

# ***Immediate Care of the Wounded***

**Clifford C. Cloonan, MD, FACEP  
COL (ret) U.S. Army**

**Associate Professor  
Department of Military & Emergency Medicine  
Uniformed Services University of the Health Sciences**

## **Introductory Thoughts**

*“It will be tragic if medical historians can look back on the World War II period and write of it as a time when so much was learned and so little remembered.”*

Beecher H. Early Care of the Seriously Wounded Man.<sup>1, 2</sup>

*“It is highly desirable that anyone engaged in war surgery should keep his ideas fluid and so be ready to abandon methods which prove unsatisfactory in favour of others which, at first, may appear revolutionary and even not free from inherent danger.”<sup>3, 4</sup>*

Bailey H, ed. Surgery of Modern Warfare. 2nd ed.

*“Fight on, my men,” Sir Andrew says,  
“A little I’m hurt, but not yet slain;  
“I’ll but lie down and bleed awhile,  
“And then I’ll rise and fight again.”*

Ballad of Sir Andrew Barton, author unknown, c. 1550

*Introduction*

This text represents a thirty year culmination of my thoughts about pre-hospital combat casualty care.

My earliest introduction to this topic came in 1973 when I attended the 91A Combat Medic course in San Antonio Texas, a necessary pre-requisite before I could attend the 300 F-1 Special Forces Medic course. It was mostly poorly taught and improperly focused and fortunately I never had to take care of anyone in, or out of, a combat situation using only the knowledge gained in that course. It was run by nurses and the academic focus of the course was on nursing care skills that were mostly irrelevant to pre-hospital combat casualty care, presumably the realm of the combat medic. Some of the combat skills instruction provided by veteran combat medics with experience in the Vietnam War was a notable exception.

The 300 F-1 Special Forces Medic Course that followed was exactly the opposite; it remains to this date the best and most intense medical instruction I have ever received. I learned more relevant medical information in the short span of that course than I would ever again learn in a similar time span. Upon completion of that course I was left wondering why it took physicians four years of college, four years of medical school and several more years of internship and residency training to learn what I had learned in less than a year; I was blessedly unencumbered with the

knowledge of what I didn't know and youthfully confident in my skills and knowledge of combat casualty care. I was to never have the opportunity to learn my shortcomings as a combat medic since the Vietnam War wound down faster than I completed my training. It was this training and experience as a Special Forces medic that sent me on the path to become a military physician.

What I learned in the ensuing years is that most often:

- The simple answer is the right answer,
- Well-performed basic techniques are usually better for the patient than more complicated and "sophisticated" techniques,
- Conscious inaction is better than mindless action,
- Training is more important than equipment, and
- The day I graduated from the Special Forces Medic Course I was "smarter" than I would ever be again because mostly what I learned later was all the things that I didn't, and would never, know.

What I also learned in my nearly thirty years in military medicine is that most people believe that all relevant history began the day they were born and therefore nothing much of use for the present or the future can be learned from the past. **Nothing could be further from**

**the truth** -- there is actually very little that is completely new in the realm of military medicine. If you are looking for the solution to a problem the first place to look is in the past because there is a good chance that someone else either already solved the same or a similar problem or at least was able to find out what didn't work.

Throughout my career in military medicine I spent a considerable amount of time as a trainer/educator; I observed how people learn, what motivates them to learn, what they are likely to remember, and what they are likely to forget. I learned that it is much better to create systems (educational or otherwise) that take into account and accommodate probable human behavior than it is to try to shape or modify human behavior.

I also learned that much, if not most, of what is believed to be true has not been proven true and further it is likely that within my lifetime much of what I have been taught will be proven to be false – this as certainly been the case over the past thirty years. I discovered that almost everything that is believed to be true about pre-hospital combat casualty care is completely unproven; this certainly does not mean it is false, just that it has not been, and will likely never be, proven true. The reason for this is because, for obvious reasons, there are no randomized, double-blind, prospective studies of pre-hospital combat casualty care; and there are remarkably few such studies of civilian pre-hospital care.

What then is the basis for modern day pre-hospital combat casualty care? It is a composite of battle proven, albeit anecdotally supported, procedures and techniques combined with civilian EMS standards of care (whether appropriate to combat casualty care or not), some of which are based upon well done studies, many of which are not.

This text represents my best efforts to glean from the pages of military medical history and from such civilian pre-hospital care and other relevant studies as have been done the evidence, weak though it may be, that supports or refutes the performance of various procedures in a pre-hospital combat casualty care environment.

In the interest of full disclosure I admit to the reader certain biases that I have acquired as a result of the observations, experiences, and education I have described above. One of these biases is against teaching pre-hospital combat casualty care providers complex and potentially hazardous medical procedures even when there is no alternative (e.g. cricothyrotomy); another is a bias in favor of better training over better equipment. I also have a bias that sometimes the most important thing is to know what not to do and when not to do it.

I independently observed that there is strong psychological predisposition toward action over inaction among pre-hospital personnel, a predisposition that is certainly characteristic of Special Operations medics/corpsmen. I had also

observed that when a procedure is taught, particularly one that seems “heroic” (e.g. cardiac massage), that the procedure will be performed much more often than indicated. This observation being epitomized by the often used, tongue-in-cheek, comment by emergency medicine residents that the indication for a particular procedure they had performed was that the RANDO criteria had been fulfilled (Resident Ain’t Never Done One).

I later found that these concepts had been previously well-described by one of the fathers of modern emergency medicine, Dr. Peter Rosen, in a rather obscure July 1981 publication, Topics in Emergency Medicine, titled, “The Technical Imperative: its definition and application to pre-hospital care.” The technical imperative and its implications are defined and described in the early portion of the “Airway” section in this text and I would encourage readers to obtain and read the original article for greater detail (unfortunately it is hard to find in most libraries – I eventually found a copy in the library of the National Fire Academy in Emmitsburg Maryland).

One of the reviewers of this material suggested that it be re-written to appeal to a larger audience, noting that it is presented in the manner of a textbook. I was pleased by this comment because that is exactly what I intended. The primary intended audience for my work has been, from the beginning, military medicine trainers/educators and medical commanders who must make decisions

as to what should be taught and to whom, and what material should be provided to those who provide pre-hospital combat casualty care.

The material in this book was originally written for inclusion in an unpublished book, Combat Surgery, to be part of the multi-volume “Textbook of Military Medicine” series published by the U.S. Army’s Office of the Surgeon General. Unfortunately this book was never completed despite its obvious importance as a key volume in any series on the subject of military medicine, and the whole Textbook of Military Medicine project has, I am told, been discontinued. Thus as I finished my military career I was left having done a considerable amount of work for a book that, it seemed, was never to be published.

So the situation remained until I was contacted about a year ago by CAPT (fmr) Mike Hughey MD, a fellow military medicine educator and friend. Mike has a medical education website,

**<http://www.brooksidepress.org>**

that provides military medicine oriented educational material. He inquired as to whether I had any unpublished material on the subject of military medicine that I would like to get published? I replied that I certainly did and provided him with several megabytes of material that I used throughout my career, some of which I am pleased to see have already been incorporated into his Website. I also told him about this unpublished work which he encouraged me to com-

plete and offered to provide some editing services as well as a place to publish the material. Finally after more than four years in the writing and thirty years in the conceptualization here it is.

The commonly used ABCD approach is utilized to frame the discussion of the management of potentially life threatening problems in the pre-hospital combat environment. Historical information and current studies are incorporated to provide the reader an evidentiary basis upon which to make decisions as to what is likely to provide casualties benefit in a pre-hospital combat setting and what is either likely to be ineffectual or possibly harmful. Where it seems reasonable, based upon the available evidence, to offer what I believe is a best practice I have done so, but mostly the reader is given the available evidence and is left to decide for him or herself what materials, techniques, and procedures are most appropriate for pre-hospital combat casualty care providers.

#### *Acknowledgements*

I would like to take the opportunity here to thank those who made this work possible; most importantly Mike Hughey who has provided a venue for the material and who has also provided considerable editorial support. I would also like to thank Dr. Robert Joy, Professor Emeritus at the Uniformed Services University of the Health Sciences, COL(ret) Ron Bellamy MD, Lt. Col. John Wightman MD, USAF and COL Candice Castro MD, for their detailed reviews of my work and their helpful

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***About the Author***

Clifford C. Cloonan, M.D., FACEP  
Colonel (ret)  
Medical Corps, United States Army



Dr. Cloonan is currently a staff emergency medicine physician at Carlisle Regional Medical Center in Carlisle Pennsylvania. He is also an Associate Professor at the Uniformed Services University of the Health Sciences in Bethesda Maryland.

Prior to his retirement from the United States Army in January 2004 Dr. Cloonan was the Interim Chairman of the Department of Military and Emergency Medicine at the Uniformed Services University. From 1999 to 2002 he was the Consultant to the Surgeon General for Emergency Medicine and he served as the Department of Defense representative to the National Registry for Emergency Medicine Technicians from 2001 to 2004.

COL Cloonan was born January 16, 1954 in Boulder Colorado. He was an enlisted soldier assigned to the 10th Special Forces at Fort Devens Massachusetts between 1972 and 1975. Initially trained as an infantryman with specialized training in light and heavy weapons, he was later trained, and spent most of his enlistment, as a Special Forces medic.

After his discharge as a Sergeant in August 1975 he joined the reserves and began his

undergraduate schooling at California Polytechnic State University at San Luis Obispo. He majored in biochemistry and was in the university's ROTC program, serving as the ROTC cadet battalion commander during his last year and receiving the George C. Marshall Award. While in college he worked as a registered nurse in a local hospital emergency department having used his previous Special Forces medic training to challenge the state registered nurse exam.

In the fall of 1979 he began medical school at the Uniformed Services University of the Health Sciences (USUHS), graduating with honors in 1983. Following a transitional internship at Brooke Army Medical Center in San Antonio Texas and after a brief stint as an instructor at the SF Aidman course, he attended the Army's Flight Surgeon course and spent the next 15 months in Korea as a flight surgeon with the 43rd MASH.

Upon returning to the U.S. he attended the Medical Officer Advanced Course and in July 1986 he began his emergency medicine residency at Madigan Army Medical Center, Ft Lewis Washington, serving as one of the chief residents.

After residency he was assigned to Tripler Army Medical Center in Hawaii where he served as a staff physician. In addition to his regular duties he served in a volunteer capacity in support of Joint Special Opera-

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tions out of Ft Bragg North Carolina. In this role he was in combat with the Forward Surgical Team of the 44th Medical Brigade at Howard Air Force Base, Panama during Operation Just Cause.

Also while at Tripler he served as the head of the hospital's Emergency Medical Response Team (E.M.R.T.) which was responsible for providing emergency medical backup for Johnston Island, a major chemical weapons storage site in the Pacific. This team was also responsible for providing regional military medical disaster assistance as required. As chief of the E.M.R.T., COL Cloonan was sent to Western Samoa in February, 1990 as part of a team to assess the damage caused to that country by Cyclone Ofa.

He was next assigned to the Uniformed Services University of the Health Sciences (USUHS) medical school in August 1990 as an assistant professor in the Department of Military and Emergency Medicine. While at USUHS from 1990-1993 COL Cloonan was the course director for both the Combat Medical Skills course and for the Introduction to Combat Casualty Care course and he was Director of the Department's Basic Science Division.

In addition to his teaching duties at USUHS Dr. Cloonan also provided medical support for several federal law enforcement agencies involved in high risk law enforcement activities. In this capacity he provided medical support for the FBI Hostage Rescue Team during the Ruby Ridge standoff and during the Branch Davidian Waco Texas incident as well as medical support for numerous less high profile local area SWAT missions.

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From July 1993 through June 1994, COL Cloonan attended the US Marine Corps Command and Staff College at Quantico, Virginia, obtaining a Master of Military Studies and graduating as the top army student. He then served as Division Surgeon for the 2D Infantry Division in Uijongbu South Korea following which he was Chief of Emergency Medical Services at the 121 General Hospital in Seoul.

From August 1996 to January 1997 COL Cloonan served as the Chief of the Emergency Department at Womack Army Medical Center, Fort Bragg, before becoming Dean of the Joint Special Operations Medical Training Center. Prior to his second assignment to the Department of Military and Emergency Medicine at the Uniformed Services University, from January 1977 to July 2000, COL Cloonan served as the Dean of the newly established Joint Special Operations Medical Training Center within the JFK Special Warfare Center and School at Fort Bragg, North Carolina where all Special Operations enlisted medical personnel within the Department of Defense receive their training.

***References***

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<sup>1</sup> Beecher H. Early Care of the Seriously Wounded Man. *JAMA*. 1951;145(4):193-200

<sup>2</sup> Henry K. Beecher, Father of the prospective, double-blind, placebo-controlled clinical trial.

<sup>3</sup> Bailey H, ed. *Surgery of Modern Warfare*. 2nd ed. Edinburg: E & S Livingston; 1942; No. 1.

<sup>4</sup> Hamilton Bailey, Reknown British Surgeon

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