Advanced Trauma Life Support: The Birth and Evolution of ATLS

*Presented By:*
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**OBJECTIVES:**
*By the end of the presentation, participants will be able to:*

- Develop knowledge and understanding of the history and inception of ATLS.
- Contribute to the improvement of patient care utilizing ATLS.
Disclosure

I have no actual or potential conflict of interest in relation to this program/presentation.

HIPAA

Applies and photo consents have been obtained for those in the presentation by family or patient themselves.

Objectives

• Develop knowledge and understanding of the history and inception of ATLS
• Outline the contributions of multiple medical professionals to create and implement ATLS
• Describe how the course of ATLS has evolved and will continue to evolve to improve patient outcomes
Goals

- Be somewhat interesting and entertaining

- Make an impact so you can leave with an appreciation of our history in trauma care

*Picture of plane from ATLS Manual*
So.... I've told the story... however...

"Stalking" is such a strong word.
I prefer "Intense Research of an individual".

I wanted to learn more... so I started looking for Dr. Styner... to learn and to show him where we are 40 years later...

Key Players

• Dr. James Styner
• Dr. Paul "Skip" Collicott
• Dr. Ronald Craig
• Irvine Hughes, RN
Dr. James Styner

Styner Family, circa 1945

Dr. Paul “Skip” Collicott

- Served 2 years in the Air Force during Vietnam
- Completed surgical training at the University of Washington in Seattle
  - Majority of surgical training occurred at the then King County Hospital, now known as Harborview Hospital
  - King County was the "trauma center" for the city of Seattle and was known to be a leader in pre-hospital emergency care
- Arrived in Lincoln, Nebraska as a Vascular General Surgeon in July of 1973
Dr. Ronald Craig

Irvene Hughes

EMS Systems Act of 1973

- Nebraska
  - Initial efforts focused on pre-hospital personnel, not physicians
  - Dr. Kenneth F. Kimball a surgeon in Kearney, Nebraska was a key leader
    - Worked on the "Orange Book" which was the first standardized educational manual for Emergency Medical Technicians published in 1971
    - Assisted the National Highway Traffic Safety Administration in the design and implementation of the logo "Star of Life" in 1977 still displayed on many ambulances and EMS uniforms today
EMS Systems Act of 1973

- Established a National Director of the Office of EMSS, within the Department of Health Education and Welfare known later as the Department of Health and Human Services
  — Dr. David R. Boyd
- Provided Federal assistance to states that proposed development of Trauma and Emergency Medical Services Systems.

Beech N3600H
December 1975 flown by Dr. James Styner over the Nebraska prairie.
Photo taken by Dr. Bruce Miller.
“How could anyone survive this?”
The Rear Hatch
Randy Styner was trapped with his leg pinned under the plane.

Crash Scene
The seat folded down was where Charlene Styner was sitting during the impact. Without a seatbelt there was no chance she would be able to stay in the airplane.

Crash Scene
Center of the gap a farmhouse is visible. The plane passed over the house and crashed into the tree line.
The plane traveled approximately 294 feet after impact. Dr. Styner found Charlene’s body near the debris seen in this photo to the right and beyond the plane.

**Fatal Piece of Metal**

The piece of the prop that was sheared off from the first tree the plane hit. It ricocheted around the plane before lodging in an unoccupied seat.

**Ireland- February 17th, 2006**
Prior to ATLS

- Trauma education was gained by didactic lectures and seminars
- Trauma training has evolved into a set of standardized assessment and treatment protocols based on evidence rather than expert opinion
**Lincoln Medical Education Foundation (LMEF)**

- Advanced Cardiac Life Support (ACLS)
- ATLS
  - Similar systemized approach for treating trauma patients within the first few hours of injury
  - Prior to ATLS
    - Patients were treated as any other patient
      - Thorough history and physical before implementing any necessary interventions
      - Didn’t work with trauma

**Plane Crash**

Irvene Hughes

ACSCOT

Dr. Craig

**The Perfect Storm**

Dr. Collicott

Dr. Kimball

LMEF

**ATLS**

- Initial pilot course was presented to a group of family physicians in Auburn, Nebraska in 1978
- Introduced to the ACS by Paul E. Collicott, MD FACS when he was invited by the Committee on Trauma then chair, C.T. Thompons MD FACS of Tulsa, Oklahoma
  - Dr. Collicott introduced the ATLS concept to the ACS-COT at their annual meeting in Houston in 1979.
  - Soon after the ACS-COT arranged for the Region Chiefs to meet in Lincoln, Nebraska for their introduction to the course
Initially this was thought to be a “Nebraska Course”
Immediate past chair of ACS-COT, Robert W. Gillespie, MD FACS and the President of the American College of Emergency Physicians, Harris Graves, MD FACEP were both Nebraskans convinced the group to think more broadly
Since trauma is a surgical disease, it was suggested that the course should fall under the ACS.
Different than traditional educational programs as ATLS was developed for family physicians not surgeons

ATLS

• 1980 Regional Courses
  – Denver
  – San Diego
  – Philadelphia
  – Milwaukee
  – Dallas
  – Washington, DC
  – Newark
  – Auburn, Alabama
• 1981 introduced to Canada
  – Toronto
  – Vancouver

• Efforts by ACS -COT were focused on making the course available to all doctors that cared for the injured patient
• Between 1980 and 1981 a committee was formed within the COT that were charged with oversight, refinement, and advancement of the course
ATLS

• 1986 International
  — Royal College of Surgeons in London
  — The Royal Australasian College of Surgeons in Melbourne hosted
    the ATLS course two weeks later

• 1986 to 1992
  — 13 countries including
    • Israel
    • Ireland
    • Singapore
    • Saudi Arabia
    • South Africa

ATLS

• One of the most successful educational programs of the
  American College of Surgeons (ACS) and the international
  standard for the initial evaluation and management of the
  trauma patient.

• ACS verifies successful course completion. It does not
  certify or credential the provider taking and passing the
  course.

ATLS Program Goals

• Assess a patient’s condition rapidly and accurately.
• Resuscitate and stabilize patient’s according to priority.
• Determine whether a patient’s needs exceed a facilities
  resources and/or the providers capabilities
• Arrange appropriately for a patient’s interhospital or
  intrahospital transfer (what, who, when and how).
• Ensure that optimal care is provided and that the level of
  care does not de….....
Concepts of ATLS

- Initially were difficult to accept
  1. Treat the greatest threat to life first.
  2. The lack of definitive diagnosis should never impede the application of an individual's treatment.
  3. A detailed history is not essential to begin the evaluation of a patient with an acute injury.
The Future of ATLS

• <C> A B C
• The Hartford Concensus
• Crystalloids for fluid resuscitation??
  – 2 liters of LR, then Blood
  – We do not bleed crystalloid

“Compared to what happened in the recent tsunami in Asia, 9-11 in the US, the disaster on the Gulf of Mexico from hurricane Katrina, and the other natural and manmade disasters that have occurred in the past twenty years, my family’s experience out in that field was just child’s play. Hopefully what we have done, all of us who have become a part of the ATLS family, has played a part in saving some of those souls.”

- Dr. James Styner

In Memory of those lost to Trauma
Charlene Ann Styner
1944 - 1976
References

5. P. Collicott, MD (interview February 9, 2017)
6. P. Collicott, MD and B. Gelber, MD (interview March 2, 2017)
7. I. Hughes-Collicott (interview March 15, 2017)
8. I. Hughes-Collicott (interview April 4, 2017)
9. R. Craig (interview May 4, 2017)

Questions?

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