Preface

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

DEFINING GLOBAL HEALTH AND ITS PARAMETERS

Attempts to define and draw the parameters of the newly emerging field of global health and global health education began over two decades ago. For instance, in 1990, over 22 global health experts contributed to the first volume on International Health in the *Infectious Disease Clinics*.¹ In 1995, 33 more experts contributed to the second volume on global health: International Health beyond the Year 2000.² The second volume drew this very insightful review:

“The collection of eye opening ideas contains more than visions. Thirty three excellent and expert authors have contributed 21 papers that embrace diversity of health concerns; not only with 1) basic biomedical and social sciences focused on major sets of health problems. There are papers that focus as well on 2) varied approaches to coping with health and developmental problems including ethical issues, information systems, anthropology and behavior changes and philosophy. It also addresses 3) educational approaches to the field of international health…I cannot expect to tell you about all the exciting ideas contained on these 225 pages…the volume also has articles which explore specific health concerns, including AIDS, major infectious diseases of Tropical Medicine, problems of systemic mycosis as infecting agents, diarrheal diseases, immunization successes, and women’s health. Importantly, other articles tell the stories of advances in medical and health education, with examples of inter-institutional cooperation…”³

The philosophical, ethical, and practical threads connecting these two foundational volumes of the *Infectious Disease Clinics* emerge from transformational visions and actions in global health, global health education, and the related disciplines of...
infectious disease, public health, and medicine in general. These ideas have been carried through the present issue and its companion, which will be published in September 2011.4,5

The new millennium opened with a focus on global equity, rights, social accountability, policies, and governance based on the principles of Health for All. These ideas, visions, and actions further consolidated various understandings and concepts of global health in an integrated world of information, knowledge, economies, trade, transport, risks, health, and health care products and services.

In the current issue of the Clinics, Sir George Alleyne, a past Director General of the Pan American Health Organization and recipient of the Global Health Education Consortium (GHEC) Distinguished Service Award in 1995, addresses three central issues in his editorial6: 1) the need for a widespread consensus on a working definition of global health, 2) the challenges of noncommunicable diseases, and 3) the need for competent health systems. The forthcoming high-level United Nations meeting in September 2011 will clearly elevate the importance of long-neglected chronic conditions and noncommunicable diseases.

Currently there is no worldwide consensus on a working definition of global health. In 2008, in Kampala, Nelson Sewankambo, the Principal of Makerere University, responded to my query very succinctly: “All we do in Africa, to us is global health.” Suffice it to say that most authorities would agree that global health as a discipline and an area of study research and action refers to the health of all people at individual and population levels, with equity, universal access, affordability, and quality as hallmarks of such care.

TRANSFORMATION OF GLOBAL HEALTH EDUCATION IN THE 21ST CENTURY

The road to health equity in the 21st century is through transformation of education from prekindergarten, through primary and secondary schools, to university and allied professional schools. Here we include other schools involved in global health, such as schools of law, engineering, agriculture, veterinary, and social sciences. The last two decades have seen great movement and momentum in transforming education in the health professions globally as part of an effort toward global health workforce development and capacity building. These changes and suggestions for future directions have been captured by many of the articles in this issue of Infectious Disease Clinics and the one to be published in September. Two articles written by Jack Bryant and me open this issue. The first discusses global health meanings, traces the roots of global health over the last several decades, and offers several definitions of global health currently extant.7 We follow this with an article on the role of universities in the context of the tremendous interest in global health throughout university campuses in North America, Europe, and Australia and in some countries in Central and South America, Africa, and Asia.8 Clearly articulated mission and vision statements and social accountability are needed to calibrate this interest to benefit all parties and to train the current and next generation of the global health workforce. In another article, I examine how over the last two decades GHEC has exemplified networking among universities in North America and universities in the low- and middle-income countries for the common public good.9

Björg Pálssdóttir and André-Jacques Neusy explore how academic institutions can contribute to redressing misdistribution and shortages in the health workforce globally. The new international collaborative of medicine and health sciences with a socially accountable mandate, Training for Health Equity Network (THEnet), is collecting and disseminating evidence, challenging assumptions, and developing tools that support
health profession institutions striving to meet the health and health workforce needs of underserved communities globally. The schools are unique but share common principles and strategies, starting from the involvement of the communities that they serve and extending to equity and evidence-based curriculum and training. In the foreseeable future, THEnet will have significant influence on the development of new accreditation standards, which will provide evidence of a medical school’s impact on the public good.10

In the forthcoming issue of the *Infectious Disease Clinics*, Judith Calhoun, Harrison C. Spencer, and Pierre Buekens11 address competencies for graduate global health education. 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 United States today. Of great significance, the Association of Schools of Public Health Initiative focused on CBE and the development of a standardized global health competency model targeted at master’s level students majoring in global health. 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 are critical for wider diffusion and success of the program and for the development of an adaptable and productive workforce for global health and well-being.11

Megan Arthur, Robert Battat, and Timothy Brewer explore the emerging field of core competencies in global health for medical students. The recommendations were developed by a joint committee of GHEC and the Canadian Association of Faculties of Medicine Resource Group on Global Health. The authors present compelling arguments as to moral, ethical, professional, pedagogical, and economic imperatives in support of the integration of global health topics within medical school curricula.12 Clearly the disproportionate global burden of disease, socio-economic determinants of health, migration, and population displacement, changing global environment, economics, politics, and governance need to be viewed through the lens of equity, human rights, ethics, social justice, and social accountability. The core competencies in undergraduate medicine and in postgraduate public health recommended by Arthur, Battat, and Brewer and Calhoun and Buekens set a new benchmark and foundation in transforming global health education. The students, residents, and young faculty are clearly invested in their own education; for example, they recently released *Global Health Training in Graduate Medical Education: A Guidebook*, published in conjunction with GHEC.13

GLOBAL HEALTH CAPACITY AND WORKFORCE DEVELOPMENT

Lord Nigel Crisp shares his vast experience and insight on global health capacity and workforce development. In his influential book *Turning the World Upside Down: The Search for Global Health in the 21st Century*, Crisp shatters many myths of innovation and development. New ideas, approaches, and practices to deal with some of the most pressing situations, such as HIV-AIDS, have come from middle- and low-income countries. Interdependence, mutuality of learning, co-development, and new ideas about service delivery and professional education are ushering in a new way of looking at the world of health. In this article, Crisp picks up on these core ideas and develops them further.14

Allan Ronald and colleagues contribute a fascinating history of the founding of a unique institution in Uganda, the Infectious Disease Institute (IDI). For 15 years, the late Merle Sande—past president of the Infectious Disease Society of America,
a master teacher, clinician researcher, and friend—made a point to be in Sacramento for his “Merle Sande Hour Lecture” at the Annual Infectious Disease Symposium that I co-directed for a number of years. Many a time we discussed global health, and I felt he had a lot to contribute to that field. In 2000, he saw a perfect opportunity following the International AIDS Society Conference in South Africa and in 2003 launched the Academic Alliance for AIDS Care and Prevention in Africa (now the Accordia Foundation), a collaborative of sustained partnership using the principles and expertise of private sector entrepreneurs along with the science and capacity-building energy of academicians. The IDI is a truly remarkable organization; it is a partnership between an academic institution—Makerere University—represented by Nelson Sewankambo and David Serwadda; Pfizer, represented by Hank McKinnell, a former CEO; and other infectious disease colleagues from both North America and Uganda. The institute has successfully harnessed support from other academic institutions and pharmaceutical foundations. For example, since 2006, Baylor University, with financial support from Bristol-Meyers Squibb, has taken responsibility for the pediatrics and adolescent programs. The Gilead Sciences Sewankambo Scholar Program was designed in 2007 to be an extension of postdoctoral clinical training. The Joint Uganda Malaria Program (JUMP) was launched in 2007 with funding from Exxon Mobile and the leadership of Moses Kamya and colleagues from the University of California, San Francisco. The recent Institute of Medicine committee that produced the report “Preparing for the Future of HIV/AIDS in Africa: A Shared Responsibility” was co-chaired by Tom Quinn from Johns Hopkins and David Serwadda from Makerere. The report recommends that both the United States and individual African nations develop 10-year strategic "roadmaps" for combating AIDS, and that these prioritize prevention. It also urges long-term capacity building to produce the institutions and health workforce in Africa equipped to tackle the epidemic. Africa continues to face great challenges, and Africans should increasingly take up ownership of their health and well-being. I firmly believe that IDI will be at the forefront of such efforts. It is clear from the IDI experience that the pharmaceutical, vaccine, biologicals, and device industries and philanthropic foundations can work constructively for the betterment of the public good. Further examples of such collaborations are given in the article by Patrick Kelley in this issue, described in more detail below.

Robert Bollinger, Jane McKenzie-White, and Amita Gupta share the lessons learned from the Hopkins Center for Clinical Global Health Education. How does an institution build a global health education network for both clinical care and research using innovative distance learning tools to reach the health care providers in the most remote and resource-limited communities? Synchronous and asynchronous communication tools today connect global communities for joint learning and teaching, as well as for classical one-to-one teaching. Synchronous learning platforms and formats use fiber and wireless networks that support use of e-mail, web streaming, video conferencing, chat rooms, social networks, cell phones, and smart devices. Asynchronous platforms include e-mail, online forums, and social networking sites. The e-connectivity has empowered south-south and north-south collaboration. A fascinating example given by the authors is the Raki Health Science Program in Uganda. Their seminal research on male circumcision and reduction of HIV acquisition risk, as well as their training of health workers in performing circumcision, has greatly decreased HIV-AIDS-related morbidity and mortality.

Carey Farquhar, Neal Nathanson, and the Afya Bora Consortium Working Group focus on an African–U.S. partnership to train leaders in global health. The Consortium is developing a Global Health Leadership Fellowship for medical, nursing, and public health professionals, largely drawn from the four African partner countries Kenya,
Tanzania, Uganda, and Botswana. The primary purpose of the fellowship is to provide trainees with practical skills that will prepare them for future positions leading the design, implementation, and evaluation of large, high-impact programs in governmental agencies, nongovernmental organizations, and academic health institutions in their own countries.

Mushtaq Ahmed, Camer Vellani, and Alex Awiti address the two-fold logistical challenge of implementing an integrated primary health care system and a novel medical education model in sub-Saharan Africa. The Aga Khan University (AKU) and the Aga Khan Development Network currently operate with admirable success in several countries among diverse cultures and mostly in unforgiving political, geographic, and socio-economic terrain. Two decades ago as visiting faculty in Karachi, I had a firsthand opportunity to observe how the community health workers, medical and nursing students, and physicians from AKU worked with the social workers from the communities of Baba Island, the Katchi Abadi settlements, and the primary care facilities in Hyderabad. AKU was then in the process of integrating the secondary and tertiary centers with the help and involvement of the government of the province of Sindh. In 2008, while I was in Nairobi at the AKU, Dean Ahmed and his colleagues briefed me on their fascinating long-term plans for the university campus in Arusha, Tanzania, which will focus on basic sciences and humanities and be linked to the medical and nursing school in Nairobi. As Ahmed, Vellani, and Awiti state, consideration of factors influencing human health and development must encompass all life stages, from fetus to adult. Likewise, universal primary education, including education for girls, is the key for future well-being and health of societies. The authors also point out the need for a coordinated multi-sectoral approach to the sustainable development of integrated primary care, with the involvement of ministries and civil societies.

Xochitl Castañeda, Magdalena Ruiz Ruelas, Emily Felt, and Marc Schenker address the health of migrants and the challenges they face, such as health threats, violence, and lack of human rights. The authors, who have a long and rich experience in migrant health, suggest that current work and future energies should be focused in a new direction, that of social determinants of health of these marginalized populations globally, rather than just focusing on prevalent infectious diseases and chronic noncommunicable diseases and their treatment. Intergenerational poverty, lack of education, jobs, housing, and health security are critical factors that need to be addressed if these populations are not to be viewed as minorities or others and are to be brought into the mainstream.

Patrick Kelley from the Institute of Medicine brings his valuable experience to focus on governance and policy development in a rapidly changing global health landscape. Collective global action is increasingly being recognized as central to achieving the highest attainable standards of health and well-being for the world’s people. A collaborative approach to implementation depends on carefully crafted, coordinated policies, for example, the landmark 2003 WHO Framework Convention on Tobacco Control and the 2005 revision of International Health Regulations. Kelley reviews the current architecture of global health governance and future challenges through the lenses of the functions and actions of world agencies, philanthropic organizations, public-private partnerships, and the role of civil societies. The recent events in the Middle East and North Africa demonstrated the power of civil societies and social networks. If this type of power was harnessed for global health, education, and societal good in general, there would be acceleration in achieving the Millennium Development Goals and other, future, goals of creating a fair, socially just society.

Jennifer Kates and Rebecca Katz discuss the role of treaties, agreements, conventions, and other international instruments in global health. In a broad review, the authors
identify 50 international health agreements, including the International Sanitary Convention, which marked the first international health agreement of its kind. The authors discuss these agreements by type and focus and whether they are binding or nonbinding. The HIV-AIDS pandemic and several other infectious diseases have underscored the importance of such agreements for the global public good. This review also addresses how such health agreements underpin policy formulations and global health diplomacy as we move to addressing more complex global issues, such as gender discrimination, tobacco control, environmental issues, and other formidable challenges.

CONCLUSION

As C.E. Winslow remarked, “the life of the physical body is brief; but the thoughts of [human beings] have acquired immortality through the magic of the pen and of the printing press... a striking example of the miracle of the written word.” This may be equally applicable to all the experts and leaders in global health that have been assembled for these volumes and who today are marking out a new era and traveling the uncharted waters with knowledge and a moral compass to improve health for all human beings. When the history of global health and global health education is written, our experts’ vision and generosity will be much appreciated, as they took on the grandest challenges in public health the Health for All. Global health, in short, will be all about how to advance equity in the 21st century.

The next volume in this series will open with an editorial (by this author) on the transformation of global health, global health education, infectious disease, and chronic conditions and will continue with contributions on the landmark model for global health and global health education in the 21st century. Haile Debas and Thomas Coates of the University of California Global Health Institute explore the opportunities and challenges of setting up a center of excellence in global health. Julio Frenk, Octavio Gomez-Dantes, and Felicia M. Knaul make significant contributions to our understanding of global health by addressing the rapidly evolving challenges to health presented by rapid globalization, with a focus on infectious disease. Marcella M. Alsan, Michael Westerhaus, Michael Herce, Koji Nakashima, and Paul E. Farmer focus on the relationship of poverty, global health, and infectious diseases using their extensive experience from Haiti and Rwanda, where the Partners in Health has had a deep commitment and involvement for many years. Tracey Koehlmoos, Shahela Anwar, and Alejandro Cravioto focus on the neglected and severely neglected diseases and emerging issues such as climate change from their long, valuable experiences in Bangladesh. Nisha Garg focuses on neglected diseases and access to medicines through the five-pronged approach articulated by the WHO. Robert Martin and Scott Barnhart expertly address the long-neglected aspects of global laboratory systems development, with a particular focus on sub-Saharan Africa. Hadley Herbert, Adnan Hyder, and Alexander Butchart discuss one of the most neglected areas of global health: that of injury and violence, which rank among the ten leading causes of death worldwide. Ilona Kickbusch and Paulo Buss address the emerging important discipline of global health diplomacy and its application to peace and health. Cordelia Coltart, Mary Black, and Phillipa Easterbrook discuss the long tradition and involvement of the United Kingdom and its universities in global health, a wonderful addition to the discussion by Nigel Crisp in the current volume. Walter Patrick, a leader in global health for over two decades, shares his observations and perspectives on networking using the example of the Academic Consortia and Partnerships for Health in the Asia Pacific Region. Joel G. Breman, Kenneth Bridbord, Linda E. Kupfer, and Roger I. Glass discuss in great detail the historical, current, and future role of the Fogarty International
Center of the National Institutes of Health in training the global health workforce in the fields of infectious and chronic conditions; and Rossana Peeling and Solomon Nwako bring a fresh perspective on the complex issues of diagnostics research and drug innovations and applications to global health in the new millennium.

Previous volumes of the Clinics on Global Health were dedicated to great leaders in global health, such as Halfden Mahler, MD, of WHO, who led the Health for All Movement; His Highness the Aga Khan, whose health, development, education, and resource programs dot some of the most unforgiving terrain in the world; Mother Theresa, who worked in the slums of Calcutta and inspired so many; and “globalists” such as Carl Taylor, MD, Jack Bryant, MD, and Victor Neufeld, MD.

In keeping with that spirit, this volume is dedicated to Haile Debas, MD, a friend and fellow African, who is currently the Executive Director of the UCSF Global Health Sciences, Director of the UC Global Health Institute, and Chair of the Consortium of Universities for Global Health. Dr Debas established the Bellagio Essential Surgery Group (a consortium of 12 African countries, the WHO, and universities in the US and Europe), and the partnerships between UCSF and the Muhibili University Allied Health Sciences in Dar es Salaam, Tanzania. The Professor Haile Debas Centre for Health Professions Education at Muhibili University was inaugurated in his honor. He has co-chaired the Committee on Antiretroviral Drug Use in Resource-Constrained Settings, Board on Global Health, and is author of the report Scaling Up Treatment for the Global AIDS Pandemic: Challenges and Opportunities published by the committee. He chaired the Biological Sciences and Engineering Committee at the African Institute of Science and Technology of the Nelson Mandela Institution. In addition, he serves on several advisory committees to the Institute of Medicine and NIH. Recently he led UCSF in the signing of the Memorandum of Understanding with The Aga Khan University and serves as a trustee on its Board. His vision transcends boundaries, and that has facilitated the founding of the Global Health Institute at UCSF that serves the 10 UC campuses and co-ordinates their activities in several arenas of global health. Haile above all is a wonderful human being.

Last but not least we wish to thank Dr Robert Moellering, a leader in both clinical and investigative aspects of infectious disease and the Consulting Editor of the Infectious Disease Clinics of North America, for inviting me again to bring together the current influential opinion makers in global health, global health education, infectious disease, and public health. We also wish to convey our sincerest thanks to Barbara Cohen-Kligerman and all her staff for the excellent and timely help and wisdom they provided to me and the other authors.

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