The deployment of physician assistants (PAs) in fields other than direct patient care is not unusual. PAs have undergone tremendous changes since the emergence of the first Physician Associate Program at Duke University in 1965 which sought expansion into several subspecialty areas. This focus on subspecialty areas was redirected to the primary care role in the seventies with the introduction of favorable legislation to place the physician assistant in “the rural gap.”

The specialty PA has again emerged. Since 1978 the primary care role has changed only slightly, but the PA in medical subspecialties has increased over 25% (when compared to 1974) and well over 70% in other specialties (1). This change may have been “prompted by the fear of physician glut” as Dr. Tideiksaar aptly editorialized. The PA responded to the domino effect and redirected career aims toward a subspecialty to guarantee future job security (2).

The United States Army Medical Department (AMEDD), recognizing the unique roles PAs could serve, has implemented several specialty training programs for the Army Physician Assistant: orthopedics, occupational medicine (with an MPH awarded at completion), Aviation Medicine and emergency medicine. All these programs involved the PA in direct patient care, however, a recent program removes the PA from direct patient care and involves him in clinical perfusion and cardiovascular surgery.

The Army Physician Assistant/Clinical Perfusionist has been developed and matured to fill a serious void. Over the past several years, key military personnel trained in clinical perfusion (operation of the heart-lung machine, autologous blood conservation programs, intra-aortic balloon management and hemodynamic monitoring) have been lost from the military through attrition/retirement, better pay in the civilian sector or frustration in slow advancement and recognition of their unique job skills. This has seriously hampered the cardiovascular surgery (CV) services at the various medical centers in the Army. The CV services have had to contract perfusion support to the civilian sector with loss in control of personnel, loss of logistical management (nonmilitary supervision and confusion with Department of Defense policy) and failure to meet military mobilization requirements. This loss of personnel had continued until the present solution of training graduate PAs in the clinical perfusion field.

The Army program is twofold. With the cooperation of the Hershey Medical Center, The Pennsylvania State University at Hershey, Pennsylvania, the graduate Army PA applies to both the Hershey Cardiovascular Perfusion Technology Department and Department of the Army application boards. Upon acceptance, the Army PA is transferred to Hershey for an intensive year of didactic and clinical perfusion techniques. Application of clinical perfusion technology is taught to the individual—stressing the operation of the heart-lung machine, operation
and management of the intra-aortic balloon device, developing and promoting autologous blood conservation programs, research programs and extending the PAs knowledge of blood coagulopathies, cardiovascular hemodynamics, application of biomedical devices and expanding his knowledge of cardiovascular pharmacology and physiology.

The second part of the program requires the Army PA to move to an Army medical center (either Walter Reed Army Medical Center in Washington, DC, or Brooke Army Medical Center at San Antonio, Texas). Here the Army PA is involved with the second year of clinical perfusion—expanding and refining his role and techniques. More importantly, the PA is now introduced into the field of cardiovascular surgery, and, at his option, can begin to perform as a surgical assistant, harvesting the saphenous vein, assisting in sternotomy and closure, periopeptive patient management in ward and intensive care settings, and follow-up of the patient in the clinic. The Army PA also applies skills mastered while in the Army: logistic management, supervising personnel and augmenting the cardiothoracic surgical team in mobilization efforts. In mass casualty drills the PA performs as the front line surgeon, triage or tertiary care officer. In actual mobilization, into an area requiring a complete cardiovascular team, the PA/perfusionist manages and operates autologous blood conservation and life support systems. The service chief also benefits from the introduction of the PA as he now has a office manager/supervisor and physician assistant who can perform record management, data acquisition, research applications and administrative functions that serve the department.

In the operating theater the PA is the surgical assistant, a role well defined in several papers and fostered by several PA schools (3,4,5). The addition of the surgical assistant to an open heart team improves the quality of patient care and promotes effectiveness. When the PA augments the open heart team with autologous blood conservation techniques, intra-aortic balloon capabilities, hemodynamic monitoring applications and kidney transplantation background, the PA/perfusionist’s role has an unlimited future.

The introduction of this “new” member to a subspecialty presents an exciting challenge to the physician assistant. Careful analysis, selection and training will benefit the medical community in delivering quality assured cost effective health care. The addition of the Army Physician Assistant to the field of cardiothoracic surgery will provide to the Army a health care practitioner who can render general medical therapeutics and expand the concept of assisting the physician. The clinical skills and broad utilization of the PA/perfusionist will develop and improve the future of cardiothoracic surgery. As the role of the PA/perfusionist is further defined and utilized, the cardiothoracic surgeon will find access to a larger subset of patients and expansion of his critically needed skills. Finally, the expanded role of the PA/perfusionist in blood conservation programs, intra-aortic balloon supervision, ventricular assist devices and ECMO programs will demonstrably improve patient care through the team effort of the surgeon, nurse and PA/perfusionist.

References