

Combat Lifesaver (D2P/CLS): A Lifesaving Tutor for Battlefield Injuries

J. Nicholas Hobbs (jnh5057@psu.edu), Frank E. Ritter (frank.ritter@psu.edu), and Jonathon H. Morgan (jonathan.h.morgan@gmail.com)

16jan2012 ACS Tech. Note 2012-1

Guidelines introduced by Tactical Combat Casualty Care (TCCC)¹ suggest Combat Lifesavers should understand a number of skills to prevent deaths on the battlefield. These skills include both the identification and the treatment of specific injuries in combat situations. Importantly, these skills cover a variety of injuries and procedures necessary for combat scenarios.

D2P/CLS will tutor Marines before they go to a Combat Lifesaver course (and the tutor may be useful after the course and for continuing education). In D2P/CLS the tutee will practice applying the knowledge of a Combat Lifesaver through identifying the correct procedures in TCCC. The tutor will provide background information on the situation, present an injury, and present the tutee with a visualization of the injury. The student will then have the opportunity to treat the injury. After the student has attempted to treat the injury, feedback will be provided to the student to allow the student to realize any mistakes that could have been made when treating the injury.

The tutor will provide the tutee with a variety of situations. The tutor will first introduce basic injuries to the tutee and require the tutee to identify and perform a single action on the injured individual. As tutee progresses the situations will become more difficult and introduce sessions where an individual has multiple and more complex injuries. Because the order of treating injuries is important in a combat situation, the tutee will have to use the skills they learned at the start of the tutor to treat an individual with many injuries. Additionally, the many injury sessions provided by the tutor will reinforce previous learned material from the introductory sessions of the tutor, which will allow the tutee to continue to use the skills the tutor taught early in the tutoring sessions. A draft of the interface the tutor may use is shown in Fig 1.

The D2P/CLS tutor will reuse the D2P tutoring language developed for the Moving Target Tutor², including representing the knowledge in Herbal.

The tutor is being created at Penn State in Spring-Summer 2012, and will be tested at Quantico during the process.

Acknowledgements. D2P/CLS is developed with support from ONR through CRA (N091-086/P10008). The learning theory was developed with support from ONR Div 30 (N00014-11-1-0275/N00014-10-1-0401). D2P/CLS uses Herbal (N091-086/P10008 / N00014-06-1-0164). Ray Pursel, Paul Andre, and Henry Warren have served as SMEs.

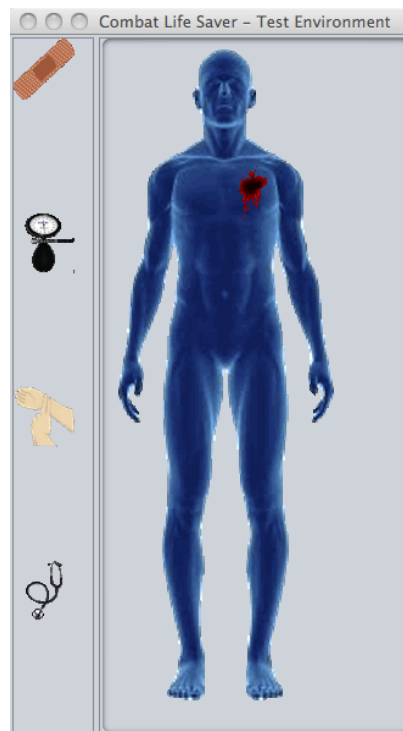


Figure 1. Initial draft D2P/CLS interface. Selectable tools are shown on the left.

¹ NAEMT. (2010). *PHTLS: Prehospital trauma life support, military edition* (Vol. 7 edition). St. Louis, MO: Mosby/JEMS.

² Ritter, F. E., Morgan, J. H., Hiam, J. W., & Kim, J. W. (2011). *The Moving Target Tutor (MTT)—Teaching the declarative knowledge to shoot moving targets* (pp. 1 page handout).