

Meeting 21st Century Public Health Needs: Public Health Partnerships at the Uniformed Services University

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The Uniformed Services University of the Health Sciences (USU) was established by Congress in 1972 under the Uniformed Services Health Professions Revitalization Act. The only medical school administered by the federal government, “America’s Medical School” as it is affectionately known, has a mission to educate, train, and comprehensively prepare uniformed services health professionals to support the US military and public health system.

The USU School of Medicine (SOM) matriculates about 170 students each year. Although the majority of the medical students receive commissions in the US Army, Navy, or Air Force and serve as military physicians in the Department of Defense (DoD), a small number of students each year are commissioned as officers in the US Public Health Service Commissioned Corps (PHS). The PHS is a uniformed service within the US Department of Health and Human Services (HHS) whose officers serve nationwide in more than 30 government agencies. However, unlike its sister DoD services, the PHS does not participate in the Health Professions Scholarship Program, so admission to USU represents the only direct accession to the PHS Commissioned Corps for prospective physicians.

Beginning with the first graduating class, more than 160 PHS physician officers have now been trained under agreements with PHS agencies and SOM, and numerous others have received training and experience from the other academic programs and research centers within USU. Ten of those graduates achieved the rank of Rear Admiral, the general officer or “flag” position of the PHS.

The benefits of the partnerships be-

tween USU, PHS, and the agencies served by PHS to public health outcomes are many. Specifically, investment in PHS students at the SOM has served to ease disparities experienced by American Indians and Alaskan Natives (AI/AN), combat the shortage of primary care physicians (PCPs), generate exceptional clinical researchers, and train health care professionals to be prepared and ready to respond to emerging threats to public health.

ADDRESSING HEALTH CARE DISPARITIES EXPERIENCED BY AI/AN

Through numerous treaties, laws, court cases, and Executive Orders—and most recently reaffirmed by the reauthorization of the Indian Health Care Improvement Act as part of the Patient Protection and Affordable Care Act (2010)—the US federal government holds responsibility for the provision of medical services to AI/AN. The Indian Health Service (IHS) is the principal federal provider of health care services for the AI/AN population. The mission of the IHS is to raise the physical, mental, social, and spiritual health of the AI/AN population to the highest level. It seeks to accomplish this mission by assuring that comprehensive, culturally acceptable personal and public health services are available and accessible to all AI/AN people.

Agency partnerships at USU, like the one between the school and IHS, sponsors medical students to become PHS physicians who can combat health disparities, especially those experienced by AI/AN. AI/AN continue to be subjected to disparities in health status across a wide array

of chronic conditions, with significantly higher mortality rates than those of white populations.¹ These trends are driven by multifactorial etiologies, including social determinants of health,² obesity and the metabolic syndrome,³ high rates of tobacco and alcohol use,⁴ and limited access to medical care.⁵

Recruitment and retention of health care providers (HCPs) has long been a challenge for the IHS.⁶ Despite many attractive factors, providing care in a setting of otherwise limited resources and the relative remoteness of most facilities may prove to be deterring factors to prospective applicants. Furthermore, promotion of quality providers to administrative roles and high turnover rates of contractors or temporary staff contribute to poor continuity of care in certain locations. Consequently, efforts are under way to increase provider retention and continuity of care for patients.

This effort is augmented by training of officers for a career of service to the IHS within the PHS. After completion of medical school and a residency in primary care, IHS-sponsored graduates from USU serve as officers in the PHS, stationed at an IHS-designated high-priority site for 10 years.⁷ However, many stay with the IHS for much longer, like IHS Chief Medical Officer, RADM Michael Toedt (USU 1995). In fact, nearly all the officers commissioned in the past 20 years are still on active duty. Within the IHS, physicians focus on community-oriented practice and improving the health of small-town and rural residents at tribal or federally operated clinics and community hospitals. In addition to performing clinical duties, graduates frequently become leaders within the IHS, advocating for systemwide improvements, performing practice-based research, and improving the overall well-being of AI/AN communities.

COMBATING THE PCP SHORTAGE

It has been well documented that primary care is essential for the prevention and control of chronic disease.⁸ However, fewer US medical school graduates are

choosing to practice in primary care specialties, and the number of PCPs is forecasted to be insufficient for the needs of the American population in the coming years.^{9,10} This deficit is predicted to be especially pronounced in rural and underserved communities.¹¹

Training PHS officers at the USU can fill this growing need by cultivating PCPs committed to a career of service in areas of high need. PHS medical students who are sponsored to attend USU by the IHS select from 1 of 7 approved primary care residencies: emergency medicine, family medicine, general pediatrics, general internal medicine, general psychiatry, obstetrics/gynecology, and general surgery.⁷ PHS students are permitted to train at military or civilian graduate medical education programs; permission to pursue combination programs is granted on a case-by-case basis, with consideration for the needs of the agency. Previously, such authorizations have included internal medicine/pediatrics, internal medicine/psychiatry, and family medicine/preventive medicine. This requirement, understood at the time of matriculation, selects for students who are passionate about primary care and are willing to live and practice in rural, underserved areas during their 10-year service commitment to the agency.

During medical school, USU students participate in numerous training activities that prepare doctors for practice in isolated or resource-poor settings, including point-of-care ultrasonography and field exercises in stabilization and transport of critically ill patients. The motto of the SOM, “Learning to Care for Those in Harm’s Way,” thereby applies not only to battlefield medicine, but to those who practice medicine in austere environments of all kinds.

GENERATING CLINICAL RESEARCHERS

Although IHS currently funds most PHS students, sponsorship also is available through the National Institute of Allergy and Infectious Diseases (NIAID), one of the institutes of the National Institutes of Health (NIH) in Bethesda, Maryland.

Students selected for this competitive program complete a residency in either internal medicine or pediatrics, then complete an NIH-sponsored fellowship in either infectious diseases or allergy and immunology. Similar to their IHS counterparts, they incur a debt of service—10 years in the PHS Commissioned Corps; however, their service obligation is served at NIH. This track supports the creation of the next generation of clinical researchers and physician-scientists, critical in this time of ever-increasing threats to public health and national security, like emerging infectious diseases and bioterrorism.

EMERGENCY RESPONSE PREPARATIONS

Combined training with experts from DoD and HHS prepares junior medical officers to serve as leaders in responding to large-scale emergencies and disasters. According to a memorandum of December 11, 1981, then Surgeon General C. Everett Koop described the importance of this skill set, saying that USU students are “ready for instant mobilization to meet military [needs] and [respond to] national disasters.” He continued, “Students are taught the necessary leadership and management skills to command medical units and organizations in the delivery of health services...They are exposed to the problems of dealing with national medical emergencies such as floods, earthquakes, and mass immigrations to this country.”¹² Fittingly, physician graduates of USU have recently led disaster response efforts for Hurricanes Harvey, Irma, and Maria and Typhoon Yutu.

Traditional medical school didactic coursework is supplemented by lectures on disaster response, emergency preparedness, and global health engagement. As training progresses, students translate their knowledge into action with practical fieldwork exercises in mass casualty triage, erection of field hospitals using preventive medicine principles, and containment of infectious disease outbreaks among displaced persons—under the close observation and guidance of military and public health subject

matter experts from across the country. Medical students complete their clinical training at military treatment facilities around the country and have elective clerkship opportunities in operational medicine nationally and internationally. PHS graduates of USU are well prepared to interface with their military colleagues, building effective joint mission capacity.

ADDITIONAL TRAINING OPPORTUNITIES

In addition to the 4-year, tuition-free MD program, the university offers 7 graduate degree programs in public health and residency programs in preventive medicine specialty areas. Continuing education opportunities and graduate certificates are available in global health, tropical medicine and hygiene, travelers’ health, international and domestic disaster response, and other fields of interest to any public health professional, military or civilian. Many programs are available to federal or uniformed service members at no cost, some incur a degree of service commitment. Furthermore, the university is home to multiple research centers, including the National Center for Disaster Medicine and Public Health, which strive to improve public health through research efforts and education.

CONCLUSION

Though the emerging public health needs of the nation are both varied and daunting, the USU/PHS partnership trains providers that will heed the call and face the modern public health needs head-on. USU remains an important source for commissioning PHS physicians and producing career officers. The unique training provided at USU educates and enables PHS physicians to ease disparities experienced by AI/AN, combat the shortage of PCPs, generate exceptional clinical researchers, and be prepared and ready to respond to emerging threats to public health.

Author disclosures

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Disclaimer

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