







Course Objectives continued

- Developing a research proposal
- The use of computer software for data analysis

Unit Objectives

Upon completion of this unit, the student will be able to:

- List several reasons why research is important to the prehospital profession.
- Discuss why knowledge of the research process is important to the individual paramedic.
- List the major medical journals publishing EMS research.
- Describe an approach to reading and interpreting the medical literature.

Why is research important?

- It defines the parameters of paramedic practice.
- It improves paramedic practice.
- It contributes to cost containment.
- It protects our resources.
- It is a requirement of a “profession.”

Why is research important? continued

- It contributes to the formulation of theory.
- Indirect benefits of the research process itself.

Why do I need to know about research?

- Self-determination of the profession.
- Daily impact on your clinical practice.
- Moral and ethical obligation to your profession and your patients.
- “You can’t believe everything you read.”

Major Medical Journals

- Peer-reviewed
 - Prehospital Emergency Care
 - Prehospital and Disaster Medicine
 - Annals of Emergency Medicine
 - Academic Emergency Medicine
 - Journal of Trauma
 - Journal of Emergency Medicine
 - Others
- Non-peer reviewed
 - JEMS
 - Emergency Medical Services

Interpreting Medical Literature

- Finding the article
 - Pubmed (<http://www.ncbi.nlm.nih.gov/PubMed/>)
 - CINAHL
 - Other articles
- Basic structure of an article
 - Abstract
 - Introduction
 - Methods
 - Results
 - Discussion/conclusion
 - References

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Interpreting Medical Literature continued

- Approach to reading the article
 - Abstract
 - Is this really what your looking for?
 - Introduction
 - What is the significance of the research question?
 - How extensive is the literature review?
 - How does this study compare with previous works?

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Interpreting Medical Literature continued

- Methods
 - How sound is the overall design?
 - What are the threats to internal and external validity?
 - What was the sampling procedure? How representative is it? Who did the sample include? Who did it omit? What is the sample size?
 - What statistical procedures were used? Were they appropriate? What is the alpha level? What is the statistical power?

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Interpreting Medical Literature continued

- Approach to reading the article continued

- Results

- What are the results? Are they statistically significant? Are they clinically significant?

- Discussion/conclusion

- How do these findings relate to previous works? Are the conclusions supported by the data? Can these findings be extrapolated to other settings? What are the limitations of the design and procedures?

- References

- How extensive is the article referenced? How old are the references? Are there references that were clearly overlooked?
