

Global health elective competency-based objectives for pediatric residents

(These objectives can be adapted by the resident's institution to pertain to a specific elective site)

Primary objective: Gain a global perspective on child health by working in a resource-limited setting within a different cultural context.

Below are examples of competency-based objectives applicable to global health electives. These objectives are not all-inclusive, and the objectives achieved will vary depending on the elective site as well as the resident's individual goals. Not all objectives will be accomplished during a 1-2 month elective—it is recommended that several objectives from each competency be prioritized based on the goals and interests of each resident and host institution. Refer also to learning objectives at the home and host institution, if they are available.

PATIENT CARE

Residents must be able to provide compassionate, culturally sensitive and effective family-centered care in a resource-limited setting.

As a participant in a global health elective, the resident will:

1. Assume full responsibility, with appropriate supervision, for the longitudinal care of children within a resource-limited clinical setting (inpatient and/or outpatient)
2. Demonstrate competence in the following elements of patient care during the elective:
 - a) Performing complete and accurate histories and physical examinations with attention to cultural sensitivity
 - b) Making informed, evidence-based diagnostic and therapeutic decisions, within the constraints of resource limitations
 - c) Developing and carrying out evidence-based diagnostic evaluations, management plans, care coordination, discharge planning, prevention strategies, and other aspects of care for diagnoses including, but not limited to: seizures/altered mental status, fever, malaria, tuberculosis, malnutrition, kwashiorkor, diarrhea/dehydration, measles, neonatal infections, HIV/AIDS, typhoid fever, dengue fever, and respiratory distress
 - d) Utilizing telemedicine and other resources, when appropriate, to obtain subspecialty input to assist with patient care
 - e) Applying evidence-based clinical practice guidelines generated for resource-limited settings (e.g. WHO, IMCI, ETAT, etc) to patient management decisions
 - f) Performing clinically indicated procedures under appropriate supervision
 - g) Interpreting radiologic images without the assistance of a radiologist
 - h) Counseling patients and families, including direct observation of pre-test and post-test counseling for HIV if permitted
 - i) Providing effective anticipatory guidance within the cultural, economic, and clinical framework of the international site
 - j) Participating in health promotion activities within the community, and identifying disease prevention strategies that currently exist or are needed
3. Utilize knowledge gained from the global health elective to provide compassionate, culturally sensitive, and effective family-centered care to internationally adopted children, immigrants, and refugees upon return to the home institution

MEDICAL KNOWLEDGE

Residents will demonstrate basic knowledge of the major biomedical, socioeconomic, and cultural determinants of childhood morbidity and mortality worldwide.

As a participant in a global health elective, the resident will:

1. Describe the epidemiology, trends, and major causes of infant and child mortality and morbidity at the global health elective site, and contrast to that in the resident's home country
2. Understand how to diagnose and manage the leading causes of infant and child mortality at the elective site
3. Recognize the major underlying socioeconomic and political determinants of infant/child health at the global health elective site, and how these impact inequities in child survival and health care access between and within countries
4. Describe known effective interventions, including prevention and treatment, for reducing under 5 mortality and morbidity worldwide (e.g. Vitamin A supplementation, exclusive breastfeeding, etc), and determine whether those interventions have been implemented at the elective site
5. Identify the neonatal mortality rate at the elective site, and compare that to the resident's home country. Understand the common causes of perinatal deaths in the region, and determine whether evidence-based prevention and treatment strategies to reduce neonatal deaths are being applied at the elective site
6. List the leading causes of maternal mortality at the elective site, and contrast them with the resident's home country. Discuss how maternal health affects infant and child health.
7. Identify epidemiological trends and significance of emerging infectious diseases at the elective site and surrounding countries
8. Understand the impact of environmental factors, including safe water supply, sanitation, indoor air quality, vector control, industrial pollution, climate change, and natural disasters on the health of children at the elective site. Identify what public health measures have been implemented to address those environmental factors
9. Understand basic epidemiology of child health worldwide:
 - a) 90% of the world's children are born in low to middle income countries, and 99% of childhood deaths occur in low to middle income countries
 - b) 9 million deaths per year in children under 5 years of age are due to just five causes: neonatal problems, pneumonia, diarrhea, malaria, and measles, with malnutrition as a contributing factor in over a third of these deaths
 - c) Perinatal causes make up nearly a quarter of the under-5 deaths worldwide
 - d) 2/3 of childhood deaths globally can be averted with interventions (prevention and treatment) that are readily available, feasible for wide scale implementation, and recommended by international guidelines
10. Develop a basic familiarity with the major indicators of child health, such as maternal mortality rate, neonatal mortality rate, infant mortality rate, under-5 mortality rate, number of children living in poverty, and number of stunted children. Know those major indicators at the elective site
11. Recognize the common childhood injuries, including drowning, ingestions, burns, and motor vehicle accidents, that contribute to childhood morbidity and disability in resource-limited settings. Determine the physical, cognitive, and psychosocial impact of those injuries at the elective site, and identify prevention strategies that have been, or could be implemented
12. Gain an awareness of the major organizations/programs/international conventions addressing child health such as WHO, UNICEF, the Global Fund to Fight AIDS, TB and Malaria, the Global Alliance for Vaccines (and other intergovernmental organizations); USAID and other bilateral organizations; non-governmental organizations; governments (both donor countries and recipient countries); philanthropic organizations; the International Pediatric Society (IPA); the Millennium Development Goals (MDGs); the Integrated Management of Childhood Illness (IMCI); the revitalization of Primary Health Care; and the UN Convention on the Rights of the Child. Identify which organizations are involved at the elective site
13. Understand malnutrition:

- a) The extent to which malnutrition (including undernutrition and overweight/obesity) impacts childhood morbidity, mortality, and cognitive development
 - b) Signs and contrasting features of underweight, stunting (chronic malnutrition), acute malnutrition (severe/moderate, complicated/uncomplicated), micronutrient deficiencies (iron, Vitamin A, iodine, zinc), low birth weight (and maternal risk factors)
 - c) Anthropometric measures used to diagnose malnutrition
 - d) The basics of prevention, evaluation and management of undernutrition, including micronutrient disorders
 - e) The interaction between malnutrition/micronutrient deficiencies and infectious diseases in infants and young children
14. List the vaccine-preventable diseases and review the current international vaccine policies and recommendations (WHO EPI). Investigate which vaccines are available at the elective site, and learn the vaccine delivery system throughout the region
 15. Identify conditions that contribute to morbidity and impaired cognitive development in resource-limited settings such as intestinal parasites, hearing loss, birth complications, anemia, infections (e.g. cerebral malaria), nutritional deficiencies, injuries, and environmental toxin exposures. Investigate whether there are any interventions at the elective site for children with cognitive delays or physical disabilities
 16. Identify the special needs that children have in the settings of disaster compared to adults and recognize that those needs are often not addressed by relief efforts. Investigate how to access resources to prepare for and manage a potential disaster at the elective site
 17. Understand the health and psychological impact of situations affecting children, including child trafficking, child soldiers, child labor, and loss of parents. Identify whether those issues exist in the region surrounding the elective site.
 18. Learn how to navigate resources (e.g. cdc.gov and the Yellow Book) to provide effective pre-travel counseling and medical care to children engaging in international travel

PRACTICE-BASED LEARNING AND IMPROVEMENT

Residents must demonstrate the ability to investigate and evaluate their care of patients in resource-limited settings, to appraise and assimilate evidence-based guidelines applicable to the elective site, and to continually improve patient care based on self-evaluation, review of pertinent literature, and commitment to quality improvement in collaboration with local medical providers.

As a participant in a global health elective, the resident will:

1. Identify individual learning objectives prior to participation in the global health elective, and refer to those goals regularly during the elective
2. Identify strengths, deficiencies, and limits to one's knowledge and expertise, particularly when pertaining to practicing medicine in resource-limited and/or tropical settings
3. Prior to or upon arrival to the elective site, engage in sustainable collaborative efforts that would benefit the elective site and/or patient population. Such efforts could include:
 - a. Development of lectures or evidence-based clinical practice guidelines adapted to the clinical setting that would address educational goals of the elective site's personnel
 - b. Sustainable projects that are requested by the local personnel (e.g. assessment of the elective site's emergency response system for a pediatric code, development of a triage system, and assistance with organization of resuscitation supplies)
 - c. Community-based project (e.g. educational intervention regarding hand hygiene)
4. Identify standardized evidence-based guidelines (e.g. WHO/UNICEF/IMCI) or other medical resources for the diagnosis and treatment of conditions common at the elective site, and adapt the guidelines to assist with patient care at the elective site
5. Work collaboratively with health care team members to assess, coordinate, and improve patient care practices and emergency preparedness at the elective site

6. Record cases and events in an effort to share new knowledge and experiences with trainees and faculty upon return to the resident's home institution
7. Develop a scholarly project for presentation upon return

INTERPERSONAL AND COMMUNICATION SKILLS

Residents will demonstrate interpersonal and communication skills which transcend cultural, economic, religious and national barriers and result in effective exchange of information.

As a participant in a global health elective, the resident will:

1. Demonstrate ease in relating directly to the patient and his/her family when working with an interpreter
2. Understand the roles of gender and non-verbal communication across inter-cultural patient-physician interactions at the elective site
3. Develop effective strategies for teaching students, colleagues and other professionals in settings with varying levels of knowledge or understanding of medical English
4. Demonstrate awareness of effective communication approaches for delivery of health care and promotional messages in communities with limited literacy and education

PROFESSIONALISM

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles, even in resource-limited settings. Residents will have an attitude and manner that recognizes the dignity of every human being and the value of colleagues trained in another cultural setting.

As a participant in a global health elective, the resident will:

1. Demonstrate the highest standards of ethical and professional behavior, and strive to provide the highest standard of care
2. Utilize cultural humility: be respectful of differences in training background, knowledge level, and clinical decision making skills between you and the local medical personnel
3. Identify common ethical dilemmas, personal biases, and challenges confronted when working in a resource-limited setting, and reflect on emotional responses to clinical decisions that involve resource allocation
4. Understand ethical standards and review process for research with human subjects carried out at the elective site. If available, identify the members of the elective site's Institutional Review Board (IRB)
5. Display respect for the host institution and for patient privacy, including adherence to HIPAA privacy regulations at the elective site and in communication with friends and families back home
 - a) Obtain consent from host institution for taking photos, and utilize a [Photo Permission Form](#) for all patient and hospital photos
 - b) Do not post data revealing patient information or descriptions of the elective site on blogs or other social networking sites
6. Maintain professional boundaries, and review the [Code of Conduct](#) prior to participating in the global health elective
7. Through the experience in a resource-limited setting, understand and be sensitive to the profound inequities in global health and how individuals contribute to diminishing these disparities

SYSTEMS-BASED PRACTICE

Residents will have basic knowledge of health care delivery systems in other countries.

As a participant in a global health elective, the resident will:

1. Appreciate that a patient's perception of his/her position within the health care system may be different coming from a culturally different health system

2. Recognize the important determinants of health (including poverty, inequity, and maternal education) and the socio-political economic factors that impact health
3. Compare and contrast different health care delivery systems in developing countries. Examine the systems applicable to the elective site, and identify the roles of different health care workers (e.g. medical officers, traditional birth attendants, community health workers, etc)
4. Understand how the policies and funding structures of major governmental and non-governmental organizations active in the region of the elective site impact child health
5. Develop an understanding and awareness of the health care workforce crisis in resource-limited settings and identify the factors that contribute to this at the elective site, as well as strategies to address this problem regionally
6. Identify the health care systems and fee structures at the elective site and, if applicable, compare them to the private sector in the region
7. Demonstrate sensitivity to the costs of medical care in resource-limited settings and how these costs impact choice of diagnostic studies and management plans for individual patients. Compare the differences in the approach to common diagnoses at the elective site compared to the resident's home institution based upon resource limitations (i.e. febrile infant, dehydration, respiratory distress)
8. Develop an understanding of different approaches to implementing health care interventions in resource-limited settings, such as vertical or targeted programs vs integrated, focused vs comprehensive, facility-based vs community. Investigate health care interventions that have been implemented at the elective site to impact child health
9. Advocate for patients and families who need assistance to deal with diagnoses or system complexities
10. Understand the resident's ongoing role as a pediatrician in advocating for health policy efforts that can reduce inequities and improve health of children in areas with health disparities, locally and globally

Acknowledgments

These competency-based objectives were developed within the framework of the ACGME Program Requirements for Graduate Medical Education in Pediatrics. (2007)

Many of the above competency-based objectives were adapted with permission directly from the American Academy of Pediatrics Section on International Child Health (SOICH) Competency-Based Goals and Objectives, a product of the SOICH working group on pediatric resident education in an effort to develop standardized guidelines for pediatric global health education nationally (2007) as well as the University of Minnesota Center for Global Pediatrics competencies for global child health.

Excerpts from the document were also adapted with permission directly from the AAP SOICH comments to the Residency Review Committee for Pediatrics on ACGME Program Requirements for Graduate Medical Education. (2009)

References:

1. AAP Section of International Child Health (SOICH) International Child Health Competency-Based Objectives. 2007.
2. Kittredge et al. APA Educational Guidelines for Pediatric Residency. Ambulatory Pediatric Association Website. Available online: www.ambpeds.org/egweb.
3. University of Minnesota Center for Global Pediatrics Competencies for Global Child Health
4. Staton D. AAP Section of International Child Health Comments to Residency Review Committee for Pediatrics on ACGME Program Requirements for Graduate Medical Education. 2009.
5. ACGME Program Requirements for Graduate Medical Education in Pediatrics (7/2007)

**Resident global health elective individualized learning objectives & goals
Top 5 priorities**

Please submit to your residency program director or global health faculty mentor

- 1.
- 2.
- 3.
- 4.
- 5.

Documentation of review of written objectives and expectations:

FACULTY

I have personally reviewed with the residents listed below the written objectives and expectations.

Faculty: _____ Signature: _____ Date: _____

RESIDENT(S)

I have personally reviewed with the faculty the written objectives and expectations for the global health rotation.

Resident: _____ Signature: _____ Date: _____

Resident: _____ Signature: _____ Date: _____