



COLLEGE
OF MEDICINE
PHOENIX

Certificate of Distinction in GLOBAL HEALTH

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Intent

The University of Arizona College of Medicine-Phoenix offers a ***Certificate of Distinction in Global Health (COD-GH)***. The COD-GH a 4 year program designed to promote the acquisition of knowledge of global health issues, foster a positive attitude toward giving service to global health communities and to build critical thinking skills directed at conquering global health barriers.

The COD-GH will be awarded to those who are dedicated to leadership and excellence in advancing the prevention, diagnosis and treatment of disease and injury through:

- **Education:** Teaching the physicians and scientists of tomorrow while enhancing the skills of today's health professionals
- **Research:** Creating new knowledge in clinical science through biomedical, behavioral and health services research
- **Patient Care:** Caring humanely and expertly for patients and providing leadership in health services
- **Service:** Forging local, regional, national and global partnerships in education, healthcare and research for the betterment of human health.

Reason for the need

Global Health Defined:

Health transcends all our cultural, geographic, and political barriers to provide a fundamental base for human dignity. In seeking to address and understand complex global health concerns and solutions, an academic medical college is uniquely positioned to enlist multidisciplinary professionals to address the world's health disparities through global health efforts. In the 2010 Lancet article, *Towards a common definition of global health* (Lancet 2009; 373: 1993–95), global health is defined as the “area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines; and is a synthesis of population-based prevention with individual-level clinical care.”

Global Health, Growing Interest:

Medical students' and residents' interest in global health has increased exponentially in the past decade. Currently approximately 30% of US and Canadian trainees participate in an international elective during their training (AAMC 2009). This growing interest among medical trainees has been accompanied by an increased commitment by the U of A COM-Phoenix to provide support, mentoring and accountability for these endeavors. The medical literature has illustrated the positive outcomes for students, residents, fellows and faculty's involvement in global health opportunities. This type of experience is a means for physicians-in-training to learn important lessons about health disparities and cultural

diversity and to encourage them to commit to lifelong service of vulnerable communities (Acad Medicine, 2010). Participation in global health electives is associated with increased likelihood of community service, interest in primary care fields and improved skills in problem solving and clinical examination (Acad Medicine 2003). The Global Health Program will provide programmatic structure and support for our trainees in medicine and public health as well as harness the research, education and clinical care interests of our faculty.

Certificate of Distinction in Global Health Objectives

- To prepare students to collaborate in global health projects with the goal of serving individual and community health needs through research, clinical involvement and health education.
- To provide students with the skill set to appropriately prioritize healthcare concerns and participate in the development and implementation of strategies to address these needs.
- To provide mentorship to students interested in global health involvement in their careers.
- To enable students to have perspective on the rewards and challenges of working in environments and cultures in contrast to those of the American system.
- Understand the basic philosophic and conceptual frameworks for the study of social determinants of health including the ecologic model and the human rights and social justice frameworks.
- Be knowledgeable of major determinants of health in low resource settings and local, national or international interventions to address health determinants (e.g., UN Millennium Development Goals or the US Global Health Initiative)
- Understand how local, national, and global trends in healthcare practice, commerce and culture contribute to the health of populations, as well as the quality and availability of healthcare locally and internationally
- Demonstrate an understanding of barriers to health and healthcare in low-resource settings and evidence-based healthcare delivery strategies in low-resource settings, especially the role of community-based healthcare and primary care models
- Demonstrate an understanding of cultural and ethical issues in working with underserved populations
- Acquire clinical skills necessary to provide care for patients with a wide range of health problems in resource-poor settings.

- Develop fundamental skills in discovery and advocacy through active participation in local or global health-related research, service, education or advocacy.

Certificate of Distinction in Global Health Program (COD-GH) Overview

The Certificate of Distinction in Global Health is a 4 year longitudinal program encompassing *5 elements* that address the scholarly component, the independent learning component, group interaction, field externship, and experience in an underprivileged country. All 5 elements must be completed in order to earn the COD-GH. Students who are not interested in pursuing the COD-GH but who are interested in learning more about GH may participate in any and all of the 5 elements without any expectations of receiving the COD-GH.

Element 1: Field externship:

- Objectives/goals:
 - During the 1st or 2nd year of medical school the students will participate in the IHOP dedicated 1 week trip to the Dominican Republic where they will focus on clinical observations, develop clinical skills, and assess community needs in an underdeveloped environment, under the mentoring of faculty. This will be preceded by a 4 hour orientation given by key GH faculty.

Element 2: Independent Learning

- Objectives/goals:
 - The student will be required to complete the online course at www.globalhealthlearning.org. This can be done during the 4 years of medical school. The *Global Health Learning Program* is an international recognized and acclaimed learning resource for global health sponsored by USAID. In 2005, USAID's Bureau of Global Health developed the Global Health eLearning (GHeL) Center to provide its worldwide mission-based health staff with access to state of the art technical global health information.
 - The courses and certificate programs at the Center offer self-paced Internet-based courses that:
 - Provide useful and timely continuing education for the world's premier global health professionals
 - Present state-of-the-art technical content on key public health topics
 - Serve as a practical resource for increasing public health knowledge

- There are 9 courses, each when completed yield a certificate of completion:
 - Child survival
 - Cross-cutting
 - Family planning and reproductive health
 - Gender and health
 - Health systems
 - HIV/AIDS
 - Infectious disease
 - Maternal health
 - Neonatal health
- Approximately 200 hours is needed to complete all 9 courses.

Element 3: Global Health Seminars

- Objectives/goals:
 - 4 two hour Global Health seminars will be given per year by the GH faculty (total of 16 seminars for 32 hours over the 4 years). The student must attend 90% of the 16 seminars. Each seminar will focus on key principles and topics generated by the GHeL independent learning element and given by a GH faculty member who has personal experience on the topic and in an underprivileged country. These seminars will be on a rotating basis over the 4 years so that all students who are either new to the COD-GH program each year or who are currently enrolled in the COD-GH will benefit from new and non-repetitive discussions and topics.

Element 4: Global Health Discovery Project (GHDP) in partnership with the Scholarly Project

- Objectives/goals:
 - The GHDP project should address an unresolved question in the medical literature dealing with an underprivileged country and its population. The Scholarly Project can and should be the GHDP. If, however, a student wishes to pursue a Scholarly Project that is not GH centered then the student will need to follow the requirements listed under the Global Health Discovery Project.
 - A systematic review should provide an exhaustive review of studies relevant to a specific medical question. Inclusion of studies in the review must adhere to a predetermined protocol that adheres to the standards of a systematic review. Once all known studies have been identified for inclusion, the information is placed in context and synthesized into a coherent informative review which fosters decision making. The synthesis should identify themes and gaps of knowledge relevant to the medical question. Through this process the systematic review provides a

comprehensive new synthesis of information, and a unique publication-quality contribution that moves medical questions toward resolution. Directions and criteria for a systematic review will be provided by the Director of Scholarly Projects.

- The student will have a GH mentor who has experience in the topic being reviewed and will guide the student through the process of preparing the prospectus and protocol and completing the final thesis that will be presented as requirements for completion of both the SP and the GHDP.
- The systematic review will yield an opportunity for the student to validate or negate the central question posed by the systematic review while in an underprivileged country (element 5) either by observation, interviews, or data acquisition and analysis and will be required to do one of the following:
 - Implement a curriculum that includes a robust evaluation
 - Develop a multi-media presentation, or an educational brochure with demonstrated impact
 - Write a policy paper with demonstrated impact

Element 5: Global Health Elective (4th year – MEDP 891)

- Objectives/goals
 - Each experience provided within Global Health is designed to help medical students become comfortable within the community health context of a developing country which has limited resources and access to medical care.
 - During this time the student will be able to validate his or hers GHDP-SP systematic review question by either observation, interviews, clinic participation, surveys or data analysis and to implement one of the following:
 - Implement a curriculum that includes robust evaluation
 - Develop a multi-media presentation, or an educational brochure with demonstrated impact
 - Write a policy paper with demonstrated impact
 - Medical students will achieve Community and Education Goals within 3 primary areas:
 - Introduction to the local health care systems.
 - Cultural issues and communication, including natural healers within bush medicine.
 - Reading, research and community education projects.
 - The learning objectives facilitated through Global Health student experiences are:

- Recognize and appreciate cost-effective approaches to medical care in a resource constrained setting. Students will have the opportunity to practice medicine relying heavily on the history and physical examination with limited access to diagnostics, choice of medicines and hospital facilities.
- Demonstrate effective team-building skills with colleagues from multiple medical disciplines and with local health care providers.
- Recognize and treat illnesses common to those seen in the developing country.
- Recognize the delivery of health in a multi-culture region of the world while gaining an understanding of the country's political, cultural and historical context and their impact on health and health care delivery.
- Recognize prevalent cross-cultural and underserved issues in primary care, and gain an understanding of how this knowledge can be applied to a practice in the participants' home country.
- Understand the benefits and challenges of working with communities and recognize strategies to overcome the challenges.
- Develop the skills, knowledge, and attitudes necessary to effectively work with communities to identify and appropriately access community-based resources.
- Understand and appreciate how psychological, economic, spiritual, social and biological factors interrelate to affect patient health

Longitudinal Process and flow

Medical Student Year 1.

- Successfully complete the first year of the Global Health Seminar Series
- Develop the Global Health Discovery Project as their Scholarly Project
- Identify U of A COM-Phoenix GH Faculty Mentor
- During the winter break attend the IHOP trip to the Dominican Republic
- Work on the GHeL online learning course

Medical Student Year 2.

- Successfully complete the second year of the Global Health Seminar Series
- Work on Global Health Discovery Project-SP
- Work on the GHeL online learning course

Medical Student Year 3 & 4.

- Successfully complete the third and fourth year of the Global Health Seminar Series

- Continue work on Global Health Discovery Project-SP
- One month of global health elective experience addressing health equity and access issues in year 4.
- Research project—report on Global Health Discovery Project

Global Health Review Committee (GHRC)

The GHRC will be responsible for oversight of the GHDP and the student's progress through the 5 elements. The GHRC will be comprised of the Director, Global Health Program and 2 clinicians with current international medical experience who have had international experience in the field. In addition the Scholarly Project Director will be a member. A passing grade on all Pre-clerkship Blocks and Courses is required to remain in the COD-GH program. Failure in any block, course or receipt of two or more Level 1 ratings in behavioral competencies in Pre-Clerkship years will render the student ineligible to participate in the COD-GH program.

Global Health Mentors

Clinicians who have an interest and experience in international health will be asked to serve as mentors to the students who are pursuing the COD in GH. The mentors and students will be paired based on common interests. The mentor will be responsible for guiding and ensuring the completion of the “Global Health Discovery Project”

- **Meeting requirements**
 - Students and mentors will meet 2 times a year and more if necessary
 - An annual presentation to the GHRC on the progress to date
 - A meeting within 2 weeks before the rough draft deadline of the GHDP-SP on February 15th of the graduation year
 - A meeting within two weeks before the final draft of the GHDP-SP deadline on April 1st of the graduation year

Global Health Certificate of Distinction: Competency Based Goals and Objectives

(Adapted from the AAP guidelines for Resident exposure to International Health with additional references)

These curriculum objectives are intended as **comprehensive guidelines** for the University of Arizona College of Medicine – Phoenix *Global Health Certificate of Distinction* program offering some organized form of training in global health, which includes a didactic curriculum and international experience.

Primary Goals

GOAL: Global Health. Understand general principles related to the health of both adults and children in developing countries. These principles can also be applied to underserved populations in the U.S.

Competencies

Competency 1: Patient Care

Provide patient care that is development- and age-appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

1. Use a logical and **appropriate clinical approach** to the care of patients in a developing country setting, utilizing **locally available resources**.
2. Understand the approach to pediatric and adult patients with the following presentations in developing countries and initiate appropriate work-up and management:

Diarrhea/dehydration

Respiratory Distress

Fever

Seizures/Altered Mental Status

Malnutrition (including Severe Acute Malnutrition)

3. Provide **culturally sensitive care and support** to patients and their families.
4. Participate in **health promotion and injury/disease prevention** activities in an international setting, utilizing local guidelines and practices.

Competency 2: Medical Knowledge.

Understand the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a physician; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care and community health.

Epidemiology/Public Health:

1. Identify the major causes and epidemiological trends of **infant and child mortality and morbidity** in developing countries.
2. Recognize the **major underlying socioeconomic and political determinants of infant/child health**, and how these impact inequities in child survival and health care access between and within countries.
3. Describe **known effective interventions, including prevention and treatment**, for reducing under 5 mortality and morbidity (e.g., vitamin A supplementation, exclusive breastfeeding, etc.).
4. Describe the epidemiology of **neonatal mortality**, and compare/contrast common causes including perinatal asphyxia and neonatal infections to under-five mortality.
5. Identify **prevention and treatment strategies** (e.g., skilled delivery at birth) specifically aimed at reducing neonatal morbidity and mortality.

6. List the leading causes of **maternal mortality** in the developing world, how they are impacted by health care systems, and contrast them with those in industrialized countries.
7. Identify epidemiological trends and significance of **emerging infectious diseases** in the developing world.
8. Understand the impact of **environmental factors**, including safe water supply, sanitation, indoor air quality, vector control, industrial pollution, climate change and natural disaster on child health in developing countries.
9. Demonstrate a basic understanding of **health indicators** and **epidemiologic tools and methods**, and how they may be used in settings with limited resources to monitor and evaluate the impact of public health interventions.
10. Understand the common childhood **injuries, including drowning, ingestions, burns and motor vehicle accidents that** contribute to childhood morbidity and disability in the developing world, and describe prevention strategies.

Malnutrition and Infectious Diseases:

11. Compare the different **anthropometric measures** used to diagnose malnutrition in **underweight, stunted and acutely malnourished children**.
12. Recognize the etiology and effects of **micronutrient deficiencies** and how they can be prevented and treated.
13. Describe the interaction between malnutrition/micronutrient deficiencies and infectious diseases in infants and young children.
14. Become familiar with the presentation, diagnosis, management, and prevention strategies of the following specific diseases in resource-limited settings, based on local and international guidelines:

Malaria - uncomplicated and complicated/severe (e.g. Cerebral malaria)

Pneumonia

Diarrhea and dysentery

Measles

Neonatal infections including neonatal tetanus

HIV/AIDS and related infections/complications

Tuberculosis

Typhoid Fever

Dengue Fever

Meningitis

15. List the **vaccine-preventable diseases** and the immunizations available in developing countries, and know the current international vaccine policies and recommendations (WHO EPI).

16. Identify conditions that contribute to **impaired cognitive development** and associated morbidity in the developing world, such as intestinal parasites, anemia, nutritional deficiencies and birth complications.

Specific Populations

17. Describe common health issues faced by **immigrant and refugee populations** in developed nations. (could be part of the Rural Health Program)

18. Describe health issues of children in the developing world affected by humanitarian crisis, including **refugees, internally displaced, and orphans**.

19. Understand the health and psychological impact of certain activities affecting children including **child trafficking, child soldiers and child labor**.

20. Identify specific health issues and needs of **international adoptees**, and describe appropriate screening and counseling for adopting families.

21. Understand the challenges faced by children living with **disabilities** in resource-poor settings, and describe prevention strategies and models of support.

Competency 3: Interpersonal Skills and Communication

Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families, their communities, and professional associates.

1. Practice effective **communication** with families who speak another language and utilize interpreters appropriately.
2. **Communicate effectively and respectfully with physicians and other health professionals** in an international setting, in order to share knowledge and discuss management of patients.
3. Demonstrate awareness of **effective communication approaches** for delivery of health care and promotional messages in communities with **limited literacy and education**.

Competency 4: Practice-based Learning and Improvement

Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve one's patient care practice.

1. Identify appropriate medical resources, including **reference texts and standardized guidelines** (e.g., WHO/UNICEF) **for diagnosis and treatment** of conditions common to developing countries.
2. Understand the principles of **evidence-based medicine** and apply them when reviewing recent literature and considering the implications for impact on practice.
3. **Work collaboratively with health care team members** to assess, coordinate, and improve patient care practices in settings with limited resources.
4. Apply and improve upon **physical examination skills and clinical diagnosis** in settings where diagnostic studies are limited.
5. Establish **individualized learning objectives** for an international elective and strategies for meeting those objectives.

6. Identify and utilize the **resources needed to prepare for an international rotation or work** in a less developed country.
7. Understand the role of the pediatrician in responding to **humanitarian emergencies and disaster relief efforts**, within the context of participating local and international organizations, and become familiar with available resources to prepare for volunteering in this setting.

Competency 5: Professionalism.

Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to diversity when caring for patients in a developed *or* developing country setting.

1. Demonstrate a commitment to **professional behavior** in interactions with staff and professional colleagues and be respectful of differences in knowledge level and practices.
2. Give examples of **cultural differences** relevant to care of international populations and how **traditional medicine** and Western/scientific medicine can conflict with or complement one another.
3. Discuss **common ethical dilemmas and challenges** confronted when working in a setting with limited resources or different cultural values.
4. Understand the **ethical standards and review processes for research** with human subjects carried out in developing countries.
5. **Recognize personal biases** in caring for patients of diverse populations and different backgrounds and how these biases may affect care and decision-making.
6. **Plan a responsible and ethically-guided international rotation experience**, ensuring adequate preparation and appropriate expectations both for yourself and your international hosts.
7. Understand and be sensitive to the profound **inequities in global health** and how individuals can contribute to diminishing these disparities.

Competency 6: Systems-based Practice

Understand how to practice high-quality health care and advocate for patients within the context of the health care system.

1. Compare and contrast different **health care delivery settings in the developing world**, including hospitals, clinics and the community, and the roles of different health care workers as they apply to patients in developing countries, such as the physician, nurse, community health worker, traditional birth attendant, etc.
2. Identify the **major governmental and non-governmental organizations** active in international child health, and give examples of initiatives and programs that impact child health (WHO, UNICEF, Global Fund, GAVI, etc.).
3. Describe international goals and strategies for improving child and maternal health (such as the **Millennium Development Goals**).
4. Develop understanding and awareness of the **health care workforce crisis in the developing world**, the factors that contribute to this, and strategies to address this problem.

5. Identify different **health care systems and fee structures** between and within countries, including the **public and private sectors**, and understand the impact of these systems on access to patient care and quality of care.
6. Demonstrate sensitivity to the **costs of medical care** in countries with limited resources and how these costs impact choice of diagnostic studies and management plans for individual patients.
7. Contrast the advantages and disadvantages of different approaches to implementing **health care interventions in developing countries**, such as vertical or targeted programs vs. integrated; focused vs. comprehensive; facility-based vs. community.
8. **Advocate** for families, such as recent immigrants to a developed country, who need assistance to deal with system complexities, such as lack of insurance, multiple appointments, transportation, or language barrier.
9. Understand the pediatrician's role in **advocating for health policy** efforts that can reduce inequities and improve health of children in developing countries.

Application Process

Applications will be accepted until **October 1st** of the first year of medical school. Applications are closed after that date.

A first meeting with Dr. Beyda should be made to discuss your interest in GH and your ideas and thoughts for a GHDP in partnership with the SP. Once it has been determined that this is a viable option for the student to pursue, an application can be submitted.

COD – GH Program Application

Section 1: Student Information

Last Name:		First Name:		M.I.:
Current Address: <small>Number and Street</small>		<small>City</small>	<small>State</small>	<small>Zip</small>
Telephone:	Email:			MS Year:

Section 2: Learning Objectives

A.	Global Health Discovery Project (GHDP): A key component of the Global Health Certificate of Distinction is the production of a paper, project design, book, report, software, or other substantive product that reflects the work done during the Track. Please indicate ideas discussed regarding the GHDP.
B.	Specific Aims: Describe briefly your goals/ objectives for your Global Health Discovery Project (GHDP).

C. Background and Significance: Describe here the rationale for the activities and/or project (why is it important) and any relevant prior literature on the subject.

D. Preliminary Work in the Area: Describe here any past work you or your mentor(s) have performed in this area.

E. Project Design and Methods: Describe your activities and/or project, including design, setting/participants, and specific procedures. Explain your plan for development and implementation of your project.

F. Project Evaluation: Describe how you will assess the impact of the activities and project you will undertake. Please include an evaluation component for each activity/project.

G. Project Timeline: Describe the timeline for your activities and/or project development, implementation, and assessment.

H. Literature Cited

I. Funding: Will external funding be necessary for your project to be completed? If so, describe estimated costs and how you plan to fund the project.

Name:

Date:

GH Director:

David H Beyda, MD

GH Director Approval: