CHAPTER 20
Global Health Careers

Global health is a multidisciplinary field that draws on knowledge of the sciences and social sciences, skills in a diversity of clinical and nonclinical practice areas, and aptitudes in cross-cultural communication, interprofessionalism, and other soft skills. There are many educational tracks and career pathways that can prepare people to make the world a healthier home for current and future generations.

▶ 20.1 Career Pathways in Global Health

There are many pathways to a career in global health. A diversity of professionals are involved in delivering health-related services to individuals and communities: physicians and surgeons, nurses, dentists, psychologists, therapists, emergency medical technicians, and clinicians with expertise in other practice areas as well as public health workers, social workers, emergency management professionals, program administrators, project managers, and many others. These practitioners and their colleagues may work in or near their home communities to improve access to quality medical, psychological, and other health-related services, or they may work in distant locations to support the goals of global public health partnerships. Health sector experts often work alongside people with expertise in other aspects of international and community development to support socioeconomic progress and environmental health. Another set of global health professionals works on the financing, management, and administration of global health policies and plans. These specialists apply their expertise in public policy, business, communication, law, and other professional practice areas to work at government agencies, foundations and other nonprofit organizations, for-profit corporations, and other groups. Many of the people who serve in leadership roles in global health today were leaders in other fields before choosing to apply their talents to global health issues.

Global health also overlaps with many lines of work that are not specifically focused on financing and implementing global health interventions. Scientists working at scales from the molecular level to the ecosystem level and beyond are making discoveries that will inform future global health activities. Engineers are inventing new tools for global health. Social scientists are providing insights about human and organizational behaviors and social systems. Policymakers in many fields are becoming more aware of the links between health and all other policy areas, and they are incorporating health promotion strategies into their recommendations.[1] Work that advances any of the Sustainable Development Goals (SDGs) can be considered

to be promoting global health advancement. By this standard, anyone working in education, social work, politics, economic development, international relations, security, or other socio-political fields; in technology, agriculture, energy, transportation, sanitation, or other environmental resource sectors; or in nearly any other area might be contributing to global health.[2]

▶ 20.2 Global Health Education

The diversity of professional pathways within global health means that there are many educational tracks that can lead to a global health career. Global health is a **multidisciplinary** field in which people from diverse areas of academic study pool their expertise to solve challenging problems. No particular undergraduate major or graduate program is necessary for entering or advancing in the global health workforce. However, all global health professionals are expected to be knowledgeable about the global burden of disease, the effects of globalization on health and health care, and the social and environmental determinants of health (**FIGURE 20–1**).[3]

The Council on Education for Public Health (CEPH), which accredits public health educational programs, has identified several

Domain		Competency
Global burden of disease	1a	Describe the major causes of morbidity and mortality around the world, and how the risk for disease varies with regions.
	1b	Describe major public health efforts to reduce disparities in global health.
	1c	Validate the health status of populations using available data.
Globalization of health and health care	2a	Describe different national models or health systems for provision of health care and their respective effects on health and healthcare expenditure.
	2b	Describe how global trends in healthcare practice, commerce and culture, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and internationally.
	2c	Describe how travel and trade contribute to the spread of communicable and chronic diseases.
	2d	Describe general trends and influences in the global availability and movement of healthcare workers.
Social and environmental determinants of health	3a	Describe how cultural context influences perceptions of health and disease.
	3b	List major social and economic determinants of health and their effects on the access to and the quality of health services and on differences in morbidity and mortality between and within countries.
	3c	Describe the relationship between access to and quality of water, sanitation, food, and air on individual and population health.

FIGURE 20–1 Key global health knowledge domains from the Consortium of Universities for Global Health.

competencies that are prerequisites for graduate education in public health (**FIGURE 20–2**).[4] All of these general public health knowledge areas are also relevant to future global health professionals. They also highlight how coursework across a variety of disciplines—health-specific courses plus courses in statistics, environmental science, biology, psychology, sociology, political science, and economics—is valuable for students aspiring to work in the global health arena. For example, a course on **medical anthropology** will provide an understanding of the global diversity of perspectives on health, disease, illness, sickness, and healing, and a course on **public policy** will explain the processes for developing, implementing, funding, enforcing, administering, and evaluating laws, regulations, policies, and government-sponsored programs.

A **liberal arts** education—that is, a program of study that includes exposure to the humanities, social sciences, and sciences—is a good foundation for understanding the social-behavioral and biological-environmental contributors to health and disease. (The general education requirements at most colleges and universities in the United States provide broad exposure to the liberal arts that complements focused studies in a particular major or concentration area.) However, there is no particular checklist of courses that must be taken to be on track for a global health career. Studies within a particular major or during advanced professional training can be supplemented with electives that fill gaps in knowledge and enhance skills in the particular area of expertise that the learner intends to apply to global health work.

Profession and Science of Public Health	Factors Related to Human Health
Explain public health history, philosophy, and values.	Explain the effects of environmental factors on a population's health.
Identify the core functions and essential services of public health.	Explain the biological and genetic factors that affect a population's health.
Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health.	Explain the behavioral and psychological factors that affect a population's health.
List major causes and trends of morbidity and mortality in populations.	Explain the social, political, and economic determinants of health and how they contribute to population health and health inequities.
Discuss the science of prevention in population health.	Explain how globalization affects the global burden of disease.
Explain the critical importance of evidence in advancing public health knowledge.	Explain an ecological perspective on the connections among human health, animal health, and ecosystem health.

FIGURE 20–2 Foundational public health knowledge identified by the Council on Education for Public Health.
Data from *Accreditation criteria: Schools of public health and public health programs*. Silver Spring MD: Council on Education for Public Health (CEPH); 2016.

One of the SDG targets calls for steps to "ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development" (SDG 4.7).[5] These educational goals apply to all levels of the educational system, from primary school through advanced degrees, and they also align with the diversity of areas in which global health professionals must develop competencies.

Successful global health careers are built on both technical aptitudes and on **soft skills**, the personal, social, emotional, and communication skills that equip people to productively contribute to and lead work teams and other collaborative activities. One of the soft skills valued in global health is **interprofessionalism**, the ability to work with and communicate well with colleagues in different clinical and nonclinical practice areas in order to achieve a shared goal. Global health also values compassion, empathy, and a sense of solidarity with other human beings, whether those people live next door or on the other side of the planet.[6] Soft skills that are valued across work sectors include communication, courtesy, flexibility, integrity, positive attitude, professionalism, responsibility, social skills, teamwork, and work ethic.[7] For global health careers, aptitudes in capacity strengthening; collaboration, partnering, and communication; ethical reasoning and professional practices; health equity and social justice; program management; sociocultural and political awareness; and strategic analysis have been identified as critical both by the Association of Schools and Programs of Public Health (ASPPH),[8] which is the organization for institutions with public health programs accredited by CEPH,[9] and by the Consortium of Universities for Global Health (CUGH), which is a professional network for medical schools and other academic health programs.[3]

▶ 20.3 Experiential Learning in Global Health

Being proficient in any professional discipline requires a mix of knowledge, skills, and abilities (KSAs). After foundational knowledge in a field has been acquired, skills and abilities can be developed through applied learning experiences. In global health, the typical options for gaining experience include service-learning courses, study abroad (including international clinical electives), internships, and volunteering with diverse local populations or in international settings.[10] Fellowships and other designated career development programs may provide additional opportunities for structured learning experiences. Employees (and volunteers) at any stage of their careers can seek mentorship and complete continuing education activities that expand their skill sets and competencies.

The best experiential learning opportunities in global health are ones that are equally beneficial to the learner, the host organization, and the host community.[11] This requires mutual respect and assurances that none of the parties will be exploited, undermined, or harmed.[12] For example, mutual respect means that volunteers should not engage in practices that are beyond the scope of their abilities. A student without hands-on medical training at home should not provide clinical care in a foreign country, and a student without supervised counseling experience at home should not provide mental health care in a foreign country. **Voluntourism**, or volunteer tourism, is travel for the purpose of volunteering, and it usually combines vacation with international service.[13] Short-term volunteer experiences offer little time to build relationships with local partners, so the participants must be especially sensitive to local norms and committed to supporting local practitioners and their trainees rather than displacing them or competing with them.[14]

One of the goals of experiential learning is to gain **cultural competency**, the ability to communicate effectively with people from different cultures and backgrounds.[15] Cross-cultural communication is about much more than language skills. Cultural competency encompasses awareness of one's own cultural rules and biases, knowledge about other cultures, skills in verbal and nonverbal communication, and characteristics like empathy, curiosity, and openness that enable effective communication.[16] These skills are valuable not only for working on multidisciplinary international teams but also for enhancing practice within one's home community and workplace.

▶ 20.4 Global Health Matters

As global health has matured as a field of study, research, and application, several activities have emerged as important global health functions, including protecting the world from dangerous infectious diseases, saving the lives of children and their mothers, and promoting global security and economic growth by finding cost-efficient solutions for expensive health issues (**FIGURE 20–3**).[17] Global health interventions could make unparalleled improvements in the lives of billions of people during the 21st century by promoting health, preventing disease and disability, improving health standards, reducing health disparities, tackling the health and security problems associated with extreme poverty, and bringing together people from across the world as equals to address shared challenges.

A brief summary of the core messages of *Introduction to Global Health* highlights the many reasons why global health matters and why careers and volunteer work that contribute to global health can be very meaningful. Global health is a dynamic field, and health interventions are effective in preventing adverse health outcomes and promoting

transitions toward improved population health (Chapter 1). International trade and other globalization processes have increased the risk of pandemics while also creating opportunities to work together to address shared concerns and enhance security.

The SDGs provide a global framework for prioritizing investments in poverty reduction and other outcomes that will reduce global health disparities and promote global security. Health metrics are a tool for evaluating population health needs, selecting cost-effective health interventions, and tracking progress toward achieving goals (Chapter 2). Improvements in economics, education, employment opportunities, equity, and governance yield benefits for population health (Chapter 3). Improvements in access to clean drinking water, toilets, clean energy, unpolluted air, safe jobs, and planned cities, and the adoption of sustainable practices, enable healthier human living and a healthier planet (Chapter 4). Health and human rights are inextricably connected, and populations are healthier when everyone has access to the tools for health (Chapter 5). Personal and public health activities are financed by a diversity of governmental, private, and corporate entities (Chapter 6), and global health interventions are implemented by people working for governmental and intergovernmental agencies, nonprofit organizations, and for-profit corporations who apply their expertise to solving complex challenges (Chapter 7). A wide range of educational and professional pathways can lead to a career in global health.

A diverse set of health conditions can be considered to fall under the umbrella of global health, including HIV, tuberculosis, and antimicrobial resistance (Chapter 8); diarrheal diseases, pneumonia, influenza, and vaccine-preventable infections (Chapter 9); malaria, other vectorborne diseases, and emerging infectious diseases (Chapter 10); reproductive and sexual health (Chapter 11); undernutrition, overnutrition, and food safety (Chapter 12); cancer (Chapter 13);

Priority Area		Recommendation
Secure against global threats	Achieve global health security	Improve international emergency response coordination.
		Combat antimicrobial resistance.
		Build public health capacity in low- and middle-income countries.
	Address continuous threats	Envision the next generation of the President's Emergency Plan for AIDS Relief (PEPFAR).
		Confront the threat of tuberculosis.
		Sustain progress toward malaria elimination.
Enhance productivity and economic growth	Invest in women's and children's health	Improve survival in women and children.
		Ensure healthy and productive lives for women and children.
	Promote cardiovascular health and prevent cancer	Promote cardiovascular health and prevent cancer.
Maximize returns on investments	Catalyze innovation	Accelerate the development of medical products.
		Improve digital health infrastructure.
	Smart financing strategies	Transition investments toward global public goods.
		Optimize resources through smart financing.
	Global health leadership	Commit to continued global health leadership.

FIGURE 20–3 Recommended actions from the National Academies of Sciences, Engineering, and Medicine's Committee on Global Health and the Future of the United States.

Data from National Academies of Sciences, Engineering, and Medicine. *Global health and the future role of the United States*. Washington: The National Academies Press; 2017.

cardiovascular diseases (Chapter 14); chronic respiratory diseases and diabetes (Chapter 15); mental health and substance use disorders (Chapter 16); and injuries (Chapter 17). While the health profiles of low-income and high-income populations can be quite different when comparing countries or comparing subpopulations within the same country, there are also many shared socioeconomic, environmental, and health concerns.[18] Opportunities to improve the health status of individuals, communities, and the world exist throughout the

life span, from the prenatal period (Chapter 18) through older adulthood (Chapter 19). Everyone can be involved in making communities all over the world healthier places for current and future generations.

▶ References

1. *Health in All Policies (HiAP): Framework for country action*. Geneva: WHO; 2014.

2. Hughes BB, Kuhn R, Peterson CM, Rothman DS, Solórzano JR. *Patterns of potential human progress (volume 3). Improving global health: Forecasting the next 50 years*. Denver: Pardee Center for International Futures; 2011.

3. Jogerst K, Callender B, Adams V, et al. Identifying interprofessional global health competencies for 21st-century health professionals. *Ann Global Health*. 2015;81:239–47.

4. *Accreditation criteria: Schools of public health and public health programs*. Silver Spring MD: Council on Education for Public Health (CEPH); 2016.

5. United Nations. *Transforming our world: The 2030 Agenda for Sustainable Development*. New York: UN; 2015.

6. Benatar SR, Daar AS, Singer PA. Global health ethics: The rationale for mutual caring. *Int Affairs*. 2003;79:107–38.

7. Robles MM. Executive perceptions of the top 10 soft skills needed in today's workplace. *Bus Commun Q*. 2012;75:453–65.

8. *Global health competency model (final version 1.1)*. Washington DC: ASPPH; 2011.

9. Calhoun JG, Spencer HC, Buekens P. Competencies for global health graduate education. *Infect Dis Clin North Am*. 2011;25:575–92.

10. Arya AN, Evert J, eds. *Global health experiential education: From theory to practice*. New York: Routledge; 2018.

11. Stone GS, Olson KR. The ethics of medical volunteerism. *Med Clin North Am*. 2016;100:237–46.

12. Melby MK, Loh LC, Evert J, Prater C, Lin H, Khan OA. Beyond medical "missions" to impact-drive short-term experiences in global health (STEGHs): Ethical principles to optimize community benefit and learner experience. *Acad Med*. 2016;91:633–8.

13. Lasker JN. *Hoping to help: The promises and pitfalls of global health volunteering*. Ithaca NY: Cornell University Press; 2016.

14. Loh LC, Cherniak W, Dreifuss BA, Dacso MM, Lin HC, Evert J. Short term global health experiences and local partnership models: A framework. *Global Health*. 2015;11:50.

15. Napier AD, Ancarno C, Butler B, et al. Culture and health. *Lancet*. 2014;384:1607–39.

16. *Intercultural knowledge and competence VALUE rubric*. Washington DC: Association of American Colleges and Universities (AAC&U); 2009.

17. *Global health and the future role of the United States*. Washington DC: The National Academies Press; 2017.

18. Frenk J, Gómez-Dantés O, Moon S. From sovereignty to solidarity: A renewed concept of global health for an era of complex interdependence. *Lancet*. 2014;383:94–7.