq. ft. of laboratory space where scientists and clinicians work together to find new cancer treatments.
- Established the Gene Editing Institute, a worldwide leader in gene editing and biomedical research in cancer and other inherited diseases, and the only one in the U.S. embedded in a clinical center where interactions among oncologists, genetic counselors and patients take place.

Dr. Petrelli has received numerous awards and has authored 343 peer-reviewed manuscripts. He has served on several advisory panels of the National Cancer Institute, the American Society of Clinical Oncology, the American Cancer Society and the Society of Surgical Oncology. He was President of the Society of Surgical Oncology 2007-2008. In 2013, he received the Order of the First State Award by Governor Jack Markell for his dedication to excellence in serving the community and the State of Delaware.

Previous recipients include:

2008 Victor F. Battaglia, Sr., Esq.

2009 Robert W. Frelick, M.D.

2010 Leslie W. Whitney, M.D.

2011 Robert B. Flinn, M.D.

2012 Edwin L. Granite, D.M.D.

2013 Katherine L. Esterly, M.D.

2014 LTG(DE) William H. Duncan, M.D.

2015 Joseph A. Kuhn, M.D.

2016 J. Kent Riegel, Esq.

2017 Hon. Susan C. Del Pesco

Darshak Sanghavi, M.D., Chief Medical Officer and Senior Vice President of Translation, Optum Labs, presented the keynote address. Dr. Sanghavi is an award-winning medical educator, who has worked in medical settings around the world and published dozens of scientific papers on topics ranging from the molecular biology of cell death to tuberculosis transmission patterns in Peruvian slums. A frequent guest on NBC's Today and past commentator for NPR's All Things Considered, Dr. Sanghavi is a contributing editor to Parents magazine, a health care columnist with Slate, and has regularly written about health care for the New York Times, Boston Globe, and Washington Post. His best-seller, A Map of the Child: A Pediatrician's Tour of the Body, was named a best health book of the year by the Wall Street Journal.

Dr. Sanghavi treated the audience to a fascinating discussion of the use of data in the treatment of disease.

88th Annual Meeting program book on top of 2017 "Year in Review" – the annual report of the Delaware Academy of Medicine.

This year's annual meeting was sponsored by Christiana Care Health System, Highmark Delaware, the Delaware Health Sciences Alliance, Nemours / Alfred I. duPont Hospital for Children, Nephrology Associates, Quality Insights, and We Work for Health – Delaware

Delaware Public Health Association Advisory Council Member, Richard Killingsworth, M.P.H., joined by some of his University of Delaware students.

The ceremonial gavel is passed from outgoing president, Daniel J. Meara, M.D., D.M.D. to incoming president, Omar A. Khan, M.D., M.H.S..

Dr. Petrelli, left, accepts the President's Award from Dr. Meara, on right.

2018 Lewis B. Flinn President's Award given to Nicholas J. Petrelli, M.D., F.A.C.S. and the Helen F. Graham Cancer Center and Research Institute.

Staff and Board from Jewish Family Services of Delaware pose with their CEO, Basha Silverman, prior to Ms. Silverman's acceptance of the 2018 Public Health Recognition on behalf of JFS.

Academy/DPHA executive director, Tim Gibbs shares a reunion moment with JFS of Delaware, Board President, Regina Kerr-Alonzo.

Academy/DPHA President, Omar Khan, M.D., M.H.S., presents the Public Health Recognition to Basha Silverman, CEO, JFS of Delaware.

Some Academy/DPHA staff including (from left) Matt McNeill (intern), Kate Lenart (archives), Dr. Kate Smith (program manager), Liz Lenz (operations), and Tim Gibbs (executive director).

DHSS Press Release

Dr. Kara Odom Walker, Secretary
Jill Fredel, Director of Communications
302-255-9047, Pager 302-357-7498
Email: jill.fredel@state.de.us

Date: July 09, 2018
DHSS-07-2018

DELAWARE CANCER MORTALITY CONTINUES TO DECREASE; PUBLIC HEALTH RELEASES ANNUAL CANCER REPORT

DOVER, DE (July 9, 2018) - Cancer screening and early detection efforts continue to drive down Delaware's all-site cancer mortality rates, say Delaware public health officials. From 2000-2004 to 2010-2014, Delaware's cancer death rate decreased 12 percent, an impressive improvement though slightly lower than the decline seen nationally (14 percent), according to the latest cancer data announced by the Division of Public Health (DPH).

DPH presented its new report, Cancer Incidence and Mortality in Delaware, 2010-2014 to the Delaware Cancer Consortium (DCC) following its meeting today in Dover. The annual report provides data for all cancer sites combined (all-site cancer), 23 site-specific cancer types, risk factors, early detection and screening recommendations, and census tract maps.

Delaware ranks 16th nationally for all-site cancer mortality, which remains unchanged from last year's report, but is two slots lower than 14th highest two years ago, which looked at the 2008-2012 time period. Delaware's current ranking still represents considerable continued progress since the 1990s, when the state ranked second for all-site cancer mortality.

Delaware's all-site cancer mortality rate fell 15 percent among men, 9 percent among women, 21 percent among African Americans, 14 percent among Caucasians, and 2 percent among Hispanics over the last decade, according to the report. Despite continuing decreases, at 178.2 deaths per 100,000 people, the state's mortality rate was still 7 percent higher than the U.S. rate of 166.1 for 2010-2014. The DCC and DPH are committed to continuing efforts to reduce Delaware's cancer mortality rate.

Regarding incidence, or diagnosis of new cancer cases, Delaware's 2010-2014 all-site cancer incidence rate (506.4 diagnoses per 100,000) was 14 percent higher than the comparable U.S. rate. Despite fluctuations in all-site cancer incidence between the 2000-2004 to 2010-2014 time periods, Delaware's 2010-2014 all-site cancer incidence rate was unchanged from 2000-2004 (506.3 per 100,000). While Delaware is ranked second among states for highest all-site cancer incidence, the state's continued success in early detection and screening efforts play a key role in these rates. All-site cancer incidence fell 5 percent among men but increased by 5 percent in women. It also decreased by 9 percent among African Americans, 12 percent among Hispanics, but increased by 2 percent among Caucasians. Part of the increase in female cancer incidence may be due to increased screening efforts by DPH; Delaware is ranked second nationally in breast cancer screening (mammography).

"Delaware is making great progress in battling the deadly disease of cancer in our state," said Governor John Carney. "This report shows our successes, but also shows us we have more work to do, particularly when it comes to reducing cancer incidence. As an original member of the Delaware Cancer Consortium, I want to thank the strong network of cancer advocates in our state for their important partnership on this issue, particularly the Department of Health and Social Services Division of Public Health, the Consortium, and our many statewide and community champions for the daily work they do to improve access to screening and treatment for all Delawareans."

Today, DPH also issued the supplementary report, Disparities in Cancer Incidence and Mortality Among Delaware Residents, 2010-2014, which addresses disparities in cancer in the state. According to the Disparities report, Hispanics had statistically significantly lower incidence rates for all-site cancer compared to both Caucasians and African Americans. This was also true when comparing Hispanic males and females specifically to Caucasian and African-American males and females in this category. African-American females had significantly lower all-site cancer incidence rates compared to Caucasian females.

African-American females also had significantly lower incidence and mortality rates for lung cancer, compared to Caucasian females. Hispanics in general, and Hispanic males in particular, had significantly lower lung cancer incidence rates compared to their counterparts of Caucasian and African-American ethnicity.

African-American males, particularly those between 40 and 74 years of age, had significantly higher incidence and mortality rates for prostate cancer compared to Caucasian males of similar ages. "I'm pleased that we are seeing some successes, particularly in the African-American and Hispanic communities," said Dr. Kara Odom Walker, Cabinet Secretary of the Delaware Department of Health and Social Services (DHSS). "However, there is still more we need to do to eliminate disparities for African Americans, particularly when it comes to earlier diagnosis of lung cancer in men."

"While we continue to make progress in screening more Delawareans and detecting cancer earlier, it's time for us to make a shift in our approach to reducing cancer incidence and mortality," said DPH Director Dr. Karyl Rattay. "We know that if we really want to move the needle in this area, we need to increase our focus on prevention, screening, and addressing upstream issues such as tackling lifestyle factors that contribute to cancer risk such as obesity and lack of physical activity."

To accomplish this, DPH plans to increase its prevention efforts, making it easier for Delawareans to improve their health and reduce their risk of cancer. This includes working with communities so they can focus on the their most important barriers to making healthy lifestyle choices such as not smoking, engaging in regular physical activity, eating a healthy diet and maintaining a healthy weight. DPH will focus on implementing strategies that will "make the healthy choice the easy choice" for all Delaware residents.

DPH officials also acknowledge that there is still much more work to be done regarding specific cancer types. Of particular concern is lung cancer, which is the most frequently diagnosed cancer in the nation and in Delaware. Lung cancer continued to account for 14 percent of all newly diagnosed cancer cases and 30 percent of all cancer deaths in Delaware from 2010 to 2014. Most lung cancer cases are diagnosed in the distant stage, when the cancer has spread to distant tissues, organs, or lymph nodes.

In the coming year, the DPH Comprehensive Cancer Control program will focus its outreach efforts on educating consumers and providers about the importance of lung cancer screening for high-risk groups and will collaborate with the DPH Tobacco Prevention and Control program on cessation efforts and proactive policies. According to the U.S. Department of Health and Human Services, 85 percent to 90 percent of lung cancers are caused by tobacco use. Though cigarette smoking prevalence among Delaware adults was at an all-time low of 18 percent, according to the 2016 BRFS, it remains largely unchanged over the last four years.

Both reports, in addition to a secondary analysis report of census tracts with higher incidence of cancer, can be viewed in full here.

Breast Cancer

- Female breast cancer mortality in Delaware decreased 15 percent over the last decade (2000-2004 to 2010-2014), slightly lower than the 17 percent decline seen nationally.
- From 2000-2004 to 2010-2014, the breast cancer incidence rate decreased by 9 percent among Hispanic females in Delaware.
- The proportion of breast cancer cases diagnosed in the earliest, most treatable stage has greatly improved in Delaware over the past three decades. The proportion of Delaware breast cancers diagnosed at the local stage increased from 42 percent in 1980-1984 to 67 percent in 2010-2014.

Colorectal Cancer

- From 2000-2004 to 2010-2014, Delaware's colorectal cancer incidence rate decreased 31 percent, a higher decrease than the comparable U.S. rate (23 percent).
- Ranked 35th nationally, Delaware's colorectal cancer incidence rate of 37.8 diagnoses per 100,000 was lower than the U.S. rate of 40.1 per 100,000.

- From 1980-1984 through 2010-2014, the percentage of colorectal cancers diagnosed at the local stage increased from 32 percent to 38 percent.
- From 2000-2004 to 2010-2014, Delaware's colorectal cancer mortality rates declined 50 percent among non-Hispanic African-American males, compared to 28 percent among non-Hispanic Caucasian males. During the same time period, colorectal cancer mortality declined 55 percent among non-Hispanic African American females, compared to 31 percent among non-Hispanic Caucasian females.

Liver Cancer

- From 2010-2014, Delaware's liver cancer incidence rate of 8.7 diagnoses per 100,000 was similar to the U.S. rate of 8.6 per 100,000.
- From 1980-1984 through 2010-2014, Delaware's percentage of liver cancer cases diagnosed at the local stage increased substantially from 15 percent to 41 percent.

Lung Cancer

- From 2000-2004 to 2010-2014, Delaware's lung cancer incidence rate decreased 8 percent. The national incidence rate decreased 12 percent.
- From 2000-2004 to 2010-2014, Delaware's lung cancer mortality rate declined 14 percent. The national mortality rate declined 18 percent.
- From 2000-2004 to 2010-2014, Delaware's lung cancer mortality rates declined 32 percent among non-Hispanic African-American males and 25 percent among non-Hispanic African-American females.

Prostate Cancer

- From 2000-2004 to 2010-2014, prostate cancer mortality in Delaware declined 31 percent, which is slightly higher than the decrease seen nationally (29 percent).
- Between 2000-2004 and 2010-2014, prostate cancer incidence rates in Delaware decreased by 18 percent.
- From 1980-1984 through 2010-2014, Delaware's percentage of prostate cancer cases diagnosed in the local stage increased substantially, from 50 percent to 79 percent.

Those seeking lung cancer screenings should visit HealthyDelaware.org/lung or call 302-401-4212 to speak with a screening nurse navigator. Delaware tobacco users seeking help quitting can contact the Delaware Quitline, a free tobacco cessation counseling hotline for residents 18 and older, at 1-866-409-1858 or http://dhss.delaware.gov/dph/dpc/quitline.html.

A person who is deaf, hard-of-hearing, deaf-blind or speech-disabled can call the DPH phone number above by using TTY services. Dial 7-1-1 or 800-232-5460 to type your conversation to a relay operator, who reads your conversation to a hearing person at DPH. The relay operator types the hearing person's spoken words back to the TTY user. To learn more about TTY availability in Delaware, visit http://delawarerelay.com

Delaware Health and Social Services is committed to improving the quality of the lives of Delaware's citizens by promoting health and well-being, fostering self-sufficiency, and protecting vulnerable populations. DPH, a division of DHSS, urges Delawareans to make healthier choices with the 5-2-1 Almost None campaign: eat 5 or more fruits and vegetables each day, have no more than 2 hours of recreational screen time each day (includes TV, computer, gaming), get 1 or more hours of physical activity each day, and drink almost no sugary beverages.

Delaware Health and Social Services is committed to improving the quality of the lives of Delaware's citizens by promoting health and well-being, fostering self-sufficiency, and protecting vulnerable populations.

Jewish Family Services of Delaware's Response to the Global Refugee Crisis

History of JFS Delaware

JFS Delaware was founded in 1899 with the goal of improving people's lives. Since then, the organization has expanded to serve people throughout the state, reaching more than 2,000 clients annually. The organization's core mission is to provide counseling and support services that strengthen the well-being of the individual, family, and community, based on Jewish values. JFS Delaware provides a continuum of support services focused on individuals and families during the most vulnerable times of their lives. Our programs include outpatient mental health services; in-home care management; support services for older adults aging-in-place; prevention education and digital media training for at-risk youth; case management and workforce development for youth identified with disabilities; family support services including case management for refugee families; a volunteer network; and a crisis alleviation program that distributes food, clothing, and household supplies to clients in need.

In addition to these services, JFS has been working with refugee and immigrant populations since our founding, regardless of race or religion. A refugee is defined as someone who has fled from his or her home country and cannot return because he or she has a well-founded fear of persecution based on religion, race, nationality, political opinion or membership in a particular social group.[1] JFS has historical experience responding to international refugee crises. During the last major refugee crisis in the late 1980s, JFS was instrumental in resettling hundreds of families from the Former Soviet Union in Delaware. Since 1997, JFS Delaware has been providing émigré services for refugees who have already arrived in the state.

Scope and Importance of Refugee Resettlement

The office of the United Nations High Commissioner for Refugees (UNHCR), was created in 1950 after World War II to help European refugees[2] and is still on the frontline today. UNHCR is mandated to provide international protection for refugees and registering with UNHCR in the country that a refugee fled to is the first step for most refugees.[3] According to UNHCR, there are currently over 65 million forcibly displaced people worldwide—22.5 million of which are refugees.[4] In 2016, there was a total of 189,300 refugees resettled worldwide[5]—which is a small fraction of the growing number of refugees. UNHCR offers three durable solutions to refugees—repatriation, integration into country of asylum, and resettlement—which is granted to less than one percent of refugees.[6] This statistic is a testament to the notion that only the most vulnerable refugees are resettled.

Each year, the President of the United States makes a "Presidential Determination" on refugee admissions to the United States. The Presidential Determination for Fiscal Year 2018 was a ceiling of 45,000 refugees,[7] which is the lowest since the inception of the U.S. Refugee Admissions Program. According to Refugee Council USA, to reach the proposed ceiling of 45,000 refugees for fiscal year 2018, 3,750 refugees must be resettled each month, and as of March 5th, the U.S. has only resettled 8,757 refugees.[8] At this rate, the U.S. may not come near the proposed ceiling.

Resettlement in Delaware

In October 2016, JFS became the only refugee resettlement agency. JFS, an affiliate of HIAS—one of nine national resettlement agencies—meets refugee families the moment they step into the United States and assists them with everything they need to begin their new life in Delaware. The resettlement program at JFS Delaware is known as the Refugee Integration Support Effort, or RISE. JFS RISE staff members provide transition services and case management to help families resettle, and volunteers assist with tasks such as creating resource packets for local landlords and employers, sourcing furniture for apartments, and providing transportation. JFS works with over 300 volunteers through a coalition comprised of 30 faith-based and local community organizations; seven healthcare and dental providers; and four landlords to house, host activities, offer educational opportunities including ESL classes, provide community integration efforts, medical services, and cultural orientation to ensure that refugees feel welcome in their new home.

Resettlement in Delaware begins when JFS Delaware receives word from HIAS that a "case" or refugee family has been assigned to us. We are usually given about two weeks' notice of an before the family arrives. Prior to a refugee family's arrival, JFS Delaware is mandated to secure housing in a safe and affordable neighborhood (primarily in Wilmington, Newark, or New Castle).

The *Refugee Resettlement Services table* below breaks down services JFS Delaware offers during each phase of the resettlement process, which lasts for 90 days:

The *Statistics for Delaware chart*, located at the end of the article, includes statistics on the number of refugee arrivals to Delaware since the program started. We welcomed the first family to Delaware in January 2017. It's important to note "Country of Departure" in the chart below. Families who must flee their country of origin are hosted by an asylum country and are later recognized as refugees by UNHCR. These asylum countries are usually the countries they depart from to enter the US, or other countries that accept them for resettlement.

The newest family that arrived in Delaware on February 27th were welcomed by JFS in the "Kimmel Center," which resembles a comfortable living room. This space is strategically setup for just that reason—to serve as a comfortable place for our clients. When this family arrived, they were welcomed with a culturally appropriate meal while the staff made copies of their documents. After the welcoming reception, they asked to be shown which space (in the office) they would sleep in. They were informed that there was a furnished home waiting for them. When we got to the home, the family cried, and prayed and mentioned how grateful they were to be in their own home as they spent most of their lives suffering.

Refugee Resettlement Services

Pre-Arrival Services	Arrival Services
Create sign-up list for donations from the community (furniture/food/linens/etc)	Meet the family at the JFS Delaware office upon arrival/copy all documents/take family home
Secure Housing (max rent $950)	Conduct home visits family's arrival
Furnish Housing (Apartment setup team)	Transports families to apply for public assistance/social security numbers/scheduled medical appointments
Connect with an in-person interpreter to translate during day of arrival	Assist clients with school-aged children enroll in school after receiving proper immunizations/enroll in employment services/ and English classes
Arrange to have culturally-appropriate meals, and weather-appropriate clothing present when the family arrives	Connect families with JFS RISE volunteers, faith-based, and community organizations to help families integrate into life in the United States
Begin scheduling medical appointments for each family member	Provide cultural orientation lessons to families upon arrival to ensure they understand the services being offered to them, US Laws, and the education on the overall goal of the US Refugee Admissions Program, which is self-sufficiency

Partnerships

In addition to our wonderful volunteers who work extremely hard alongside JFS RISE staff to welcome families and help them integrate into life in America, the RISE Program has formed great partnerships with local healthcare facilities and landlords. These partnerships make it possible for us to promptly schedule medical appointments for clients prior to them arriving to the country and secure apartments through "RISE Landlords" who are willing to rent to refugees. RISE Landlords graciously agree to waive credit and background checks and allow us access to the apartment prior to the family's arrival so that we have time to set up the home. The successes of the new refugee families would not have been possible without these partnerships.

One example of how our partnerships with faith-based organizations have attributed to the success of refugee families is the interfaith coalition that West Minster Presbyterian, Congregation Beth Shalom, and Hanover Presbyterian church formed to help one of the Afghan families we resettled last year with adjusting to life in the U.S. By leveraging their resources, these faith-based organizations helped the family learn how to save, secure a job, learn how to drive, and participate in different community events.

Challenges and Future Direction

While many of the refugees who arrive are experienced, talented and possess professional credentials in a variety of fields, their biggest challenge is employment. Many face seemingly insurmountable obstacles when they arrive speaking little to no English and their professional credentials are not recognized in the United States. JFS works closely with Literacy Delaware and many volunteers to help them learn English as quickly as possible. Each member of a family receives an English test and enrolled into English classes as soon as possible as a way of career development. However, the newly arrived refugees are forced, at least initially to find entry-level employment. JFS RISE is working diligently to connect with employers in the New Castle County area to build a database of work opportunities for refugees. Another major hurdle, securing affordable housing in a safe neighborhood is also a challenge as the most affordable houses are often not in the safest neighborhoods. Therefore, RISE Landlords are one of the keys to the program's success. JFS will continue to work with the Delaware community of residents, business owners, property owners, and healthcare providers to strengthen our collaborative to ensure that we have the necessary resources for newly arrived Americans to settle safely, comfortably, and with dignity and to become integrated members of our community.

As a former refugee from Liberia, West Africa, Lourena Gboeah is committed to serving the public through her volunteer, work, and educational experiences. She has over six years of full-time work experience with vulnerable and marginalized populations in Philadelphia, Pennsylvania. Lourena currently serves as a volunteer staff member with YesLiberia—a US-based international organization committed to innovative education methods for disadvantaged students in Liberia, and an advocate for refugees as a Delegate to the State of Delaware for the Refugee Congress.

In her current position, she serves as a Program Coordinator for the Refugee Integration Support Effort (RISE) Program at Jewish Family Services of Delaware where she oversees the state's resettlement and emigre programs.

Lourena earned a Bachelor of Science degree in Management from Rutgers University, Newark Campus in 2009 and a Master of Social Work degree from Temple University in 2014. Lourena is currently pursuing a Master of Public Administration degree at the University of North Carolina, Chapel Hill's online MPA program.

Statistics for Delaware

Year of Arrival	Month of Arrival	Country of Origin	Country of Departure	Number of Arrivals
2017	January	Ukraine	Ukraine	4
	February	Syria	Thailand	3
	February	Pakistan	Sri Lanka	2
	March	Afghanistan	Afghanistan	4
	June	Eritrea	Ethiopia	7
	September	Afghanistan	Afghanistan	4
2018	February	Afghanistan	Pakistan	2
	February	Pakistan	Sri Lanka	3
	February	Central African Republic and Democratic Republic of Congo	Ghana	3
	March	Democratic Republic of Congo	Tanzania	3

References

1 "Refugee Admissions," U.S. Department of State, https://www.state.gov/j/prm/ra/index.htm
2 "History of UNHCR," UNHCR, http://www.unhcr.org/en-us/history-of-unhcr.html
3 "Refugee Admissions," U.S. Department of State
4 "Figures at a Glance," UNHCR, http://www.unhcr.org/en-us/figures-at-a-glance.html
5 "Figures at a Glance," UNHCR
6 "Solutions," UNHCR, http://www.unhcr.org/en-us/solutions.html
7 Donald J. Trump, "Presidential Memorandum for the Secretary of State," https://www.whitehouse.gov/presidential-actions/presidential-memorandum-secretary-state-4/
8 "FY18 Refugee Arrivals," Refugee Council USA, http://www.rcusa.org/

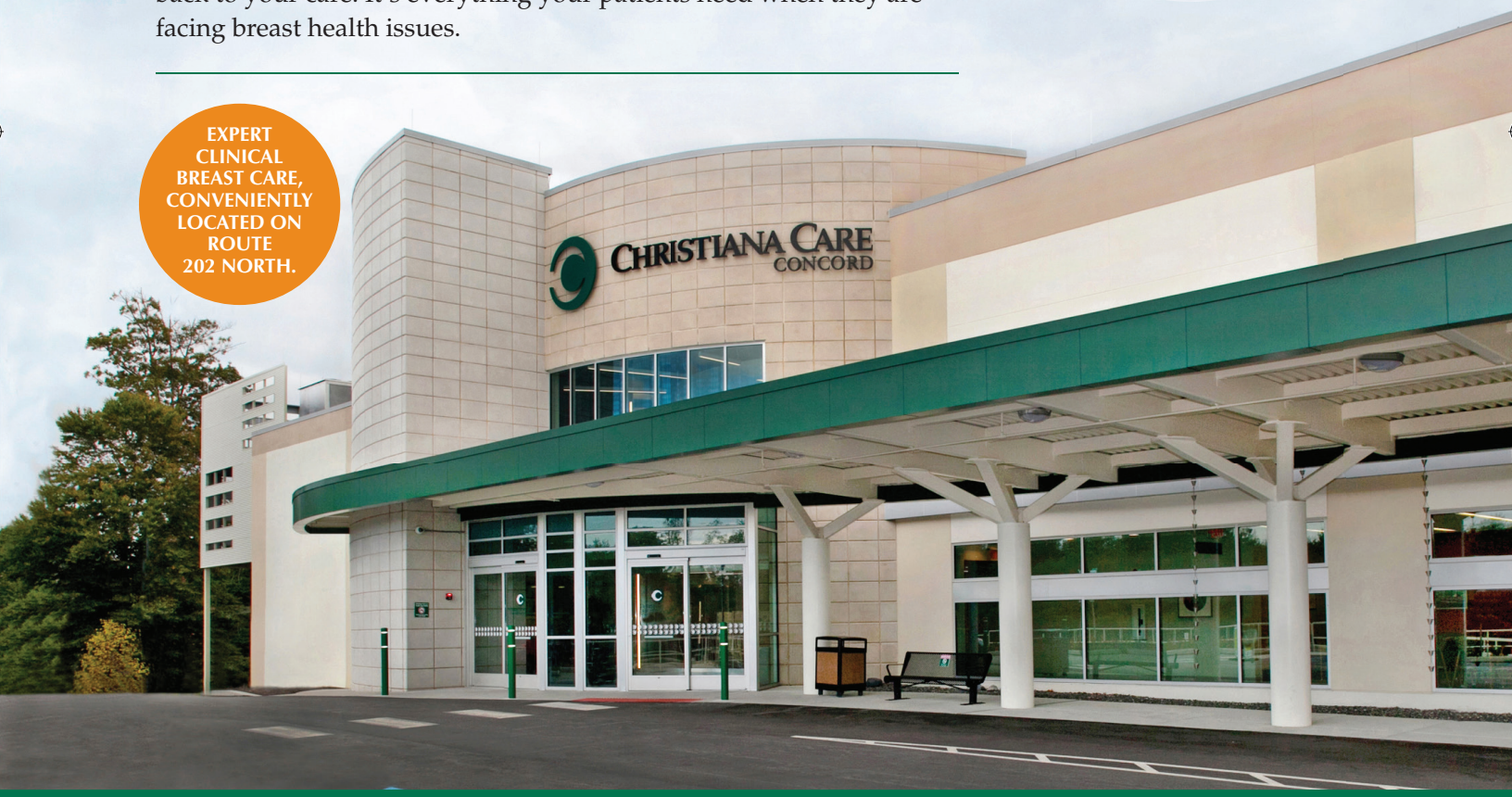
christianacare.org/concordbreast

Exceptional Breast Care Is Now Exceptionally Close.

As Medical Director of the Breast Center at Christiana Care's Helen F. Graham Cancer Center in Newark, Delaware, Diana Dickson-Witmer, M.D., has helped many women face their breast health challenges, live longer and improve their quality of life. She can help your patients too. She and her team specialize in breast surgery and offer compassionate care from diagnosis through postsurgical care.

In addition to her Newark office, Dr. Dickson-Witmer is now seeing patients at Christiana Care's Concord Health Center on Route 202 North. For any patients you refer, Dr. Dickson-Witmer will keep you apprised of their treatment plans so they can make a smooth transition back to your care. It's everything your patients need when they are facing breast health issues.

EXPERT CLINICAL BREAST CARE, CONVENIENTLY LOCATED ON ROUTE 202 NORTH.



If you have a patient who needs a surgical consultation or requires breast surgery, our team is here to help. Have your patient call 302-623-4343 today for an appointment.

161 Wilmington-West Chester Pike, Chadds Ford, PA 19317

18CAN69

CHRISTIANA CARE HEALTH SYSTEM

Helen F. Graham Cancer Center & Research Institute

DelawareBio

WE HAVE MOVED!

NEW LOCATION AS OF JULY 9

ADDRESS

2110 Concord Pike
Wilmington, DE 19803

CONTACT INFO

TEL: (302) 635-0445
EMAIL: info@delawarebio.org
WEB: delawarebio.org

COMING SOON!

Bio Dome at DelawareBio

The Bio Dome at Delaware Bio will be offering co-working space, meeting rooms, seminar series, networking events, and more. To sign up for the Bio Dome mailing list and receive the latest news about upcoming events click the button below!

The John Edward Fogarty International Center

Fogarty at 50

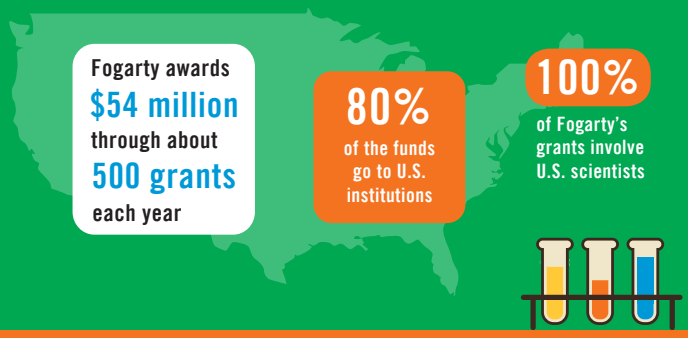
Americans benefit from global health research

Diseases know no borders, as we've seen with Ebola, Zika, bird flu, SARS and other infectious disease outbreaks. To protect the health and safety of Americans, the Fogarty International Center has for three decades managed grant programs that develop scientific expertise in developing countries, ensuring there is local capacity to detect and address pandemics at their point of origin, contain outbreaks and minimize their impact. We are all only as safe as our weakest link.

Fogarty, part of the U.S. National Institutes of Health, supports basic, clinical and applied research and training for U.S. and foreign investigators working in the developing world. The Center serves as a bridge between NIH and the greater global health community—facilitating exchanges among investigators, providing training opportunities and supporting promising research initiatives in low-resource settings. Since its establishment in 1968, about 6,000 scientists worldwide have received significant research training through Fogarty programs.

Fogarty funds more than 500 projects involving about 100 U.S. universities. Fogarty also convenes the best scientific minds to address critical global health research problems such as pandemic response, antimicrobial resistance and strengthening research capacity in Africa.

Contributing to the US Economy



Creating sentinels overseas to protect American health

When Ebola struck Africa in 2014, countries with little or no scientific capacity suffered the most, and the cost of the U.S. response soared above $2 billion. Sufficiently strengthening scientific expertise at local institutions, training health leaders and linking them to the global network of experts would require just a fraction of that amount. Fogarty recently awarded grants to build partnerships between scientists at four U.S. institutions and their counterparts in Sierra Leone and Liberia. The goal is to train West African scientists to conduct clinical trials safely and ethically, including how to handle and store specimens, obtain informed consent from study participants, and manage and analyze data. When the next outbreak comes, they will be prepared to rapidly implement therapeutic or vaccine trials. By stopping outbreaks where they occur, it is more likely to prevent them from reaching America.

Unique opportunities abroad can accelerate discoveries

We may learn the key to preventing the ravages of Alzheimer's disease—which is expected to strike one in three Americans and cost $1 trillion annually by 2050—by studying an extended family with hereditary, early-onset Alzheimer's in rural Colombia. Fogarty has provided critical scientific training so that local researchers can perform brain scans, genetic analysis and other sophisticated approaches that has already enabled a clinical trial of a U.S. manufactured drug that might help stop Alzheimer's at its earliest stage. In rural Brazil, scientists trained by Fogarty to investigate Chagas disease have redirected their research skills to examine Zika when that outbreak began.

Research and Research Training Programs

Brain Disorders in the Developing World: encourages collaborative research and capacity building projects on brain disorders throughout life, relevant to low- and middle-income countries (LMICs), which involve substantial collaboration between developed and developing country investigators and incorporate both research and capacity building.

Chronic, Noncommunicable Diseases and Disorders Across the Lifespan: supports collaborative research training to sustainably strengthen research capacity of LMIC institutions, and to train in-country experts to conduct research on chronic, noncommunicable diseases and disorders. Examples include cancer, cardio- and cerebrovascular disease and stroke, chronic lung disease, diabetes, mental illness, neurological, substance abuse and developmental disorders.

Ecology and Evolution of Infectious Diseases: funds interdisciplinary research projects that strive to elucidate the underlying ecological and biological mechanisms that govern the relationships between environmental changes and the transmission dynamics of infectious diseases.

Emerging Epidemic Virus Research Training for West African Countries with Widespread Transmission of Ebola: funds U.S. or African research institutions to plan research training and capacity building programs focused on emerging viral epidemics in collaboration with institutions in Guinea, Liberia and Sierra Leone.

Framework Programs for Global Health Innovation: provides support to institutions in the U.S. and in LMICs to build capacity within their institutions to develop broadly interdisciplinary, postdoctoral (or post-terminal degree) research training programs in global health.

Global Environmental and Occupational Health: supports paired consortium led by a LMIC institution and a U.S. institution to plan research training and curriculum development activities that address and inform priority national and regional environmental and occupational health policy issues.

Global Health Research and Research Training eCapacity Initiative: funds innovative research education programs to teach researchers at LMIC institutions the knowledge and skills necessary to incorporate Information and Communication Technology (ICT) into global health research and research training.

Global Infectious Disease Research Training: enables institutions in the U.S., or in developing foreign countries, to support current and future collaborative research-related training on infectious diseases.

Global Noncommunicable Diseases and Injury Research: supports innovative, collaborative biomedical or behavioral and social science research in the areas of noncommunicable diseases and injury throughout life in LMICs.

Health Professional Education in Africa: with PEPFAR support, leverages results of the Medical Education Partnership Initiative (MEPI) to invest in junior faculty at MEPI institutions; strengthens the research and health care workforce in eight African countries through the Health-Professional Education Partnership Initiative (HEPI); and invests in an African Association for Health Professions Education and Research.

HIV Research Training: strengthens the human capacity to contribute to the ability of institutions in LMICs to conduct HIV-related research on the evolving epidemics in their countries and to compete independently for research funding.

International Bioethics Training: allows domestic or foreign institutions to develop graduate, doctoral and postdoctoral curricula, and to provide training in international bioethics related to performing research in developing countries.

International Collaborative Trauma and Injury Research Training: supports research training on diagnosis, prevention, and treatment related to injury and trauma in LMICs. Research training programs can be related to prevention, treatment at the scene, emergency medical facilities and services, diagnostic imaging, post-acute care, and long-term care including rehabilitation.

International Cooperative Biodiversity Groups: sguides natural products drug discovery, botanicals research, crop protection science and bioenergy exploration toward international collaborative models that provide local communities, universities and other organizations from LMICs direct benefits from the diverse biological resources of their countries.

International Tobacco and Health Research and Capacity Building: encourages trans-disciplinary research to address the international tobacco epidemic and to reduce the global burden of morbidity and mortality caused by tobacco use.

Mobile Health Technology and Outcomes: funds exploratory and developmental research to develop or adapt innovative mobile health (mHealth) technology specifically suited for LMICs, and the health-related outcomes associated with implementation of the technology.

Reducing Stigma to Improve HIV/AIDS Prevention, Treatment & Care in LMICs: seeks to stimulate new and impactful research towards the development of stigma reduction interventions leading to better outcomes for the prevention and treatment of HIV/AIDS and improving the quality of life of people living with HIV/AIDS.

Career Development Opportunities for Individuals

Emerging Global Leader Award: secures protected time for research scientists in LMICs who hold academic junior faculty positions or research scientist appointments at LMIC academic or research institutions.

International Research Scientist Development Award for U.S. Postdoctoral Scientists (IRSDA): supports basic research, behavioral and clinical scientists who are committed to a career in international health research and would benefit from an additional period of mentored research.

Global Health Program for Fellows and Scholars: provides supportive mentorship, research opportunities and a collaborative research environment for early stage investigators from the U.S. and LMICs to enhance their global health research expertise and their careers.

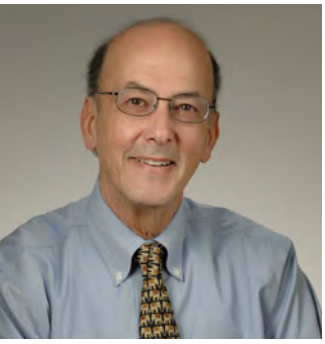
Fulbright-Fogarty Fellows and Scholars in Public Health: partners Fogarty and the Fulbright Program–the flagship international educational exchange program sponsored by the U.S. government–to promote the expansion of research in public health and clinical research in resource-limited settings for medical or graduate student fellows and postdoctoral scholars.

For a complete list of Fogarty's programs, visit: **www.fic.nih.gov/Programs**

OPINION

By Dr. Roger I. Glass, Director, Fogarty International Center

Response to a congressman



A congressman recently invited me to speak with him about global health research supported by NIH and Fogarty. He was doubtful about the value of this work and needed ammunition to respond to his constituents, many of whom were unemployed, and concerned that their taxes were not being well spent. I responded directly and asked: What are the key health concerns of people in your community? Are they worried about the health of their children, the elderly, cancer, heart disease or Alzheimer's disease?

Children seemed a great starting point so I queried: In most communities, diarrhea is one of the most common causes of hospitalizations among children. Do you have any families with small children in your district who suffer bouts of severe diarrhea?

He nodded yes. I responded, Do you know where the treatment for childhood diarrhea was first discovered and proven to be effective? He was unaware.

In Bangladesh, I responded, cholera is the most severe of the diarrheal diseases, often causing epidemics of huge proportions. NIH and CDC researchers wanted to develop a simple treatment for cholera, the most severe and rapidly fatal diarrheal disease known to man. American and Bangladeshi investigators developed a simple, home-based remedy—a package of oral rehydration salts—that when added to water could exactly replace the fluids and electrolytes lost from the disease and save the patient's life. This recipe developed through clinical trials in Bangladesh and Calcutta has been adapted to treat the common diarrheal illnesses that we see at home. The medical journal *The Lancet* touted this as one of the greatest public health breakthroughs of the 20th century and has attributed this treatment to saving one million lives a year.

I queried further if he was worried about the growing problem of Alzheimer's disease that might affect perhaps one-third of all elderly Americans. He acknowledged the problem. I followed by noting that some of the most important secrets of this disease might first be revealed by studies of a small population in Colombia carrying an unusual genetic mutation that raises the risk of both early onset Alzheimer's—as young as 35 years—and its rapid progression to severe senility. If we are to learn by imaging brains with this disease, finding new biomarkers to monitor disease progression over time and testing new treatments to slow down or ultimately halt its progression, this is a key population. We need to conduct some of our research in collaboration with our Colombian colleagues.

The U.S. National Institute on Aging is studying some of these patients and others are being enrolled in clinical trials of new therapeutic agents. So with Alzheimer's being one of the bank-breaking and evolving pandemics of our time, part of the solution will likely come from research in global health.

We are leaders in global health because we have been able to reach out and engage others to do studies that are locally relevant but can have clear implications for us at home. Global health research truly is the new frontier of science.

I continued and asked if anyone in his constituency had suffered from cancer and received chemotherapy? Did he know where the first link that a virus could cause cancer was found?

Another negative look appeared on his face and I responded. It was in Uganda, when Dr. Dennis Burkitt established the link between a newly discovered virus, the Epstein-Barr virus, and African Lymphoma. Burkitt then visited the U.S. where chemotherapy for cancer was first being developed and brought back a new drug regimen, which he administered to a child with full-blown disease. The tumor melted away in several weeks and became the treatment of choice for this lymphoma, demonstrating that some cancers could be cured.

My time was up so I left him with a final thought. In almost every branch of medicine, research overseas has allowed us to advance our discoveries faster, cheaper and more efficiently than we ever could have at home. We are leaders in global health because we have been able to reach out and engage others to do studies that are locally relevant but can have clear implications for us at home. Global health research truly is the new frontier of science.

www.fic.nih.gov

GLOBAL HEALTH MATTERS

Fogarty at 50

MAR/APR 2018

Inside this issue

Fogarty trainee provides leadership, trains next generation in Peru…p. 5

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

NIH, Fogarty discuss health inequities at CUGH meeting

At least half of the world's population lacks access to health services, the WHO Director-General told attendees of the Consortium of Universities for Global Health (CUGH) annual meeting. Financial barriers and stigma prevent many from receiving treatment and that must be addressed, said Dr. Tedros Adhanom Ghebreyesus. "Good data is the crucial starting point for reducing health inequities," he said. "Identifying where health inequities exist is essential for reducing them." WHO has developed a health equities assessment toolkit to help countries identify underserved populations and track progress in improving access.

The CUGH conference, titled "Health Disparities: a Time for Action," brought together more than 1,800 participants from around the world who are engaged in global health activities.

In a plenary panel, Fogarty grantee Dr. Patty Garcia presented a case study of an outreach program she

. . . continued on p. 2

Photo courtesy of CUGH

Fogarty Director Dr. Roger I. Glass updated CUGH attendees on the Center's activities to mark its 50th year of advancing global health science.

On 50th anniversary, Fogarty reviews progress

To commemorate 50 years of its global health research and training programs, Fogarty is convening partners and grantees on May 1 to review accomplishments and lessons learned, as well as consider future directions and goals. The day-long symposium is titled "Fogarty at 50: What are the new frontiers in global health research?"

The Lancet editor Dr. Richard Horton will provide the keynote address, which will be followed by panel discussions of how to advance global health priorities. NIH Director Dr. Francis S. Collins will also present his observations on how NIH Institutes and Centers can collectively sustain and advance the global health research agenda. Panelists will present case studies and lead conversations to explore questions such as what is needed to advance infectious disease research and achieve the end of HIV/AIDS; how can existing platforms be leveraged to address noncommunicable diseases; and what can be done to advance the global brain disorders agenda. Finally, senior investigators and their trainees will discuss the long-term impact of the multigenerational capacity building Fogarty supports.

The event is being videocast by NIH and webcast on Facebook Live: **www.videocast.nih.gov**

FOCUS

Fogarty-supported adolescent health research fills critical gap

- Adolescents' health needs often neglected in studies
- Early pregnancy can impact well-being for a lifetime
- Encouraging healthy habits in teens reduces future NCD burden
- HIV/AIDS a key battleground for teen health researchers

Read more on pages 6 – 9

NIH, Fogarty discuss health inequities at CUGH meeting

. . . continued from p.1

developed to provide cervical cancer screening in Peru, which she said is one of the most inequitable countries in terms of health services. She and her colleagues at the University of Cayetano Heredia developed a plan to deploy trained volunteers to reach out to women living in a slum near the Lima airport to inform them about cervical cancer. The lay workers also provided simple diagnostic tests that the women could self-administer at home and then drop off in collection boxes, where they were picked up and processed in a lab. With more than 2,000 women participating, 49 cases of cancer were discovered and referred for treatment. "Women loved self-testing in their own home and getting results by text message," Garcia said.

Climate change disproportionately impacts people in low- and middle-income countries, said the NIH's Dr. John Balbus, during a panel session he led.

Climate change is exacerbating health inequities, as increasingly severe storms, drought, wildfires and heatwaves disproportionately impact those living in low- and middle-income countries, according to Dr. John Balbus, a senior advisor at the NIH's National Institute of Environmental Health Sciences, who led a conference session on the topic. He suggested authorities plan climate-ready health systems that are "resilient in the face of extreme events, and they need to be prepared for the kinds of shifts in infectious diseases, for the kinds of changes in morbidity and mortality that we've seen in heat waves."

Health can also be improved by public policies, such as those governing food labels, sugar taxes and nicotine regulation—issues explored by a panel of participants from the Lancet-O'Neill Institute Commission on Global Health and the Law. John Monahan, a Fogarty board member and on the faculty of Georgetown University, said the Commission's upcoming report is designed to get more health professionals and lawyers working together to alleviate suffering and advance health equity. "Law is ultimately a tool for justice," he said.

Ways to strengthen support for female leaders in global health was the discussion topic for a panel of academics and scientists, including Fogarty's director. The conversation focused on possible actions such as cultivating institutional change, addressing cultural barriers, increasing visibility for women to help them progress in their careers and developing flexible work models. "I believe we need a shift in what we think leadership is and what that can look like," said Stanford University professor Dr. Michele Barry, who recently hosted a conference on the subject.

Former Fogarty Fellow, Dr. Jeffrey Blander, discussed how his early foreign research experience informs his work as PEPFAR's chief innovation officer.

To encourage early-career scientists to pursue a global health career track, alumni of Fogarty's Global Health Fellows and Scholars Program discussed their experiences and presented the results of their work. One former Fogarty Fellow, Dr. Jeffrey Blander, is now chief innovation officer at the President's Emergency Plan for AIDS Relief, or PEPFAR. His work is about disruption, he said. "For example, what can you do without electricity?" One of his projects, which involved developing field tests for strep, has increased diagnoses and reduced hospital visits.

Fogarty's director applauded Blander, his peers and their faculty mentors. "This fellowship program is extraordinary in the way in which it's enriched your understanding of other cultures and enhanced your ability to work with people with different belief systems," said Glass. "This is the best investment we've made in the last 15 years—seeding the next generation of global health researchers and leaders."

More than 1,800 academics, practitioners and policymakers attended the CUGH annual meeting.

Photos courtesy of CUGH

Photo courtesy of the Friendship Bench Program, Zimbabwe.

Zimbabwe's Friendship Bench program, developed with partial support from Fogarty, helps reduce the mental health treatment gap by training lay health workers to deliver problem-solving therapy.

Low-cost mental health innovation enables access to care in Africa, US

A woman in Zimbabwe has more problems than she can handle. She's HIV-positive, unemployed, has a husband who's violent and threatening to leave, and her 13-year-old daughter has been raped and is pregnant. Overwhelmed, she learns to prioritize her problems and identify solutions by talking with an elderly woman, a lay health worker known as a "grandmother," as they sit on a bench outside a primary care clinic.

That scenario, described by former Fogarty Fellow Dr. Dixon Chibanda, exemplifies the Friendship Bench Program he helped create to reduce the mental health treatment gap in Zimbabwe, where he's one of 12 psychiatrists in a country of 16 million people. Using a task-shifting approach, clinics refer patients to non-health care professionals trained to deliver problem-solving therapy for anxiety, depression and other common mental disorders in a safe and comfortable setting—a discreetly located bench. The concept is now being adapted for use elsewhere in Africa and even New York City.

The project began in 2006, and with Fogarty support that came later, Chibanda conducted a systematic review of psychological interventions to identify ways to enhance the bench program. The fellowship also helped him prepare for a clinical trial, funded by Grand Challenges Canada, which showed people who experienced the bench intervention were less likely to have symptoms of depression after six months than those who received standard care that included doctors. Now, more than 70 Zimbabwean communities have benches, 400 grandmothers have been trained, and nearly 40,000 people received therapy last year, according to Chibanda.

"Being a psychiatrist, one of the things you immediately realize when you work in this part of the world is there are thousands of people who need your services, but just can't get them," Chibanda said. Tapping elderly lay health workers made sense to him because they are respected and rooted in their communities and could be trained for under $200. Grandmother candidates must know how to read, write and use a mobile phone. Then they receive training and are evaluated on their ability to listen, summarize what they've heard and show empathy.

On the first encounter of the six-session program, the participant and grandmother spend an hour working through the three stages of the intervention. "Opening the mind" enables participants to relax and share their story; "uplifting" helps the client prioritize their problems and find solutions; and "strengthening" assures they are ready to tackle their challenges.

"The beauty of the Friendship Bench is that at the end of the very first session, you walk away with a solution and plan that you go and execute. So, when you come back, you come back with feedback," Chibanda explained. Grandmothers are supervised by peers and can contact psychiatrists or psychologists if there's something they can't handle.

Malawi has started a friendship bench program that mirrors Zimbabwe's, according to Chibanda. The concept also is being adapted for use in New York City, where permanent and mobile benches are being installed in public places—including health fairs and block parties. People seeking assistance can talk anonymously with trained community workers or peer counselors who provide support and refer them to resources where they can get help. The New York pilot project has been successful, with bench workers reporting they have interrupted suicide plans and helped people enter detox programs.

"The one thing that really resonated with me, these stories that are coming out of New York are no different than the stories coming out of Zimbabwe with regard to the people coming to the bench and the experience that the benchers and the counselors have," said Chibanda. "It's all about stories, powerful stories, which are embedded in an evidence-based approach that seeks to truly empower clients who come to the bench."

RESOURCES

http://bit.ly/friendshipbench

PROFILE

Fogarty Fellow continues to fight heart disease in Malawi

By Karin Zeitvogel

Five years after completing a Fogarty global health fellowship in pediatric cardiology, Dr. Amy Sims Sanyahumbi has returned to Malawi with a prestigious Fogarty grant, the International Research Scientist Development Award (IRSDA), and a new focus: she wants to work toward eradicating rheumatic heart disease. Also known as a K award, the IRSDA gives early career researchers protected time to focus on research and engage in professional development activities, both of which, said Sims Sanyahumbi, are critical for anyone embarking on a global health path.

Her 2011-13 Fogarty fellowship led to her new award, said Sims Sanyahumbi. "The Fogarty fellowship helped me to build a foundation in research, and helped to solidify my research interests. It also smoothed the path to the award because without the experience of the fellowship, it would have been much more difficult coming to a different country and environment than I'm used to, and just hop in and perform research," she explained.

As a fellow, Sims Sanyahumbi studied deficiencies in cardiac function in children with HIV. She also ran the pediatric cardiology clinic in Lilongwe, Malawi. As she examined sick children, she noticed that "every other child I saw had rheumatic heart disease," she said. "Seeing so many children with such a devastating, completely preventable disease was heartbreaking, so I decided to help do something about it."

Rheumatic heart disease occurs when a seemingly banal strep throat infection is not adequately treated with antibiotics. This can lead to a child developing acute rheumatic fever and, in some cases, rheumatic heart disease, which results in permanent damage to the heart valves. The disease forces the heart to work harder to pump blood and, over time, may cause heart failure. While rheumatic fever usually occurs in children aged 5-15, it can be years before any heart-related symptoms are evident.

The saddest aspect is that advanced disease can be prevented by low-cost monthly injections of penicillin, Sims Sanyahumbi said. Among the questions she will seek to answer are whether poor adherence is to blame for the high number of children with rheumatic heart disease in Malawi.

Photo courtesy of Dr. Amy Sims Sanyahumbi

Amy E. Sims Sanyahumbi, M.D.

Fogarty Fellow:	2011-2013
Local organization:	UNC Project, Lilongwe, Malawi
U.S. organization:	Children's National Medical Center
Research focus:	Pediatric cardiomyopathy

She plans to register children with rheumatic heart disease in the capital city, Lilongwe, and then track their follow-up care for a year. After gathering and analyzing those data, Sims Sanyahumbi said she will look for barriers to and facilitators of care, and will work to develop a comprehensive strategy that harnesses mobile and eHealth tools to improve adherence in low- and middle-income countries (LMICs) like Malawi.

Another key goal is to train Malawians in pediatric cardiology, echocardiography, patient care and research practices. "There is one pediatric cardiologist in Malawi and there are an estimated 169,000 cases of rheumatic heart disease in the country," she says. "Something that can be shared with my Malawian colleagues are the skills needed to better diagnose and care for these patients."

Sims Sanyahumbi's primary mentors are Dr. Peter Kazembe, the executive director of the Baylor HIV clinic in Malawi, and Baylor College of Medicine associate vice chair for research in pediatrics, Dr. Kristy Murray, in Houston, Texas. "While in Africa, I will have Skype meetings with my Houston team but having a strong mentorship team on the ground in Africa is also very important," said Sims Sanyahumbi. The outcomes of her research are expected to benefit not only children in LMICs but also in the United States, where, although the incidence of rheumatic heart disease has declined to the point that it is no longer a notifiable disease, "We still see it, particularly in areas of high poverty or in places with a significant immigrant population," noted Sims Sanyahumbi.

Q&A

PATRICIA GARCIA, M.D., M.P.H., PH.D.

Dr. Patricia Garcia is a professor and former dean of the School of Public Health and Administration at the Universidad Peruana Cayetano Heredia (UPCH) in Lima, Peru, a position she has held since 2011 with a 15-month interruption to serve as her country's minister of health. A former Fogarty trainee, Garcia was the first woman to lead the Peruvian National Institute of Health and has served on a number of high-level WHO advisory committees. Garcia earned her master's of public health from the University of Washington, and her M.D. and Ph.D. from UPCH.

How did Fogarty shape your career?

It was through Fogarty's AIDS International Training and Research Program (AITRP) that I went to the University of Washington, where I was exposed to research and started my career as an infectious diseases doctor. As an AITRP trainee, I learned what makes an enabling environment for research, and when I returned to Peru, I was able to create one at Cayetano Heredia's School of Public Health. I believe that every single step you take in life shapes who you are, and the steps I've walked with the help of Fogarty were instrumental in helping me to achieve a great deal, including being appointed health minister and becoming the first doctor in my family.

How did UPCH become a research powerhouse?

First of all, Fogarty gave many Peruvians the opportunity to train in the U.S. Second, we've been able to access numerous grants through Fogarty, including early career support that allows trainees to come back to Peru, and training grants that have allowed us to devise and implement our own programs. One Fogarty training grant allowed us to develop a program for medical informatics that is now used in Peru and more broadly in Latin America. Fogarty has also taught us to network more effectively by giving us the opportunity to interact with U.S. researchers.

How has Fogarty advanced research in Peru?

One of the things I'm proudest of is that I helped obtain funding from Fogarty for several Peruvians who, as faculty members at Cayetano, are doing the same for the next generation. It's like having my kids, grandkids and great-grandkids with me at Cayetano—generations who have benefited from Fogarty training and are now doing research.

Fogarty's investment in Peru has been catalytic. Former Fogarty trainees laid the foundations for preventing and controlling HIV and STDs in Peru. We've introduced point-of-care tests. Medical informatics in Peru started at Cayetano with grants from Fogarty. One of those grants allowed us to create a center for training and research in medical informatics for global health, which people from around Latin America have attended.

How do you foster collaboration at Cayetano?

We've learned that promoting collaboration from the very beginning of people's careers teaches them to work together. Let me explain that by using the example of our Fogarty-supported project called *Kuskaya*—the word in *Quechua*, the language of the Incas, for "working together." *Kuskaya* brings together people from different disciplines, at least one of whom must be from the global south and one from the north. We've had projects that pair architecture and health, media and health, physical activity and health, cell phones and TB. Through a *Kuskaya* project run by a Fogarty trainee in the Amazon, called "Mothers of the River," women with solar-powered tablets are reducing maternal mortality in jungle communities.

How do you share knowledge beyond Peru?

South-south cooperation is very important to us. People from Mexico, Bolivia, Venezuela, Colombia and Ecuador attend the Andean Center for Training on Medical Informatics. At the Latin American Association for STDs, which we created, we've been working with several countries on the introduction of rapid syphilis tests, among other issues.

We also do south-north cooperation—advising the U.S. on how to do things in developing countries. USAID recently contacted me to ask about our experiences in Peru with antiretroviral therapy. They're trying to change the system they use to provide antiretroviral therapy in Sudan.

And future generations of researchers and doctors from the U.S. come to Peru to train. Here in Peru, they encounter diseases they don't have in the U.S., so when they do see them back home, they know what to do. So we work with others as collaborative citizens of the world. That's what Fogarty trains us to be.

Fogarty's adolescent research key to future good health

The world is sitting on a global health time bomb as the largest adolescent population in history—1.8 billion youth—transitions into adulthood. HIV deaths among adolescents are rising, even as they decline for other age groups. AIDS-related illnesses claim more adolescent lives than any other cause except road accidents, according to UNAIDS. Adolescence is a time of risk-taking, when many social behaviors related to health—things like smoking, drinking, sexual behaviors and delinquency—are established. "It's a time of a whole set of serious social transformations which are important for adolescents but really have major importance down the road," said adolescent health specialist and long-time National Institute of Child Health and Human Development (NICHD) grantee, Dr. John Santelli of Columbia University. "Adolescents don't die from tobacco use but if you wait 20-30 years, you'll see the serious health consequences of teen smoking. And then, of course, in most of the world, adolescents rapidly become the parents of tomorrow. So their health, their well-being predicts the health of their children."

And yet, until recently, the health needs of adolescents have been largely overlooked by the research community. "Adolescents are perceived by many researchers and policymakers to be a healthy lot, with few pressing needs," said Fogarty grantee, Dr. Monika Arora, director of the health promotion division at the Public Health Foundation of India—the country with the largest number of adolescents in the world. "But adolescent mortality has fallen at a slower rate than it has in children aged 0 to 9 years old, and the adolescent age group is the only one in which AIDS-related deaths are not decreasing."

Adolescent research has lagged behind other age groups, in part because the factors that influence youth health—the conditions in which a person is born, grows, lives, works and ages—fall outside the health system. Called the social determinants of health, these include how long youth stay in school, how a country regulates tobacco and alcohol, child marriage, the poverty rate, and so on. Behaviors adopted during this time of life can impact youth in the short term, when they're older, and influence the quality of life and health of the next generation.

Every year, more than 18 million girls, some younger than 15, give birth in developing regions, according to the WHO. Complications during pregnancy and childbirth are the leading cause of death for 15- to 19-year-old females globally and giving birth during adolescence has a negative impact on the future well-being of both mothers and infants.

Fogarty has long supported research into multiple aspects of youth health, from tobacco use to teen pregnancy and how it affects women's health later in life, to HIV testing and care. Many Fogarty-funded projects take a multisectoral, life-course approach to adolescent health, looking not just at the clinical aspects of teen health but also seeking to address the social determinants that impact health from the time a child is in the womb through adolescence and into adulthood.

Photo courtesy of GHESKIO

Adolescents are often overlooked by health researchers but have unique health issues that require study.

Articles in this section by Karin Zeitvogel
Resources: http://bit.ly/AdolescentHealth

Courtesy of Dr. Catherine Pirkle

An expectant teenage mother is examined in Brazil as part of a Fogarty-supported study led by Dr. Catherine Pirkle of the University of Hawaii, Manoa.

Teen pregnancy has lifetime impact

Adolescent girls—some as young as 10—routinely give birth at the West African hospitals where Dr. Catherine Pirkle did doctoral research. "This clearly has long-term implications for their health—if they survive," Pirkle said. "Pregnancy and childbirth complications are the leading cause of death among 15- to 19-year-old girls globally, and women who give birth as adolescents seem to have particularly adverse health outcomes as they get older."

A study of postmenopausal women from several countries found those who gave birth as adolescents had a higher long-term risk for cardiovascular disease than childless women or those who gave birth as adults. Armed with a Fogarty noncommunicable disease (NCD) grant for exploratory research, Pirkle set out to try to explain the relationship between teen birth and cardiovascular disease later in life. "It could be that exposing biologically immature organs to a high dose of estrogen can induce subtle changes to glucose metabolism, which might impact metabolic syndrome or diabetes," she said. "Or it could be that the social consequences of adolescent childbearing are more pertinent: adolescent mothers drop out of school, have fewer economic opportunities and more stresses in life. Being a teenaged mother, especially without adequate support, does not appear to be good for your health."

Now an assistant professor at the University of Hawaii at Manoa, Pirkle has teamed up with researchers in northeastern Brazil to follow a pilot cohort of adolescent and adult women who are pregnant for the first time, from the start of pregnancy to six weeks postpartum. As part of the project, trainees are being given instruction on research practices, offered courses on epidemiological best practices, and provided specialized training in ethical research conduct when working with pregnant and adolescent women.

Building on the capacity developed with Fogarty support, Pirkle said she is planning a longitudinal cohort study to lay the foundation for a more comprehensive investigation of ties between adolescent childbirth and poor health in later years.

Healthy habits in teens help reduce NCD burden

When teens see their movie idols light up on the big screen, they're more likely to try tobacco themselves, Fogarty-supported studies indicate. This matters because tobacco use is the single biggest risk factor for developing an NCD later in life, and it's a behavior often adopted during adolescence.

Among the Fogarty-supported studies to look into teen smoking, one, led by grantee Dr. Monika Arora, found a clear association between exposure to tobacco use in India's popular Bollywood movies and teens taking up the habit. India is not only the country with the largest population of adolescents in the world, but also one of four countries with China, Russia and the U.S., in which more than half of global tobacco-related deaths occur. Even after adjusting for demographic, social and family differences between the nearly 4,000 Indian teens who took part in the study, Arora found that the odds of using tobacco were more than double among teens who saw a lot of smoking in Bollywood films than those with low exposure to tobacco use in movies.

Those findings are not restricted to India. A study conducted in Argentina, with support from Fogarty and NIH's National Cancer Institute, found that the more adolescents saw actors smoke in U.S. and Argentinian films, the more likely they were to start using tobacco themselves. Researchers in India and Argentina have called for policy action on 'film smoking,' calling it an important, independent risk factor for smoking initiation.

Early use of tobacco is of concern because it predicts greater likelihood of addiction, longer lifetime use, and higher rates of lung cancer, said Arora. "Ensuring good health in adolescents brings economic and lifestyle benefits at the individual and national level and is vital to improving the health of future generations," she said.

HIV/AIDS a key battleground for teen health researchers

With AIDS-related illnesses claiming more adolescent lives than any other cause except road accidents, HIV has become one of the key battlegrounds for adolescent health researchers. A majority of adolescents who died of AIDS-related illnesses in 2013 acquired HIV from their mothers, but 40 percent of all new infections each year occur among adolescents in resource-poor settings, UNAIDS says. Most of those new infections affect girls, particularly those who are socially marginalized, live in poverty and have an unstable family life.

Exacerbating the youth HIV crisis is the fact that only a small fraction of the five million adolescents living with HIV globally have been tested for the virus. Youth who are unaware that they are infected do not seek care, don't begin antiretroviral therapy (ART), and may start or continue to have sex and transmit HIV.

Haiti's teen HIV clinic boosts adherence

Haiti has the highest HIV infection rate in the Western Hemisphere, but only 9 percent of adolescent females and 4 percent of adolescent males know their HIV status. A Fogarty-supported project that recruited more than 3,300 adolescent slum-dwellers for HIV testing found that the prevalence rate among youth was 2.65 percent—nearly seven times higher than the estimated national adolescent HIV prevalence (0.4 percent) and more than half a percentage point higher than adult prevalence (1.9 percent). Nearly three-quarters of adolescents who tested positive for HIV were female, according to an analysis of the data collected by researchers from Weill Cornell Medical College and the Haitian Study Group for Kaposi's Sarcoma and Opportunistic Infections (GHESKIO), who led the study.

Young adolescent girls read lesson books in Manila, Philippines.

Adherence to antiretrovirals is also low among Haitian adolescents. To overcome that, GHESKIO scientists led by Fogarty trainee, Dr. Vanessa Rouzier, turned sessions at a youth-specific HIV clinic that's been operational since 2009 into social events "with doctor stuff tagged onto the group gathering," said Dr. Dan Fitzgerald, a longtime Fogarty grantee and the head of Weill Cornell Medicine's Center for Global Health, which for decades has partnered with GHESKIO to fight HIV/AIDS in Haiti.

A year after launching a pilot study of these mixed social and medical sessions, only around 10 percent of youth had dropped out of care, compared to around half before the peer group meetings were introduced. The pilot study has led to a larger project called FANMI—Haitian Creole for "my family"—targeting HIV-infected adolescent girls, "who we need to be tailoring our interventions for," said Fitzgerald. Supported by NIH's National Institute of Child Health and Human Development (NICHD), FANMI delivers peer group counseling, social activities and clinical care to HIV-infected girls in a community center rather than a medical clinic.

FANMI and other youth-focused HIV projects are a recognition by GHESKIO that "we urgently need adolescent-specific strategies to help these youth cope and thrive with this disease, as well as prevent new infections in that group," said Rouzier. With Fogarty support, GHESKIO is also building research capacity to prevent AIDS-related cervical cancer, of which Haiti has the highest incidence in the world. Researchers are being trained in all aspects of human papillomavirus (HPV) infections in teenage girls, including behavioral, social and ethical issues, and how to administer HPV vaccination programs for this at-risk age group.

School: a powerful determinant

In Rakai, Uganda, poverty has fallen, high school enrollment has surged, and sexual intercourse initiation—an important risk factor for HIV, other sexually transmitted diseases, and unintended pregnancy—has been delayed, said Dr. John Santelli, leader of an NICHD-supported project that since 1994

has been collecting data on youth in this rural part of Uganda. The Rakai Adolescent Project has found that not being enrolled in secondary school was associated with higher prevalence of sexual experience and earlier initiation of sexual intercourse, especially among girls. "In many cultures, girls are married off to older men, who are much more likely to be HIV-positive," said Santelli. "Being in school means that's less likely to happen. Our study indicates that secondary school enrollment has a huge impact on HIV risk factors, incidence and prevalence."

Fogarty-supported research in rural Nigeria has similarly found that keeping girls in secondary school provided them with "a socially acceptable alternative to early marriage," said Dr. Daniel Perlman, one of the lead investigators on that project.

Across the Atlantic in Belize, which has the highest HIV prevalence rate in Central America, an in-school, peer-to-peer program helped promote HIV risk-reduction behaviors among adolescents. Fogarty-supported researchers trained teens to lead instructional sessions aimed at increasing knowledge of HIV among their peers. Seven weeks after the start of the intervention, adolescents who learned about HIV from the teen-educators had higher HIV knowledge and were more likely to use condoms than youth who went to control-group schools, where information about HIV/AIDS was provided through handbooks.

"Adolescents are a very high-risk group for HIV, but a lot of these children are not provided with even basic information about HIV," said Dr. Don Morisky of the University of California, Los Angeles, the study's principal investigator. "We need to harness peer-to-peer counselling more, especially for teens—they learn so much from their peers."

Stopping the spread of HIV among teens is a critical global issue that Fogarty-funded researchers are working to address.

Courtesy of GHESKIO

Stigma complicates HIV diagnoses for teens

Sub-Saharan Africa is home to the overwhelming majority of youth with HIV, many of whom acquired the virus perinatally. Fogarty grantee Dr. Dorothy Dow has been studying mental health issues that affect HIV-positive youth in Tanzania, such as stigma, suicide ideation, and, she discovered, the circumstances under which a teenager learns they have HIV. In one of many publications she has co-authored since she began working as a Fogarty Fellow and later grantee in an AIDS clinic in Moshi, Tanzania, Dow wrote that teens' caregivers often shield them from learning they have HIV, fearing the child is too young to understand or that knowing they are infected would cause them distress. But 80 percent of youth interviewed for the study said they figured out on their own that they were HIV-positive. These teens were more likely to have mental health symptoms and poor adherence to antiretroviral therapy (ART) than teens whose HIV status was purposefully disclosed by an adult, said Dow. The study is believed to be the first to look at the impact on adolescents' well-being of how, when and by whom a youth's HIV status is disclosed to them. "It's imperative to implement disclosure protocols early to reduce mental health difficulties, internal stigma, and promote ART adherence in youth living with HIV," Dow said. "We need to focus more on telling kids early that they have HIV, and on getting HIV-exposed children tested and into age-appropriate care, where their health and psychosocial well-being are monitored."

"Adolescents are a very high-risk group for HIV, but a lot of these children are not provided with even basic information about HIV. We need to harness peer-to-peer counselling more, especially for teens—they learn so much from their peers."

– DR. DON MORISKY,
UNIVERSITY OF CALIFORNIA, LOS ANGELES

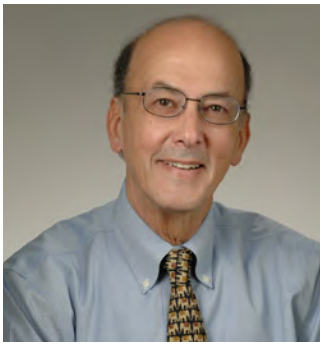
RESOURCES

http://bit.ly/AdolescentHealth

OPINION

By Dr. Roger I. Glass, Director, Fogarty International Center

We have come so far, yet much remains to be done



As we mark our Center's 50th anniversary, it's appropriate that we take stock of our accomplishments and also remember our namesake, Rep. John Edward Fogarty. A member of Congress from Rhode Island, he was a staunch supporter of biomedical research and under his leadership of the House appropriations subcommittee with responsibility for health, funding for NIH grew dramatically, from $37 million in 1949 to $1.24 billion in 1967. A bricklayer by trade, he was committed to improving health for everyone, at home and abroad.

"Time and again it has been demonstrated that the goal of better health has the capacity to demolish geographic and political boundaries," he said. "The nations of the world can and must share their knowledge and other resources so that people everywhere may have the blessing of better health, and through health, may move forward to new levels of peaceful productivity."

If Congressman Fogarty were looking down on us today, what would he think? How have things changed since he died in 1968? What gains would he notice? What challenges remain? And what are the new health problems that have emerged?

We have come so far, yet much remains to be done. For instance, in the 1960s, more than 16 million children died each year before reaching the age of five. Through vaccinations, improved hygiene and better medical care, the figure has dropped by more than two-thirds. And yet, 7,000 newborns around the world still die each day, and about five million children do not live to see their fifth birthday.

Another sign of progress is that the scourge of smallpox was eliminated in 1970. Polio, too, has been beaten back in most corners of the earth. And yet, despite our best efforts, isolated pockets of the virus continue to fester. And, even though we are armed with vaccines against cholera, outbreaks of that terrible disease continue in Haiti, Yemen, the Democratic Republic of Congo and elsewhere.

Another formidable challenge emerged in the 1980s, as HIV/AIDS swept across the globe. Back then, a positive diagnosis was a death sentence. Now, because of research advances, the disease can be managed with medication and we've discovered numerous ways to reduce its transmission.

A committed humanitarian, Rep. Fogarty would no doubt approve of the extraordinary effort the U.S. has undertaken with the President's Emergency Plan for AIDS Relief, by which Americans have funded new research and provided treatment for 13 million people each year, saving countless lives at home and in low- and middle-income countries. But we still have no vaccine or cure for HIV. And if its spread is not contained among adolescent girls and young women, the epidemic is unlikely to be stopped anytime soon.

On Capitol Hill, Rep. Fogarty would be pleased to see that the strong bipartisan support he helped build for the NIH has only grown stronger. And yet, if we are to maintain our competitive edge in biomedical research globally, to take advantage of genomics, imagine the use of cellphone technologies, big data and other promising developments, we must continue our research efforts to address the most compelling health problems.

We have come so far, yet much remains to be done. As we mark our 50th year, my staff and I are seeking advice as we ponder the road ahead. What are the most compelling research gaps and unmet needs? Where are the greatest scientific opportunities? How can we best move forward, together, as partners in our critical mission to improve health for all the world's people.

In returning to our namesake, the thoughts he expressed in the 1960s have never been more relevant. "In the wake of technological advances, the world has shriveled in size. The most distant places are only hours apart. When a child in Calcutta falls victim to cholera or a worker in Mexico contracts smallpox, the mothers of Providence and Kansas City and Los Angeles must be concerned," he said. "The life and well-being of a single individual is a richness beyond all value, a prize without price."

PEOPLE

Infectious diseases expert Redfield leading CDC

Dr. Robert Redfield, an infectious diseases researcher who contributed to the early understanding of HIV/AIDS, is the new CDC director. After retiring from the U.S. Army Medical Corps, Redfield co-founded the Institute of Human Virology at the University of Maryland. He previously served as a Fogarty advisory board member.

Olsen appointed Peace Corps director

Dr. Josephine (Jody) Olsen has assumed leadership of the Peace Corps. A former volunteer, she has held numerous positions with the agency, including deputy and acting director. Olsen most recently was with the University of Maryland, Baltimore, as a visiting professor and faculty advisor for the Center for Global Education Initiatives.

Global Alliance for Clean Cookstoves has new CEO

The Global Alliance for Clean Cookstoves, a public-private partnership hosted by the UN Foundation, appointed Dymphna van der Lans as its new chief executive officer. Most recently with the World Wildlife Fund, she has more than 25 years of experience managing and leading global development, energy and climate initiatives.

Farrar to continue as Wellcome Trust director

Dr. Jeremy Farrar, who became director of the Wellcome Trust global research charity in 2013, has been appointed to a second five-year term that will start October 2018. A clinical scientist with research interests in infectious diseases and tropical health, Farrar previously directed the Oxford University Clinical Research Unit in Vietnam.

CUGH recognizes Merson's global health leadership

The Consortium of Universities for Global Health honored Dr. Michael Merson with its 2018 Distinguished Leadership Award for his commitment to improving the health of populations worldwide. Merson, a former Fogarty grantee and advisory board member, was founding director of the Global Health Institute at Duke University.

Adebamowo recognized by clinical oncology society

Fogarty grantee Dr. Clement Adebamowo has been named a Fellow of the American Society of Clinical Oncology and will be recognized at its annual meeting in June. A professor with the University of Maryland School of Medicine, Adebamowo is a cancer epidemiologist, whose projects include a research ethics training program in Nigeria.

Longtime Fogarty grantee Mason dies

Dr. Peter Mason, a Fogarty grantee who developed a significant research training program in Zimbabwe, has died. In 1995, he co-founded the Biomedical Research and Training Institute (BRTI), an independent institution that he led for more than 20 years.

Global HEALTH Briefs

NIH unveils plan for universal flu vaccine

To speed development of a universal flu vaccine, the NIH's National Institute of Allergy and Infectious Diseases has released a research plan focusing on three key topics: improving understanding of influenza infection; characterizing how immunity occurs and how to tailor vaccination responses to achieve it; and supporting the design of universal vaccines.
News release: http://bit.ly/NIAIDflu

Framework will spur Alzheimer's research

The research community now has a new framework for developing a biologically-based definition of Alzheimer's disease. This proposed "biological construct" is based on measurable changes in the brain and is expected to facilitate better understanding of the disease process. The NIH's National Institute on Aging and the Alzheimer's Association convened the effort.
Journal article: http://bit.ly/AlzFramework

NIH releases adolescent brain data

The NIH has released data from 4,500 participants of its Adolescent Brain Cognitive Development study. Approximately 30 terabytes of data—three times the Library of Congress collection—are now available to scientists worldwide to conduct research on the many factors that influence brain, cognitive, social and emotional development.
News release: http://bit.ly/AdolBrain

New mental health data tools are available

The NIH's National Institute of Mental Health (NIMH) has added new interactive data visualization tools and sharing capabilities on its website to improve understanding of the impact of mental illnesses. The site includes statistics on prevalence and treatment utilization for mental illnesses, and possible consequences, such as suicide and disability.
Website: www.nimh.nih.gov/statistics

Nursing Now campaign launched

Nursing Now—a three-year campaign to increase awareness of the role of nurses and midwives in global health—is a collaboration of WHO and the International Council of Nurses. The effort aims to boost investment in nursing, increase nurses' influence in policymaking, and improve dissemination of effective and innovative nursing practices.
Website: www.nursingnow.org

Funding Opportunity Announcement	Details	Deadline
African Postdoctoral Training Initiative - a partnership of the African Academy of Sciences, the Bill & Melinda Gates Foundation and NIH	http://bit.ly/AfricanPostdoc	May 11, 2018
International Research Ethics Education and Curriculum Development Award (R25)	http://bit.ly/Ethicsop	May 17, 2018
International Bioethics Research Training Program (D43 Clinical Trial Optional)	http://bit.ly/EthicsD43	May 17, 2018
Global Infectious Disease (GID) Research Training Program (D71) (D43)	 http://bit.ly/GIDplan http://bit.ly/GIDtrain	 Jul 26, 2018 Jul 26, 2018
Reducing Stigma to Improve HIV/AIDS Prevention, Treatment and Care in LMICs (R21 Clinical Trial Optional)	http://bit.ly/StigmaHIV2018	Aug 1, 2018
Infrastructure Development Training Programs for Critical HIV Research at LMIC Institutions (G11)	http://bit.ly/FOGg11	Aug 23, 2018
Planning Grant for Fogarty HIV Research Training Program for LMIC Institutions (D71)	http://bit.ly/FOGD71	Aug 23, 2018
Fogarty HIV Research Training Program for LMIC Institutions (D43 Clinical Trial Optional)	http://bit.ly/HIVRTD43	Aug 23, 2018

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

Global Health Matters

March/April 2018

Volume 17, No. 2 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

Writer/editor: Karin Zeitvogel
Karin.Zeitvogel@nih.gov

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

Designer: Carla Conway

SUBSCRIBE:
www.fic.nih.gov/subscribe

READ
DOWNLOAD
SUBSCRIBE

Research!America honors Fogarty Director Roger Glass

Photo courtesy of Research!America

Fogarty Director Dr. Roger I. Glass was presented the 2018 Geoffrey Beene Builders of Science Award for his research and advocacy efforts in global health during Research!America's annual honors dinner on March 14. Glass was cited for his leadership of NIH efforts to transform African medical education, establish research training programs in West African countries that saw widespread Ebola infection, expand Fogarty's Scholars and Fellows program for early-career scientists, and help found the Global Alliance for Chronic Diseases. He was also recognized for his research on rotavirus, norovirus and cholera, and the recent WHO approval of a new low-cost rotavirus vaccine he helped develop over the last three decades.

The award was presented by Mara Hutton, vice president of the Geoffrey Beene Foundation, which was established to honor the late fashion designer, and support research in cancer and Alzheimer's Disease. Hutton noted that Fogarty is the most leveraged organization at NIH with nearly 90 percent of its grants receiving co-funding from other I/Cs and thanked Glass for his commitment to improving the health of the world's most vulnerable people. "He has a conscience for doing the right thing, he has empathy, tenacity, and his leadership reflects the best in the American scientific research community," she said.

Consortium of Universities for Global Health

- 166 institutions and a network of 30,000 individuals in the world
- World's largest consortium of academic institutions and other partner organizations: we address global health challenges through research, education, advocacy, and service.

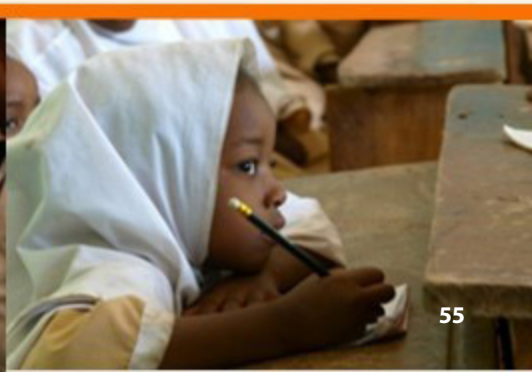
Join us to improve the wellbeing of people and the environment!
Learn more: www.cugh.org

Email info@cugh.org

Follow us on Twitter
@CUGHnews
@CUGH_TAC

CUGH's 10th Annual Conference
Translation and Implementation for Impact
Chicago – March 7-10th, 2019





Global Health's Grand Challenge: Achieving Healthy Populations and a Sustainable Planet

Keith Martin M.D., P.C., Executive Director, Consortium of Universities for Global Health

In 2009 Jeff Koplan et al defined global health as 'an area for study, research and practice that places a priority on improving health and achieving health equity for all people worldwide'.[1] Since that time the field has matured, as all fields do. We now have a deeper understanding of the threats we face and what we need to do to address them. Of significance, the degradation of our environment and its irreplaceable importance to our well being has thankfully come to the fore.[2]

I would argue that the modern definition of global health is: the study, research and implementation of initiatives that improve the health of people and the planet. This short but powerful definition reflects the overarching, existential challenge of our time: improving the well-being of people while living sustainably on our planet. It is active, challenging us to connect knowledge, research and implementation to address these problems. It is broad enough to embrace the various disciplines within it. And it includes the major threats we face: environmental degradation, climate change, noncommunicable diseases, infectious diseases and the social determinants of health including poor governance.

The World Economic Forum's 2018 Global Risk Report's listed 5 threats that will have the biggest impact on us in the next 10 years. They were: weapons of mass destruction, extreme weather events, natural disasters, failure of climate change mitigation and adaptation, and water crises.[3] Of these, 4 out of 5 of the threats have some environmental component. Global health is uniquely positioned to address these and other challenges to our wellbeing due to the broad array of disciplines within it and its foundation of interdisciplinary collaboration.

A few examples.

The Global Health Security Agenda, which involves over 60 nations, is designed to prevent, detect and respond to lethal pathogens. It is actually a public health platform. Expanding it will not only enable nations to address infectious disease outbreaks but also reduce

noncommunicable diseases which are responsible for 70% of the world's deaths yet receive little financial or political support. Global health law can strengthen public institutions a vital yet neglected area in development. Veterinarians, ecologists, oceanographers, engineers and public health specialists can work to mainstream conservation and environmental protection into development initiatives. This will help address our sustainability challenges, tackling the degradation of ecosystems services, massive biodiversity losses and climate change while improving people's wellbeing.

With 166 institutional members, the Consortium of Universities for Global Health, CUGH, based in Washington DC is the world's largest consortium of academic institutions and allied organizations involved in global health. (www.cugh.org). The organization works across

research, education, service and advocacy to improve the well-being of people and the planet. It has very active committees comprised of its members. This includes a Trainees Advisory Committee of students which is connected to a network of 51 campus representatives. Collaborating with universities, associations, institutions, NGOs, and governments around the world, CUGH strives to strengthen global health programs, share knowledge, strengthen research and training programs to improve the health of people and the environment, particularly in low resource settings. In addition, the organization holds a must attend annual conference. In 2018 it was in NYC. Its theme was Health Disparities: a time for action. Mar 7-10, 2019 it will be in Chicago on Translation and Implementation for Impact in Global Health.

On our tiny blue planet, challenges abound: governance, neglected tropical diseases, protecting human rights, climate change, corruption, capacity building, public health strengthening, the social determinants of health and much. If we want a healthy future, inaction today is not an option. Global health provides pathways to improve the well being of everyone. However, it will take our combined efforts, collaborating across disciplines, while engaging the public and policymakers to win this battle for our planet and ourselves.

References:

1.Koplan et al. Towards a Common Definition of Global Health. Lancet 2009, 373: 1993-5
2. Planetary Health Commission Safeguarding human health in the Anthropocene epoch - The Lancet http://www.thelancet.com/commissions/planetary-health
3.World Economic Forum Global Risk Report 2018

Dr. Martin is a physician who, since Sept. 2012, has served as the founding Executive Director of the Consortium of Universities for Global Health (CUGH) based in Washington, DC. The Consortium is a rapidly growing organization of over 130 academic institutions from around the world. It harnesses the capabilities of these institutions across research, education, advocacy and service to address global challenges. It is particularly focused on improving health outcomes for the global poor and strengthening academic global health programs.

Between 1993-2011, Dr. Martin served as a Member of Parliament in Canada's House of Commons representing a riding on Vancouver Island. During that time he held shadow ministerial portfolios in foreign affairs, international development, and health. He also served as Canada's Parliamentary Secretary for Defense. In 2004, he was appointed to the Queen's Privy Council for Canada. His main areas of focus are in global health, foreign policy, security, international development, conservation and the environment. He is particularly interested in strengthening human resources capabilities and scaling up initiatives in low-income settings that improve environmental sustainability and human security.

As a parliamentarian, Dr. Martin created CanadaAid.ca, an online platform to facilitate partnerships between universities, governments, multilateral institutions, NGOs, and the private sector. In 2006, Dr. Martin founded Canada's first all-party Conservation Caucus in Parliament and developed the online conservation site, www.icforum.info to help mainstream sustainable conservation and environmental practices into development initiatives to achieve positive outcomes for the environment and people.

Dr. Martin has been on numerous diplomatic missions to areas in crisis including Sudan, Zimbabwe, Mali, Niger, Sierra Leone, Colombia, and the Middle East. He served as a physician in South Africa on the Mozambique border during that country's civil war. He has travelled widely in Africa, visiting the continent 26 times. Dr. Martin is the author of more than 150 editorial pieces published in Canada's major newspapers and has appeared frequently as a political and social commentator on television and radio. From 1997-2000, he created and moderated the nationally syndicated, current affairs television program, Beyond Politics. He is currently a board member of the Jane Goodall Institute, editorial board member for the Annals of Global Health and an advisor for the International Cancer Expert Corps. He has contributed to the Lancet Commission on the Global Surgery Deficit, is a current commissioner on the Lancet-ISMMS Commission on Pollution, Health and Development and is a member of the Global Sepsis Alliance. Dr. Martin is based in Washington, DC, which is the home of CUGH's Secretariat.

"In the days following the hurricane, one of the most difficult things was simply not being able to communicate with my grandparents, cousins, aunts and uncles, and with my friends. Communications gradually improved, with texting being one of the first, best ways to reconnect."

"Even today, the power is still intermittent, and some areas may never be fully restored. The power lines and infrastructure were already in bad shape, Maria dealt a final blow."

– Carla Aponte

Perspectives:

HURRICANE MARIA – GLOBAL DISASTER, LOCAL RESPONSE

Timothy E. Gibbs, M.P.H., N.P.Mc.

When the editorial board of the Journal committed to an issue focused on Global Health, we could not have predicted the series of hurricanes that devastated the Caribbean and Puerto Rico in late 2017. Months later, some of Puerto Rico is still without power, and the disruption to the infrastructure, ecosystem, and residents of this beautiful island continue to this day. Life is slowly returning to a new normal for those affected, but it will doubtless take years for a full recovery.

Hurricane Maria formed in the Atlantic Ocean on September 16, 2017, made landfall on the island of Puerto Rico on September 20, and had dissipated by October 2. Maria lasted 17 days, and directly impacted Puerto Rico for over 24 hours.

Even after internalizing the data, images, and news reports, it is difficult to imagine the magnitude of this disaster, both during and after the actual storm.

This article brings real, first person accounts of local recovery efforts. In the days after the storm, a group of concerned and affected employees at Christiana Care Health System (CCHS) quickly formed. We heard their stories, their anguish, and their uncertainly. These stories needed to be told: to inform, to inspire, to serve as a warning, and above all, to heal.

According to the National Hurricane Center and strictly by the numbers, Category 5 Hurricane Maria is now regarded as "the worst natural disaster on record to affect Dominica and Puerto Rico." It is the 10th most powerful Atlantic storm on record (in a hurricane season that was extremely active). With sustained winds of 175 miles per hour and up to 38 inches of rain, Maria caused 18 times more damage in the U.S. Territories than the second-costliest hurricane on record (Hurricane Georges, 1998). The actual death toll may never be known, but it is telling that while the official death toll is 65, a recent study in the New England Journal of Medicine estimates deaths at over **4000** (https://www.cnn.com/2018/05/29/us/puerto-rico-hurricane-maria-death-toll/index.html). It is estimated that Maria cost $90 billion in damages, devastating the entire island of Puerto Rico and its infrastructure (https://www.nhc.noaa.gov/data/tcr/AL152017_Maria.pdf). To give some idea of the magnitude of this devastation, the 2019 budget for the State of Delaware (SB 235) is $4.2 billion dollars (https://news.delaware.gov/2018/06/28/governor-carney-signs-budget/).

On October 30, 2017, a volunteer group from the Christiana Care Health System (CCHS) community (including Dr. Anand Panwalker (Internal Medicine, Infectious Disease), Jacqueline Ortiz (Diversity & Inclusion), and Dr. Omar Khan (Family Medicine, Global Health Residency Track) organized a global health education discussion to talk about the hurricane. During the meeting—which was open to both CCHS employees and residents of Delaware—support for colleagues and friends impacted by the disaster, probable health impacts to the residents of the island, and what type of response would be helpful were discussed.

Attendees had an educational, emotional and cathartic meeting. Participants spoke of a sense of helplessness and frustration at the official response (or lack thereof). There were several first person reports, both from those who had visited the island since the disaster and those who had been unable to communicate with relatives due to the total devastation to the communications infrastructure.

The group resolved to provide support to one another. Community resources were pooled and common strategies were discussed. Individual volunteers agreed to help fund generators sent to the island, to gather needed supplies, to help when able (and more importantly, to stay out of the way if warranted). Resources from the CCHS were reviewed, including the "Care for the Caregiver" program.

On November 6, 2017, at the annual meeting of the American Public Health Association, the Puerto Rico Public Health Association communicated their significant "on the ground needs" with which affiliates and local groups and individuals could assist.

> *Puerto Rico Public Health Association has 3 representatives here at APHA. They talked to us on Affiliate Day about the needs and also about their work getting supplies to those who need them the most. PRPHA works with community organizations to distribute supplies. Attached a list of items that can be very helpful to support the people in need in Puerto Rico. In addition, donations to PRPHA (tax deductible) will help with the expenses of distribution as well as supporting the Association in this challenging time. Please give what you are able. And please distribute this information.*
>
> *ELECTRONICS: Batteries, Flashlights, Lanterns, Solar Lamps, Battery Operated Fans, Portable Radios, Water Filter Systems (Reverse Osmosis or Tested and Certified to NSF/ANSI Standards)*
>
> *FIRST AID: First Aid Kits, Band-Aids, Gauze Pads, Antibacterial Wipes, Aspirin, Ibuprofen, Acetaminophen, Anti-Diarrheals*
>
> *OTHER/MISCELLANEOUS: Mosquito Repellent, Sun Block, Work Gloves, Pop-Up Canopies, Tarps, Canned Pet Food, Condoms*
>
> *HYGIENE ITEMS/TOILETRIES: Feminine Hygiene Products, Toilet Paper, Diapers, Wipes, Diaper Rash Ointment, Adult Diapers, Disposable Bed Liners, Toothpaste, Toothbrushes, Dental Floss, Soap, Shampoo, Hand Sanitizer, Paper Towels*
>
> *FOOD: Canned Items, Nuts, Ready-to-Eat Meals or MREs, Nutrition Bars, Boxed Milk, Baby Formula, Baby Food, Powdered Ensure*
>
> *For Monetary Donations you can visit our website www.saludpublicapr.org and in the home page the option for donations is labeled as "Haz tu Donación".*

The Delaware Academy of Medicine / Delaware Public Health Association response to the disaster was to step forward immediately to pay the 2017-2018 membership dues for our Puerto Rico sister affiliate. As a result, many other national affiliates joined in support. The Academy/DPHA also pledged to assist in raising awareness, to providing a forum for the affected, and a platform for scholarly and applied discussion on effective response.

During the months of October, November, and December, many Academy/DPHA colleagues travelled to and returned from the island. The environmental devastation and lack of power were frequently reported

concerns, in addition to the reports of almost complete devastation to the inland mountainous areas of the island.

A follow-up meeting at CCHS was convened on January 25th, 2018. While the mood of the meeting was significantly more hopeful, a major theme remained – why had the U.S. government taken so long to respond, and (at that) done so unwillingly?

On February 1st, Hilda Medina (CCHS, Technician, Nuclear Medicine) emailed the following communication:

New message

From: Hilda Medina

Subject: Hurricane Maria

I returned yesterday, from PR, and I will say that things definitely are normalized/ing there. It depends on where you are as to whether it is normalizing, or normalized.

Many roads are clear of debris, but many roads are still full of potholes, and issues. You can get from point A to point B. I even went into sections of Utuado, and Jayuya, and it wasn't too bad. I was happy because of my back. Although you do have to drive slow because just when you pick up speed, you drop into a pothole.

In Utuado, and Jayuya, a lot of the roads that were affected by landslides have concrete barriers, or drums, to alert drivers to the issues. That was not the case in November. There were areas where you could see fences, or buildings, were still being affected by landslides, but overall the roads themselves were passable.

In Utuado, and Jayuya, there are generators (hooked up to electric poles) every so often, providing electricity. The generators were also being guarded so they don't get stolen. I saw MRE's and water being handed out in the Utuado town plaza. The plaza was extremely crowded with people because of this.

The airport is fully operational. B terminal, which was closed in November, is now open, and fully running.

I didn't encounter many issues. Chicken is still a bit hard to find, and pricey when you do find it. I find that odd being that it's an island, and people used to have chickens. Odd??!! My step-mom said the day she was able to find a whole chicken, it was going to cost about $10, and so she didn't buy it. The tax is in full effect again at 11.5%.

Walmart had, on the day I was there, received a massive delivery of supplies. There were pallets everywhere!! The next time I went to Walmart, supplies were stocked. There was plenty of items. Even the mosquito repellent items, like mosquito lamps, were available. There were none in November.

As far as the mosquitos, I did not get bit once. I didn't use any off spray either. There were mosquitos, but I didn't get bit. In November, they made mincemeat of my arms, and legs.

As far as the coffee, I went to Yauco, but it was late in the day by the time I got there, and couldn't find much out. I did see a coffee plant (in town) and it had coffee beans on it. I would have to image it shouldn't be an issue? In Guanica, I saw a ton of banana plants. There were also rows, and rows, of new seedlings that had been planted. I imagine that should not be an issue.

Now, El Yunque [one of the national treasures of the United States, a national park and rainforest- the environmental heart of Puerto Rico] is closed indefinitely. The program they had to volunteer, to replenish forests, is also closed in the forest. This article will explain some of the effort going into El Yunque's re-growth. http://www.laht.com/article.asp?ArticleId=2448551&CategoryId=14092

As far as volunteer opportunities, please look at the following articles. http://www.delval.edu/news/planting-seeds-of-hope-for-puerto-ricos-farmers

https://www.nbcnews.com/storyline/puerto-rico-crisis/remote-areas-hurricane-ravaged-puerto-rico-volunteers-still-serve-crucial-n837646

https://www.goabroad.com/providers/tropic-ventures-research-education-foundation/programs/tropic-ventures-research-education-foundation-154033

I had seen that volunteering programs were suspended, so don't be surprised if you contact the next link, and are told it is suspended for now. The conservation trust founded, and launched, Para La Naturaleza. Para La Naturaleza, has a goal of protecting 33% of the land, on the island, by 2033. http://www.paralanaturaleza.org/en/-conservation-trust-of-puerto-rico-launches-para-la-naturaleza. If you go to https://www.gooverseas.com/volunteer-abroad/puerto-rico/program/122938 you will be able to see what I mean about the program being temporarily suspended.

I will say that I didn't see much as signs of tourism. In La Parguera, all the bars were open, but empty. I believe tours into the Parguera (phosphorescent bay) might be open. We were there, at night, and were unable to see the bay light up. We were also unable to buy tickets for a tour, but there was a sign for tickets to purchase. It was truly heart breaking seeing all the bars open, and barely any customers.

In Guanica, and Arecibo, at the beaches, there were a couple of people there, but certainly not enough to sustain a tourist economy. I think it would be safe to say that tourism can start again, but the beaches are in poor shape. Broken bottles, empty bottles, diapers, plastic containers, lids, broken huts, etc. The beach in Guanica was much better, but I would not dare to go walk on the beach, or go into the beach, bare footed.

We did see a lot of electric brigades. We stopped, and spoke to one gentleman, on a Sunday, who said he was sitting there (admiring the beach) doing nothing because he had no line. Other brigades were able to work, and we took the time to shout a big 'THANK YOU' to them, and it almost caught them off guard. They shouted back 'YOU'RE WELCOME!'

Send

Images from Hilda Medina

Playa Santa area near Guanica & La Parguera: A business/ home completely destroyed. Taken January 29, 2018

A family trip to Utuado, to deliver homemade meals, revealed much damage. Roads were very difficult to travel, in November, and this sign alerted that "5 families" lived "up the hill." The five families were isolated due to the damage created by the hurricane. Taken November 11, 2017.

Stepfather, Javier Morales, with myself (Hilda Medina), and cousin Emma Morales. She lives in a wood house in the mountains of Ciales. She is wheelchair bound. Supplies delivered, and time spent with family. Feels great to know she survived. Her roof was tarped over. November 6, 2017

Road damage, in Islote, where there wasn't much shoulder to begin with. Islote sustained a lot of damage throughout. Taken November 7, 2017

Debris along the river bed - Rio Grande de Manati near Ciales. Taken November 6, 2017

An uprooted tree has relocated mailboxes, destroyed a car, and blocks access to this yard. This home is located en route to San Juan. Taken November 4, 2017.

Arecibo: Pictured are Crimilda Montijo (friend of the family), and Delvis Medina (my stepmother) discussing the destruction of Crimilda's house. Crimilda lost everything. She finally received a payment from FEMA, as of early 2017, to fix her home. As of July 2018 her home is still not repaired, and is uninhabitable. Taken November 2, 2017

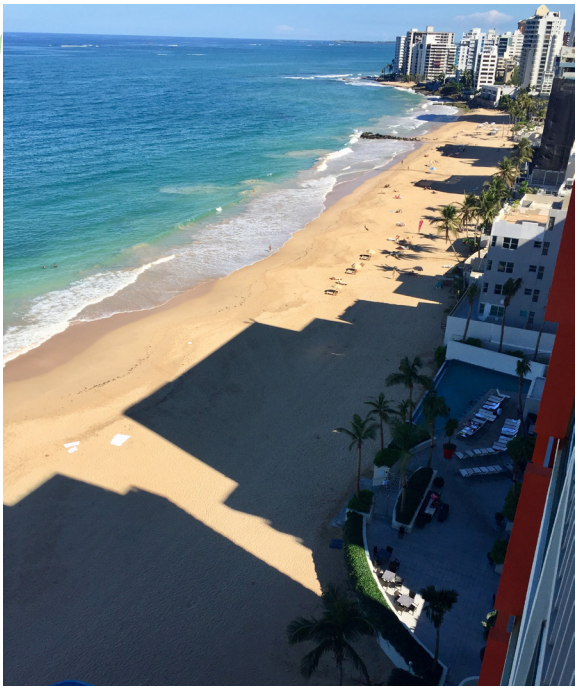
Near Hatillo: Cancha Julia Ruiz (basketball court) where the Red Cross and Military Personnel were distributing cases of MRE's and water – one case of each per household. Taken November 2, 2017.

This is a Walmart in Hatillo, PR. Daily trips, for the two weeks I was in Puerto Rico, demonstrated limited supplies, and empty shelves. Cases of water were only available first thing in the morning, and many days were not available at all. Taken November 2, 2017

Hatillo area: Nothing from this demolished home stands but the bathroom. Taken November 2, 2017

Images from Carla P. Aponte, December 2017.

Destruction behind this signs. It reads "Believe. PR keep moving forward"



Beautiful view in San Juan. I only added this picture to these because even through the horrible experience of Hurricane Maria Puerto Ricans got back up and worked really hard to get the island back open for tourism.

What you see in the foreground of this picture are a lot of blue tarps helping those who lost some or all of their roof. The background of the pictures are the main docks on San Juan.

This is a tourist store in San Juan that was still using a generator in December. I don't think you can imagine how loud that little machine is.

You see this a lot as you travel throughout the San Juan metropolitan area. These trucks were from New York.

This is art inside La Concha Hotel in Condado done by Puerto Rican artist Hector Collazo Hernandez. The main bar area in the lobby was destroyed by Hurrican Maria and this was a wall put up while construction was happening behind it.

On June 1, just eight months after hurricane Maria, the 2018 Atlantic Hurricane Season began. The season will last until November 30, and three named storms have already occurred: Alberto, Beryl, and Chris.

According to Mercy Corps, building resilience in Puerto Rico is more critical than ever, especially at the local community level (https://www.mercycorps.org/articles/united-states/8-months-after-hurricane-maria-another-hurricane-season-looms-puerto-rico). Residents of the Island are still suffering the after-effects of Maria, be it a lack of clean water, the need for medical supplies, or the need for tourism to provide an influx of money into the economy. As the 2018 hurricane season progresses, we must remember that essence of Global Health is to support one another – both near and far, in disasters and calm seas, in sickness and in health.

We will not forget that Hurricane Maria has affected thousands - if not hundreds of thousands - of our fellow Americans. We will continue to aid and assist members of the Academy/DPHA who continue their tireless efforts to help rebuild Puerto Rico.

In the spirit of 'all global is local' – we dedicate this issue of the Delaware Journal of Public Health to Puerto Rico; to all who have helped and will help; and to the ideal that together we will prevent such disasters in the future.

"The level of anxiety about the upcoming hurricane season is high, however we support each other, we have been through this before, and we will carry on."

– Laura Serrano

The Forum at the Harvard T.H. Chan School of Public Health published the following preventive measures with which we concur

- Have supplies read for back–to-back disasters
- Make community health centers a priority
- Never stop training – continuity and knowledge are essential
- Build back better
- Build partnerships
- Maintain infrastructure

"The goodwill generated locally, and the benefits to the Christiana Care Health System in terms of collaboration for global health programs, cannot be underestimated. The values of Love and Excellence plus the promotion of the Care for the Caregiver program was paramount in our minds."

– Anand Panwalker

The DPH Bulletin

From the Delaware Division of Public Health ***July 2018***

Public comment invited by July 31 on State Health Needs Assessment

The Division of Public Health (DPH) wants public input on the *2017 Delaware State Health Needs Assessment* (SHA). The SHA is a careful examination of the health of our population and identifies primary health problems and assets. It will be used to develop strategies that comprehensively address Delaware's major health needs.

A broad range of non-profit and medical provider partners, community-based agencies, government and non-profit agencies, and Delawareans drafted the SHA. After receiving public comments, DPH will organize partners to develop health strategies and goals. To read the SHA, visit http://www.dhss.delaware.gov/dhss/dph/files/shna.pdf. To submit comments, visit http://www.dhss.delaware.gov/dhss/dph/phabacc.html. The deadline for submissions is July 31, 2018.

Cancer mortality continues decline

Cancer screening and early detection efforts continue to drive down Delaware's all-site cancer mortality rates, according to DPH's new cancer data report, *Cancer Incidence and Mortality in Delaware, 2010-2014*.

From 2000-2004 to 2010-2014, Delaware's cancer death rate decreased 12 percent, an impressive improvement though slightly lower than the 14 percent decline seen nationally. Despite continuing decreases, at 178.2 deaths per 100,000 people, the state's all-site mortality rate was 7 percent higher than the U.S. rate of 166.1 for 2010-2014.

Delaware's 2010-2014 all-site cancer incidence rate (506.4 diagnoses per 100,000) was 14 percent higher than the comparable U.S. rate and unchanged from 2000-2004 (506.3 per 100,000).

DPH issued two supplementary reports, *Disparities in Cancer Incidence and Mortality Among Delaware Residents, 2010-2014* and *Secondary Analysis of Delaware Census Tracts with Elevated All-Site Cancer Incidence Rates, 2010-2014*. To view the reports, visit http://www.dhss.delaware.gov/dhss/dph/dpc/cancer.

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

Ribbon cutting ceremony for Kent County's Medical Marijuana Compassion Center, June 27. The dispensary, operated by Columbia Care, is located at 200 S. DuPont Blvd. in Smyrna, Delaware. Photo courtesy of Ben Mace, Smyrna-Sun Times.

DPH offers free health classes

DPH's Diabetes and Heart Disease Prevention and Control Program offers four free six-week courses.

The next "Diabetes Education" course begins August 6, 2018 and the next Healthy Living Workshop begins October 8, 2018. There is one class held weekly from 9:00 a.m. to 11:30 a.m. at the DPH Training Center, located at 43 S. DuPont Hwy. in the Edgehill Shopping Center in Dover, Delaware 19901.

A Chronic Pain Self-Management course and a Cancer Thriving and Surviving course are also free. Visit www.healthydelaware.org for class schedules. State employees and retirees can register on the Delaware Learning Center.

For more information, contact Tiffany Pearson at 302-744-1020 or Tiffany.Pearson@state.de.us.

See you at the Fair!

DPH and many health partners are participating in the Delaware State Fair's Healthy Kids Health Fair on Tuesday, July 24, 2018 on the fairgrounds on Route 13 in Harrington, Delaware. The health fair begins at 9:00 a.m. and ends at 2:00 p.m. in front of the Grandstand. For more information, call 302-858-4764 or visit www.delawarestatefair.com.

Travelers Should Continue Taking Measures to Prevent Zika and other Diseases.

Sean Dooley, Community Relations Officer, Division of Public Health

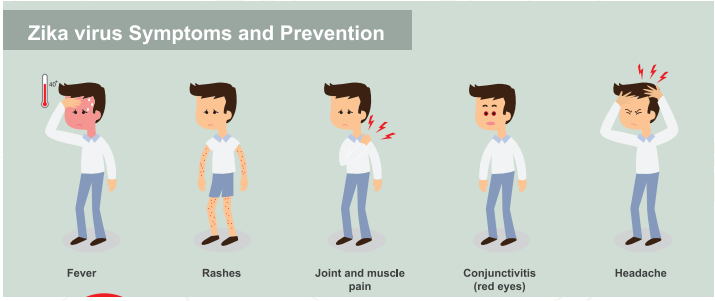
As the weather is slowly warming up in Delaware, signs of new life are emerging in the form of spring flowers, baby animals, and hatching insects such as mosquitoes. Over the past two years, the spread of the Zika virus due to mosquito bites has dominated the news. While thankfully, the number of confirmed Zika cases in the United States has rapidly declined, travelers should continue to take preventive measures against it, and other mosquito-borne diseases, while traveling abroad.

As of March 20, 2018, the Centers for Disease Control and Prevention (CDC) reports 12 confirmed Zika cases in the continental United States in 2018, all acquired while traveling abroad, with none in Delaware. While in 2017 no Zika cases were reported in Delaware, the CDC reported 427 cases in the continental United States, 416 of which were related to travel abroad. Those totals were significantly less than in 2016, when 17 confirmed cases were reported to the Division of Public Health (DPH) and the CDC reported 5,168 confirmed Zika cases in the continental United States, 4,897 of which were related to travel abroad.

According to the CDC, the countries with the most Zika activity are South American countries, some African countries, Mexico, and some Caribbean countries. Local Zika transmission, meaning it is transmitted by a bite from a mosquito in the U.S., has also occurred in parts of Texas and Florida. For a map of Zika-impacted countries, visit https://wwwnc.cdc.gov/travel/page/world-map-areas-with-zika.

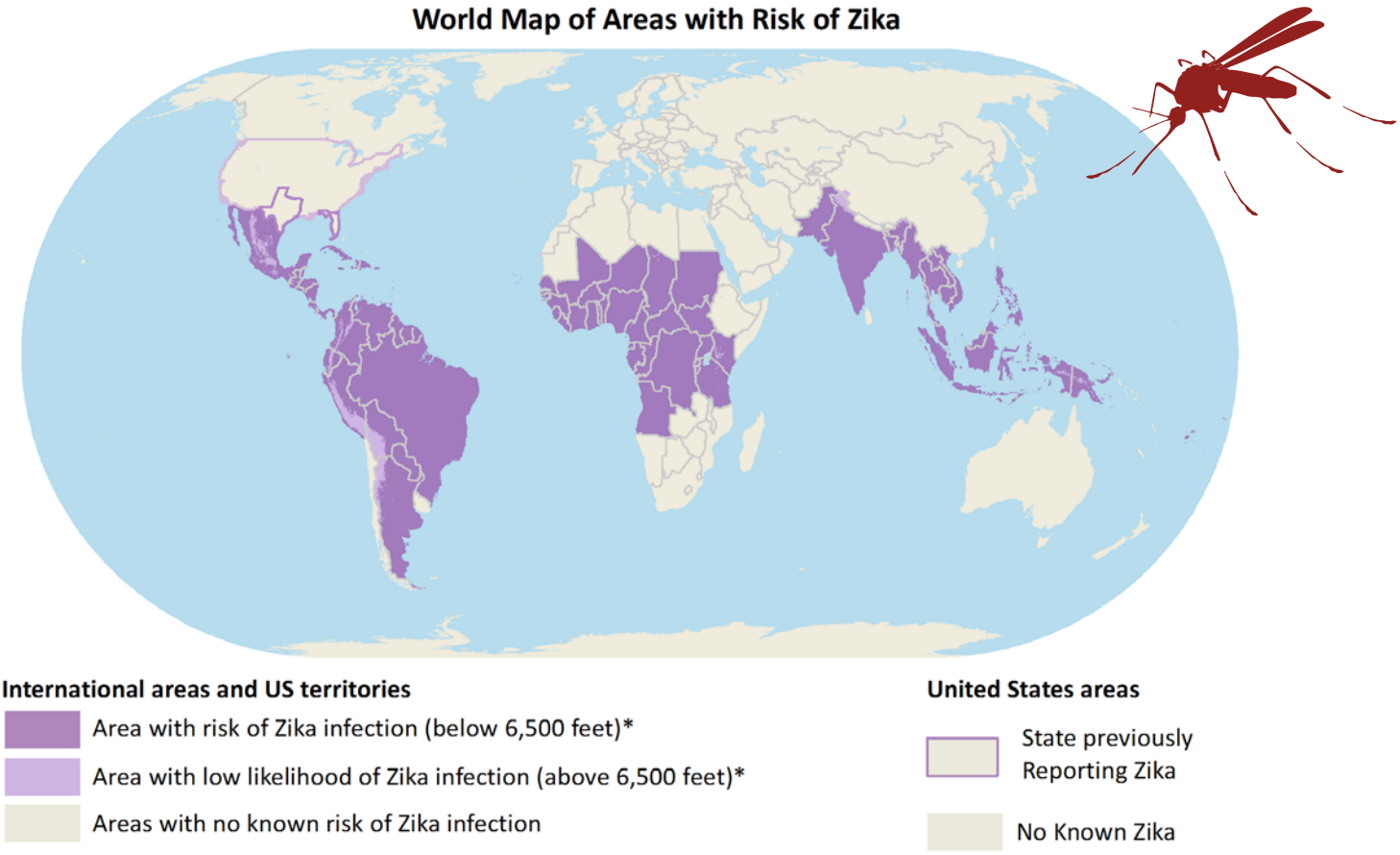
Zika is a disease caused by a virus transmitted primarily through the bite of infected *Aedes* mosquitoes. The Aedes aegypti mosquito most frequently transmits Zika virus in addition to dengue and chikungunya. Though Aedes aegypti mosquitoes are extremely uncommon in Delaware, Zika transmission is also possible from the Asian tiger mosquito, Aedes albopictus, a species more often found in the First State.

Zika symptoms, should they appear, are mild and typically start two to seven days after being bitten by an infected mosquito. Symptoms are fever, rash, joint pain, and conjunctivitis (red eyes). Other routes of transmission are through sexual activity, or the passage of the virus from a pregnant mother to her baby during pregnancy or at birth. About one in five people with the virus will develop the disease.



When mothers are infected with Zika during pregnancy, several substandard birth outcomes can occur. The most serious is a brain birth defect, microcephaly, a condition in which a baby's head is smaller than expected when compared to babies of the same sex and age.

Under Delaware law, health care providers must report individuals with known or suspected Zika infection to DPH. (See http://www.dhss.delaware.gov/dph/dpc/rptdisease.html.) Reporting is imperative in the cases



of pregnant women, and newborns and infants born to women with known or suspected Zika infection. Because of the similar geographic distribution and clinical presentation, providers should evaluate patients with Zika symptoms for dengue and chikungunya virus infection in accordance with existing guidelines.

Those planning to travel to a Zika-impacted area may want to consider postponing a trip if they are pregnant, may become pregnant, or they are considering starting a family. If travel cannot be delayed, take these additional measures to prevent contracting or spreading Zika:

- Couples with a sexual partner who had possible Zika exposure through travel or sexual contact should use barrier methods (condoms or dental dams) correctly and consistently during vaginal, anal, and oral sex, and throughout pregnancy, for at least six months for men and eight weeks for women.
- Discuss a partner's potential exposures and history of Zika with your doctor.
- Women with possible Zika exposure who are trying to become pregnant should wait at least eight weeks before trying to conceive, even without symptoms. Men with possible Zika exposure should take every precaution not to contribute to pregnancy until after six months.
- Pregnant women and those trying to become pregnant who must travel to an area with Zika should talk with their doctors and follow steps to prevent Zika transmission. Women who traveled to active Zika transmission areas up to eight weeks before pregnancy confirmation should talk to their doctors about travel history and the potential risk of Zika.

However, Zika is not the only mosquito-borne disease that travelers should be concerned about. In addition to diseases such as dengue, and chikungunya, mosquitoes can also cause West Nile Virus, malaria and yellow fever.

According to the CDC, there is a large, ongoing outbreak of yellow fever in multiple states of Brazil. Yellow fever is caused by a virus that is spread through mosquitoes. Symptoms of yellow fever (fever, chills, headache, backache, and muscle aches) take three to six days to develop. About 15 percent of people who get yellow fever develop serious illnesses including bleeding, shock, organ failure, and sometimes death. In early 2017, the Brazilian Ministry of Health reported outbreaks of yellow fever in several eastern states, including areas where yellow fever was not traditionally considered to be a risk. Since early 2018, a number of unvaccinated travelers to Brazil contracted yellow fever; many of these travelers were infected on the island of Ilha Grande (Rio de Janeiro State). Several have died, though none of the deaths were to residents of the U.S.

The CDC has issued the following recommendations for anyone planning a trip to Brazil:

- Any traveler older than 9 months of age should get a yellow fever vaccine at least 10 days before travel.
- In addition to areas in Brazil where yellow fever vaccination has been recommended since before the recent outbreaks, the vaccine is now also recommended for people who are traveling to or living in: All of Espirito Santo State, São Paulo State, and Rio de Janeiro State as well as a number of cities in Bahia State. Visit https://wwwnc.cdc.gov/travel/notices/alert/yellow-fever-brazil for a map of locations for which vaccinations are recommended.

Expanded Yellow Fever Vaccine Recommendation Areas in Brazil

- People who have never been vaccinated against yellow fever should avoid traveling to areas of Brazil where yellow fever vaccination is recommended.
- Travelers going to areas with ongoing outbreaks may consider getting a booster dose of yellow fever vaccine if it has been 10 or more years since they were vaccinated.

To prevent mosquito bites both at home and when traveling:

- Wear long-sleeved shirts and long pants.
- Stay in places with air conditioning or that use window and door screens.
- Use Environmental Protection Agency-registered insect repellents and follow the instructions printed on the label.
- Do not use insect repellent on babies younger than 2 months.
- Dress children in clothing that covers their arms and legs.
- Do not apply insect repellent onto a child's hands, eyes, mouth, and cut or irritated skin. Spray insect repellent onto your hands and then apply to a child's face.
- Treat clothing with permethrin or purchase permethrin-treated items. Do not use permethrin products directly on your skin, as they are intended to treat clothing. Treated clothing remains protected after multiple washings. Read the product information to learn how long the protection will last.
- Sleep under a mosquito bed net if you are overseas and outside or not able to protect yourself from mosquitoes.

For more information on Zika, visit http://www.dhss.delaware.gov/dph/zika.html. To report a case of Zika virus or for more information, call the DPH Office of Infectious Disease Epidemiology at 302-744-4990.

For more information on Delaware mosquito control, visit the Department of Natural Resources and Environmental Control at http://www.dnrec.delaware.gov/fw/mosquito/Pages/MC-Diseases.aspx.

References

U.S. Centers for Disease Control and Prevention, accessed March 15, 2018, https://wwwnc.cdc.gov/travel/page/world-map-areas-with-zika

U.S. Centers for Disease Control and Prevention, accessed March 15, 2018, https://www.cdc.gov/zika/reporting/.

U.S. Centers for Disease Control and Prevention, accessed April 6, 2018, https://wwwnc.cdc.gov/travel/notices/alert/yellow-fever-brazil and https://wwwnc.cdc.gov/travel/destinations/traveler/none/brazil and https://www.cdc.gov/yellowfever/symptoms/index.html.

Delaware Department of Health and Social Services, Division of Public Health, Office of Infectious Disease Epidemiology, accessed February 5, 2018, http://www.dhss.delaware.gov/dph/zika.html and http://www.dhss.delaware.gov/dph/dpc/rptdisease.html.

Delaware Department of Health and Social Services, Division of Public Health, accessed February 5, 2018, http://dhss.delaware.gov/dhss/dph/zika.html.

Delaware Department of Natural Resources and Environmental Control, February 5, 2018, http://www.dnrec.delaware.gov/fw/mosquito/Pages/MC-Diseases.aspx.

Sean Dooley is a community relations officer for the Delaware Division of Public Health within the Department of Health and Social Services. He is a graduate of Lock Haven University, where he received a Bachelor of Arts degree in journalism and mass communications. Previously, he was employed as a graphic designer for GateHouse Media.
Email: sean.dooley@state.de.us

As Delaware's affiliate to the American Public Health Association, Academy/DPHA staff are in constant contact with other affiliates and with our colleagues in the APHA National Office located in Washington, D.C.

Twice a year - once at the fall APHA Annual Conference and Exposition, and once at the summer Mid-Year Meeting - the Council of Affiliates comes together to conduct business, strategize for the coming year, and recharge by being surrounded by like-minded individuals who support and share the Academy/DPHA core values and vision of public health.

Below is a picture taken of APHA Staff and Council of Affiliates Representatives at the 2018 Mid-Year Meeting. Academy/DPHA Executive Director Tim Gibbs is in the back row, second from left.

DELAWARE ACADEMY of MEDICINE

DPHA

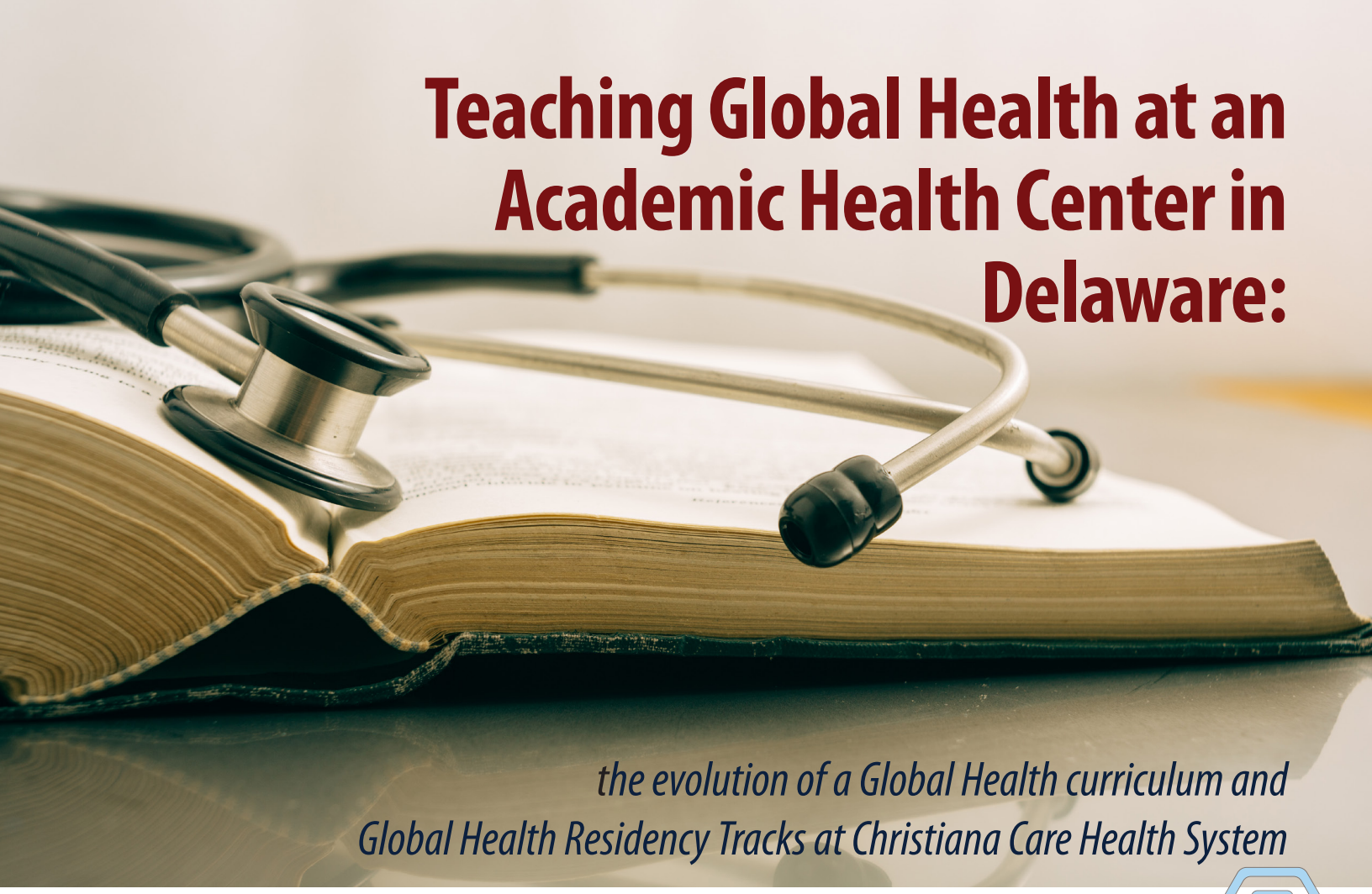
DELAWARE PUBLIC HEALTH ASSOCIATION

The *Delaware Journal of Public Health* is posting an open call for submissions. The DJPH publishes scientific articles, case reports, opinion pieces, editorials, and other articles relating to the public health sector.

Authors should refer to the Submission Information page:

http://delamed.org/wpcontent/uploads/2017/08/DJPH-Submission-Information.pdf

Submissions should be sent to ehealy@delamed.org



Teaching Global Health at an Academic Health Center in Delaware:

the evolution of a Global Health curriculum and Global Health Residency Tracks at Christiana Care Health System

Ellen Plumb M.D. M.P.H., Karla Testa M.D. and Omar Khan M.D. M.H.S. F.A.A.F.P.

Background

The increasing interconnectedness of the world and the movement of people (voluntary and involuntary) challenges all those in health to understand the global burden of disease. There subsequently arises the need to develop tools to address health disparities through direct clinical care and health systems level change. At the same time there is the essential need for education on cross-cultural interactions and mutually respectful, sustainable interactions, especially when operating in a global space.

There has been a movement in undergraduate medical education (i.e., at the medical school level of M.D. or D.O. training) to provide global health experiences for their students. Currently, more than 25% of graduating U.S. medical students enter residency with global health experience[1]. Surveys indicate, however, that this experience is of high variability with regards to objectives and outcomes[2]. While possibly important to provide a global awareness and even altruism for medical care[3], these experiences are by necessity often pre-clinical, and limited in terms of providing directly applicable clinical skills. Further, as medical schools or host programs abroad may not always provide a robust context for such learning. i.e., didactic programming in global health, students may enter residency with further variability in baseline knowledge, attitudes, and experience.

In order to build on these early global health experiences, many medical students preferentially rank residency programs that offer global health training opportunities[4]. Although at a slower pace than medical schools, residency programs have also been developing electives, curricula, and tracks to address this demand for global health education.

Global Health Track: Development

In August 2011, the Global Health Curriculum at Christiana Care Health System (CCHS) was developed by a core, multi-disciplinary group of residents and faculty[5]. CCHS is one of the largest health systems in the United States (and by far the largest in the State of Delaware), with over 1100 hospital beds, 2 separate

hospital campuses, 3 emergency departments, multiple ambulatory sites of primary and specialty care, and the largest private employer in the State. Home to over 250 residents and fellows across all major specialties and more than 1500 medical-dental staff, it is also a major training ground and workforce supplier for the region. The GH faculty thus had an opportunity to develop a systemwide program from the ground up, consistent with the pluralistic values of the health system, and meant to educate learners in the principles of community & global health. The faculty took advantage of CCHS being a member of the 4-partner consortium, the Delaware Health Sciences Alliance (DHSA)[6]. The Alliance already had a Global Health Working Group, including experts from all 4 institutions. Many of these experts were the basis of the initial and subsequent lectures in the Curriculum.

Global Health Track: Principles

From the outset, the Global Health core group developed certain guidelines: ***One,*** the GH Curriculum would draw on the strengths and capabilities of all those interested, but not be housed in (or 'owned' by) any one department; ***Two,*** the group would coordinate closely with the educations need of the GME office and the various residency programs; ***Three,*** the group would provide value to the health system and the educational mission by developing core competencies for global health work and a systematic checklist for going abroad; ***Four,*** the emphasis would be on learning the foundational principles of global health, including many of those derived from public health, and that travel simply for the sake of travel would be de-emphasized; ***Five,*** the core educational components would draw from the academic study of global health and not just 'medical missions'- and in doing so, it would teach community health and sustainability principles applicable to all health care[5].

We leveraged our core group's joint expertise from, and membership in, national and local groups, including the Global Health Education consortium (GHEC), which subsequently became part of the Consortium of Universities for Global Health (CUGH); the American Public Health Association's Section of International Health; the American Academy of Pediatrics' Section on International Child Health; the American Academy of Family Physicians' Center for Global Health Initiatives; the American College of Physicians; the Delaware Academy of Medicine/Delaware Public Health Association; and the Delaware Health Sciences Alliance.

Global Health Track: Structure

Recognizing the need to be comprehensive, yet adaptable to the needs of various audiences, the core group outlined a core set of topics felt to be essential to global health education (Table 1). To translate these to practice, the group developed several interlocking components of the Global Health Curriculum[7]:

- A monthly Global Health Lecture Series. This would be open to all CCHS colleagues and indeed the community at large. Staffed by residents and mentored by faculty, it would bring in experts locally and globally.
- Integration with the main CCHS YouTube channel, with a specific area for Global Health lectures.
- An annual resident & fellow presentation forum. This would allow all housestaff with global or community health experiences during residency to present to their peers and faculty.
- 2 high-profile, systemwide global health Grand Rounds. We leveraged our presence on committees for specialty-specific education events to maximize the global sensibility for such events. For example, we created a 'Global Health Keynote' slot in the annual Holloway Infectious Disease Symposium, the oldest ID conference in the US, hosted at CCHS for 45+ years. Past speakers have included GH luminaries such as Drs. D.A. Henderson, Thomas Quinn, and Sten Vermund.
- The annual Global Health Symposium of the Delaware Health Sciences Alliance (DHSA), a 4-member academic consortium of which CCHS is a founding partner. The GH Symposium is now in its 6th iteration[6].

As mentioned above, the GH Curriculum is the didactic aspect of the CCHS Global Health Program, and open to all. In addition, several individual departments have chosen to create an optional Global Health Track for their residents. These include residency programs in Emergency Medicine/Family Medicine (combined); Family Medicine; Internal Medicine; Internal Medicine/Pediatrics (combined); Obstetrics & Gynecology; and Surgery. Overviews of the residencies' global health tracks are accessible at:

https://residency.christianacare.org/med-peds/global-health

https://residency.christianacare.org/fm/global-health

https://residency.christianacare.org/im/global-health

As part of an innovative, multi-disciplinary program, the track is a result of a multi-institutional collaboration across the DHSA, allowing the program to draw on faculty across the social and biomedical sciences to provide a robust global health track curriculum. The track requirements consist of the components of the GH Curriculum as above, along with active participation in mentoring, and completion of a community/global health experience. The track is targeted to residents who are interested in clinical or academic careers in global health, expanding their knowledge and experience of underrepresented diseases, working with underserved communities in the United States, improving care for immigrants and refugees, and increasing competence in the care of diverse, multi-cultural patient populations.

The topic areas in Table 1 are targeted and relevant to physicians and healthcare professionals from any specialty are who are engaging in global health work internationally or locally. This core didactic curriculum is open to all hospital departments and unites students, residents and faculty from all medical disciplines along with nurses, pharmacists, social workers, administrators, and all interested staff and community members.

Table 1.

Sustainable Development Goals	Emerging Issues in Global Health
HIV	Helminths
TB	Malaria and Dengue
Social Determinants of Health	Eradication programs
Women's Health Part 1	Child Health Part 1
Women's Health Part 2	Child Health Part 2 and Malnutrition
Local Global Health	Primary Care in Developing World
Research and Ethics	Global Health Policy
Disaster Relief	Surgery/Trauma basics
Emergency Medicine	Travel Medicine
Skills Workshop	Human Rights

Track residents are all required to participate in 6 weeks of global health rotations. Residents can fulfill this requirement through international rotations, rotations with a US-based Federally Qualified Health Center or other setting relevant to underserved populations locally, ultrasound, global health electives/research, travel clinics, the Indian Health Service, and/or participation in a formal didactic course relevant to the practice of global health. Additionally, travel abroad is not a requirement of the track, but the program provides structured, formalized global health electives through partner institutions in South Asia (India and Bangladesh) and the United Kingdom. A fuller discussion of the electives is outside the scope of this paper, however, we endorse the principles of sustainable partnership as discussed elsewhere[8-11].

As part of the track, residents must produce a scholarly project or presentation related to their global health elective experiences. Another important required component of the CCHS global health program is regular mentor meetings with faculty engaged in global health. Faculty guidance in selecting and planning global health elective time is aimed at ensuring responsible clinical practice in the global context.

On average, at any given time there are 8-10 global health track residents across the different specialties. To date, fifteen residents have successfully completed the global health track over the past seven years. The residents have gone on to career paths, including a wide variety of primary care physicians (with several working at FQHCs and with refugee populations), hospitalists, a maternal-fetal medicine specialist, a colorectal surgeon, and emergency medicine physicians.

Conclusion

It is critically important for medicine, public health, and allied health disciplines to produce engaged, informed health professionals. Given the increasingly global nature of this work, the Global Health Curriculum plays an important role in the education of all learners, whether students, residents, or professionals.

In describing the Global Health Curriculum and the Global Health Residency Tracks, we emphasize the need for humility and openness to culture-specific understandings of health, disease, and identity. We also wish to emphasize that our aim is to train learners in the academic fundamentals of global health, not simply to engage in travel abroad. Recent commentaries have highlighted that the latter should be considered carefully if undertaken at all[12].

Through its shared curriculum for all, and individualized, specialty-specific GH Tracks, the Global Health Program at CCHS has been shown to be a practical, low-cost approach to teaching global health in an academic setting. Future areas of development

include increasing local capacity for global health experiences (particularly in the areas of refugee and immigrant health), standardizing pre-departure preparation across specialty areas, and further developing the global health faculty mentorship model.

Acknowledgments

The authors gratefully acknowledge past and current residents who were the impetus for the Global Health Curriculum, in particular Drs. Chris Prater and Audrey Merriam, who were among the initial cohort of Global Health Track residents (Author KT was the first resident graduate). We also acknowledge fellow faculty (past and current) and GH Curriculum leaders, in particular Dr. John Donnelly, Dr. Richard Derman, and Dr. Anna Filip. We are deeply grateful to Christiana Care Health System staff for volunteering their time as lecturers, mentors and facilitators. That they are too numerous to name individually is a testament to the depth of institutional commitment to education. We are deeply grateful to the Delaware Academy of Medicine/Delaware Public Health Association and Tim Gibbs MPH, for providing space and resources to plan and implement the curriculum, as well as providing essential dissemination assistance. We humbly acknowledge and thank our partners at elective sites who teach our learners, in particular, Dr. Aftab and Dr. Shakila at the ICDDRB (Dhaka, Bangladesh); our colleagues at the University of Plymouth (UK), and at Jawaharlal Nehru Medical College (India).

References

1. Drain PK, Primack A, Hunt DD, et al. Global health in medical education: a call for more training and opportunities. Acad Med. 2007;82:226–7.
2. Khan OA, Guerrant R, Sanders J, Carpenter C, Spottswood M, Jones DS, O'Callahan C, Brewer TF, Markuns JF, Gillam S, O'Neill J, Nathanson N, Wright S. Global Health Education in US Medical Schools. BMC Medical Education 2013, 13:3.
3. Ramsey AH, Haq C, Gjerde CL, Rothenberg D. Career influence of an international health experience during medical school. Fam Med, 2004, vol. ;36 (pg. :412--6.)
4. Hau DK, Smart LR, DiPace JI, Peck RN. Global health training among U.S. residency specialties: a systematic literature review. Medical Education Online, 2017, 22:1, 1270020, DOI: 10.1080/10872981.2016.1270020
5. Khan OA, Donnelly J, Prater C, Testa K, Merriam A. Developing and sustaining residency tracks in global health at an independent academic medical center. Annals of Global Health, 80 (3): 166, May, 2014.
6. Delaware Health Sciences Alliance. www.dhsa.org Accessed on July 1, 2018.
7. Prater CW, Testa K, Khan OA, Merriam A, Donnelly J, Thompson S. Utilizing a Shared Curriculum to Foster Specialty-Specific Global Health Tracks at an Independent Academic Medical Center. Consortium of Universities for Global Health (CUGH) Annual Conference, May 2014, Washington DC.
8. DeCamp M, Soleymani Lehmann L, Jaeel P, Horwitch C, for the ACP Ethics, Professionalism and Human Rights Committee. Ethical Obligations Regarding Short-Term Global Health Clinical Experiences: An American College of Physicians Position Paper. Ann Intern Med. 2018;168(9):651-657.
9. Melby MK, Loh LC, Evert J, Prater C, Lin H, Khan OA. Beyond 'medical missions' to impact-driven short-term experiences in global health (STEGH): ethical principles to optimize community benefit and learner experience. Academic Medicine 2016 May; 91 (5): 633-8.
10. Loh L, Evert J, Khan O, Melby M, Prater C, Lin H. Evolution of 'medical missions' into short-term experiential education in global health: Implications for learners and practitioners. American Public Health Association Annual Meeting, New Orleans LA, Nov. 2014.
11. Crump JA, Sugarman J, Working Group on Ethics Guidelines for Global Health Training (WEIGHT). Ethics and best practice guidelines for training experiences in global health. Am J Trop Med Hyg, .2010, vol. ;83 (pg. :1178-82.)
12. Silver M. Advice To Parachuting Docs: Think Before You Jump Into Poor Countries. National Public Radio. April 4, 2018. Transcript accessed July 1 at: https://www.npr.org/sections/goatsandsoda/2018/04/04/599419888/advice-to-parachuting-docs-think-before-you-jump-into-poor-countries

Ellen J. Plumb, M.D., specializes in family and community medicine at Christiana Care Health System. She joined Christiana Care from Thomas Jefferson University in Philadelphia, where she was an assistant professor and primary care physician leader advancing global health, human rights and refugee health care.

Karla Testa, M.D. earned her medical degree from Georgetown University School of Medicine in 2008. She completed her Med-Peds residency at Christiana Care and A.I. duPont Hospital for Children in 2012, and she was the co-Med-Peds chief during her fourth year at Christiana in 2011-2012.

As a resident, Dr. Testa was involved in global health, community outreach, and implementing HIV point-of-care testing. Dr. Testa continues to be a leader in the global health. She hopes to continue to work with residents and their community outreach and advocacy projects as well.

Dr. Testa currently practices primary care at Westside Family Healthcare in Wilmington, DE, a Federally Qualified Health Center. She finds this to be an excellent bridge to combine her interests in global health and public health locally.

Omar Khan, M.D., M.H.S., F.A.A.F.P., is the Editor-in-Chief of the Delaware Journal of Public Health, as well as the President of the Delaware Public Health Association, and the President-Elect of the Delaware Academy of Medicine. He is also the CEO of the Delaware Health Sciences Alliance and is the physician leader for Partnerships and Academic Programs at Christiana Care. He is also the Co-Director for the Community Engagement & Outreach component of the multi-site NIH funded DE Clinical & Translational Research program (ACCEL).

Study Abroad for Pre-health Profession Students

Donald C. Lehman, Ed.D. and Kathryn Goldman, M.A.

Medical study abroad programs can provide students interested in a healthcare profession valuable insight into medicine that they might not get in the United States. Shadowing experiences can help students decide if a career in healthcare is for them, or help them determine what medical discipline to pursue. While students can only observe in these settings, they still have the opportunity to learn about medicine and in many countries, universal healthcare. Organizations offering medical study abroad programs have increased recently in number. Medlife, founded in 1996, is one of the earliest and more well known. GoAbroad.com lists a number of medical internships offered by other organizations.

The Center for Health Profession Studies (https://sites.udel.edu/healthpro/study-abroad/) at the University of Delaware (UD) has sponsored several study abroad programs to European countries. We often collaborate with the organization Atlantis (https://atlantisglobal.org/). These are 3-week programs in winter or summer session. To reinforce study abroad experiences, students need to reflect thoughtfully on what they have experienced. In the programs that we sponsor, students are enrolled in a graded course and are required to write a reflection paper with a minimum length of 10 pages. Students are also required to address some of the differences that they have experienced between European and American healthcare systems. Similar programs are offered by other faculty members at UD.

ATLANTIS
Innovating Healthcare Education

What Do Students Gain From A Study Abroad Experience?

The journey in becoming a healthcare professional is difficult and requires a strong commitment. Study abroad experiences can validate and invigorate students' desire to enter the medical profession. As one student enrolled in the Italy program wrote in her paper,

> "I walk away from this experience with a renewed sense of conviction that I am in the right major and the right career path, and I am excited to see where the next few years take me."

Some students grow up wanting to be a healthcare professional, but they are unaware what it is like to be a physician or other healthcare provider. After experiencing typical days in the life of a physician, students can be convinced that this is the profession for them. A student wrote,

> "I was able to gain insight on what it means to be a doctor on a daily basis as well as how another county's healthcare system works, and how it compares to our own healthcare system. Anyone can read a textbook about healthcare, but it is so much more tangible and impactful when it is experienced firsthand. This also goes for what it means to be a doctor–anyone can tell you what a doctor does, but to be able to observe the entire process in person is an experience that I am extremely grateful for."

Sometimes study abroad experiences do not lead to a firm conviction. As one student explains,

> "My reason for going through this program was to finally figure out what I want my future in health care to look like. Before I began shadowing, I was between becoming a physician's assistant or a doctor but leaning more towards the physician's assistant route. Now, I am not sure if this program helped clear up that decision or make me even more confused, but I do know that I need to work in health care."

This student reinforced her desire to become a healthcare professional but added indecision about what path to take. This is not necessarily a negative outcome, because it forces the student to reflect more on his or her desires. This would give her a better opportunity to make the best choice. The following student developed an appreciation for a medical specialty that she had not considered before.

> "I was surprised about my fondness towards the department [radiology] because patient interaction is basically the reason I wanted to be a doctor. Still, after my experience in Cattinara's Radiology department [Trieste, Italy], I can say that I would most definitely consider being a radiologist as a future career choice."

Students participating in study abroad programs have the opportunity to interact with other pre-healthcare students. Programs sponsored by the Center for Health Profession Studies have not only included premedical students but also students interested in becoming physician assistants, physical therapists, and nurses to mention a few. The students can learn about other healthcare professions from peers enrolled in the program. In addition, students can see the interactions between physicians, nurses, and other healthcare

providers in other countries. The physical assistant profession is not present in foreign countries. Students can appreciate the many team members necessary for quality patient care.

Learn About Other Cultures

Some of the students in our programs had prior experience traveling abroad, but few had been on study abroad programs and none of the participants had been on a pre-medical internship in another country. Most had little to no background knowledge of the countries that they would visit. Prior to departure, mandatory orientation meetings included information about local culture, customs and etiquette, food, traditions and taboos. Safety protocols were also reviewed prior to the program and when the students arrived at their host sites. The onsite orientation provided additional lessons about the local culture.

In addition to going to the hospital and learning about the medical culture, the onsite Atlantis site coordinators offered valuable opportunities for students to learn about the country's culture. The students frequently participated in excursions, such as museums and architectural landmarks, to see the sites and observe the local culture. In addition, on some programs UD students participated in a service opportunity. Local citizens who wanted to learn how to speak conversational English were matched with a student several times during the program to talk about their lives, experiences, and dreams. The students found this to be a very rewarding experience.

Learn About Medicine Outside Comfort Zone

Medical internships in a foreign country force students to have experiences outside their comfort zone. They are submersed in a foreign country for three weeks. Many students are not even able to speak the language. Students quickly gain an appreciation and respect for different cultures, characteristics that give them a perspective on global health that they can draw on as health practioners. As one student wrote,

> "…this program would further my education outside of the US in many health-related areas, not just physical therapy which is the career I aspire to pursue. I expressed my desire to step outside my comfort zone and experience the unique Italian lifestyle and history, allowing myself to grow not only as a student, but as an individual."

Not only do students experience the culture of a different country but also different medical specialties. The students in our programs spend an average of 25 hours per week in the hospital. While they are able to request to shadow in a medical specialty they are interested in, the students are also exposed to a variety of other hospital specialties. In most programs, students shadow in three different specialties. They have seen the birth of babies, cardiac catheterizations, orthopedic surgeries, emergency medicine, pediatrics, and other specialties.

Students are guided by attending physicians who know that this is an exciting and stressful experience for the students. The intensity of the exposure to the real day to day operation of a hospital enlightened the students. For some participants, this was a new experience and not always comfortable. Occasionally, students had to leave the room during a medical procedure.

Shadowing experiences can give students insight into becoming excellent health practioners. They can learn from experienced and caring practicing physicians and medical students. A student made this comment,

> "After leaving the first room, I asked the doctor what he was going to do with those patients and he said something that has stuck with me, 'when I look at these patients I think to myself, what quality of life am I giving these people? But then I remember it is always the patient first and that it isn't entirely up to me and that I have to take into consideration of what they want.' This statement really made me realize that this Professor is a brilliant man. He also said, 'before I am physician, I am a man, just a normal man. Professionals tend to forget this and often take away the humanity of the job.' This professor was so insightful throughout my week there."

Another student wrote about a valuable lesson that she learned. During a day of shadowing, a physician was busy with a number of tasks and was not able to spend much time with the student. The following day, the physician apologized. The student wrote,

> "This physician felt it a personal responsibility to impart knowledge to me, an American student whom he'd known for a mere week. Dr. Matteo demonstrated empathy, a character trait indispensable to any healthcare employee. I gained a valuable lesson that day, one that no textbook could ever teach."

Competitive Edge for Professional Healthcare Programs

The unique set of experiences provided to students in medical internships are designed to broaden the student's intellectual and practical understanding of the medical profession. Study abroad experiences help students distinguish themselves as outstanding applicants for medical school and other health-related professional schools. On their personal statement of the application, applicants can share their first-hand experiences observing medical care in a different country and how this has impacted their lives. After completing the study abroad program, students are well versed in European healthcare practices, and during interviews, they can articulate the differences between the American and European healthcare systems. They also can relate cultural experiences they had while attending the program. One student wrote in her paper,

> "Another goal of mine was to better comprehend the implications of nationwide public healthcare, in order to be able to advocate for the healthcare issues in the United States. Going into the trip I had the expectation that some aspects of European healthcare would be different from the United States, for example the number of patients in the hospital and the attitude of doctors. However, once I experienced them, I was shocked by the magnitude of those differences."

Study Abroad Programs at the University of Delaware

Locations of programs sponsored by the Center for Health Profession Studies include the Azores Islands (Portugal), Spain, Hungary, and Italy. The Center's mission is to enable future generations of healthcare professionals pursue their callings as global health leaders. We want every medical internship abroad program we sponsor to reflect a deep concern for ethical solidity, educational value and innovative, cutting-edge thinking. Medical internships abroad for our growing population of premedical/pre-health profession students are designed not only to help UD students obtain admission into medical and professional schools but also to learn more about the world we live in.

Our collaborators from Atlantis make the arrangements for shadowing, housing and meals, and cultural excursions. Atlantis also provides bilingual site coordinators. Nationwide, the majority of students in Atlantis programs enroll individually. However, at UD most students are enrolled in our group programs. From 2015 through summer 2018, 21 UD students have chosen to enroll with Atlantis directly and not receive course credit. Study abroad programs are expensive and not paying tuition for a course saves the students money.

Acceptance into our medical internship programs is very competitive. Normally, about 40 students apply for 18 positions. Applicants are recruited through University sponsored Study Abroad Fairs, information meetings, email announcements to faculty and students, posters and word of mouth. Students of previous programs are excellent ambassadors due to the overwhelming positive experiences they have had.

On the application, students are required to write essays about their interest in a healthcare profession and their past experiences shadowing healthcare professionals. The student's letter of recommendation from a healthcare provider or faculty member and their grade point average (GPA) are also considered before offering an applicant an interview.

Interviews are important in determining who will be selected to attend the program and to establish a wait list. Interview questions were established to provide consistent criteria in making final decisions. Questions are intended to assess the student's passion for healthcare, their commitment to the community, and their intellectual and emotional maturity. Knowledge and concern about global health issues and past shadowing experiences are also explored in the discussions.

The faculty director's final decisions for accepting students entails several factors, first the student's comments on the application and answers to the interview questions. Also important is if the student was able to demonstrate that he or she is committed to healthcare, helping others, and has sensitivity to global issues. Students with higher GPAs and who are juniors or seniors are given priority. Freshmen and sophomores will have more opportunities to participate in a study abroad experience than upper classmen. In addition, underclassmen tend to be less mature and have fewer experiences convincing them that healthcare is a profession for them.

Since 2015, a total of 104 students were selected to attend 8 different programs. Some programs were as small as three students while other programs had up to 25 participants. Nationally, study abroad programs are more attractive to women than men. About 65% of participants are women.[1] At UD for all study abroad programs from 2015 through 2017, 73% (1973/2700) of the participants were female. Our programs have an even larger percentage of women. Of the 104 students, 87 (84%) were female and 17 (16%) were male. This is in contradiction to the number of applicants to medical school, in which 49.5% (25,600/51,680) were women in 2017-2018.[2]

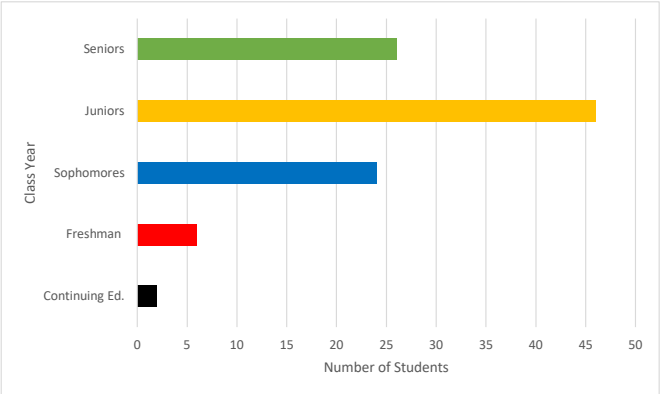


Figure 1. Number of students by class enrolled in medical study abroad programs offered by the Center for Health Profession Studies, total number enrolled 104.

In programs sponsored by the Center for Health Profession Studies, 74 students (71%) were juniors or seniors when they participated in the program *(Figure 1).* A total of 17 academic majors from 4 different Colleges were represented. As expected. students are generally enrolled in a health science related major *(Figure 2).* Although, about 22% (23/104) were biological science majors.

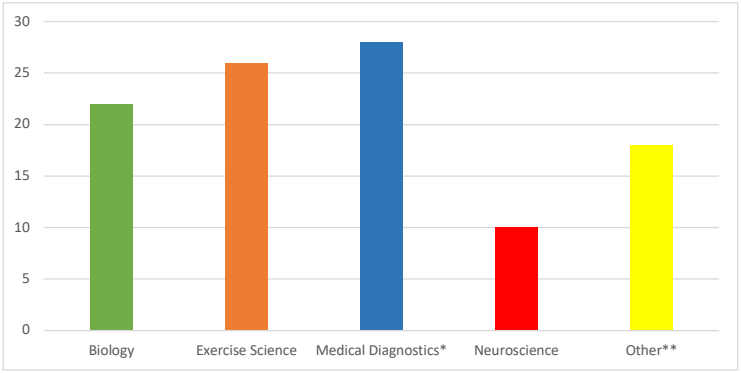


Figure 2. Participants by major in medical study abroad programs offered by the Center for Health Profession Studies, total number enrolled 104.

**Medical Diagnostics includes Medical Laboratory Science and Interest Group majors.*
***Other majors represented include Athletic Training, Biochemistry, Chemistry, Cognitive Science, Dietetics, Health Behavior Science, Liberal Studies (Medical/Dental Scholars Program), Nursing, Pre-Medical Post Baccalaureate Certificate Program, Pre-veterinary Science, Psychology, and Nutritional Sciences.*

Student Feedback

Upon completion of study abroad programs, the Institute for Global Studies at UD administers online program evaluations from the students. All students are required to register for a zero-credit, pass/fall course. Students must complete the evaluation to get a passing grade; this ensures nearly 100% participation. Overall, students enrolled in the programs sponsored by the Center for Health Profession Studies are well received. See Table for sample comments. Students are also asked to use a scale of 1 (poor) to 5 (excellent) to rate the program. Our programs have a mean of about 4.4.

Conclusion

To gain the most from a study abroad experience, students need to reflect thoughtfully on their experiences. In our programs, the faculty director facilitates de-briefing sessions with all the students. In these meetings the students share their experiences with other group members. It gives the group time to learn and process their days together. In addition, students are required to submit a reflection paper.

Medical internships provide valuable, life-long experiences. For some students, the internship solidifies commitment and passion for healthcare. Others may change their goals or adjust their timeframes. The students create memories that can shape them to be better healthcare providers. Overall, completing a medical internship abroad is a life-changing endeavor for all of the students.

References:

1. Student Profile. International Institute of Education. www.iie.org/Research-and-Insights/Open-Doors/Data/US-Study-Abroad/Student-Profile.

2. Applicants and Matriculants Data. American Association of Medical Colleges. www.aamc.org/data/facts/applicantmatriculant.

Comments
I appreciated the activities and excursions we participated in while on the trip; they shed light on the culture and background of the location we studied in.
This course really helped to shape the path I hope to follow in medical school and beyond, allowing me to see which departments weren't for me.
It was incredible, both inside the hospitals and outside. We went to see a lot of the area we stayed in, and the shadowing experience was very helpful.
This course was amazing and I was able to really learn from experiences instead of just reading information. Shadowing doctors every day gave me a better understanding of healthcare and the path the I wish to take for my career.
I could not have asked for a more relevant course to immerse myself in the healthcare system of a foreign country.
We did have briefings and debriefings for each week of the fellowship and it helped me better understand the significance of the fellowship, and also what my classmates were experiencing in the same fellowship.
This course allowed us to immerse ourselves in a universal healthcare experience.

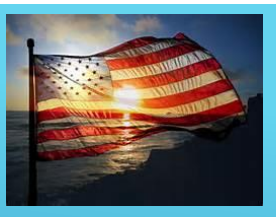
Table: Sample comments made by students on program evaluation form.

Dr. Lehman (dlehman@udel.edu) is an associate professor in the Department of Medical Laboratory Sciences at the University of Delaware. He received his B.S. degree in Medical Technology and an M.S. in Microbiology and Immunology from Wright State University, and an Ed.D. from the University of Delaware. In addition to teaching, he is a health profession advisor.

Kathryn Goldman (kgoldman@udel.edu) is an Academic Program Manager in the University Studies Program at the University of Delaware. She received her B.S. degree in Criminal Justice from the College of New Jersey and her M.A. in Counseling from Rider University.

DELAWARE MILITARY & VETERANS SUBCOMMITTEE

(DELAWARE SUICIDE PREVENTION COALITION)



SAVE THE DATE

2018 Military & Veterans Mental Health Summit

Tuesday, September 11, 2018

Registration information coming soon!

Dover Downs

1131 N. DuPont Highway, Dover, DE 19901

FREE FOR ALL ACTIVE MILITARY MEMBERS AND VETERANS!

Vaccines and Global Health

Kate Smith, M.D., M.P.H.

Vaccines are considered one of the greatest global health achievements, and it is estimated that they save an estimated 2 to 3 million lives each year. Since Edward Jenner's breakthrough with cowpox in 1796, the use of vaccines have eradicated wild-type polio from the world, prevented countless birth defects and lifelong disabilities from diseases like polio, and reduced childhood mortality rates in every country (Bustreo & Kieny, 2016).

Vaccines created against measles, diphtheria, tetanus, and many more have led to the near or total elimination of these diseases from the United States, and the Centers for Disease Control and Prevention (CDC) have listed vaccines as one of their Top 10 Public Health Achievements (Centers for Disease Control and Prevention, 2011).

A Global Issue

International travel is an experience many people enjoy, and humans are now travelling in numbers and at speeds heretofore unprecedented in history. Travelers are visiting remote villages and major urban cities. People are being displaced due to social, economic, and political upheavals. Natural disasters are forcing people from their homes. Long-distance air transportation lets anyone reach almost any part of the globe within days.

Travel and globalized trade is a significant risk factor for infectious disease emergence. While International Health Regulations (IHR) provide some safeguards to limit the spread of disease, travelers are only one piece of the puzzle: trade, animal migration, water and air currents all have their part to play (Greenwood, 2014). Additionally, contact between animals, humans, and microbes may result in zoonoses (animal viruses "jumping" to humans), and creating new diseases for which there is no current cure.

Pandemics

In April 2009, H1N1 (swine flu) viruses were first detected in the United States, and the resulting spread led the US Government to declare a nation-wide public health emergency. By the end of April, the WHO had raised the influenza pandemic alert from phase 4 to 5, signaling a pandemic (the spread of a disease world-wide) was imminent. The pandemic was formally declared on June 11, 2009 (Centers for Disease Control and Prevention, 2010).

Some disease outbreaks, like those seen with the Ebola virus, can cause countries to close their borders to those fleeing the disease. In 2014, an Ebola outbreak in Guinea, Liberia, Nigeria, and Sierra Leone took the lives of hundreds of healthcare workers, inspiring an onslaught of foreign doctors and medical aid workers to offer their assistance.

Constant Vigilance

Vaccines are not now, nor have they ever been, a "one and done" phenomenon. Herd immunity – vaccinating the majority of a population to keep those that cannot be immunized safe – stops the spread of contagious diseases in a community. The CDC and the WHO work closely with a variety of international and domestic partners to protect people all over the globe from contagious and life-threatening vaccine-preventable diseases. Vaccination research and development have led to new and promising Ebola, Zika, and other much-needed vaccines. Countries must now have in place procedures to test and monitor health workers returning from countries seeing outbreaks to keep the outbreak contained to one or a few countries.

Moving Forward

Global health is a moving target: new diseases will inevitably arise, old diseases will mutate and change, and research will further scientific knowledge about the basis of infectious disease. Vaccines – new and old – will remain as one of the best methods of infectious disease prevention around the world, and allow the global community to move, interact, and thrive.

Source: https://www.cdc.gov/globalhealth/infographics/pdf/global-impact-of-vaccines.pdf

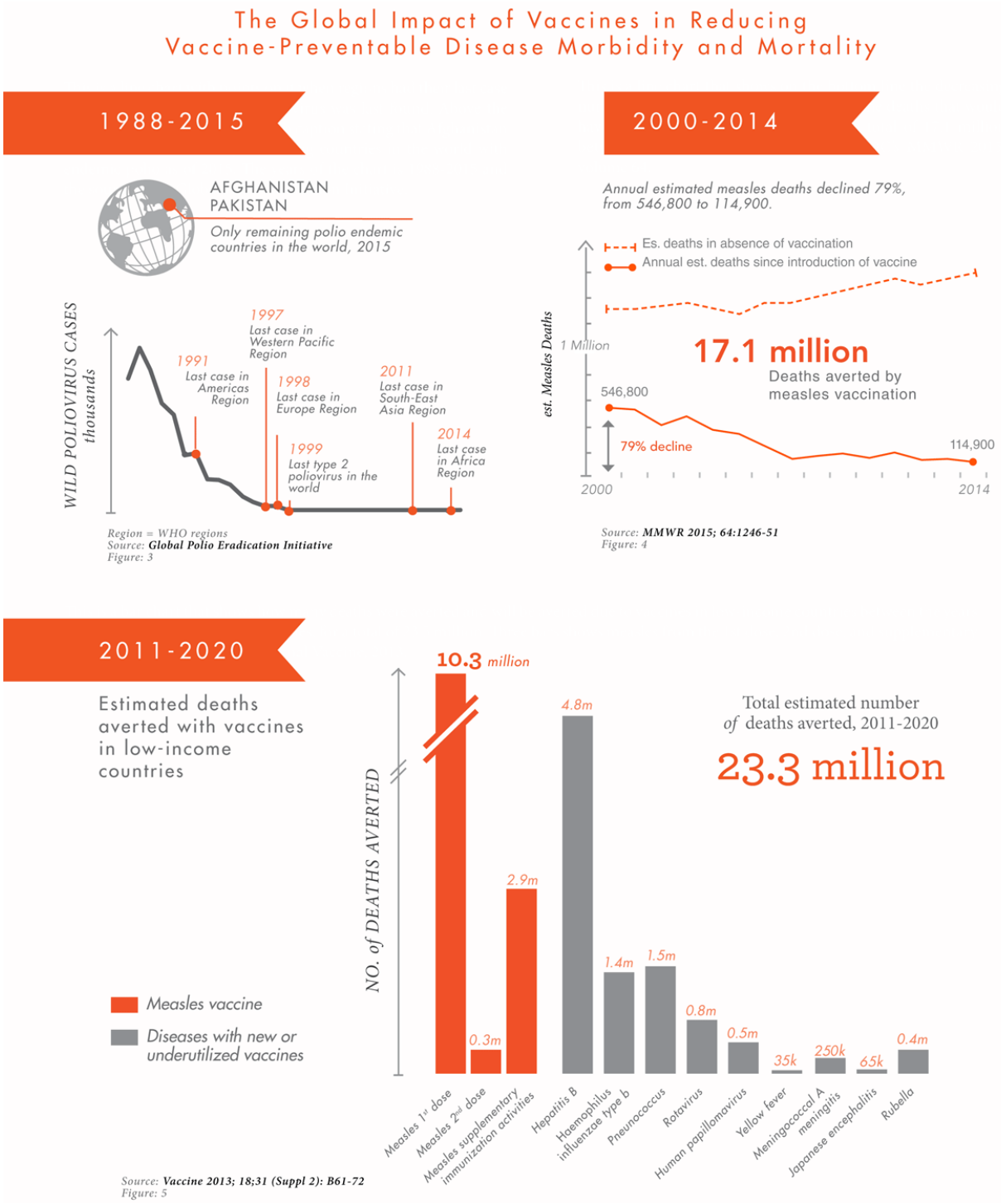
References

Bustreo, F., & Kieny, M.-P. (2016, April). Vaccines: A global health success story that keeps us on our toes. World Health Organization. Retrieved from http://www.who.int/mediacentre/commentaries/vaccines/en/

Centers for Disease Control and Prevention. (2010, June). H1N1 Flu. Retrieved from CDC.gov: https://www.cdc.gov/h1n1flu/cdcresponse.htm

Centers for Disease Control and Prevention. (2011). Ten great public health achievements - United States, 2001-2010. MMWR. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6019a5.htm?s_cid=fb2423

Greenwood, B. (2014, June 19). The contribution of vaccination to global health: past, present and future. Philosophical Transactions of the Royal Society B: Biological Sciences, 369(1645). doi:10.1098/rstb.2013.0433



Dr. Katherine (Kate) Smith has a background in medicine and public health, and has led research projects on foreign and domestic immunization practices. The results of her research have led to new practices for heat-stable vaccines and high-heat cold chain breaks in New South Wales, Australia. She is currently the program manager for the Immunization Coalition of Delaware – a program of the Delaware Academy of Medicine, and works to increase the public's knowledge of vaccines and their role in increasing a community's overall public health.

IMMUNIZATION COALITION *of* DELAWARE

The ICD is a diverse group of passionate, energetic, and committed partners working together to ensure that no one in Delaware suffers from vaccine preventable illnesses. Its mission is to bring together local, state, and community organizations and individuals to promote education about vaccine preventable diseases and new vaccines. Its goal is to improve access and vaccination rates throughout the lifespan. The ICD focuses its efforts on public and provider education, immunization advocacy, and vaccine access.

The ICD has members working in government, secondary and tertiary education, health care, pharmacy, insurance, and pharmaceutical industries. The ICD's website, www.immunizedelaware.org is an excellent reference for the public and providers alike about immunization in the State of Delaware.

Initial Experience

Fogarty Scholars

Dr. Magaly Blas

With initial support as a Fogarty Scholar, Dr. Magaly Blas was able to conduct a year of mentored research on HIV/AIDS. After earning her master's and Ph.D., she was able to conduct independent research as a Fogarty Fellow. Like her, 80 percent of all program participants continue in global health.

Senior Scientist

Trainee becomes trainer, research leader

Dr. Patricia Garcia

After earning her master's and Ph.D. with Fogarty support, Dr. Patty Garcia became a principal investigator and mentor, building a research and training grant portfolio that encompasses more than 40 NIH awards at her institution in Peru. Recently, she served as her country's Minister of Health.

Fogarty at 50

The Fogarty International Center supports research training at all career stages.

Find the right program for your application today:

fic.nih.gov/programs

connect with us

fic.nih.gov/subscribe

@fogarty_nih

fogarty.nih

bit.ly/FogartyLinkedin

NATIONAL INSTITUTES OF HEALTH • DEPARTMENT OF HEALTH AND HUMAN SERVICES

Early Career

Fogarty Fellows

Dr. Bhakti Hansoti

Post-docs like Dr. Bhakti Hansoti can receive support for a year or two to continue field research and generate findings necessary to secure future funding, in addition to helping train foreign scientists. Participants form international research partnerships they often maintain throughout their careers.

Mid-Career

Support to bridge the gap

Dr. Thomas Gaziano

Bridging support is available to enable mid-career scientists, such as Dr. Thomas Gaziano, to advance to the next stage. He received a Fogarty Independent Research Scientist Development Award, which provided a stepping stone to competing successfully for an R01 research grant.

For Delaware's primary care doctors, exciting times are ahead

Dr. Adrian Wilson, D.O., F.A.A.F.P.

Notation, this op-ed first appeared in The News Journal on July 9

I pass a storefront marquee on my way to work that often displays cheerful and pithy yet poignant anecdotes. It has reminded me "chance favors the prepared mind" (Louis Pasteur) and "optimism is the faith that leads to achievement" (Helen Keller).

Recently, the message suggested "politics is too serious a matter to be left to the politicians" (Charles de Gaulle).

I report this quotation with no disrespect. Quite the contrary, in fact. I've found many politicians rely on feedback from constituents and encourage community engagement on matters of profound importance. This message seems especially germane as our medical community strives to not only improve the health care of Delawareans, but also to support the necessary legislative changes to sustain those efforts.

Recently, laudable efforts by the Medical Society of Delaware, Sen. Bryan Townsend, Rep. David Bentz and supporters from across the state, led to the creation of Senate Bill 227. This bill serves to address a number of inequities within Delaware's health system.

Delaware is losing primary care doctors. This Senate bill aims to increase their pay

Specifically, the bill mandates commercial insurance providers reimburse no less than physician Medicare rates for all chronic care management and primary care services over the next three years — instead of the 65 to 85 percent of Medicare rates reimbursed in Delaware currently. Additionally, the legislation calls for all health insurance providers to participate in the Delaware Health Care Claims Database, an effort to improve health care price transparency and collect reliable insurance spending data.

Lastly, SB 227 includes a Primary Care Reform Collaborative under the Delaware Health Care Commission that will address larger, longer-term issues such as increased primary care spending and transitioning to pay-for-value services.

The Medicare pay equity component of SB 227 is a boon for primary health care providers and will hopefully stem the threat of practice closings and decreased patient access. More than that, it's fair and makes sense.

So does healthcare cost transparency and engaging insurance providers in this process— a small step to improve future planning for now, but there is no reason why payers shouldn't have more skin in the game and eventually share responsibility for health care outcomes when healthcare-related costs are so entwined with medical decision making and the patient experience.

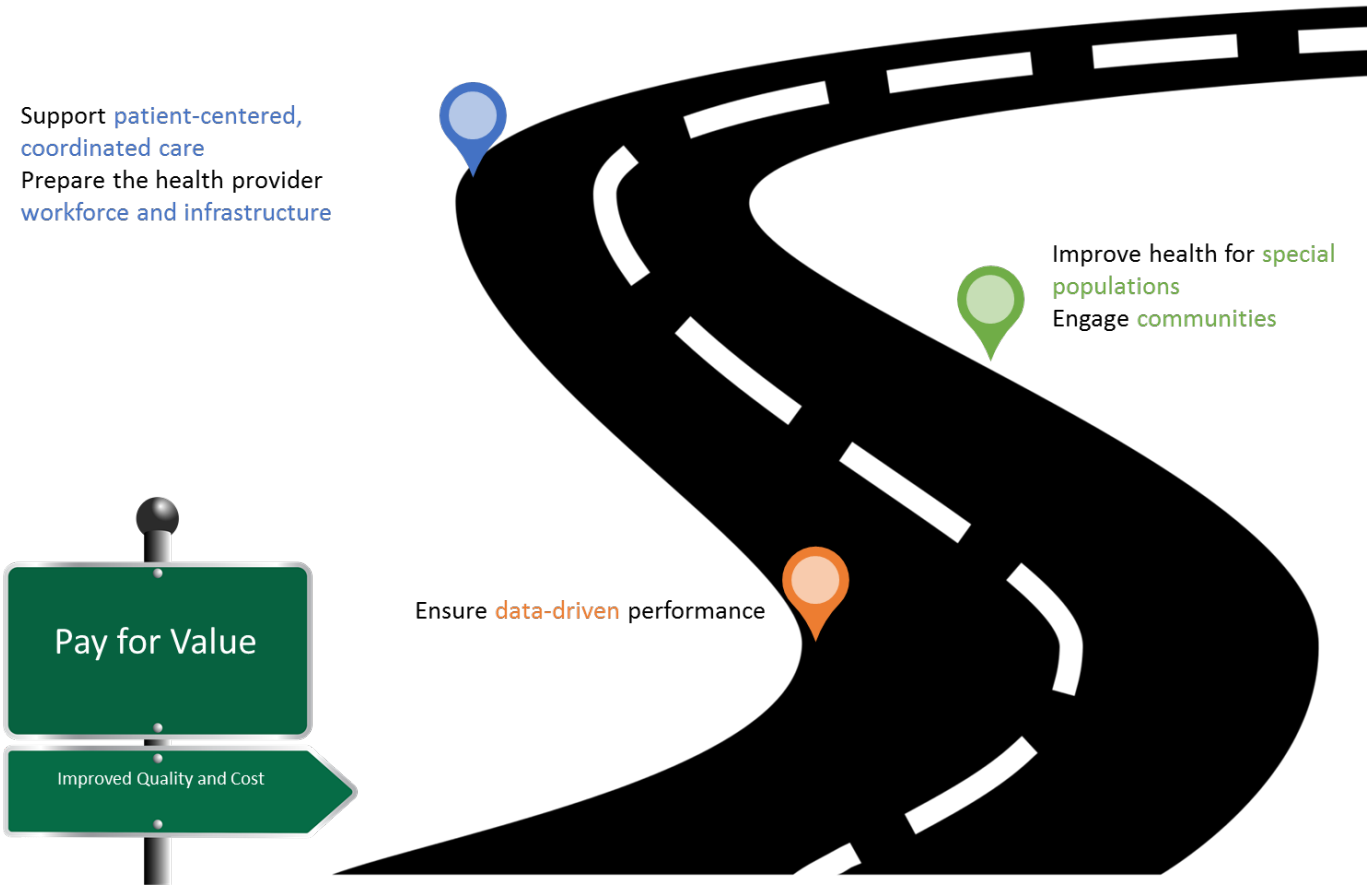
Less clear is how the Primary Care Reform Collaborative will achieve an increase in overall primary care spending. A previous version of SB 227 called for an increase of at least 1 percent per year to 12 percent by 2025, but the bill's final version relegated the topic to further discussion.

Despite spending more per capita on health care than all but two states and ranking 30th in America's Health Rankings, Delaware only spends 3 to 4 percent on primary care services — half the national average. States such as Oregon and Rhode Island have shown that increasing primary care spending to 10 to 12 percent or more improves health outcomes and decreases overall health care spending.

Since many other practice transformation measures hang in the balance, I would hope the Collaborative considers primary care spending its top priority.

Rather than working in isolation, the Collaborative should align their plans with existing efforts by the

Delaware's Road to Value



Department of Health and Social Services and its Road to Value, particularly in regards to moving toward an outcomes-based model of care. Pay-for-value puts the emphasis on the needs and health of patients and, burden of documentation aside, is good practice.

DHSS' Road to Value also incorporates incentivizing care coordination, addressing provider shortages in primary care, targeting social inequities and establishing a common scorecard for quality measures across payers. It will require a unified vision by health care providers and legislators to improve access and quality of care in such a comprehensive manner.

While legislation, payment reform or provider collaboration in isolation will not achieve the desired objective, a multidisciplinary approach could move us closer to that goal. By working together, and pooling our resources, passion for caring and dedication to our craft, we can improve health care in Delaware in a patient-centered and cost-effective manner.

I'm not sure what the sign will say next week on my drive to work, but if Delaware's medical landscape is any indication, we have exciting times ahead.

Adrian Wilson D.O., F.A.A.F.P., a practicing family physician, is associate medical director with Westside Family Healthcare and president and board chair of the Delaware Academy of Family Physicians.

You Can Prevent Colon Cancer by Getting Screened.

HEALTHY DELAWARE

by Stephen S. Grubbs, M.D.

In Delaware and in the United States, colon cancer arising in the large bowel – also known as colorectal cancer – is the third-most commonly diagnosed cancer in men and women, and it's also the second-most common cause of cancer death. Although it is possible to develop colon cancer at any age, 90 percent of diagnoses happen after age 50.

The most stunning fact about colon cancer deaths – predicted to be more than 50,000 this year – is that they are, for the most part, preventable.

In most cases, people develop colon cancer because of growths called polyps. Polyps can form in the colon and, over time, become cancerous. A colon cancer screening called a colonoscopy can find polyps and eliminate them before they become cancerous.

The current guidelines established by the Centers for Disease Control and Prevention recommend that people age 50 and older get a colon cancer screening. There are two recommended screening approaches:

A colonoscopy – A procedure performed by a health care provider called a gastroenterologist, who looks at your colon using a special technology to locate polyps that could become cancerous. The gastroenterologist can remove polyps on the spot, if they are found, to decrease the future risk of colon cancer. This test should be repeated every 3 to 10 years depending on the findings and you will be advised by your physician.

A fecal immunochemical test (FIT) – A test that looks for hidden blood in your stool, which can be a sign that you are at risk for colon cancer. The test is done at home, where you collect several samples of your stool and then send those samples to a lab for testing and the test should be repeated every year if normal.

Many people resist the idea of a colonoscopy because of the required preparation to cleanse the colon the day before. It requires taking a strong laxative, which may be inconvenient. But it can't begin to be as daunting as a cancer diagnosis that could be life-threatening.

You may need a colorectal cancer screening before age 50 if you are at greater risk for colon cancer. You're at greater risk if you:

- Use alcohol in excess
- Are obese
- Live a sedentary lifestyle
- Smoke
- Have Type 2 diabetes
- Are African-American
- Have a history of noncancerous polyps
- Have a history of colon cancer
- Have a history of inflammatory bowel disease, ulcerative colitis, or Crohn's disease

A routine colonoscopy is the preferred screening, but other effective screening (FIT, virtual colonoscopy, fecal DNA) is better than no screening. The Harvard Center for Cancer Prevention released a report stating that a combination of routine screening and lifestyle changes can help prevent half of all colon cancers. The report recommends getting regular exercise; maintaining a healthy weight; eating fruits, vegetables and whole grains; avoiding tobacco; and limiting alcohol consumption.

As with many cancers, there are usually no symptoms in the early stages of colon cancer. Symptoms that occur in the advanced stages might include low red blood count (anemia), rectal bleeding, blood in the stool, change in bowel habits, persistent abdominal pain, weakness and/or unexplained weight loss. If you are experiencing any of these symptoms, you should contact your doctor immediately.

Talk to your health care provider about your risks, and discuss which screening is best for you. It's important to get screened. If you don't have insurance or if your insurance won't cover these screenings, there's a program in Delaware called Screening for Life that can help. If you are a Delaware resident age 40 to 64, or if you are 65 or older and don't qualify for Medicare, if you don't have health insurance, or have health insurance that doesn't cover screenings – and you meet the income guidelines – you could be eligible for a colon cancer screening through Screening for Life. You can learn about Screening for Life and also ask a nurse navigator to schedule a screening for you by visiting www.HealthyDelaware.org.

If you have been diagnosed with cancer, you may be eligible for assistance with covering cancer treatment costs for up to two years. *Visit our Delaware Cancer Treatment Program page* or call them at 1-800-996-9969 to find out if you are eligible.

Stephen S. Grubbs, M.D. is a member of the Delaware Cancer Consortium, a group of volunteers from all walks of life who contribute their insight, ideas and time to help reduce the burden of cancer in Delaware.

############

GLOBAL HEALTH LEXICON
OF TERMS

CDC

Centers for Disease Control and Prevention. Responsible for implementing public health initiatives in the U.S., and also leveraging its resources to advance global health initiatives. https://www.cdc.gov

GHC

Global Health Corps. A leadership development organization focused on health equity. https://ghcorps.org

Global Health

The health of populations in the global context: the area of study, research and practice that places a priority on improving health and achieving equity in health for all people worldwide

NGO

Non-Governmental Organization. Any non-profit, voluntary citizen's group that is organized at the local, national, or international level. These organizations are task-oriented and are usually organized around particular issues like health, human rights, or the environment. Some examples include:

CARE International

https://www.care-international.org

Doctors Without Boarders/Medecins Sans Frontieres (MSF)

https://www.doctorswithoutborders.org

Population Services International

https://www.psi.org

For a more inclusive list, please see https://www.fic.nih.gov/Global/Pages/NGOs.aspx

Population Health

The health outcomes of a group of individuals, including the distribution of such outcomes within the group. It is an approach to health that aims to improve the health of an entire human population.

UNICEF

United Nations Children's Fund. Promotes health initiatives, and prioritizes the needs of the world's most vulnerable children. UNICEF strives to address major health concerns such as HIV and AIDS, maternal and child nutrition, excessive maternal mortality, increasing vaccination rates, among other areas of importance such as gender equality, and child survival and development. https://www.unicef.org

USAID

United States Agency for International Development. An independent agency of the United States federal government that is primarily responsible for administering civilian foreign aid and development assistance. https://www.usaid.gov

WHO

World Health Organization. A specialized agency of the United Nations that is concerned with international public health. http://www.who.int

World Bank

A leading institution for investments in health and development. Strives to alleviate poverty by providing loans, credits, and grants to poor countries to implement various development projects in areas like education, healthcare, agriculture, environmental and natural resource management, infrastructure, etc. http://www.worldbank.org

GLOBAL HEALTH RESOURCES

Delaware Resources
Federally Qualified Health Centers

Name	Address	Phone Number
Westside Family Healthcare, Inc	27 Marrows Road Newark, DE 19713-3701	302-455-0900
	1802 W. 4th Street Wilmington, DE 19805-3420	302-655-5822
Delmarva Rural Ministries, Inc	26 Wyoming Avenue Dover, DE 19904-6922	302-678-3652
	1095 S. Bradford Street Dover, DE 19904-4141	302-678-2000
Henrietta Johnson Medical Center	3301 Green Street Claymont, DE 19703-2052	302-792-2757
	600 N. Lombard Street Wilmington, DE 19801-4429	302-761-4610
	601 New Castle Avenue Wilmington, DE 19801	302-655-6187
LA Red Health Center, Inc	300 High Street Seaford, DE 19973-3940	302-855-1233
	21444 Carmean Way Georgetown, DE 19947-4572	302-855-1233
	1 Sussex Avenue Milford, DE 19963-1853	302-855-1233
	1057 S. Bradford Street Dover, DE 19904-4141	302-855-1233
Northeast Community Health	908 E. 16th Street, Suite B Wilmington, DE 19802-5145	302-225-1800
Seaford Gyn Associates	105 N. Front Street, Suite B Seaford, DE 19973-2707	302-855-1233

Delaware Department of Public Health

The DPH offers a variety of services for children and adults located throughout the state (http://dhss.delaware.gov/dph/clinics.html)

For Children	
Child Development Watch	Assistance to the child who is having difficulty with hearing, seeing, talking, moving or learning
Child Health Clinics	Well visits for children without health insurance
Children's Health Insurance	Access to low cost health insurance
Community Health Centers	Medical treatment for people in most income levels
Dental	Low cost dental services to those who are eligible
HIV Services	HIV services information
Immunizations	Immunizations and vaccinations for the uninsured or underinsured
Lead Testing	Help for children who may be at risk due to lead exposure
School-Based Health Centers	A range of health services provided to students in participating schools
Tuberculosis	Tuberculosis screening, treatment and management
WIC - Women, Infants and Children	Education and food vouchers to eligible infants, children, pregnant women and recently delivered mothers

For Adults	
Community Health Centers	Partners in community health services
Family Planning	Birth control and pregnancy testing
Flu Shots and Other Immunizations	Preventive vaccinations available to the high-risk and uninsured
HIV Services	HIV services information
Screening for Life	Breast and cervical cancer screening
Smart Start	Home visits for pregnant women
STD Testing and Counseling	Sexually transmitted disease treatment
Tuberculosis	TB screening, treatment and management
Community Education and Home Visits	
Communicable Disease/Epidemiology	Case management for infectious diseases such as hepatitis, meningitis, shigelloses, salmonella, etc.
Health Educator	Community education provided by public health educators
HIV Services	HIV services information
Lead Poisoning Prevention	Preventive actions to minimize lead exposure
Smart Start	Extended services for Medicaid eligible pregnant women
Health and Wellness Services	
Adolescent Health	Addresses health needs of youth, adolescents and young adults ages 12-24
Early Childhood	Addresses needs of children from birth through age five and their families
Immunization	Immunization and vaccination records and information
Maternal Child Health	Addresses health needs of pregnant women, mothers and their infants up to age one, children and children with special health care needs
Newborn Hearing Screening	Identifies newborn babies born with hearing loss
Newborn Screening	Identifies newborn babies born with rare disorders
Reproductive Health	Services related to sexual and reproductive health
Tuberculosis Elimination	TB screening, treatment and management
WIC - Women, Infants and Children Supplemental Nutrition	Education and food vouchers to eligible infants, children, pregnant women and recently delivered mothers

Other Resources

Connecting the Dots

The purpose of this guide is to help individuals with a newly-diagnosed disability or special health care need and their family members find available supports and services. It was developed with the support of parents of children with disabilities and special health care needs and adults with disabilities and special health care needs. www.udel.edu/cds/downloads/CTDbooklet_final.pdf

Delaware Aging & Disability Resource Center

The Delaware Aging and Disability Resource Center (ADRC) is a one-stop access point for information and services for older persons and adults with physical disabilities throughout the State. www.delawareadrc.com/

Delaware Assistive Technology Initiative (DATI)

The Delaware Assistive Technology Initiative (DATI) is a program of the Center for Disabilities Studies at the University of Delaware. DATI connects Delawareans who have disabilities with the tools they need in order to learn, work, play and participate in community life safely and independently. www.dati.org/aboutus/index.html

Delaware Community Legal Aid Society, Inc.

Community Legal Aid Society, Inc. (CLASI) is a private, non-profit law firm dedicated to equal justice for all. CLASI provides civil legal services to members of the community who have low incomes, disabilities or who are age 60 and over. Services help clients to become safe and self-sufficient. www.declasi.org/

Delaware Developmental Disabilities Council

The Delaware Developmental Disabilities Council (DDC) is authorized by Public Law 106-402 to address the unmet needs of people with developmental disabilities through system-wide advocacy, planning and demonstration projects. www.ddc.delaware.gov

Family SHADE

Delaware's Family SHADE is a collaborative alliance of family partners and organizations committed to improving the quality of life for children and youth with special health care needs by connecting families and providers to information, resources and services. www.familyshade.org/

Food Stamp Program

The Food Supplement Program (FSP) enables low-income households to purchase the food they need to maintain adequate nutritional levels. https://www.benefits.gov/benefits/benefit-details/1240

Head Start

A federal program that promotes school readiness of children from birth to age 5 from low-income families by enhancing their cognitive, social, and emotional development. https://www.benefits.gov/benefits/benefit-details/1903

Health Equity Guide for Public Health Practitioners and Partners

The Delaware Division of Public Health (DPH), the University of Delaware's School of Public Policy & Administration, and other partners created the Health Equity Guide for Public Health Practitioners and Partners to help Delawareans better understand tools and strategies that promote health equity and support upstream population health approaches. http://www.dhss.delaware.gov/dhss/dph/mh/files/healthequityguideforpublichealthpractitionersandpartners.pdf

Healthy Delawareans with Disabilities

www.GoHDWD.org has pertinent documents regarding the current health status of people with disabilities in Delaware, and what is being done to improve the health of these individuals.

Jewish Family Services

Jewish Family Services of Delaware provides services and programs that assist families through crisis, help children grow stronger, and care for older adults. www.jfsdelaware.org

Low Income Home Energy Assistance Program (LIHEAP)

A federally funded program for low-income families that need help meeting their home energy costs. https://www.benefits.gov/benefits/benefit-details/1531

Medicaid

Furnishes medical assistance to eligible Delaware low-income families and to eligible aged, blind and/or disabled people whose income is insufficient to meet the cost of necessary medical services. https://www.benefits.gov/benefits/benefit-details/1623

Mid-Atlantic ADA Center

The Mid-Atlantic ADA Center provides information, guidance and training on the Americans with Disabilities Act (ADA), tailored to meet the needs of businesses, government entities, organizations, and individuals in the Mid-Atlantic Region (DC, DE, MD, PA, VA, and WV). www.adainfo.org

National School Breakfast and Lunch Program

The School Breakfast and Lunch Programs make nutritionally balanced, low-cost or free meals available to school children each school day. https://www.benefits.gov/benefits/benefit-details/1956

Planned Parenthood of Delaware

Support and promote reproductive health and responsible sexual behavior through the provision of comprehensive and high quality education, counseling, and medical services for all. https://www.plannedparenthood.org/planned-parenthood-delaware

Special Milk Program

The Special Milk Program (SMP) provides milk to children in schools and non-profit childcare institutions that do not participate in other Federal child nutrition meal service programs. https://www.benefits.gov/benefits/benefit-details/1785

Summer Food Service Program

The Summer Food Service Program (SFSP) provides free, nutritious meals and snacks to help children in low-income areas get the nutrition they need to learn, play and grow throughout the summer months when they are out of school. https://www.benefits.gov/benefits/benefit-details/1708

Temporary Assistance for Needy Families

The TANF program is Delaware's main cash assistance program. https://www.benefits.gov/benefits/benefit-details/1655

Unemployment Insurance

The Federal-State Unemployment Insurance Program provides unemployment benefits to eligible workers who are unemployed through no fault of their own (as determined under Delaware law, and meet other eligibility requirements of Delaware law. https://www.benefits.gov/benefits/benefit-details/1693

University of Delaware, Center for Disabilities Studies

The mission of the Center for Disabilities Studies is to enhance the lives of individuals and families through education, prevention, service, and research related to disabilities. We promote independence and productivity so individuals and families can fully participate in the life of their communities in Delaware and beyond. www.udel.edu/cds

Weatherization Assistance Program

The U.S. Department of Energy (DOE) Weatherization Assistance Program (WAP) provides grants to states, territories, and some Indian tribes to improve the energy efficiency of the homes of low-income families. These governments, in turn, contract with local governments and nonprofit agencies to provide weatherization services to those in need using the latest technologies for home energy upgrades. https://www.benefits.gov/benefits/benefit-details/1846

YMCA of Delaware

The YMCA is a leading non-profit organization committed to strengthening community through youth development, healthy living, and social responsibility. www.ymcade.org


20
18
MILLENNIAL SUMMIT
YOUNG PROFESSIONALS
CONFERENCE
AUGUST 7, 2018
· CHASE CENTER ON THE RIVERFRONT ·
WILMINGTON, DELAWARE
LEADERSHIP/PROFESSIONAL DEVELOPMENT
NONPROFIT BOARD SERVICE
PUBLIC SERVICE & ADVOCACY
MAKE AN IMPACT • SIGN UP TODAY
MILLSUMMIT.COM

Index of Advertisers

Pediatric Perspective 2018 13
Christiana Care Helath Systems and Nemours

Call For Abstracts 18
Delaware Academy of Medicine

The DPH Bulletin June 2018 19
Division of Public Health, Department of Health and Social Services

The Nation's Health - July 2018 25
American Public Health Association

DHSS Press Release 31
Delaware Division of Public Health

Collage of Health Scienses Gala 37
University of Delaware

Concord Breast Surgeon 38
Christiana Care Health Center

We've Moved - New Location 39
Delaware Bio Dome

CUGH's 10th Annual Conference 55
Consortium of Universities for Global Health

The DPH Bulletin July 2018 65
Division of Public Health, Department of Health and Social Services

DJPH Submission Information 69
Delaware Journal of Public Health

Delaware Military and Veterans Subcommittee - Save the Date 79
A partnership of the Delaware Suicide Prevention Coalition (Delaware Military and Veterans Subcommittee), the Mental Health Association of Delaware, and the Delaware Academy of Medicine

Westside Family Healthcare: 30th Anniversary Gala 82
Westside Family Healthcare

Fogarty at 50 83
The Fogarty International Center

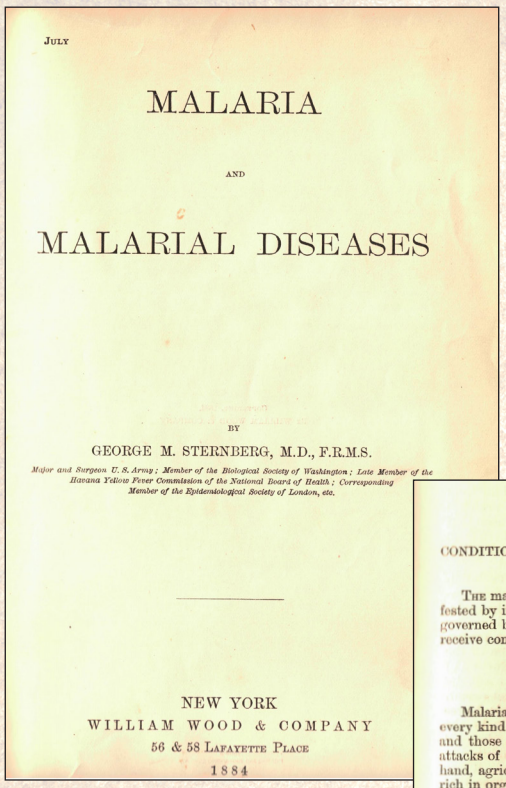
Healthy Delaware Colon Cancer Blog 86
Delaware Cancer Consortium

49th Annual Robert O. Y. Warren Memorial Seminar 87
Nemours Children's Health System

Millennial Summit. 93
Young Professionals Conference

From the history and archives collection

Kate Lenart, M.A.



JULY

MALARIA

AND

MALARIAL DISEASES

BY

GEORGE M. STERNBERG, M.D., F.R.M.S.

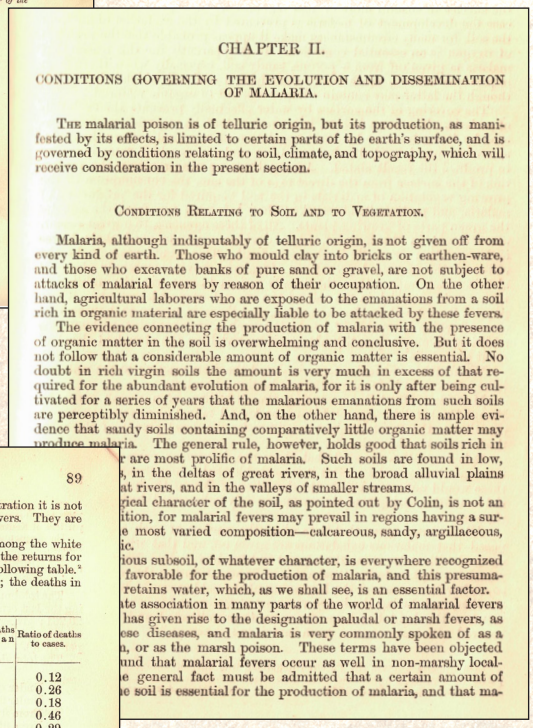
Major and Surgeon U. S. Army; Member of the Biological Society of Washington; Late Member of the Havana Yellow Fever Commission of the National Board of Health; Corresponding Member of the Epidemiological Society of London, etc.

NEW YORK
WILLIAM WOOD & COMPANY
56 & 58 LAFAYETTE PLACE
1884

Plate 1 filename "title page.jpg"

Malaria was a significant infectious disease threat in the United States in the late 1800's which originated in Constantine, Algeria and was discovered by Charles Louis Alphonse Laveran, a French Army surgeon. The symptoms of malaria were described in ancient Chinese medical writings as early as 2700 BC.

Today we know that malaria is transmitted by mosquitos, however chapter 2 of a book from the collection of the Academy/ DPHA paints a very different picture…



CHAPTER II.

CONDITIONS GOVERNING THE EVOLUTION AND DISSEMINATION OF MALARIA.

THE malarial poison is of telluric origin, but its production, as manifested by its effects, is limited to certain parts of the earth's surface, and is governed by conditions relating to soil, climate, and topography, which will receive consideration in the present section.

CONDITIONS RELATING TO SOIL AND TO VEGETATION.

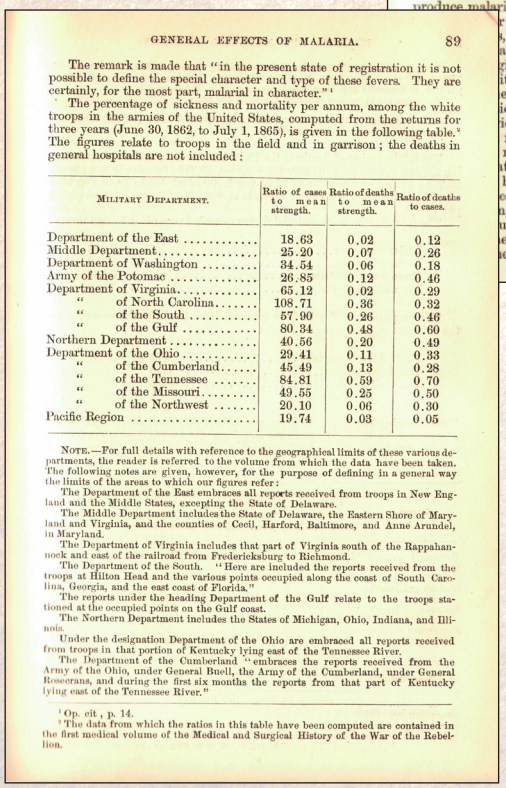
Malaria, although indisputably of telluric origin, is not given off from every kind of earth. Those who mould clay into bricks or earthen-ware, and those who excavate banks of pure sand or gravel, are not subject to attacks of malarial fevers by reason of their occupation. On the other hand, agricultural laborers who are exposed to the emanations from a soil rich in organic material are especially liable to be attacked by these fevers.

The evidence connecting the production of malaria with the presence of organic matter in the soil is overwhelming and conclusive. But it does not follow that a considerable amount of organic matter is essential. No doubt in rich virgin soils the amount is very much in excess of that required for the abundant evolution of malaria, for it is only after being cultivated for a series of years that the malarious emanations from such soils are perceptibly diminished. And, on the other hand, there is ample evidence that sandy soils containing comparatively little organic matter may produce malaria. The general rule, however, holds good that soils rich in
r are most prolific of malaria. Such soils are found in low,
, in the deltas of great rivers, in the broad alluvial plains
at rivers, and in the valleys of smaller streams.
gical character of the soil, as pointed out by Colin, is not an
ition, for malarial fevers may prevail in regions having a sur-
e most varied composition—calcareous, sandy, argillaceous,
ic.
ious subsoil, of whatever character, is everywhere recognized
favorable for the production of malaria, and this presuma-
retains water, which, as we shall see, is an essential factor.
te association in many parts of the world of malarial fevers
has given rise to the designation paludal or marsh fevers, as
ese diseases, and malaria is very commonly spoken of as a
, or as the marsh poison. These terms have been objected
nd that malarial fevers occur as well in non-marshy local-
e general fact must be admitted that a certain amount of
e soil is essential for the production of malaria, and that ma-

Plate 2 filename "origin.jpg"

"The malaria poison is of telluric origin, but its production, as manifested by its effects, is limited to certain parts of the earth's surface, and is governed by conditions relating to soil, climate, and topography…."

"Telluric" is defined as being of the soil (earth).



GENERAL EFFECTS OF MALARIA. 89

The remark is made that "in the present state of registration it is not possible to define the special character and type of these fevers. They are certainly, for the most part, malarial in character."[1]

The percentage of sickness and mortality per annum, among the white troops in the armies of the United States, computed from the returns for three years (June 30, 1862, to July 1, 1865), is given in the following table.[2] The figures relate to troops in the field and in garrison; the deaths in general hospitals are not included:

MILITARY DEPARTMENT.	Ratio of cases to mean strength.	Ratio of deaths to mean strength.	Ratio of deaths to cases.
Department of the East	18.63	0.02	0.12
Middle Department	25.20	0.07	0.26
Department of Washington	34.54	0.06	0.18
Army of the Potomac	26.85	0.12	0.46
Department of Virginia	65.12	0.02	0.29
" of North Carolina	108.71	0.36	0.32
" of the South	57.90	0.26	0.46
" of the Gulf	80.34	0.48	0.60
Northern Department	40.56	0.20	0.49
Department of the Ohio	29.41	0.11	0.33
" of the Cumberland	45.49	0.13	0.28
" of the Tennessee	84.81	0.59	0.70
" of the Missouri	49.55	0.25	0.50
" of the Northwest	20.10	0.06	0.30
Pacific Region	19.74	0.03	0.05

NOTE.—For full details with reference to the geographical limits of these various departments, the reader is referred to the volume from which the data have been taken. The following notes are given, however, for the purpose of defining in a general way the limits of the areas to which our figures refer:

The Department of the East embraces all reports received from troops in New England and the Middle States, excepting the State of Delaware.

The Middle Department includes the State of Delaware, the Eastern Shore of Maryland and Virginia, and the counties of Cecil, Harford, Baltimore, and Anne Arundel, in Maryland.

The Department of Virginia includes that part of Virginia south of the Rappahannock and east of the railroad from Fredericksburg to Richmond.

The Department of the South. "Here are included the reports received from the troops at Hilton Head and the various points occupied along the coast of South Carolina, Georgia, and the east coast of Florida."

The reports under the heading Department of the Gulf relate to the troops stationed at the occupied points on the Gulf coast.

The Northern Department includes the States of Michigan, Ohio, Indiana, and Illinois.

Under the designation Department of the Ohio are embraced all reports received from troops in that portion of Kentucky lying east of the Tennessee River.

The Department of the Cumberland "embraces the reports received from the Army of the Ohio, under General Buell, the Army of the Cumberland, under General Rosecrans, and during the first six months the reports from that part of Kentucky lying east of the Tennessee River."

[1] Op. cit., p. 14.
[2] The data from which the ratios in this table have been computed are contained in the first medical volume of the Medical and Surgical History of the War of the Rebellion.

Plate 3 filename "chart.jpg"

The associated table shows various statistics gathered regarding malaria. In the notes section, below the table, Delaware is listed as having been a part of the "Middle Department." The area described as the Middle Department faired better (as reported by ratio of deaths to cases) than most areas.