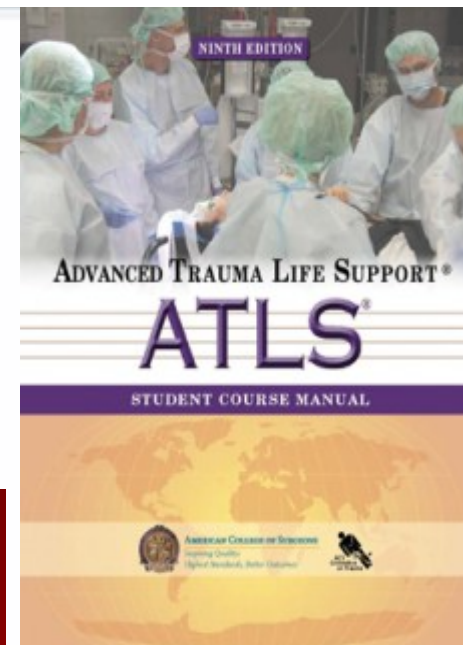


SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Azienda Unità Sanitaria Locale di Cesena



# ATLS®

*approach to the  
trauma patient*



Dr. Marco Barozzi  
Direttore U.O. Med. Urg. e P.S.  
Ospedale Bufalini, Cesena  
ATLS E. R. Faculty Director

# *Trauma in Italy: current problems*

- Only a **post-graduate** education on trauma care;
- That education is **optional**, somehow;
- Structurated Trauma System only in **few regions**;
- **No** National Trauma Registry;
- Who knows **whom** trauma belongs to?





# *The beginning*

...the ATLS course was born out of that mangled mass of metal...

James K. Steiner, 2007



February 17<sup>th</sup> 1976



# *The beginning*

## ***1966, The White Paper*** ***Accidental Death and Disability:*** ***The Neglected Disease of Modern Society.***

- **1977:** pilot Course was run in  
Auburn, Nebraska
- **1979:** adopted and incorporated by  
the ACS-COT
- **1980:** 1<sup>st</sup> ATLS® Course in USA

# ***International promulgation***

**1981:** 1<sup>st</sup> ATLS® Course in Canada

**1986:** exported to Trinidad and Tobago (pilot project)

**1987:** guidelines for promulgation in other Countries

**1988:** UK - Royal College of Surgeons of England

**2005:** Intl. Programs activity exceeded ACS-COT's organizational network activity

**2006:** birth of ATLS® Europe Association

**2012:** ATLS® Program 9<sup>th</sup> Edition

# *The evolution*

'80s

'00s



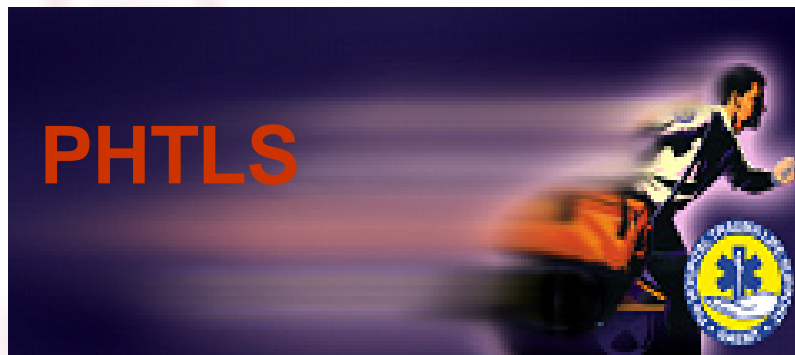
'90s

'10s

Over 60 countries in 5 continents

Over 60 countries in 5 continents  
Common language

# *ATLS® Program - Adjuncts*



**developed by NAEMT in cooperation with ACS-COT**

**1983:** Pilot Course in New Orleans

**1984:** 1<sup>st</sup> Nat. Faculty Course in New Orleans



**developed by STN (Society of Trauma Nurses)**

**1984:** 1<sup>st</sup> ATCN® course taught concurrently with ATLS®



# *ATLS® program in Italy*



**1993:** introductory site visit and MOU signed by COT and ACS-Italian Chapter representatives

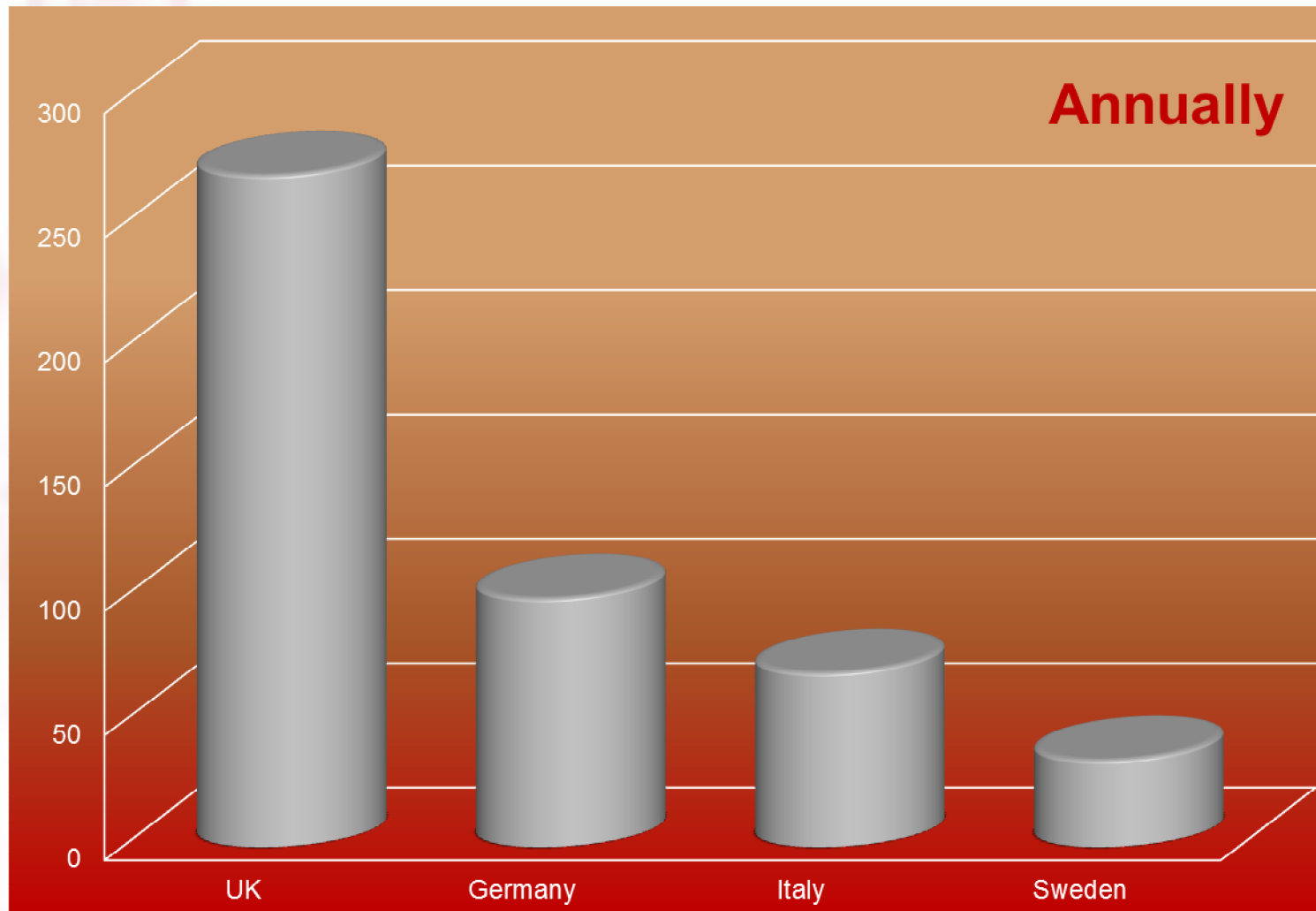
**1993:** initial training of the Faculty members in Fargo



**1994:** inaugural courses in Torino

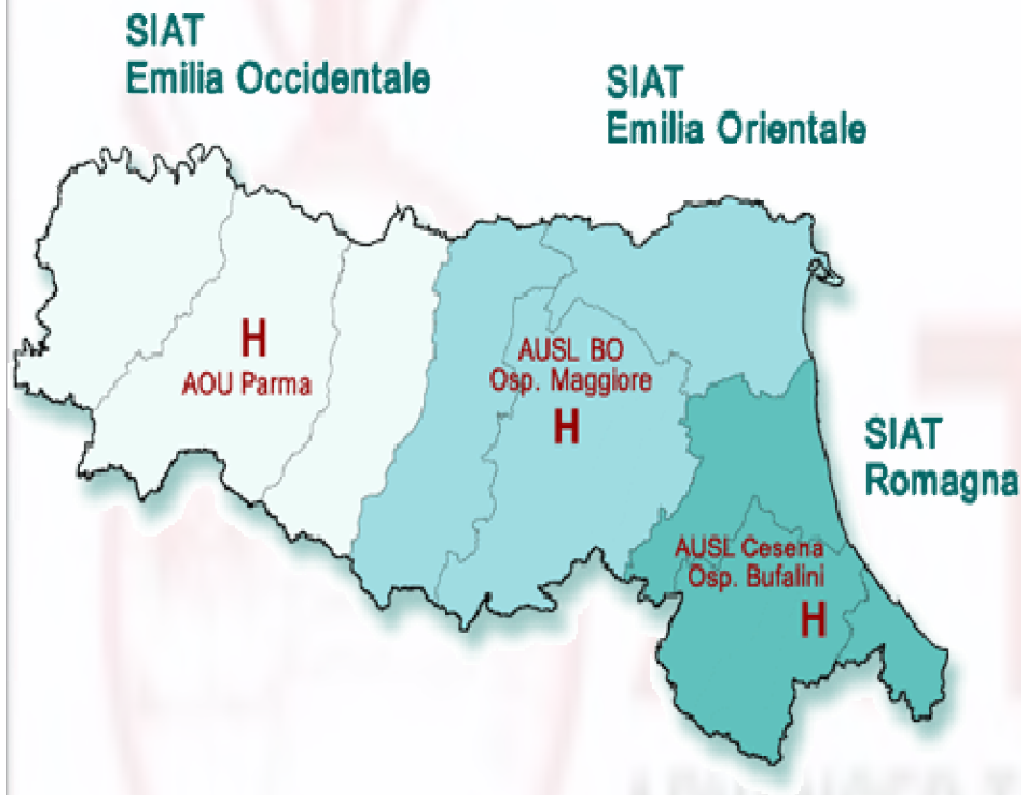
**1994-now:** continued promulgation

# *ATLS<sup>®</sup> program in Italy*



Total courses in Italy = **1050**

# ATLS® program in Emilia Romagna



- 1<sup>st</sup> course **1998**
- total courses (2012) **175**
- Regional Faculty constituted in **2003**
- **Modena**, regional home office, **59** courses (1999-2012)
- **2** Course Directors
- **3** Course Coordinators
- **30** qualified Instructors
- **4** ATCN Courses (2010-12)



# *ATLS® in Europe*

**Amsterdam, April 8-9, 2005**  
**1<sup>st</sup> European ATLS® Meeting**



- **SWOT analysis**
- **institution of an european steering group**



# *ATLS® in Europe*



**Torino, April 28-30, 2006**  
**ATLS® Europe Meeting**

➤ **incorporation of the scientific medical  
ATLS® Europe Association**

 **ATLS® in Europe**



Advanced Trauma Life Support





# INCORPORATION OF THE SCIENTIFIC MEDICAL ASSOCIATION

"ATLS®Europe" with head office in Torino (Italy)

The undersigned:

- Ioannis ANDROULAKIS, Greek citizen;
- Inga B. Margareta BEHRBOHM FALLSBERG, Swedish citizen;
- André Philippe Raphael BONVIN, Swiss citizen;
- Åse BRINCHMANN-HANSEN, Norwegian citizen;
- Laura BRUNA, Italian citizen;
- Claus FALCK LARSEN, Danish citizen;
- Pedro FERREIRA MONIZ PEREIRA, Portuguese citizen;
- Fergal Gerald HICKEY, Irish citizen;
- Patrizio MAO, Italian citizen;
- Salvijus MILAŠIUS, Lithuanian citizen;
- Maria Soledad MONTÓN CONDÓN, Spanish citizen;
- Giorgio OLIVERO, Italian citizen;
- Rosalind Katrina RODEN, United Kingdom citizen
- Marie Therese Nicole SCHAAPVELD, Dutch citizen;
- Endre Pál VARGA, Hungarian citizen;

hereby state and agree as follows:

MARIA SOLEDAD MONTÓN CONDÓN  
Marie Therese Nicole Schapveld

Maria Soledad Montón Condón



*Ioannis Androulakis*  
*André Philippe Raphael Bonvin*  
*Åse Brinchmann-Hansen*  
*Claus Falck Larsen*  
*Pedro Ferreira Moniz Pereira*  
*Fergal Gerald Hickey*  
*Patrizio Mao*  
*Salvijus Milašius*  
*Maria Soledad Montón Condón*  
*Marie Therese Nicole Schapveld*  
*Endre Pál Varga*

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*Maria Soledad Montón Condón*  
*Marie Therese Nicole Schapveld*  
*Endre Pál Varga*

## ATLS® in Europe



## Bylaws of Torino

Signed by the  
representatives of  
14 European  
Countries

# ***Bylaws of Torino***

## **purposes:**

- **to spread ATLS® in other European Countries**
- **to improve trauma training across Europe**
- **to influence the future developments of ATLS®**
- **to organize other teaching Programs**
- **to collect funds for educational purpose**



# *ATLS® International Meeting*

**Chicago, October 7-8, 2006**

- International Regional Structure
- Joint Meeting ATLS® Europe & ACS-COT
- MOU signed by ATLS® Europe & ACS-COT representatives



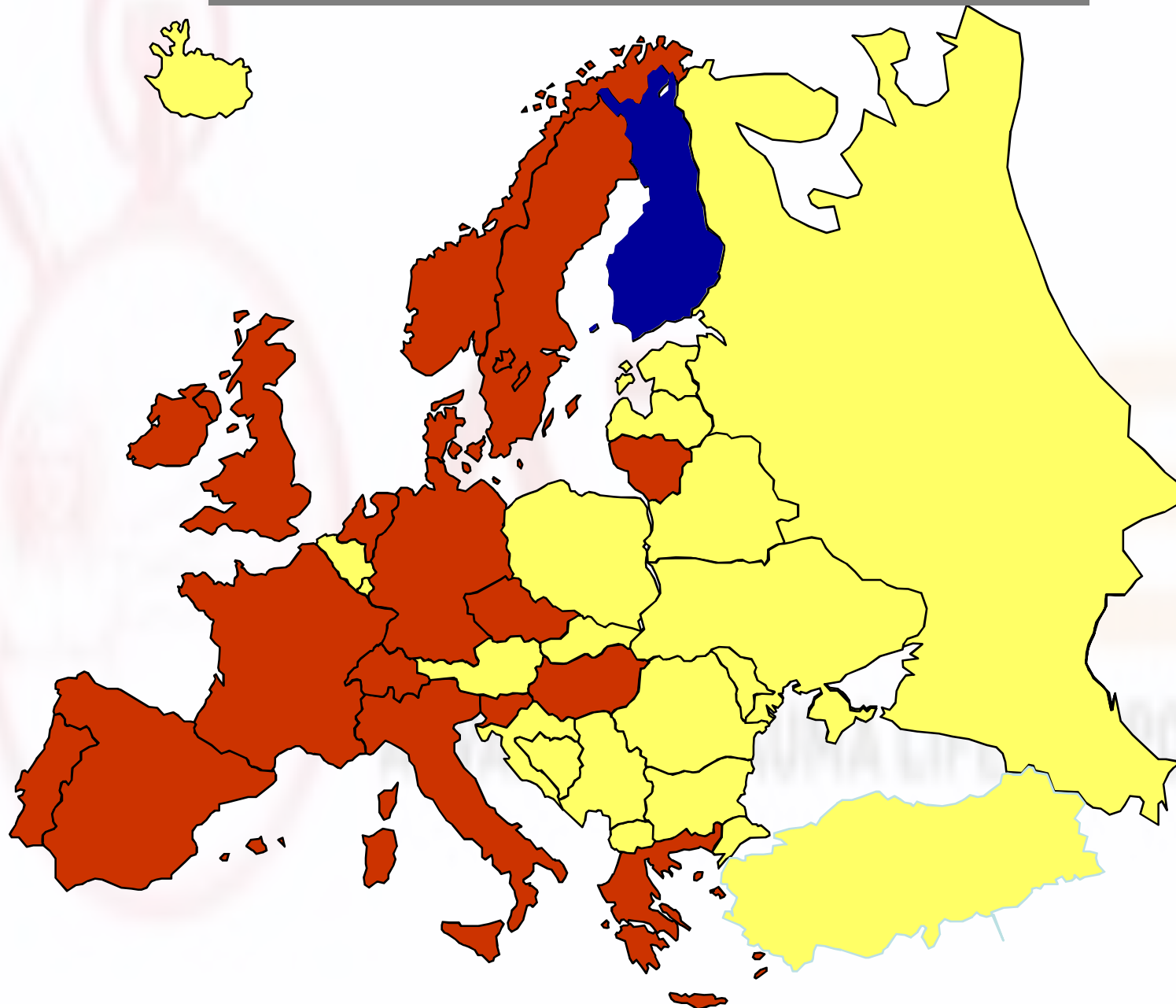


# *Joint Meeting*

- educational format of courses to be reviewed
- adoption of a modified Instructor Course for Europe covering the same objectives
- new edition revision process with international involvement
- 2 ATLS® Europe representatives appointed in ATLS® Subcommittee



# *ATLS<sup>®</sup> in Europe*





# *Criticisms*

ATLS® is too...

- **yankee**
- **rural**
- **stiff**
- **dogmatic and unflexible**
- **monstrous and petrified**
- **aggressive and dangerous**
- **surgical**
- **expensive**
- **scientifically inadequate**

# ***ATLS<sup>®</sup> program***

- **ATLS<sup>®</sup> was born to provide clinicians working in small hospitals with an effective, standardized and systematic **method** to evaluate and treat trauma patients**
- **focused on the "golden hour" for inhospital settings**
- **proven to be safe and reliable**

## *ATLS<sup>®</sup> program*

- ATLS<sup>®</sup> express **guidelines**, not protocols
- can be applied at **Trauma Centers** as well
- local protocols: **inspired** by ATLS<sup>®</sup>; they should consider structural, diagnostic and professional resources

## ***ATLS® program goals***

- **Rapid accurate assessment**
- **Resuscitate and stabilize by priority**
- **Determine needs and capabilities**
- **Arrange for transfer to definitive care**
- **Assure optimum care**

# ***ATLS® principles and philosophy***

- **different approach to evaluation/treatment, based on vital functions**
- **ABCDE, priority order approach**
- **treat greatest threat to life first**
- **definitive diagnosis not immediately important**
- **do not further harm**
- **time management is essential**
- **resource management**



# *Prioritizing vital functions*

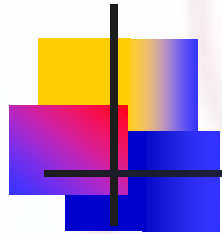
**A**irway: with C-spine protection

**B**reathing: ventilation / oxygenation

**C**irculation: stop the bleeding!

**D**isability: neurological status

**E**xpose: environment / body temperature



## Initial Assessment

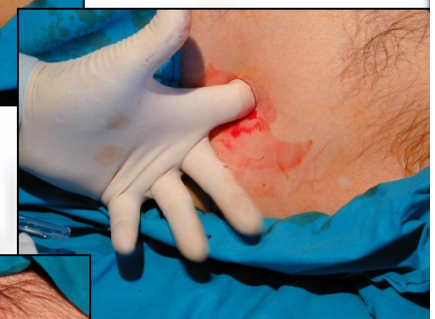
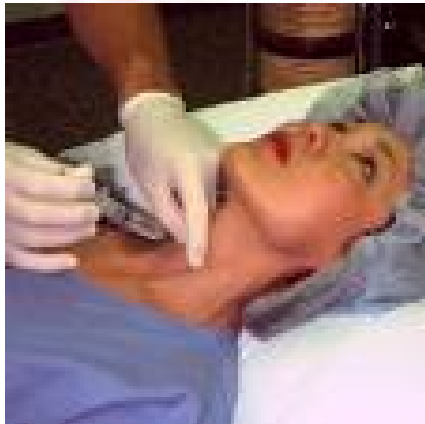
Primary survey and resuscitation of vital functions are done simultaneously in a team approach.



# *ATLS® principles and philosophy*

## **Do not further harm**

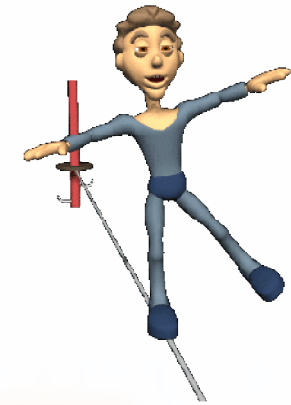
Invasive procedures are taught and demonstrated according to a safe method, as described and recommended by the ACS Committee on Trauma.



# *ATLS<sup>®</sup> principles and philosophy*



## **pitfalls**



Unforeseen obstacles/errors that may be encountered during initial assessment

- Airway vs ventilation problem
- The tachycardic child
- Neurologic deterioration
- Hypothermia



# *ATLS<sup>®</sup> principles and philosophy*

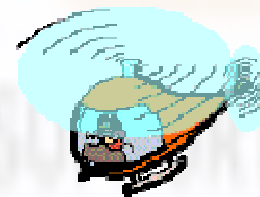
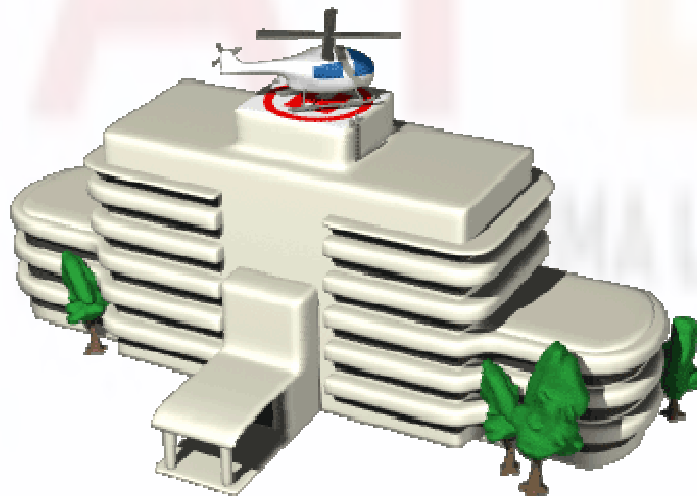
**Resource Management**



**Centralization/Transfer**



**Trauma System**





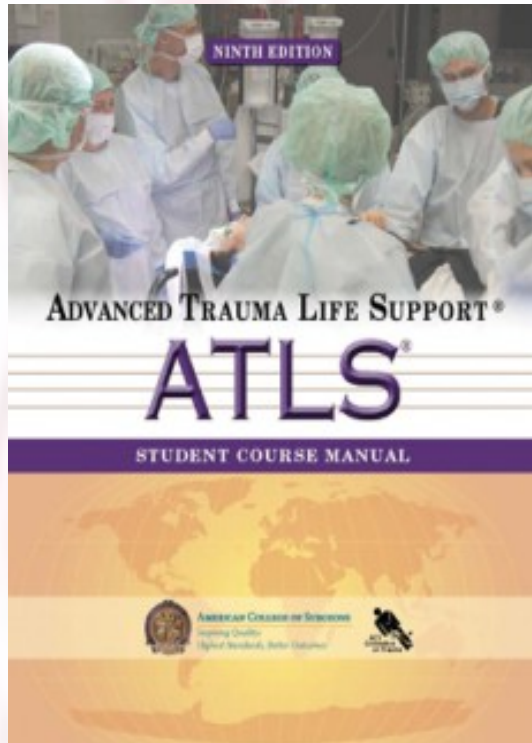
# ***ATLS® 9<sup>th</sup> edition***

**2012, Chicago**  
**September 30<sup>th</sup> - October 4<sup>o</sup>**  
**ACS Annual Clinical Congress**





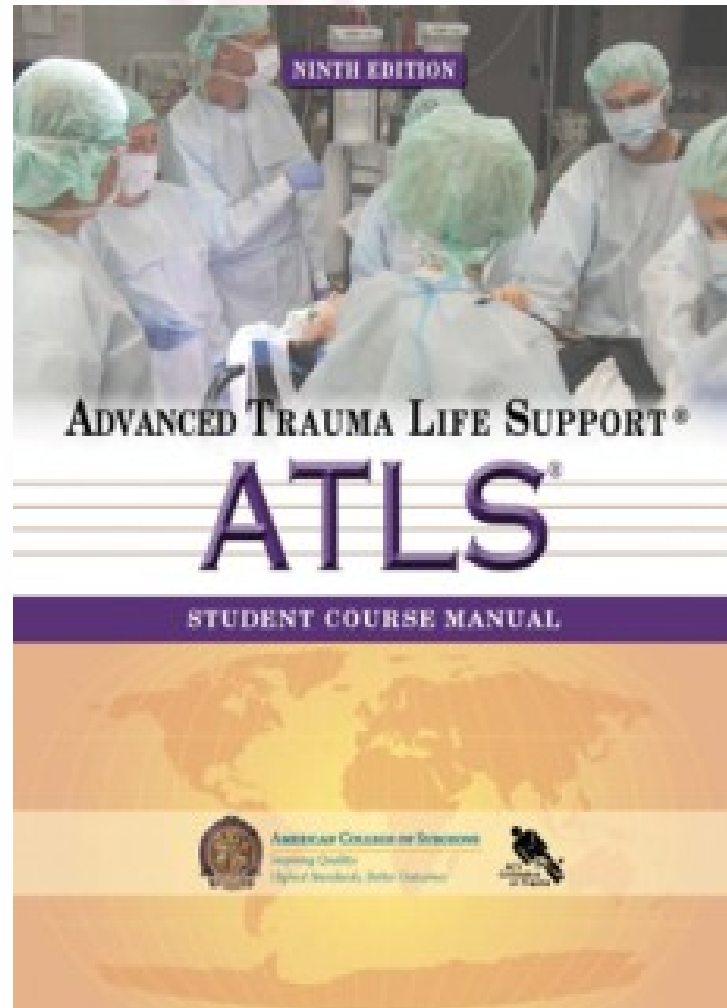
# ATLS® 9<sup>th</sup> edition



***still...***

- ...strict adherence to evidence based medicine
  - ...highly interactive design
  - ...lectures based on focused discussions
  - ...recognition of the unique needs of adult learners
- New manual
  - New ppt presentations
  - New scenarios
  - New multiple choice tests

# ATLS® 9th edition

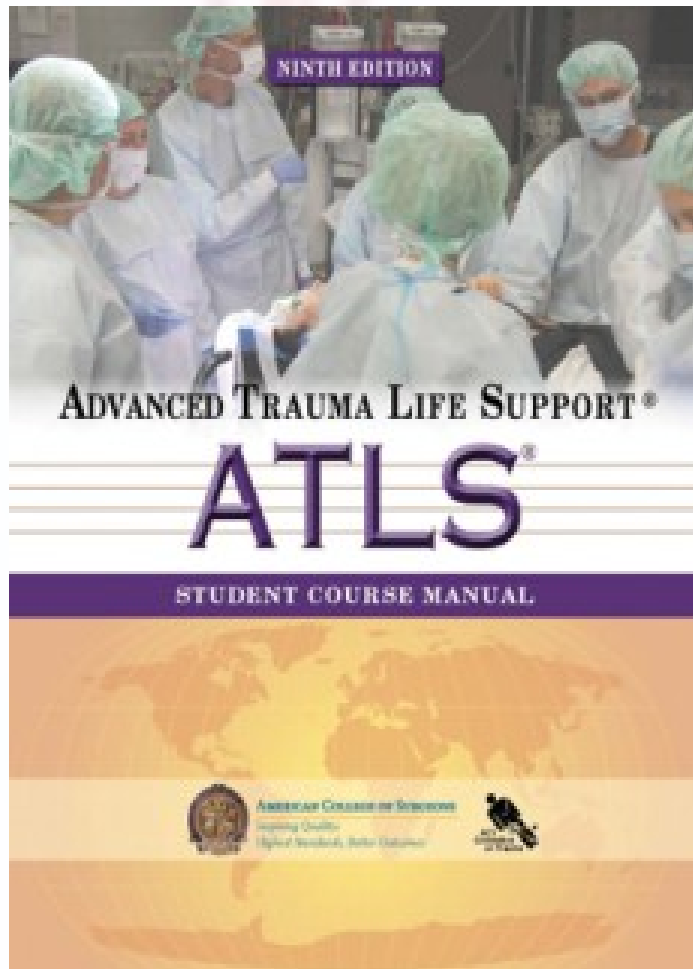


## Initial Assessment

- Team
- Huddle
- Checklist
- Debrief

# ATLS® 9<sup>th</sup> edition

## Circulation



- Concept of balanced resuscitation further emphasized
- Avoid aggressive resuscitation until hemorrhage is controlled
- Early use of blood and blood products further emphasized (MTP)
- Angioembolization
- Tourniquet

# *Effectiveness of ATLS®*

- many authors demonstrated that ATLS®:
  - increases knowledge and skills
  - increases confidence
  - leads to a change in practice
- the efficacy of the **educational design** has been proven by:
  - assessing the learning abilities
  - measuring the rate of retention
- ultimate goal of **trauma education**
  - positive impact on patient outcome
  - proven decrease in morbidity
  - proven decrease in mortality



# ***Impact of ATLS® on patient outcome***

## **a large number of confounding factors:**

- **clinical experience and other educational experiences**
- **level of trauma activity**
- **organization and effectiveness of Trauma System**
- **appropriateness of prehospital trauma care**
- **appropriateness of hospital services**
- **local trauma care protocols**
- **effectiveness of definitive management**

# ***Impact of ATLS® on patient outcome***

*The Journal of TRAUMA*

## **Trauma outcome improves following the Advanced Trauma Life Support program in a developing country**

*Ali J, Adam R, Butler AK et al.*

1993; 34:890-899

*American Journal of Emergency Medicine*

## **Clinical Impact of Advanced Trauma Life Support**

*van Olden GDJ, Meewis JD, Bolhuis HW et al.*

2004; 22:522-525

# *Quality control system*

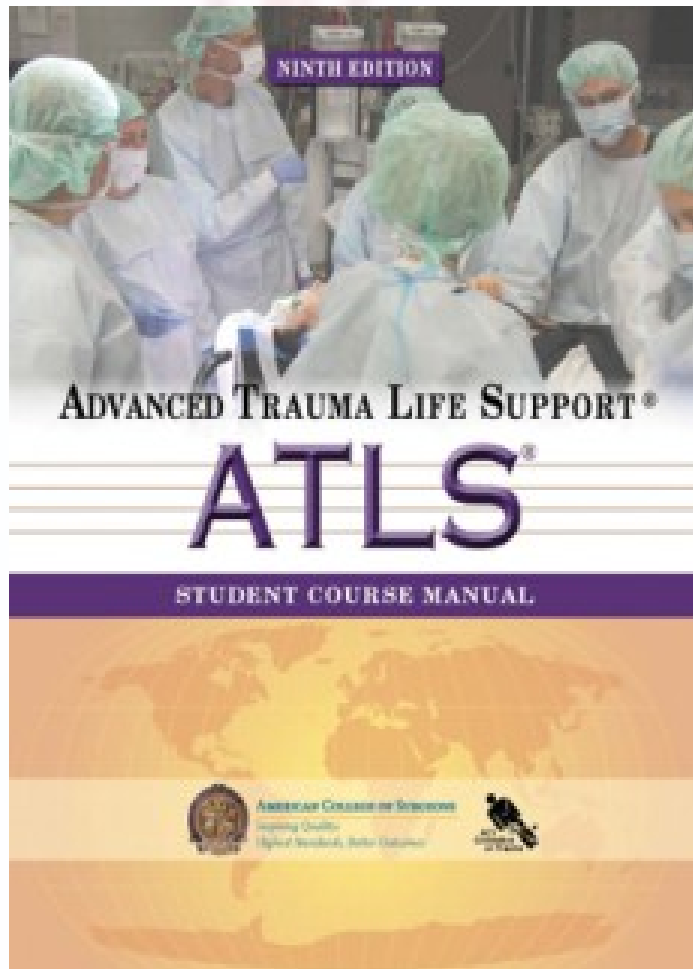
- **time-limited certification verifying successful ATLS® Student Course completion**
- **ATLS® Providers are encouraged to attend a Refresher Course every 4 years because of:**
  - ❖ **significant attrition of knowledge base**
  - ❖ **significant attrition of trauma management skills**
  - ❖ **4-year revision cycle of the ATLS® Program**

# *Quality control system*

- **4-year revision process**
  - evidence based
  - scientific and educational changes
- **re-certification is required to maintain accreditation**
  - providers
  - instructors
  - educators
- **training network**
  - state and regional faculty
  - national and international faculty
- **verification of ATLS® sites**



# ATLS® 9<sup>th</sup> edition



The hottest piece of news is that there is no hot news

Do you think we need some more discussion about specific trauma topics?

# *ATLS® limitations*

- ATLS® provides a common language...
- ...but it can't examine in depth some essential topics with reference to emergent diagnostic and therapeutical pathways of the trauma patient:
  - Damage Control Strategy
  - Acute traumatic coagulopathy
  - NOM
  - Algorithms of some complex injuries (*i.e.* abdomino-pelvic injuries)

## *My ETC®*

- I attended ETC® in may 2009, in Bologna
- It was an exciting experience with reference to Team working
- I am fully convinced that ATLS® and ETC® are not alternative, so I think all the clinicians involved in trauma care should attend this course, after taking part in ATLS®
- Yet, does education on trauma need a higher level course?
- Certainly, trauma education cannot be based only on courses. Trauma Teams need a local, regularly recurring practical training

# *Trauma Team training*

- Trauma Team practises are now planned at Bufalini H. new shock-room, in Cesena
- They should take place on a monthly basis
- All Trauma Team members (nurses, e.m. doctors, anesthesiologists, surgeons, radiologists, orthopaedists) will be involved in emergency care of simulated trauma cases





# *ATLS<sup>®</sup> integralism*



It could be very dangerous to adhere slavishly and without judgement to general prescriptions or rules. They have always to be tailored to the situation, the resources and the individual skill (if you can intubate a manikin you are not necessarily a master in airway management!)

# *Summarizing...*



✓ *Evidence Based Medicine*

✓ *Confidence Based Medicine*

✓ *Providence Based Medicine*

✓ *Common Sense Based Medicine*

# *THANK YOU*

