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

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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    - quickly outdated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