



## Recommended Curriculum Guidelines for Family Medicine Residents

# Global Health

*This document was endorsed by the American Academy of Family Physicians (AAFP).*

### Introduction

This Curriculum Guideline defines a recommended training strategy and priorities for family medicine residents. Attitudes, behaviors, knowledge, and skills that are critical to family medicine should be attained through longitudinal experience that promotes educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME), [www.acgme.org](http://www.acgme.org). The family medicine curriculum must include structured experience in several specified areas. Much of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center, although additional experience gained in various other settings (e.g., an inpatient setting, a patient's home, a long-term care facility, the emergency department, the community) is critical for well-rounded residency training. The residents should be able to develop a skillset and apply their skills appropriately to all patient care settings.

Structured didactic lectures, conferences, journal clubs, and workshops must be included in the curriculum to supplement experiential learning with an emphasis on outcomes-oriented, evidence-based studies that delineate common diseases affecting patients of all ages. Patient-centered care, and targeted techniques of health promotion and disease prevention are hallmarks of family medicine and should be integrated in all settings. Appropriate referral patterns, transitions of care, and the provision of cost-effective care should also be part of the curriculum.

Program requirements specific to family medicine residencies may be found on the ACGME website. Current AAFP Curriculum Guidelines may be found online at [www.aafp.org/cg](http://www.aafp.org/cg). These guidelines are periodically updated and endorsed by the AAFP, and in many instances, other specialty societies as indicated on each guideline.

Each residency program is responsible for its own curriculum. **This guideline provides a useful strategy to help residency programs form their curricula for educating family physicians.**

## **Preamble**

Global health continues to evolve as an academic discipline with increasingly diverse areas of concentration and training available for family physicians. Examples of such areas include, but are not limited to public and community health, clinical training and service, research, and international trainee and faculty development. Developing curricula and competencies is challenging because there is no universally accepted definition of global health, nor any current, definitive standard of what global health education should entail. Some authors define global health as the universal state of public health around the world, irrespective of national borders. This framework emphasizes the need to advance health equity for all vulnerable populations through addressing disparities of care and improving social determinants of health (SDoH). Others have a more targeted interpretation of global health, focusing on health issues and disparities that primarily affect populations of low- and middle-income countries (LMICs), rather than of high-income countries, often with heightened focus on clinical knowledge, skills, and improving medical education. While there is much overlap between these two frameworks, they can result in different emphases within medical education.

What is clear is that any global health curriculum should expand the learner's understanding and practice of public health and primary care to include the global community. It should provide insight into cultural and religious factors affecting health and health care of both individuals and communities, including SDoH and resource availability. An educational emphasis should also address the unique clinical knowledge, skills, and evidence-based interventions specific to cross-cultural populations, including physical and mental health concerns. Attention should be focused on refugee, immigrant, asylee, displaced, international adoptee, and other minority populations, as well as victims of trafficking and exploitation. Given our increasingly globalized world, knowledge of common global diseases and travel medicine principles for those traveling and working abroad is equally important. On a system-based level, a family physician should be able to identify the unique roles of the physician, the larger health workforce, and health care systems to provide the best possible resource-appropriate care. Finally, it is imperative for residency programs to create a learning environment that fosters attitudes and behaviors that promote life-long learning to continuously improve health for all individuals and populations.

The second framework of global health, cited above, highlights instruction on select causes of health disparities in LMIC settings. This includes the diagnosis and treatment of both communicable and non-communicable diseases in resource-limited settings.

Education in global health should be informed by the individual learner's global health experiences and tailored to their needs, interests, and trajectory. This would entail

expanded knowledge in public health, research, clinical knowledge, as well as surgical skills.

Basic knowledge of global health is necessary for all learners, irrespective of their personal interests in global health, including but not limited to ethical principles of global health; social and global determinants of health; cultural humility; cross-cultural communication, including working with translators and interpreters; travel medicine; and refugee and immigrant health. However, some competencies, attitudes, skills, and knowledge may be more relevant for learners with heightened global health interest.

Specialized priorities may also focus on various areas of concentration and resources of the program, as well as on the learner's interests. Other assets may be institutional partnerships and formal or informal mentorship availability.

Specialized curriculum for global public health/community health could prioritize population or community-based study; ethical principles of global public health; preventive care application; understanding the effects of migration and SDoH; understanding key global health stakeholders; and knowledge of local culture, health care structures, and medical terminology.

Specialized curriculum for global health research could prioritize focusing on interests and priorities of host site; community-based participatory research methods; knowledge of research procedures of host and sending institutions, including institutional review boards (IRBs); appropriate training in research ethics; international standards of authorship of publications; and engaging multiple institutions in a collaborative approach.

Specialized curriculum for global clinical medicine, such as at an LMIC district hospital level, could prioritize primary care in resource-limited settings; clinical tropical medicine; various life support courses (Advanced Life Support in Obstetrics® [ALSO®] and Global ALSO®, Neonatal Resuscitation Program® [NRP®], Pediatric Advanced Life Support [PALS], Advanced Cardiovascular Life Support [ACLS], Advanced Trauma Life Support [ATLS®]); ultrasonography skills; obstetrics skills; basic trauma and orthopedic management in resource-limited settings; and basic general surgical skills—depending on the needs and capabilities of the partnering site and interest of the learner. Furthermore, cross-cultural medical education and faculty development may be helpful if there are learners within that environment.

Specialized curriculum for refugee and immigrant health could prioritize effectively working with translators and interpreters; learning about local and regional disease processes specific to refugees and immigrants; medicolegal elements of refugee and immigrant care and their impact on health; cultural humility and cross-cultural communication; and trauma-informed care.

## **Competencies**

At the completion of residency training, a family medicine resident should be able to:

- Provide cross-cultural patient care, using appropriate verbal and non-verbal skills,

cultural sensitivity and humility, and high-quality translation and interpretation services (Patient Care, Communication)

- Provide appropriate patient care for those who have lived in other countries, informed by knowledge of global disease patterns, utilizing resources that include local, state, federal, and international agencies (Patient Care, Systems-based Practice, Practice-based Learning and Improvement)
- Employ and utilize resource-appropriate, evidence-based ancillary studies and procedures to address patient symptoms based on knowledge of global disease patterns (Patient Care)
- Develop treatment and follow-up plans with sensitivity to the medical, psychological, cultural, religious, socioeconomical, and health literacy contexts of cross-cultural patients (Patient Care)
- Counsel and educate patients and family members in a respectful manner appropriate to their culture, including delivery of uncertain diagnoses, bad news, and end-of-life discussions (Patient Care, Communication)
- Deliver effective health care with intra-disciplinary teams in cross-cultural settings, including engagement with local physicians, case managers, social workers, and nurses (Patient Care)
- Identify needs and provide support to local health care systems and personnel with cultural humility (Professionalism, Communication)
- Utilize health registry information to identify patients of minority, marginalized, or cross-cultural backgrounds, and tailor plans of care to improve health outcomes (Practice-based Learning and Improvement)
- Demonstrate awareness of the difference of structure and function of health care systems within LMICs, including governmental, non-governmental, and faith-based health care systems that contribute to the provision of health care (Systems-based Practice)
- Discuss the issues of SDoH, health equity, social justice, and governmental policy in terms of their impact on the distribution of health services in low-resource settings within the United States and internationally (Systems-based Practice)
- Assess the health care and public health needs of communities, and make evidence-based recommendations with regard to resource allocation and population health services (Medical Knowledge, Patient Care, Systems-based Practice and Practice-based Learning and Improvement)
- Recognize personal practice limitations and seek consultation with other health care professionals and systems resources to provide optimal care within a global context (Practice-based Learning and Improvement, Systems-based Practice)

## **Attitudes**

The resident should demonstrate attitudes that encompass:

- Recognition of the impact of culture, religious, and political structures on the health and health care of individuals, their community, and society at-large
- Recognition of personal biases and stereotypes that affect health care delivery in international settings or with patients of cross-cultural backgrounds
- Acceptance of the need to develop cultural humility within cross-cultural contexts and appreciation of patients' beliefs, values, and practices when engaging in shared decision making
- Value of continued accessibility and accountability with regard to the sustainability of health care delivery in international settings
- Embrace the need to balance compassion and humanism with realism and practicality in health care delivery models in various global or resource-limited settings
- Intentional integration of self-care and recognition of personal limitations within cross-cultural and global contexts, as well as the recognition of the importance of self-reflection and reflection with one's local and international team
- Commitment to life-long learning with ongoing education and innovation in the field of global health
- Desire to advocate for health care delivery systems that improve the health of the patient population

## **Knowledge**

In the appropriate setting, the resident should demonstrate the ability to apply knowledge of:

- Socioeconomic, environmental, and political factors as determinants of health and disease, including clean water supply, food and housing security, vector control, sanitation, industrial pollution, climate change, and natural disasters
- United Nations Universal Declaration on Human Rights, Declaration of Alma-Ata, and the 2030 Sustainable Development Goals, including goal 3 targets and indicators related to health and well-being
- Epidemiology and major causes of infant, child, and maternal mortality in LMICs
- Physical and mental health issues specific to immigrant, migrant, internally displaced, international adoptee and refugee populations (e.g., psychological impact of transitions, trauma, undocumented status, health literacy and poverty)
- Social, environmental, geographic, and telecommunication factors influencing the ability of the health care system to mitigate chronic disease, and recognize and mitigate ongoing epidemics or emergent infectious diseases
- Multifaceted cultural approaches to health, healing, disease, death, and dying
- Services and technology available for specialized medical care, diagnosis, treatment, and rehabilitation in international or resource-limited settings

- Presentation, diagnosis, management, and prevention strategies of the most common infectious diseases in resource-limited settings, based on local and international guidelines.
- Vaccine-preventable diseases and unique immunizations available in developing countries, as well as current international vaccine policies and recommendations
- Disease consequences specifically due to regional and genetic influences (e.g., glucose-6-phosphate dehydrogenase [G6PD] deficiency and sickle cell diseases with malaria)
- Availability and safety of medications in international settings and the current World Health Organization [WHO] Model List of Essential Medicines
- Unique health care delivery methodology and outcomes data for specific international settings
- Resources and issues pertinent to travel medicine, including health risk prevention and health maintenance specific to international travelers
- Non-medical issues (e.g., political, personal security, environmental, and climate factors) unique to international travel and tourism
- Specific safety factors, legal considerations, and personal freedoms that might be handled differently when taking part in health care delivery in an international setting (e.g., conflict zones, epidemics)
- Financial aspects of providing health care in an international or resource-limited setting, and a patient-centered and cost-saving approach to diagnostic tests and treatments

## **Skills**

In the appropriate setting, the resident should demonstrate the ability to independently perform or appropriately refer:

- Basic medical care in a cross-cultural setting with sensitivity to cultural and religious factors, including an appropriate treatment plan and follow-up care
- Clinical skills and available diagnostic procedures to appropriately diagnose and treat patients in a limited-resource context
- Evidence-based resources and tools for use in limited-resource health care settings
- Mental health issues, especially with populations affected by marginalization, displacement, domestic violence, human trafficking and sexual exploitation—advocating for the patient's well-being across cultural or other barriers
- Communication with patients and caregivers using interpretation and translation services in a cross-cultural setting
- Communication with physicians and other health professionals in cross-cultural setting, in order to share knowledge and discuss management of patients

- Advocating for the patient, family, community, and society to improve health outcomes for marginalized populations
- Skills working in limited-resource contexts, and similarly work towards sustainable knowledge transfer and skill development for health professionals who are from and working in those settings

## Implementation

Implementation of this curriculum should ideally include both focused and longitudinal experiences throughout residency. Examples of didactic training include lecture series, journal and book clubs, global health webinars, and other sources of model curricula through professional organizations (see Resources section). Case-based teaching in clinic, on rounds, or in large-group conferences; problem-based learning; and small group discussion may focus on patients of international background, including both national and international guidelines and standards of care, as applicable.

Domestic medical electives (DMEs) can be an excellent resource for teaching the principles of global health in underserved areas and can include caring for patients who are Native Americans, immigrants, asylum-seekers, refugees, or victims of trafficking. These not only imitate the cross-cultural, low-resource health care experiences found abroad, but are valuable in their own right. These experiences typically reveal the disparities of health care and need for advocacy among vulnerable and marginalized populations in the US. Clinical experiences in the context of interdisciplinary team-based care and clinical rotations to domestic rural or other resource-limited, underserved areas aid in developing the mindset and skills needed by all family medicine physicians.

When possible, the curriculum should include opportunities to experience health care delivery abroad. These experiences should be offered to residents throughout their residency experience, as time permits. Residents should be informed of opportunities for how to structure international experiences during residency orientation. International partnering sites for international medical electives (IMEs) should embody the principles and practices of safe, ethical, and sustainable rotations.

These IMEs should:

- Provide effective predeparture training for residents prior to their international experiences in terms of personal health, travel safety, and ethical practice overseas
- Provide adequate supervision and mentorship during the rotation with routine communication between the overseas physicians and U.S.-based faculty
- Ideally establish longitudinal partnerships that are mutually beneficial in promoting better understanding of the other's respective needs, sustainable and patient-centered learning opportunities, and pursuing bilateral exchanges and the sharing of knowledge and skills

- Evaluate outcomes based on competencies and learning objectives which may include multi-source evaluations from host communities (360-degree evaluations), self-reflection, scholarly projects, or standardized testing, and should include the evaluation of impact on partners and host communities

## Resources

### General Textbooks

Markle WH, Fisher MA, Smego RA. *Understanding Global Health*. 2<sup>nd</sup> ed. New York, NY: McGraw-Hill Professional; 2013.

Skolnik RL. *Global Health 101 (Essential Public Health)*. 3<sup>rd</sup> ed. Burlington, Mass.: Jones and Bartlett Publishers; 2015.

Wall AE. *Ethics for International Medicine: A Practical Guide for Aid Workers in Developing Countries*. Hanover, NH: Dartmouth College Press; 2012.

Chase, J, J Evert. *Global Health in Graduate Medical Education: A Guidebook*. 2<sup>nd</sup> ed. San Francisco, CA: GHEC/iUniverse; 2011.

Neil Arya, A, J Evert (ed). *Global Health Experiential Education: From Theory to Practice*. New York, NY: Routledge Press; 2018.

### Primary Care

Kidd M, ed. *The Contribution of Family Medicine to Improving Health Systems*. 2<sup>nd</sup> ed. London: Radcliffe Publishing; 2013.

Kruk ME, Porignon D, Rockers PC, Van Lerberghe W. The contribution of primary care to health and health systems in low- and middle-income countries: a critical review of major primary care initiatives. *Soc Sci Med*. 2010;70(6):904-911.

Rao M, Pilot E. The missing link—the role of primary care in global health. *Glob Health Action*. 2014;7:23693.

World Health Organization (WHO). *Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Health Care in Low-Resource Settings*. Geneva, Switzerland: WHO Press; 2010.

### Health Equity, Disparities, and Mental Health

Migration Policy Institute (MPI). *Refugees and Asylees in the United States*. Washington, DC: MPI; 2015.

U.S. Department of Health and Human Services (HHS). *HHS Action Plan to Reduce Racial and Ethnic Disparities: A Nation Free of Disparities in Health and Health Care*. Washington, DC; 2011.

Donkin A, Goldblatt P, Allen J, et al. Global action on the social determinants of health. *BMJ Global Health*. 2018;3:e000603.

UN High Commissioner for Refugees (UNHCR). UNHCR Global Trends 2015. Geneva, Switzerland: UNHCR; 14 June 2016.

### **Specific Populations**

Human Trafficking: Zimmerman C & Kiss L. Human trafficking and exploitation: a global health concern. *PLoS Med*. 2017;14(11):1-11.

Refugees: Myles P, Swenshon S, Haase K, Szeles T, Jung C, Jacobi F, Rath B. A comparative analysis of psychological trauma experienced by children and young adults in two scenarios: evacuation after a natural disaster vs forced migration to escape armed conflict. *J Public Health*. 2018;158:163-175.

Saul J, Simon W. Building resilience in families, communities, and organizations: a training program in global mental health and psychosocial support. *Fam Proc*. 2016;55:689-699.

Child Soldiers: Betancourt TS, Borisova I, Williams TP, Meyers-Ohki SE, Rubin-Smith JE, Annan J, Kohrt BA. Research review: psychosocial adjustment and mental health in former child soldiers-a systematic review of the literature and recommendations for future research. *J Child Psychol Psychiatry*. 2013;54(1):17-36.

### **Safe International Travel**

Bazemore AW, Huntington MK. The pretravel consultation. *Am Fam Physician*. 2009;80(6):583-590.

Galvin S, Robertson R, Hargarten S. Injuries occurring in medical students during international medical rotations: a strategy toward maximizing safety. *Fam Med*. 2012;44(6):404-407.

Centers for Disease Control and Prevention. *CDC Yellow Book 2018: Health Information for International Travel*. New York: Oxford University Press; 2017.

### **Concise Clinical References or Tools for International Work**

Brent A, Davidson R, Seale A. *Oxford Handbook of Tropical Medicine*. 4<sup>th</sup> ed. Oxford: Oxford University Press; 2014.

Comninellis N. *INMED International Medicine and Public Health*. 2<sup>nd</sup> ed. Kansas City, Mo.: Institute for International Medicine; 2012.

Doctors without Borders. Medecins Sans Frontieres. Medical Resources. [www.msf.org/medical-resources](http://www.msf.org/medical-resources)

Iserson K. *Improvised Medicine: Providing Care in Extreme Environments*. 2<sup>nd</sup> ed. New York, NY: McGraw-Hill Professional; 2016.

Palmer, Dennis et al. *The Handbook of Medicine: A Manual for Practitioners in Low Resource Settings*. 5<sup>th</sup> ed. Bristol, TN: CMDA Publisher; 2019.

Schull CR. *Common Medical Problems in the Tropics*. 3<sup>rd</sup> ed. Oxford: MacMillan; 2009.

World Health Organization. WHO Guidelines Approved by the Guidelines Review Committee. [www.who.int/publications/guidelines/en/](http://www.who.int/publications/guidelines/en/)

*Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors*. 2<sup>nd</sup> ed. Geneva, Switzerland: WHO Press; 2017.

*Managing Newborn Problems: A guide for doctors, nurses and midwives*. Geneva, Switzerland: WHO Press; 2003.

*Pocketbook of Hospital Care for Children*. 2<sup>nd</sup> ed. Geneva, Switzerland: WHO Press; 2013.

Other Updated Guidelines and Protocols for: HIV/AIDS, Malaria, Tuberculosis, Meningitis, Malnutrition, Women, Children and Older Adults Health Topics, Essential Medications, Mental Health and Substance Abuse, Disaster and Public Health Emergencies.

### **Medical Student and Residency Education**

Abedini NC, Gruppen LD, Kolars JC, Kumagai AK. Understanding the effects of short-term international service-learning trips on medical students. *Acad Med*. 2012;87(6):820-828.

Asgary R, Smith CL, Sckell B, Paccione G. Teaching immigrant and refugee health to residents: domestic global health. *Teach Learn Med*. 2013;25(3):258-265.

Bazemore AW, Goldenhar LM, Lindsell CJ, Diller PM, Huntington MK. An international health track is associated with care for underserved US populations in subsequent clinical practice. *J Grad Med Educ*. 2011;3(2):130-137.

Birnberg JM, Lypson M, Anderson RA, et al. Incoming resident interest in global health: occasional travel versus a future career abroad? *J Grad Med Educ*. 2011;3(3):400-403.

Coupet S, Del Valle J. A case for an international health elective training program during residency: a four-points call for action. *Teach Learn Med*. 2013;25(3):266-271.

Gupta A, Talavlikar R, Ng V, et al. Global health curriculum in family medicine: resident perspective. *Can Fam Physician*. 2012;58(2):143-146, e82-e86.

Hansoti B, Douglass K, Tupesis J, et al. Guidelines for safety of trainees rotating

abroad: consensus recommendations from the Global Emergency Medicine Academy of the Society for Academic Emergency Medicine, Council of Emergency Medicine Residency Directors, and the Emergency Medicine Residents' Association. *Acad Emerg Med*. 2013;20(4):413-420.

Holmes D, Zayas LE, Koyfman A. Student objectives and learning experiences in a global health elective. *J Community Health*. 2012;37(5):927-934.

Khan OA, Guerrant R, Sanders J, et al. Global health education in U.S. medical schools. *BMC Med Educ*. 2013;13:3.

Peluso MJ, Forrestel AK, Hafler JP, Rohrbaugh RM. Structured global health programs in U.S. medical schools: a web-based review of certificates, tracks, and concentrations. *Acad Med*. 2013;88(1):124-130.

Rassiwala J, Vaduganathan M, Kupershtok M, Castillo FM, Evert J. Global health educational engagement—a tale of two models. *Acad Med*. 2013;88(11):1651-1657.

Rowson M, Smith A, Hughes R, et al. The evolution of global health teaching in undergraduate medical curricula. *Global Health*. 2012;8:35.

Zink T, Solberg E. Development of a global health curriculum for family medicine based on ACGME competencies. *Teach Learn Med*. 2014;26(2):174-183.

## **Website Resources**

### **General**

Child Family Health International. [www.cfhi.org/](http://www.cfhi.org/)

The American Academy of Pediatrics Section on International Child Health  
<http://www2.aap.org/sections/ich/>

Disease Control Priorities Project. <http://dcp-3.org/>

GapMinder. [www.gapminder.org](http://www.gapminder.org)

National Institute on Minority Health and Health Disparities. Minority Health & Health Disparities International Research Training (MHIRT) program.  
<http://www.nimhd.nih.gov/programs/edu-training/hd-research-institute/>

### **Safe International Travel**

American Academy of Family Physicians. Volunteering Abroad: Before You Travel.  
[www.aafp.org/about/make-a-difference/global-health/before-you-travel.html](http://www.aafp.org/about/make-a-difference/global-health/before-you-travel.html)

Centers for Disease Control and Prevention. Travelers' Health. [www.cdc.gov/travel](http://www.cdc.gov/travel)

U.S. Department of State Bureau of Consular Affairs. U.S. Passports & International Travel. <http://travel.state.gov>

## **Organizations for Networking in Global Health**

American Academy of Family Physicians. Family Medicine Global Health Workshop. [www.aafp.org/events/global-health.html](http://www.aafp.org/events/global-health.html)

Global Health Opportunities. [www.aafp.org/about/make-a-difference/international.html](http://www.aafp.org/about/make-a-difference/international.html)

Global Health Video. [www.aafp.org/medical-school-residency/fmig/lead/programming/global-health.html](http://www.aafp.org/medical-school-residency/fmig/lead/programming/global-health.html)

American Medical Student Association. Global Health Committee. [www.amsa.org/members/career/scholars-programs/global-health/](http://www.amsa.org/members/career/scholars-programs/global-health/)

Consortium of Universities for Global Health. [www.cugh.org/](http://www.cugh.org/)

2013 Global Health Programs Database. [www.cugh.org/resources/2013-global-health-programs-database](http://www.cugh.org/resources/2013-global-health-programs-database)

Global Health Council. [www.globalhealth.org](http://www.globalhealth.org)

Society of Teachers of Family Medicine (STFM). Group on Global Health. [www.stfm.org/group/international.cfm](http://www.stfm.org/group/international.cfm)

World Organization of Family Doctors (WONCA). [www.globalfamilydoctor.com](http://www.globalfamilydoctor.com)

## **Web-based Training**

American Academy of HIV Medicine (AAHIVM). AAHIVM Core Curriculum in HIV Care, Prevention and Treatment (16 Modules). <https://aahivm.org/core-curriculum-3/>

American Academy of Pediatrics: Helping Babies Breathe. [www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/helping-babies-survive/Pages/Helping-Babies-Breathe.aspx](http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/helping-babies-survive/Pages/Helping-Babies-Breathe.aspx)

Consortium of Universities for Global Health educational modules. [www.cugh.org/resources/educational-modules](http://www.cugh.org/resources/educational-modules)

University of Ibadan, Nigeria and Swansea University, UK, Ibadan- Swansea Partnership. International Health eLearning Modules. [http://isp.swanhi.org/index.php?option=com\\_content&task=blogcategory&id=27&Itemid=37](http://isp.swanhi.org/index.php?option=com_content&task=blogcategory&id=27&Itemid=37)

USAID. Global Health eLearning Center. [www.globalhealthlearning.org](http://www.globalhealthlearning.org)

World Health Organization (WHO) Collaborating Center University of Pittsburgh. Supercourse: Epidemiology, the Internet and Global Health. [www.pitt.edu/~super1/](http://www.pitt.edu/~super1/)

World Health Organization. Management for health services delivery: Short and longer courses of study. [www.who.int/management/newitems/en/index1.html](http://www.who.int/management/newitems/en/index1.html)

Resources Revised 08/2011

Revised 06/2012 by University of Hawaii Family Medicine Residency Program

Revised 05/2014 by Sioux Falls Family Medicine Residency Program, SD

Revised 08/2016 by Resurrection Health Family Medicine Residency, Memphis, TN

Revised 08/2019 by KUSM-W Via Christi Family Medicine Residency