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### **‘Amazing Race’-Like Challenge Used to Teach Military Medical Students Leadership, Teamwork, and Communication Skills**

**Bethesda, MD** – Sixteen teams of uniformed medical students will go head-to-head to determine who wins the “Gunpowder Challenge” adventure race at the F. Edward Hébert School of Medicine, part of the Uniformed Services University of the Health Sciences. The challenge is part of a two-day medical field practicum to help third-year medical students develop team-based military/medical leadership and communication skills, March 26-27.

The Medical Field Practicum 201 “Gunpowder” is part of the curriculum for the school’s Department of Military and Emergency Medicine. Students will practice small-team leadership, better understand group dynamics, review successful communication strategies during crisis situations, and experience how stress affects performance. Many of the activities are nested in Advanced Trauma Life Support (ATLS) and Tactical Combat Casualty Care (TCCC) scenarios.

During Gunpowder, students rotate through four core teaching sessions: ATLS scenarios, TCCC scenarios, Operation Bushmaster Rehearsal of Concepts, and Improvisation. The ATLS scenarios will offer students the opportunity to learn and practice advanced life-saving skills (placement of chest tubes, intubation, etc.) using the high-fidelity Sim Man 3G and other simulation technologies. The Improvisation training lane, which takes place in the woods behind the University, puts students in teams to try and figure out ways to evacuate casualties using minimal equipment. The casualties must be evacuated across a stream from one side of the bank to the other. Students will construct a rope bridge and use it in their efforts.

In the TCCC sessions, the scenario is an active shooter who has injured a number of people before being subdued (and now a casualty himself). Actors use cut suits (human-worn simulators) that allow actual cutting, chest tube placement, etc., and can produce spurting “blood” and other things to make the scenario very realistic. Once the students are given the scenario, they should immediately spring into action to save their “patients,” and they are given additional challenges (e.g., a second shooter) to face while administering care. This is not only a review of lessons learned throughout their time at USU, but also a leadership lesson as they assume roles, give orders, etc., to their fellow student team members.

The Operation Bushmaster Rehearsal of Concepts is a “war-gaming” event. Two squads at a time, in separate rooms, will have sand tables with sophisticated props where they will lay out the Bushmaster operation site and then be given scenarios that they have to run through as if their platoon were responding, while rotating leadership and other important team roles. Bushmaster is a mandatory fourth-year medical student field practicum and final exam for the Military Contingency Medicine course. Students spend a week in the field at Fort Indiantown Gap, Pa., learning to deal with the challenges of delivering medical care in support of combat, peacekeeping, and humanitarian assistance operations. The Bushmaster training exercise concludes with a simulated convoy attack with a mass casualty situation. The students draw on their education, training, and experience as they try to make order out of chaos while triaging, treating, and evacuating patients. The Rehearsal of Concepts is designed to help prepare the students before they go through the actual Bushmaster exercise six months later.

## *Learning to Care for Those in Harm's Way*

On the second day of the field practicum, students will participate in the “Gunpowder Challenge,” named for the originally-intended training site: the Gunpowder Military Reservation in Baltimore. The site was not used in its inaugural year because of heavy snow. The training was returned to the school’s Bethesda campus, but the name stuck.

The Gunpowder Challenge adventure race incorporates 16 skills stations that include mass casualty triage, differentiating traumatic brain injury from combat stress reaction, determining evacuation priority, breaking bad news to patients, a litter obstacle course, casualty evacuation scenario, improvisation, the rope bridge, and a Bushmaster “hunt.” Additionally, high-fidelity simulation is used for two ATLS stations, an ACLS station, trauma ultrasound, cut suits, and ultrasound-guided central venous catheterization.

The course is divided into several zones with five stations per zone. Students must complete each station within a specified time limit to earn points. They must complete at least two stations in each zone to finish the race, but will earn an extra 10 points for each zone in which they complete at least three or more stations. If a station involves a leadership role, each member of the team will take a turn in that role. The students have approximately 5 ½ hours to complete the race.

“This exercise delivers intense scenarios that push our students to their limits – and sometimes beyond,” said Navy Commander (Dr.) James Palma, the exercise director. “They react to, and lead their team through, crisis situations that would strain most fully-trained physicians. Using this crucible of high-stress training and simulation, we are forging military medical leaders.”

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The Uniformed Services University of the Health Sciences (USU), founded by an act of Congress in 1972, is the academic heart of the Military Health System. USU students are primarily active duty uniformed officers in the Army, Navy, Air Force and Public Health Service who receive specialized education in tropical and infectious diseases, TBI and PTSD, disaster response and humanitarian assistance, global health, and acute trauma care. A large percentage of the university’s more than 5,200 physician and 790 advanced practice nursing alumni are supporting operations around the world, offering their leadership and expertise. USU also has graduate programs in biomedical sciences and public health committed to excellence in research, and in oral biology. The University's research program covers a wide range of clinical and basic science important to both the military and public health. For more information, visit [www.usuhs.edu](http://www.usuhs.edu).