



Introductory Research Module for use with ALS Training Curricula

Developed by the Prehospital Care
Research Forum,
in conjunction with the National
Association of EMS Educators,
Research Committee

The Prehospital Care Research Forum

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Objectives

- Describe the importance of quality EMS research to the future of EMS
- Describe the importance and benefits of research
- Explain the EMS provider's role in data collection
- Advocate the need for supporting and participating in research efforts aimed at improving EMS systems

Introduction

- Most of EMS based on in-hospital activities moved to the out-of-hospital environment
- Need to develop evidence-based EMS practice
- Movement toward professionalism, means:
 - ethics
 - standards of care
 - unique body of knowledge

Aspects of Research

- Research methodologies vary
 - formal clinical research
 - chart review
 - case studies
- Research areas are diverse
 - educational
 - clinical
 - systems

Aspects of Research

(cont'd)

- Conducting research is important
 - provides new data/information
 - validates existing data/information
 - develops the unique EMS body of knowledge
- Reading research is equally important
 - promotes evidence-based practice
 - promotes generation of new research ideas
 - provides background essential to understanding EMS

Acquiring Literature

- Books vs. Journals vs. Electronic Media
- Information focus
 - books
 - often lacks scientific justification
 - quickly outdated
 - curriculum directed

Acquiring Literature

(cont'd)

- journals
 - trade journals
 - non-peer review
 - topic directed
 - scientific journals
 - peer-reviewed
 - research directed

Acquiring Literature

(cont'd)

- electronic media
 - web sites
 - non-peer reviewed
 - often misinformation (IMPROVING!)
 - surf carefully
 - on-line journals
 - peer-reviewed
 - reputable (but not always “gospel”)

Acquiring Literature

(cont'd)

■ Locating information

– Index Medicus

■ contains peer reviewed medical literature

■ available on-line

– CINAHL

■ contains health related literature

■ available on-line

Literature Format

■ Layout of a research article

- abstract
- introduction
- materials/methods
- results
- discussion
- conclusion

Evaluating An Article

- Evaluate demographics
 - similar system configuration
 - similar patient distribution
- Evaluate numbers
 - enough patients
 - right equipment
 - comparing apples to apples

Reading the Literature

■ Critical analysis

- do the numbers add up
- do the numbers make sense
- do the results answer the question
- is the data extrapolated too far

Reading the Literature

(cont'd)

- Limitations to existing literature
 - no perfect project
 - acknowledge strengths & weaknesses
- Incorporating into practice
 - influence current practice
 - how much is enough
 - evidence-based practice

Examples

- Controversies raised
 - MAST use
 - trauma care
- Practice adjusted
 - fluid management in trauma
 - MAST use

Summary

- Participating in research is important
 - to current practice
 - to future practice
 - to establishing the professionalism of EMS
- Begin with reading the literature
 - books
 - journals
 - electronic media

Summary

- Be critical of research
 - not all published research is good research
 - not all published research is valuable research
 - not all published research is reported correctly
- Hold people accountable
- Research is the future of EMS
 - validates
 - promotes
 - improves