Preface

Global Health, Global Health Education, and Infectious Disease: The New Millennium, Part II

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Guest Editor

In this second volume of Global Health, Global Health Education, and Infectious Disease: The New Millennium, thought leaders and opinion makers in global health continue the dialogue and discuss their experiences and visions for global health, global health education, research service, development, policy, and diplomacy to achieve Health for All in an equitable manner.

I continue to be inspired by the exceptional membership of the Global Health Education Consortium (GHEC)—students, faculty and administrators, and institutions—who for 20 years have been deeply committed to changing the landscape of global health and global health education through networking between academic institutions, nongovernmental organizations, civil society, and other global partners. At the various global health conferences, student activism and leadership for global health continue to be very visible. For example, see the student perspective on the 17th Annual GHEC Sacramento Conference, held in Sacramento, California, in 2008.¹

The role of universities and other health institutions in global health and the impending merger of GHEC and the Consortium of Universities for Global Health (CUGH) are

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barriers to global health development gives us an unprecedented opportunity not only for a new intergenerational dialogue but also for sustained focus and action on the evolving paradigm of global health, global health education, and emerging health systems and on the relevant research agendas. How we view health and education will be changed by the renewed focus on and action around the Millennium Development Goals, health system strengthening, and reinvention of primary care with its moral-ethical backbone and framework; by action on chronic and infectious diseases and neglected tropical diseases; and by increased attention to poverty, education, climate change, and long-neglected mental health, trauma, and surgical anesthesiology needs. We must continue to advocate for a comprehensive definition and compass of “global health with a face,” a concept that goes beyond being a discipline or goal, but which has a moral underpinning and is accepted worldwide. The hard lessons we have learned teach us that all of these activities in the field and vision of global health must be integrated and intersectoral for sustained human development and the social good of all humankind.

The article by Haile Debas and Thomas Coates shares their valuable experiences, challenges, and opportunities in setting up the unique University of California Global Health Institute (UCGHI), a collaborative effort of the 10 University of California (UC) campuses that represents a paradigm shift in both structure and function of universities. By bringing together a wide range of disciplines from both the health and the non-health sciences, they have created truly inter- and transdisciplinary programs that are addressing the complex global health challenges of the 21st century, training future global health leaders, and forging international academic partnerships. This pioneering effort of a university-wide initiative will focus on producing leaders and practitioners of global health, conducting innovative and important research, and developing international collaborations to improve the health of vulnerable people and communities in California and worldwide. The programs of UCGHI are action-oriented and go beyond those of traditional academic programs, which focus on education, research, publication, and dissemination. The first three programs, the Center of Expertise on Migration and Health; Center of Expertise on One Health: Water, Animals, Food and Society; and Center of Expertise on Women’s Health and Empowerment, are setting high standards and demonstrating a new form of interdepartmental and interdisciplinary collaborations. As Debas and Coates state, “the metrics by which UCGHI will judge itself will include not only the usual metrics for academic success, but just as importantly, the actual impact its programs make to the health and welfare of poor people on the ground everywhere [emphasis added].”

Joel G. Breman, Kenneth Bridbord, Linda E. Kupfer, and Roger I. Glass articulate in great detail the vision, mission, programs, and accomplishments of the Fogarty International Center (FIC) of the US National Institutes of Health (NIH). In 1988, FIC started the flagship HIV/AIDS International Training and Research Program in response to the global pandemic. Since then, more than 23 extramural training and research programs and an intramural program have begun operating, all in collaboration with other Institutes and Centers at NIH, US government agencies, foundations, and partner institutions in the low- and middle-income countries (LMICs) and the US. Today, FIC training programs are addressing chronic, noncommunicable diseases and are strengthening the quality of medical schools and health care provider training, in addition to expanding expertise in infectious diseases. The FIC model for successful training is based on long-term commitments, institutional strengthening, “twinning” of research centers, focus on local problems, and active mentoring. Because the FIC programs are institution-strengthening partnerships and candidates are carefully selected and mentored, close to 90% of FIC trainees return to their countries of origin and in turn help develop
the next generation of leaders and global health workers in LMICs. FIC has an enviable record of supporting long-term (>6 months) basic, clinical, and applied research training for over 3600 future leaders in science and public health from LMICs; tens of thousands more have also received short-term training. The wide variety of programs, projects, and initiatives supported by FIC reflects FIC’s goals of providing comprehensive training and tools to investigators to ultimately—and sustainably—build capacity in global health research and lessen the burden of global disease and illness worldwide. FIC thus sets a very high bar for existing and future institutions involved in global health.

Walter Patrick shares the long and valuable experiences of the Asia Pacific Academic Consortium for Public Health’s (APACPH) in strengthening South-South and South-North Collaborations in global health education, development policy, and networking for the public good. To date, limited efforts and investment have been made to promote South-South cooperation between and within LMICs for basic health needs. As a result, there are very few stable South-South cooperative networks. However, the evolution of APACPH demonstrates how an academic organization that originated as a North-South collaboration with strong interest in fostering developments in the South has since emerged as South-North-South organization with South-South academic networks established nationally and regionally. Patrick also points to the newer shift in global cooperation and collaboration involving the African–South American collaboration. Although these collaborations initially focused primarily on energy and trade, their focus now includes issues of peace, security, health needs, and poverty reduction. Patrick identifies the strengths and weaknesses of sustaining such partnerships and key catalysts in the stages of development for such a metamorphosis. He further focuses on how universities, nongovernmental organizations, and international agencies involved in population health improvement have expanded the social responsibility of medical and public health schools to the marginalized populations and have promoted South-South regional and national academic networks through access to knowledge on the Internet as well as cultural compatibilities.

Cordelia Coltart, Mary Black, and Philippa J. Easterbrooke trace the rich roots of global health activities in the UK, going back a little over a century to their origins in “Tropical Medicine and Hygiene,” and describe how these activities have now broadly evolved to encompass multiple arenas, especially the government and university sectors. These efforts are built on the central idea, launched as a UK government-wide strategy in 2008, that health is global. The authors address the role of government and international aid, the role of UK academic and other institutions in international partnerships, and undergraduate and postgraduate training opportunities. Global health enables the harmonization of international and domestic health concerns and the adoption of a more global outlook than that afforded by a development or foreign-assistance perspective alone. The development of the UK global health strategy is built around the UK Department of Health’s five key areas for the promotion of global health: global security and health protection, sustainable development, trade by promoting health as a commodity, maximization of global public good, and encouragement of the human rights approach to health. The strategy was based on five key areas for action, with key goals remaining the elimination of poverty and the delivery of clean water, sanitation, basic health care, and education to the world’s poorest people. The authors point out that there has been limited discussion and debate in the UK as to the optimal role of UK universities in global health and to the type of institutional partnerships that will meet the needs and priorities of southern institutions, as well as building and sustaining the capacity
of these institutions for the future. Finally, the authors provide examples of academic courses and degrees in global health in the UK.

Judith Calhoun, Harrison C. Spencer, and Pierre Buekens address competencies for Global Health Graduate Education to drive global health education initiatives. There is an urgent need to focus on competencies, uniform standards, and interprofessional education beyond silos. The authors provide an overview of competency-based education (CBE) and its impact in the US today. Of great significance, the Association of Schools of Public Health (ASPH) Initiative focuses on CBE processes and best practices and the development of a standardized ASPH global health competency model. The authors also provide recommendations addressing potential future trends and barriers to acceptance of CBE to help the many educators and trainers who are just embarking on the competency journey. Acceptance by professional organizations, accrediting bodies, and school-wide leadership is critical for the wider diffusion and success of the program and for the development of an adaptable and productive workforce for global health and well-being.

Julio Frenk, the recipient of the GHEC Distinguished Service Award [2008], Octavio Gomez-Dantes, and Felicia Knaul address globalization and infectious diseases through the lenses of human security and interdependence. International transfer of risks, especially in the realms of infectious disease and noncommunicable/chronic conditions, has also generated interdependence, new opportunities for collaborating across boundaries, joint learning, and international collective action to ensure the public good. The authors have contributed significantly to our understanding of global health. Aside from knowledge translation and its foundational support to build policies for the public good, the important concept of “global health with a human face” gives us another window on global health.

Ilona Kickbusch and Paulo Buss (recipient of the GHEC Distinguished Service Award 2010) have enriched us considerably over the past many years in the exciting field of Global Health Diplomacy and Peace. The authors elaborate on the complex multilevel multi-actor negotiation processes that shape and manage the global policy environment for health. They further explore the dynamic relationship between health and foreign policy and provide examples from the national, regional, and global levels. Reflecting on the deliberations in different international bodies, they discuss key questions and opportunities that could contribute to moving health and peace agendas forward in today’s rapidly evolving global health and development landscape. In the geopolitical marketplace, “soft power” and “smart power” in reference to global health initiatives have increasingly replaced the “hard power” of the last century. In the negotiations on global health policy, the other side of the coin—the interests and desires of the LMICs—is mostly neglected. However, the authors point out that these interests were amply represented at the recent deliberations of the 128th Executive Board in 2011 and echoed in the UN General Assembly Resolutions. The authors stress that it is critical to empower the LMICs through capacity building to take the initiative in managing their own development and growth.

Marcella M. Alsan, Michael Westerhaus, Michael Herce, Koji Nakashima, and Paul E. Farmer discuss how to apply a biosocial framework to the design of health systems based on their valuable experience and long involvement in Haiti and Rwanda. They review ways in which poverty, structural violence, and infectious disease and chronic conditions confine poor populations to vicious cycles of suffering and despair and then examine the implications of these understandings on the design of health interventions. As they forcefully argue, it is the failure to employ a biosocial lens that often gives rise to charity and development models of health intervention that replicate preexisting unequal structures. Such models localize blame for disease with the poor themselves.
In contrast, a biosocial lens makes clear that disease among the poor results from the embodiment of structural violence and requires that any serious attempt to address disease in resource-poor settings incorporate efforts for social change. Through commitment to models built upon the principles of social justice, Partners In Health (PIH) has found that advocacy and long-term partnerships between the public sector and the communities in which they work are indispensable for creating sustainable transformations in health that reduce suffering caused by infectious and chronic disease. Thus, the authors challenge the prevalent model of just providing diagnostic tools, pharmaceuticals, and trained clinicians without addressing the consequences of deep poverty: limited transportation, poor housing, and food scarcity, among others. In essence, PIH and local partners provide care that integrates social and economic programs. Such solutions, which privilege a biosocial approach to identifying and breaking down barriers to care, have resulted in remarkable successes in addressing epidemics of HIV/AIDS, TB, malaria, and other communicable and chronic diseases in some of the most challenging domestic and global settings.

Tracey Koehlmoos, Shahela Anwar, and Alejandro Cravioto bring their unique experience from Bangladesh to address noncommunicable diseases (NCDs), mental health, accidents, occupational injuries, urbanization, climate change, and disaster preparedness. This perspective is important because clearly the largest burden of NCDs occurs in LMICS. Of the deaths due to NCDs, 80% occur in developing countries, and only 2.3% of international development assistance for health is directed to NCDs. The economic impact and burden of NCDs are therefore likely to be dramatic and overwhelming. These challenges, together with ongoing classical challenges of infectious disease and emerging infectious disease, will place significant strains on these fragile economies. The authors define the unique epidemiological features and relevant programmatic health systems and policy responses that are necessary to successfully negotiate the current and impending challenges.

Nisha Garg focuses on neglected diseases and access to medicines. The essential thesis is that there are not only neglected diseases but also neglected populations who are resource poor, lack fundamental amenities, and are overlooked even in the presence of available resources. Garg outlines several key challenges and opportunities for promoting local ownership of problems and responsibility for solutions, strengthening health systems, sustained donor commitments, logistics, and poverty reduction. She outlines successful programs and reasons for failure. Empowering the local populations to fully partake in their health decisions, preventive efforts, and education can significantly change the dynamics and help improve productivity, as was the case with the control of Guinea worm disease. Policies to control and in certain cases eliminate neglected tropical diseases must be multipronged and involve decision-makers and resources from both the donor and the recipient countries.

Hadley Herbert, Adnan Hyder, Alexander Butchart, and Robyn Norton discuss in a very comprehensive and succinct manner one of the most neglected areas of global health: that of injury and violence, which rank among the top ten leading causes of death worldwide. They further examine how injury and violence relate to global health using recent global burden of disease data and selected key studies and databases, and they explore risk factors and intervention initiatives that address unintentional and intentional injuries. This article serves as a call to action to enhance our understanding of the growing burden of injury and violence, especially in LMICs, where over 90% of injuries occur. The article by Koehlmoos, Anwar, and Cravioto also adds to this rich perspective.

Richard J. Deckelbaum, James M. Ntambi, and Debra J. Wolgemuth provide evidence that basic science research and education should be a priority for training
and capacity building in developing countries. They pose several important questions, such as: Is there a need?, What is the current status of basic science training in global health?, How can the problems of lack of financial and human resources, physical infrastructure, and poor recognition of the need for local basic science related to indigenous health issues be addressed?, and how will strengthening basic science research in developing countries be achieved? Currently, there are tremendous gaps between strong science education and research in developed countries (the North) as compared to developing countries (the South). In addition, science research and education appear to be low priority in many developing countries. The authors point out the acute need to stress basic science research beyond the typical investment in infectious disease. Basic service and research laboratories in developing areas contribute meaningfully to society in terms of the benefits not only to education, but also to economic strengthening and development of human resources. There are some indications that appreciation of basic science research education and training is increasing, but this still needs to be applied more rigorously and strengthened systematically in developing countries. They further point out that what is required is the will and the financial, physical, and human resources to implement basic science programs. A recent special issue of *Nature* has also focused on this need of building science in Africa.6–14

Robert Martin and Scott Barnhart address the long-neglected topic of global laboratory systems development, with a particular focus on sub-Saharan Africa. Laboratory systems are an integral part of any robust, efficient, integrated health system and are necessary for country capacity building. The new directions outlined by the authors call for development of leadership, education of laboratory scientists, quality assurance, resource management, and country ownership and responsibility. Furthermore, networking within the country and between countries for setting and maintaining quality and standards is critical for the accreditation process and patient safety. A particular statement from Easterly15 quoted by the authors is worth restating here, as it has a broad applicability in global health: “It would be worth testing and exploring the hypothesis that most successful development is homegrown. And if so, research should concentrate more on homegrown determinants of development rather than spend so much time on outsider’s actions... Perhaps then we might find that the ones most likely to ‘save Africa’ are Africans themselves.”

Rosanna W. Peeling and Solomon Nwaka discuss new business models for research and development to accelerate progress along the path from discovery of drugs and diagnostics to product adoption and implementation. While funding for research and development is critical, an accompanying increase in investment to build capacity for drug and diagnostic research and development, as well as development of robust health care infrastructure, is critical if the full impact of these innovative approaches is to be realized. A new paradigm is emerging from a convergence of several key insights and developments that includes proof-of-concept funds, networks linking scientists and entrepreneurs, and physical centers providing shared research infrastructure. The involvement of developing-country scientists and institutions as key partners continues to be an urgent challenge. This is in keeping with the WHO’s Global Strategy and Plan of Action developed by the Inter-governmental Working Group on Innovation, Intellectual Property, and Public Health that promotes innovation as a way to improve the range and affordability of medical interventions for diseases that disproportionately affect developing countries. As the authors emphasize, the commitment of public-private partnerships to share resources, share risks (crossing the valley of death), and share rewards is a critical element of the new paradigm and most urgently needed.
These two volumes of the of North America of North America have focused mostly on universities and consortia, but I would be remiss if I did not acknowledge the excellent work in global health and global health education being carried out by the Bill and Melinda Gates Foundation, The Aga Khan Development Network, the Rockefeller Foundation, the William J. Clinton Foundation, the Carter Center, and many other nongovernmental organizations, religious organizations, and other leading health systems both abroad and in North America.

In the US, the recently passed Affordable Care Act focuses on reducing disparities, improving quality, and reducing costs and waste. President Obama pointed out four institutions as health care models for the future: Kaiser Permanente, the Mayo Clinic, the Cleveland Clinic, and the Geisinger Health System. It is important to highlight some unique features that make these models so successful, since there is a rush globally to create new markets for health care delivery without consideration of equity cost, quality, or safety. Due to lack of space, I will discuss only the largest and most successful model, Kaiser Permanente (KP), below.

Over the last 60 years, KP has transformed how medicine is practiced in the US, and its pervasive influence has been felt around the world. KP is a nonprofit, integrated, managed care system. Physicians and hospitals collaborate effectively to mitigate health care cost increases and improve the quality, safety, and accountability of care. This process requires input from other arenas of health care, and at KP this expertise is provided by three Institutes: Health Policy, Research, and Culturally Competent Care. The cornerstone of the KP Health Systems is the integration of the principles of population management, evidence-based medicine, team-based chronic care management, multicultural health, diversity and inclusion, community outreach, and cost effectiveness, with recent emphasis on same-day access. KP today has the most comprehensive electronic health record system in the world, which securely connects all members’ medical records across both ambulatory and inpatient settings; integrates billing, scheduling, and registration; and provides members access to personal health records on the organization’s Web-based member portal and through member–physician secure e-mail communication. These tools and technologies of the 21st century simultaneously make health and health care more personalized and convenient, safer, and more cost effective. KP’s ubiquitous motto “Live well, be well, and thrive” focuses on preventive care and promotes healthy living. KP also offers a unique training opportunity for residents from university- and community-based programs throughout the Northern California Region, including Stanford, UC Davis, and UC San Francisco. Approximately 900 affiliated residents rotate through the KP Northern California facilities each year for 1 to 6 months at a time. “Our increasing involvement in global health is a natural outgrowth of our mission, of improving the health of the communities we serve, and for the past two years, approximately one third of the incoming class of new residents and fellows at Kaiser Permanente Northern California have reported participating in some type of global health rotation during medical school” (Bruce Blumberg, KP Northern California Director of Graduate Medical Education, personal communication, July 12, 2011). Recently, KP global health residency training sites have been established in Ugenya, Kenya (the TIBA/Mati Babu Foundation); University Teaching Hospital at Lusaka, Zambia; and the Sihanouk Hospital in Phnom Penh, Cambodia, and many others are currently being evaluated.

The Kaiser Permanente Medical Group (TPMG) in the Northern California Region is the largest medical group in the US, comprising over 7000 physicians and 25,000 staff members. It operates 19 medical centers in Northern California and is responsible for 3.3 million members. Similar sister groups exist in seven other regions: Southern
California, Oregon, Georgia, Hawaii, Colorado, Ohio, and the Mid-Atlantic. Many of the physicians, nurses, and other health workers are in academia and contribute significantly to the global health programs in the US and many parts of the world and will continue to be a significant force after retirement as they continue to train the global health workforce. These tremendous resources are generally overlooked outside the academic centers, but the new millennium has ushered in a new spirit of cooperation among universities and organizations such as KP to train the new global health workforce in a manner that is culturally competent and sensitive and socially accountable.

Another generally overlooked and underappreciated aspect of global health is the significant contributions of US volunteers who are involved in global health and citizen diplomacy. A Global Health Task Force (of which I am a member) was created in 2010, with goals of increasing the impact of US health volunteers worldwide and improving their monitoring and evaluation, as well as strengthening and leveraging the contributions of US citizens to meet the goals of the Global Health Initiative and the goal of doubling the number of American citizen diplomats in the next 10 years. Mary Flake Flores, the Former First Lady of Honduras (a GHEC Distinguished Service Award recipient for 2008 for her remarkable work and dedication to the people of Honduras following Hurricane Mitch), was a guest speaker at the first meeting of the US Citizen Diplomacy Summit in Washington DC. The First Lady very movingly recollected the very real contributions that the US and other volunteers made to alleviate the tremendous loss and destruction of life, property, and environment in Honduras. A monograph is available that lists organizations and members of the Task Force and its initiatives.

In conclusion, I wish to extend my sincerest appreciation to all the experts who have contributed to this second volume and to the enlightened leadership at TPMG, including Dr Robert Pearl, the Executive Director of TPMG; Dr Richard Isaacs, Physician In Chief of Kaiser Permanente; and Dr Boone Seto, Chief of Medicine at KP South Sacramento, for their robust support of my efforts in global health over the last several years. Finally, I wish to extend my sincere thanks to Dr Robert Mollering, Consulting Editor of the *Infectious Disease Clinics of North America* for giving me another opportunity to focus on global health issues. I also wish to express my sincere thanks to the wonderful staff at Elsevier, in particular, the editor for this edition, Stephanie Donley; journal manager, Diana Schaeffer; and Teia Stone, who were so helpful to me and to the authors who contributed to this edition of the *Clinics*.

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