



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Hemorrhage Control and Resuscitation Evaluation of Compression Bandages

Researchers at NAMRU-SA, sponsored by MCSC, evaluated the performance of compression bandages at ameliorating hemorrhage. Though often rudimentary in form, compression bandages are vital for hemorrhage control in battlefield trauma care, and can also protect the wound from contaminants that may cause infection or renew bleeding. A recent summit of medical experts and medical industry representatives established four consensus parameters on which to characterize and evaluate both simple and complex compression bandage systems: pressure, layers, components, and elastic properties. A range of compression bandages was evaluated based on the accepted parameters and during applications to two different mannequin systems, the HapMed and the SynDaver™ Synthetic Human. Compressional bandages with mechanical pressure applicators were more effective, without compromising blood flow to the rest of the extremity. The outcome of the study provided critical data regarding compression bandage use and efficacy. The results will aid the DoD selection process and improve quality of care in combat environments.