

Overview of the Global Health PRN

Established in 2015, the Global Health Practice and Research Network (PRN) is one of ACCP's newest PRNs. It was created out of a need to provide clinical pharmacists, trainees, and researchers with a single network to address global health concerns, reduce disparities in the delivery of pharmacy services on an international level, and learn from the successes and mistakes of others through education, research, and idea sharing.

Global Health PRN members consist of pharmacists from diverse clinical backgrounds who are passionate about global health disparities and seek to influence ACCP policy from the clinician level. The PRN also serves to facilitate recruitment for various mission trips around the world.

Opportunities for Residents, Fellows, and Students

The Global Health PRN welcomes trainee involvement in a variety of ways, including through service on its committees, including the Programming, Member Engagement, and Scholarship committees.

The Global Health PRN has multiple student liaisons for social media who are responsible for posting to its social media pages. The PRN also encourages trainees to submit items for posting to its social media pages, including Facebook (https://www.facebook.com/pg/ACCPglobalhealthPRN/about/?ref=page_internal), Instagram (@ACCPGlobal), Twitter (@ACCPGlobal), and the PRN e-mail list (global@prn.accp.com).

Topics can include international opportunities, information on organizations/meetings relevant to global health, articles/news updates related to global health, and resources for overseas clinical experiences. Trainees also have the opportunity to present their global health research at the annual Global Health PRN meeting and be selected for a spotlight article in the ACCP Global Health PRN newsletter. Poster rounds are conducted by PRN volunteers during the ACCP Annual Meeting to highlight the work of all PRN members, including students, residents, and fellows. An upcoming project for the PRN will be to put together a resource of postgraduate training opportunities with global health components, given that no such list currently exists for students with these interests.

Noncommunicable Diseases in Global Health

Noncommunicable diseases (NCDs) are the leading cause of death worldwide (70% of all deaths globally).¹ According to the World Health Organization (WHO), 80% of people who died of NCDs prematurely (defined as age 30–69) live in low- and middle-income countries (LMICs). The World Economic Forum projects \$21.3 trillion in losses over the next 2 decades in developing countries.² This can be the result of health care costs as well as the loss of productivity, particularly in the younger population.³ The most prevalent NCDs contributing to the mortality rate are cardiovascular diseases (CVDs), cancers, respiratory diseases, and diabetes mellitus (DM).¹

Risk factors, including higher tobacco use, excessive alcohol consumption, dietary concerns (high sugar, fat, and salt intake), and physical inactivity, are major concerns for developing these NCDs in LMICs.³ Cultural variation occurs across regions, including rates of dietary salt intake, use of biomass/fuels for cooking, and use of chewing tobacco. DM rates are

rapidly increasing in Central America, Africa, the Middle East, and Oceania. In LMICs, the deaths from and rates of cancer, diabetes, and stroke are increasing more quickly than the communicable diseases are decreasing, placing a huge burden on an already underresourced health care system.

From a medication perspective, medication purchases are often an out-of-pocket costs for families or communities.² Universal access to and quality of medications also vary between LMICs.⁴ Generic, multidrug combinations are often unavailable in the primary care setting, or the primary care setting has traditionally focused on prevalent, communicable diseases (e.g., HIV/AIDS).⁴⁻⁶ In addition, guideline-driven therapy is lacking, and medications are often out-of-stock in the public sector. Moreover, even when medications are available in the private sector, they tend to cost significantly more.⁷ For example, in India, where the leading cause of death is CVD, less than one-sixth of patients were receiving an antiplatelet agent for secondary CVD prevention, as reported in a 2006 study.⁸ Insulin, inhaled medications for asthma, and off-patent cancer chemotherapies remain unavailable in many parts of the world and are not currently included in many countries' WHO Model Lists of Essential Medicines. The cost-effectiveness of vaccinations against hepatitis B and human papillomavirus can reduce the global rates of liver cancer and cervical cancer, but these vaccinations are currently underused and underresourced.

From a global policy perspective, NCDs were largely ignored until the recent development of the 2015 United Nations Sustainable Development Goals (SDGs).^{3,4,9} Before this, the Millennium Development Goals focused on preventing and treating communicable diseases. The 2015 SDGs call for a reduction in NCD mortality by one-third and for support in research and vaccine development for NCDs.

NCDs in the developing world can be addressed through effective prevention strategies that have worked well in high-income countries, like the United States, but that have not been widely used or implemented in LMICs. According to an independent task force from the Council on Foreign Relations, the United States is poised to assist in noncommunicable global health solutions and can make differences both now and soon as a leader or as part of a shared collaboration (see Table 1).²

Table 1. Areas for U.S. Government Support with Noncommunicable Diseases

U.S. Leadership – Differences Now	U.S. Leadership – Differences Soon	U.S. Shared Collaboration
Primary and secondary prevention of CVD	Frugal diagnostic and curative strategies: Leukemia and breast cancers	Population-based strategies: Reduce poor diets and nutrition, physical inactivity, obesity
Tobacco control	Diabetes management in low-income settings	Mental health integration with primary care
Hepatitis B vaccine for liver cancer prevention		Low-cost chronic care: Programs and technology
HPV vaccine and screening for cervical cancer		

CVD = cardiovascular disease; HPV = human papillomavirus.

Information from: Daniels ME Jr, Donilon TE, Bollyky TJ, et al. The Emerging Global Health Crisis: Noncommunicable Disease in Low- and Middle-Income Countries. Council on Foreign Relations Press, December 2014. Available at <https://www.cfr.org/report/emerging-global-health-crisis>. Accessed March 21, 2018.

Progress has been made in treating NCDs in LMICs alone and with collaborations between LMICs and high-income countries, with both private and public sector funding.² High-income countries can also learn about treating NCDs through LMIC initiatives. Improvements in nutrition through farming and urban planning have been developed, which may assist LMICs with better nutrition as well as assist high-income countries with obesity concerns. Integrating mental health through primary care offices is effective, but much work remains in this area to reduce the stigma of mental health worldwide and provide appropriate training to health care workers and others. Technology, especially through innovation in the private sector, has also been promising, with improvements made in rural medicine through novel, low-cost techniques and mHealth. However, studies of NCDs vary with respect to research methodologies and geographic location. Finally, access to medications through the WHO Model Lists of Essential Medicines, though improving, remains variable throughout the world.

References

1. World Health Organization (WHO). Noncommunicable Diseases. Available at www.who.int/mediacentre/factsheets/fs355/en/. Accessed March 21, 2018.
2. Daniels ME Jr, Donilon TE, Bollyky TJ, et al. The Emerging Global Health Crisis: Noncommunicable Disease in Low- and Middle-Income Countries. Council on Foreign Relations Press, December 2014. Available at <https://www.cfr.org/report/emerging-global-health-crisis>. Accessed March 21, 2018.
3. Hunter DJ, Reddy KS. Noncommunicable diseases. *N Engl J Med* 2013;369:1336-43.
4. Beaglehole R, Bonita R, Horton R, et al. Priority actions for the non-communicable disease crisis. *Lancet* 2011;377:47.
5. Sacco RL, Smith SC, Shurin S, et al. Accelerating progress on non-communicable disease. *Lancet* 2013;382:e4-e5.

6. Perkovic V, Huxley R, Wu Y, et al. The burden of blood pressure-related disease: a neglected priority for global health. *Hypertension* 2007;50:991-7.
7. Joshi R, Jan S, Wu Y, et al. Global inequalities in access to cardiovascular care: our greatest challenge. *J Am Coll Cardiol* 2008;23:1817-25.
8. Joshi R, Cardona M, Iyengar S, et al. Chronic diseases now a leading cause of death in rural India – mortality data from the Andhra Pradesh Rural Health Initiative. *Int J Epidemiol* 2006;35:1522-9.
9. United Nations Development Programme (UNDP). Sustainable Development Goals. Available at www.undp.org/content/undp/en/home/sustainable-development-goals.html. Accessed March 21, 2018.