Medical Education Program Highlights

The F. Edward Hébert School of Medicine, “America’s Medical School,” is the only medical school owned and operated by the U.S. government. Because Uniformed Services University (USU) medical students are dedicated to national service, they not only graduate debt free but are also paid the salary and benefits of active duty military or Public Health Service officers while they learn to become doctors.

Established to serve as the “leadership academy” for military health and the Public Health Service, USU’s curriculum includes 700 hours of military unique training, focusing on areas such as disaster and humanitarian response, tropical medicine, global health, preventive medicine, and health systems science. Students receive extensive training in prehospital trauma life support and have the opportunity to graduate with certifications in advanced life support as well as in advanced trauma life support.

One of the most distinctive features of our 4-year curriculum is our capstone field exercise, called “Operation Bushmaster.” During this multiday event, designed to simulate an overseas deployment in support of combat operations, teams of fourth-year medical and graduate nursing students work together to manage a wide array of clinical, logistical, and ethical challenges. There is nothing else like it in American medical education.

Curriculum

Curriculum description


Curriculum changes since 2010

In 2011, with the graduating class of 2015, the School of Medicine began transitioning from a traditional 2 × 2 program to an integrated, organ system-based approach called Molecules to Medicine. Our revised curriculum includes a 17-month preclerkship period comprising 7 organ system-based modules, a 12-month clerkship period, and a 15-month postclerkship period. Key elements of military medical practice and leadership, including 4 field exercises, are threaded throughout the 4-year curriculum.

Also included in the revised program is a 6-week period of advanced didactics in the postclerkship period (bench to bedside and beyond) and opportunities for students to engage in an extended scholarly project of their choice (capstone research).

Assessment

Our education objectives are based on the ACGME domains of competence. They are:

- Medical and population health knowledge
- Interpersonal and cross-cultural communication skills
- Patient care
- Practice-based learning and improvement
- Professionalism, leadership development, and officership
- Systems-based practice

Each of these overarching competencies is linked to a series of programmatic objectives that are defined in outcome-based terms and assessed using a variety of measures.

See Chart 1—Domains of Competence.

Along with the 2011 curricular revision, several major changes to student assessment were instituted. These included replacing course-/discipline-based examinations with a series of NBME Customized Assessment Services examinations. The traditional letter-based grading framework was changed to honors/pass/fail, and the timing of the USMLE Step 1 examination was shifted to after completion of the core clerkship year.

Additional changes involved use of a core group of teaching faculty who longitudinally follow the development of clinical skills in an assigned group of students through their first 17 months of the curriculum. New assessment methods were introduced, focusing on small-group discussion and exercises. These include assessing pathology case write-ups, concept maps, and Clinical Reasoning Mapping Exercises. Substantially more OSCE assessments were integrated into new curricular structure, including a final, end-of-preclerkship OSCE. In addition, each of the core clerkships use an OSCE as part of their end-of-clerkship assessments.

In addition to covering the same curricular content civilian medical schools teach, our 4-year curriculum includes an additional 700-plus hours of military unique instruction and field exercises that teach team communication, leadership,
problem solving, and essential principles of military medical practice. This ensures that our graduates are capable, confident, and adaptable in any clinical setting from a tertiary care hospital to a refugee camp.

**Pedagogy**

The following pedagogical approaches are currently used:

- Case-based learning
- Clinical experience: ambulatory
- Clinical experience: inpatient
- Discussion: large group
- Discussion: small group
- Laboratory
- Lectures
- Peer teaching
- Preceptorship
- Problem-based learning
- Role play/dramatization
- Self-directed learning/tutorial
- Simulation
- Standardized/simulated patients
- Team-based learning
- Video/podcast
- Workshop
- Military field exercises/training

**Clinical experiences**

Since 2010, the School of Medicine has steadily reduced its reliance on the delivery of content via traditional 50-minute lectures and instead is increasing its use of small-group, team, and case-based discussions. We have also incorporated a growing array of interprofessional programs, podcasts, and prerecorded curricular content, and more recently, distance learning to allow for a more interactive and individualized pedagogic approach.

During the preclerkship curriculum, the majority of required clinical experiences are provided at nearby Walter Reed Medical Center as well as at the school’s Val Hemming simulation center, where students interact with high-fidelity
simulators, a cadre of highly trained standardized patients, and a walk-in virtual environment. Required clerkship and postclerkship experiences are delivered at premier military hospitals, clinics, and teaching facilities across the United States as well as hospital and university-based simulation centers.

Students experience their initial clinical encounters during the first week of medical school. These take place during the Foundation in Medicine module and involve working with patients in local military medical centers and our school’s simulation/standardized patient center.

Required and elective community-based rotations

- Required community-based experiences: All students are required to complete 5 weeks of family medicine, with most rotations occurring in ambulatory clinics associated with community hospitals. Requirements for exposure to outpatient pediatrics and to ambulatory neurology may also be completed in clinics associated with community hospitals. Required rotations in internal medicine, neurology, and psychiatry may be completed at one or more VA medical centers.
- Elective experiences: Students have access to a wide variety of clinical electives, both medical and surgical, that can be accomplished in ambulatory clinics, many of which are associated with community hospitals, operationally focused military medical units, and/or a VA medical center.

Challenges in designing and implementing clinical experiences for medical students

One of the major challenges associated with designing and implementing clinical experiences for students relates to the frequency with which military faculty are required to rotate to other duty assignments/duty locations and/or be prepared to deploy to other locations in response to national and/or international contingencies. To meet this challenge, we have put in place an active and ongoing nationwide program of faculty development to ensure consistently skilled and comparable delivery of instruction, feedback, and evaluation. Finally, it should be noted that just as in the civilian sector, the need to balance demands for clinical productivity against time for clinical teaching and mentorship is an ongoing challenge. Given the unpredictability of the military mission, we engage in continuous contingency planning, including identifying alternate training locations.

Curricular Governance

Decentralized curricular governance

The only departmentally based components in the curriculum are the department committees that oversee administration of their respective clinical clerkships. While these committees have responsibility for developing and delivering clerkship content and the assessment of individual students, the Executive Curriculum Committee oversees and manages the entire curriculum, including clerkship experiences.

See Figure 1—Curricular governance.

Education Staff

Medical education leadership

The Office of Medical Education is staffed by 4 decanal staff: the associate dean for medical education, the associate dean for curriculum, the associate dean for assessment, and the assistant

![Curricular governance](image)
dean for capstone programs. Six full-time staff members provide administrative support to the decanal staff.

**Department of Medical Education**

- The primary medical education staff are responsible for the implementation of undergraduate medical education only.
- The Center for Health Professions Education includes health professions graduate education programs granting MHPE and PhD degrees, a distributed learning office, the newly established Academy for Educators, and a research office focused on ascertaining the long-term career outcomes of our graduates and factors associated with their success.

See Figure 2—Organizational chart.

**Faculty Development and Support in Education**

**Professional development for faculty as educators**

Since our faculty are dispersed across the United States and periodically move from one teaching hospital to another within the larger organization, our faculty development program has devised a unique approach to standardization. It includes an array of in-person, interprofessional workshops delivered locally and at 25 national teaching hospitals. These workshops address a range of topics, including foundational educational skills and principles, career development, quality improvement, and scholarly endeavors. Educational sessions conducted at USU are recorded and made available via live video teleconference.

We also conduct a semiannual week of structured activities for our key academic leaders. These sessions are tailored to meet the needs of specific cohorts of educators and include preparatory work, assigned readings, and a submitted reflection. Groups are deliberately designed to be interprofessional, and they include leaders of both undergraduate and graduate medical education programs.

To meet the growing faculty development needs of our large health system, we created a robust faculty development outreach program. To date, it has trained 25 interdisciplinary clinician–educators to support and strengthen our core team. These new faculty developers can each deliver up to 13 standardized presentations on a core set of foundational topics. Because they are embedded in the school’s major teaching affiliates and have the flexibility to meet local scheduling requirements, they are an invaluable asset to our national faculty.

Finally, to recognize those who achieve advanced levels of faculty development, we award 4 different certificates.

**Role of teaching in promotion and tenure**

Promotion and tenure decisions hinge on achievement in one or more of 4 major areas of scholarship: research, clinical work, institutional service, and teaching.

Teaching is categorized into 3 levels:

- Level 1: direct provision of teaching in the classroom, labs, wards, or clinics
- Level 2: development of teaching materials and curriculum and program or course direction

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**Figure 2** Organizational chart.
• Level 3: peer-reviewed and disseminated teaching achievements via journals, posters, presentations, digital media, grants, and educational leadership

Educator portfolios are encouraged to document achievements. Promotion to associate professor requires comprehensive level 1 and significant level 2 accomplishment. Promotion to professor requires comprehensive level 1 and 2 and significant level 3 output.

The Academy for Health Professions Educators was officially chartered in September 2019. It will include faculty from USU’s School of Medicine, Graduate School of Nursing, and Post-Graduate Dental College. It will serve to assist faculty in their ongoing development as educators and educational researchers.

Regional Medical Campuses
Although we have a remarkable network of military teaching hospitals, national faculty, and clerkships across the country, and offer elective experiences around the world, all educational activities are coordinated from our home campus in Bethesda.