

# A Different Kind of Residency— A Different Kind of Resident

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*The military dermatologist requires a set of job skills beyond that of the civilian dermatologist. When military dermatologists complete their training, they must be prepared to function in remote locations with limited subspecialty support. Military dermatologists must be competent in the broad range of disciplines that encompass dermatology and have special expertise in tropical and environmental dermatology. They also must maintain a broad knowledge of biological and chemical agents. Three US military training programs currently exist. The largest, in San Antonio, Texas, was formed in 1996 when Wilford Hall Medical Center and Brooke Army Medical Center merged their resources and residents to create a single large program. The contributions of military dermatologists are discussed in the context of how the joint Army/Air Force program is structured to meet a broad set of needs.*

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The San Antonio Uniformed Services Health Education Consortium (SAUSHEC) was formed through the merger of residency and fellowship training programs at 2 of the largest military medical centers in the country, Wilford Hall Medical Center and Brooke Army Medical Center. SAUSHEC became a reality with the start of the 1996–1997 academic year. The combination of these 2 well-established and respected programs led to a single large program with the flexibility and resources to provide

an enhanced training experience for a large number of residents. With 21 residents, SAUSHEC is one of the largest dermatology residency programs in the country by number of residents.

The teaching staff at SAUSHEC has the obligation to produce graduates who can function independently in remote environments with limited access to subspecialists. Military dermatology graduates must have special expertise in tropical medicine, injuries from the cold, environmental exposure, chemical warfare, and bioterrorism. In 2001, when anthrax became a concern to the average citizen and bioterrorism became a hot topic, many medical and dermatologic societies turned to military dermatologists for disease images and educational resources. For military dermatologists, anthrax and all other chemical and biological warfare agents always have been part of their residency curriculum and their military-related continuing medical education. Problems that are new to most physicians in the United States are not necessarily new to military dermatologists.

Military and former military dermatologists are heavily represented in American Academy of Dermatology organizations such as the Bioterrorism and Rapid Response task forces. In addition, they have been involved intimately with many of the recent efforts to educate American Academy of Dermatology members about issues surrounding the smallpox vaccine. The military has immunized several hundred thousand soldiers and often is able to compile statistics of the immunization experience more quickly and in a more standardized manner than many local, state, and national agencies.

Military dermatology training programs are unique because they must provide expertise in special areas. History has proved the value of dermatologists during wartime. At the onset of World War II, there was not a single qualified dermatologist in the

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US armed forces.<sup>1</sup> Dermatologists who were already famous and those who would later make their mark in the advancement of dermatologic practices stepped forward during World War II to create treatment guidelines and to write textbooks that overseas military physicians and medics could use to treat troops and keep them in combat. These pioneers in dermatology include notables such as LCDR Marion Sulzberger, USN, and MAJ Clarence Livingood, USA.<sup>2</sup>

Statistics show that there are more soldiers killed or immobilized by disease than by bullets.<sup>3</sup> The conditions, collectively referred to as “disease and non-battle injury,” kill and disable more soldiers than do weapons.<sup>3</sup> Skin diseases such as dermatophytic infections and pyodermas are prevalent in hot and humid environments.<sup>4</sup> The impact of skin disease should not be underestimated. Half of the US fighting strength in the Mekong Delta during the Vietnam War was immobilized at times because of dermatophytic infections.

Infectious agents also may be used as biological weapons. Skin disease always has been a source of misery and danger to soldiers. Although influenza and typhus were some of the more lethal diseases to the World War I doughboy, trench foot (cold water immersion injury) was a widespread source of morbidity and, in some cases, lasting disability. One of the greatest sources of morbidity among troops serving the Great War was sexually transmitted disease, especially syphilis. Despite the prevalence of skin disease in patients during World War I, military medics were ill equipped to treat common skin diseases, and unnecessary morbidity followed.<sup>5</sup> In Southwest Asia, entire military units were pulled from combat to recover from their tropical immersion injuries.<sup>6</sup> To help maintain unit effectiveness, hygiene orders were instituted instructing troops to change their socks frequently, to limit their time in the water, and to wear shower thongs when not in the field.<sup>7</sup> These recommendations were based on dermatologic research commissioned by the US Army.<sup>8</sup>

The environmental areas of the last several conflicts involving US troops have brought back some old enemies, such as frostbite in troops stationed in the mountains of Afghanistan, and some new variations, such as “sandbag filler’s dermatitis,” an irritant dermatitis caused by the fine talclike sand found in the Persian Gulf, and “warm water immersion foot,” which occurred in troops who wore their occlusive chemical protective garments too long. Dermatologists now are assigned to military hospital ships and larger support hospitals to provide on-site consultations and education.

At meetings of the Association of Professors of Dermatology, the author has heard other doctors contemplate that dermatology residents, for the most part, represent a relatively homogeneous group of high performers. The residents realized early the level of effort needed to get into a competitive field such as dermatology, and they did “all the right things” to enter this field. Acceptance to a military program also requires a history of academic excellence and a proven ability to work hard toward a goal; however, the medical careers of SAUSHEC candidates are anything but homogeneous. Most military residents have had experience as general medical officers, often overseas, and others as flight surgeons. They have run clinics, have managed complicated follow-ups, and understand charting and coding requirements. Some residents have had careers in family practice, pediatrics, or internal medicine.

Resident continuity clinics are designed to encourage the sense of responsibility and autonomy required of military dermatology practitioners. Although staff are present at all clinics and must do a hands-on evaluation for all first-year resident cases and defined high-risk patient encounters, the patients do not “belong” to the staff but instead are followed and managed by the residents. Both SAUSHEC medical centers are worldwide referral centers, are level 1 trauma centers, have ancillary activities that are dermatology intensive (eg, bone marrow transplant services), and have a burn treatment research institute.

SAUSHEC trains its residents with the assumption that graduating dermatologists will report to a one- or 2-man clinic, possibly overseas. It also is assumed there will be no subspecialized dermatologic surgery support except by special arrangement or by travel of the patient to a referral center. In addition, it is assumed that the histology support will be provided by a general pathologist and that evaluation of a specimen by a trained dermatopathologist will be available only by mailing it to a laboratory. For this reason, the SAUSHEC curriculum is especially heavy on dermatologic surgery and dermatopathology. In addition to basic cutaneous surgery, Mohs surgery, and complex closures, SAUSHEC residents have ample opportunity to perform basic cosmetic procedures such as chemical peels and sclerotherapy (by laser or injection), and many recently have been getting experience in nonablative resurfacing techniques and laser hair removal. Upper-tier cosmetic procedures such as liposuction and hair transplants are not performed in the clinic, though a limited number of CO<sub>2</sub> resurfacing procedures and botulinum toxin injections are performed for resident education. The

facility has 2 vascular lasers, 2 Nd:YAG lasers, a variable pulse width Nd:YAG hair removal/sclerotherapy laser system, 2 CO<sub>2</sub> lasers with scanning attachments, and an intense pulsed light device.

How else does a military residency prepare dermatologists for their unique duties? There are many aspects of the curriculum that are foreign to most civilian residencies. All army staff and residents annually go through "soldier readiness processing," whereby they make sure the immunization records, medical records, life insurance, and wills of military personnel are in order. Likewise, they take part in "common task testing," whereby they are tested in their ability to care for their side arm, to wear a gas mask, and to perform medical operations during combat. If dermatologists do not already have training prior to their residency, they must pass a 10-day intensive military medical training program that includes certification in advanced trauma life support before they report to their next duty station. This is supplemented by lectures given at the institution that deal with leadership, humanitarian missions, tropical diseases, chemical and biological warfare, and environmental injury.

In a mass casualty situation, military dermatologists will help manage burns, gunshot wounds, nerve gas exposure, heat stroke, or whatever else may present. Even when the mission is humanitarian medical support, medical care is provided in austere circumstances with limited resources. Leishmaniasis is not just a disease in a textbook to SAUSHEC residents. If they haven't seen the condition in a returning US soldier or in a foreign soldier who is in the United States for specialized training, they know they may see it on a humanitarian assistance mission or on a longer deployment to an endemic area. Antimalarials are not just a useful adjunct in the treatment of cutaneous lupus but are something military dermatologists likely

will be taking on their travels. Frequently, when humanitarian missions are being assembled, the host nation will specifically request that a dermatologist be assigned to the team. On occasion, SAUSHEC has been able to send a resident with a staff member on this type of mission, where they both provide a valuable service and obtain an unparalleled educational experience.

Graduates from SAUSHEC have gone on to a wide variety of postresidency careers. Most graduates will complete 1 or 2 tours of duty, then separate from the service to enter private practice or civilian academia. However, some will complete a 20- to 30-year career in uniform before joining their civilian counterparts. Although the total number of dermatologists trained in military programs cannot be precisely determined, it has been estimated that more than 400 dermatologists, most still in active practice, were trained in uniform.

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