

**2008 UIC Emergency Medicine Residency Research Course**  
**Successful Manuscript Writing**  
**Edward P. Sloan, MD, MPH, FACEP**

**Manuscript Writing:**  
*How to Get your  
Manuscript Written  
Effectively and Easily*

Edward P. Sloan, MD, MPH, FACEP



**2008 UIC Research Course**

*UIC EM Residency Program  
Chicago, IL  
September 25, 2008*

Edward P. Sloan, MD, MPH, FACEP



**Edward P. Sloan, MD, MPH FACEP**

*Professor*

*Department of Emergency Medicine  
University of Illinois College of Medicine  
Chicago, IL*

Edward P. Sloan, MD, MPH, FACEP



**Attending Physician  
Emergency Medicine**

**University of Illinois Hospital**

Edward P. Sloan, MD, MPH, FACEP



**Overview**

***Objectives***

- Review the template manuscript
- Apply so as to meet your needs
- Be systematic
- Make the process enjoyable
- Write the paper
- Get it done!

Edward P. Sloan, MD, MPH, FACEP



**Overview**

***Key Concepts***

- Simple, constant, clear
- Short and sweet
- Complete
- Parallel construction
- Focused on research questions

Edward P. Sloan, MD, MPH, FACEP



## Introduction

### *Paragraph 1*

- What is the issue or problem?
- Why is it relevant?
- Why must it be solved?

Edward P. Sloan, MD, MPH, FACEP



## Introduction

### *Paragraph 2*

- Provides overall understanding
- What other results are known?
- What are their limitations?
- Why must this study be done?
- Why will it be unique in solving the problems?

Edward P. Sloan, MD, MPH, FACEP



## Introduction

### *Paragraph 3*

- What is the purpose of this study?
- What is the general study type?
- Who will address (generally)?
- What therapy or intervention?
- What are the study questions?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 4*

- What is the study setting?
- What type of hospital? Patients?
- What type of doctors, training?
- What kind of area, city?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 5*

- What patients will be studied?
- What criteria?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 6*

- What patients will be excluded?  
Why?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 7*

- What is the intervention?  
(Describe Clearly)

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 8*

- What is the control, or placebo?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 9*

- What is the randomization  
method?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 10*

- What is the level of blinding?  
Why?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 11*

- What is the main outcome  
measure?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 12*

- How will data be collected?
- What data, in brief?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 13*

- How will data be analyzed?
- Are there unique data analysis methods such as multivariate analysis?
- How was this done?

Edward P. Sloan, MD, MPH, FACEP



## Methods

### *Paragraph 14*

- How are patient protections addressed?

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 15*

- What patients were included and excluded?
- Any difference/impact because of excluded patients?

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 16*

- Describe the study patients globally.
- List all important demographics.
- Are there any differences between the two groups?
- Table 1

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 17*

- Describe the main outcome.
- Does the outcome differ based on interventions?
- In a “what is the number” study, give the number.
- Table 2

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 18*

- Describe main secondary outcome.
- Does outcome differ based on intervention?
- In “what is the number” study, give the number.
- Table 3.

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 19*

- Describe 2nd secondary outcome.
- Does outcome differ based on the intervention?
- In a “what is the number” study, give the number.
- Table 4.

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 20*

- Describe some global outcome, that takes into account all of the above outcomes.
- Consider cost.
- Figure 1

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 21*

- Describe other interesting findings, not necessarily related to the study questions.

Edward P. Sloan, MD, MPH, FACEP



## Discussion

### *Paragraph 22*

- Restate why these issues and this study are important.
- Speak generally about why this discussion is worth reading.

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 23*

- State why the population is unique, important, or different.
- (Please see results para 16.)

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 24*

- State the relevance of main result.
- How does it compare to a similar result in other studies?
- Why might it be the same or different based on this study design?
- (Please see results para 17.)

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 25*

- State the relevance of second result.
- How does it compare to a similar result in other studies?
- Why might it be the same or different based on this study design?
- (Please see results para 18.)

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 26*

- State relevance of 2<sup>nd</sup> second result.
- How does it compare to a similar result in other studies?
- Why might it be the same or different based on this study design?
- (Please see results para 19.)

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 27*

- State the relevance of global results.
- How do they compare to other studies?
- Why might it be the same or different?
- Consider cost in more detail.
- (Please see results para 20.)

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 28*

- What are the limitations of the study?
- How should the reader interpret the results given these limitations?
- Are these limits more or less than other studies? (Was this a reasonable study?)
- What is the value of the study, even with the limits?

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 29*

- What future work needs to be done?
- What actually needs to be studied?  
How? In whom? Why?
- How will future work help us?
- What new questions now exist?

Edward P. Sloan, MD, MPH, FACEP



## Results

### *Paragraph 30*

- What did we learn from this study?
- What should we do differently clinically based on what we learned?
- Why? With what expected effect?
- Will patient outcomes improve?

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### *General Notes*

- Keep it short and sweet.
- Limit long intros and discussions.
- Be explicit in your methods. Why did you do what you did?
- Talk about excluded patients in the results.

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### *General Notes*

- Use tables, figures to present the data.
- Use written results to summarize or aggregate tabular data.
- Do not simply restate the same exact data in both tables and written words.
- Limit the number of tables and figures.
- Use figures that tell the story.

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### *General Notes*

- Answer the study questions with data using a parallel format.
- Question 1, answer 1, discussion 1, etc.
- Don't answer questions not asked.
- Don't do a lit review in the introduction or discussion.
- Discuss in detail only your data.

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### *General Notes*

- Discuss the results in the exact order they were presented in the results.
- Feel free to discuss any unique patient population, design, or analysis issues.
- Make it easy to read.
- Write for impatient, data overloaded, wishing to be spoon fed learners and clinicians.

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### *General Notes*

- Don't over emphasize limitations.
- Every study has merits. Every study has limitations.
- Provide a balanced view for each.
- Don't restate the whole area of research

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### *General Notes*

- Be clear as to what you learned.
- Be specific about what must be done in the future, not just "future research needs to be done."
- Give specific clinical or research recommendations.

Edward P. Sloan, MD, MPH, FACEP



## Manuscript Writing

### General Notes

- Acknowledge all the people who helped you with the work.
- Make sure authors are authors.
- Store the data and analyses so that they can be accessed in the future.
- Store the paper on the Internet.

Edward P. Sloan, MD, MPH, FACEP



## Conclusions

- This is a plan, a framework
- It simplifies the process, breaking the work into pieces easily completed
- It is a process that can be replicated
- Process enhances the ability to write a readable manuscript
- Process minimizes work, promotes success for all

Edward P. Sloan, MD, MPH, FACEP



## Recommendations

- Follow the format
- Review the format prior to any manuscript writing
- Discuss each paragraph in general terms with each team member
- Use it to guide the research itself

Edward P. Sloan, MD, MPH, FACEP



## Recommendations

- Write as much of the paper first as is humanly possible
- Write the introduction and methods
- Format the data tables and abstract
- Put together the literature analysis section based on the lit search

Edward P. Sloan, MD, MPH, FACEP



## Recommendations

- Do the research and analysis
- Fill in the data tables and abstract
- Compare data to literature data
- Write the results and discussion
- Write the full paper before you present it...do not deviate from this plan under any circumstances!

Edward P. Sloan, MD, MPH, FACEP



*Thank you.*

[www.ferne.org](http://www.ferne.org)  
[ferne@ferne.org](mailto:ferne@ferne.org)

[edsloan@uic.edu](mailto:edsloan@uic.edu)  
312 413 7490

ferne\_2008\_research\_lecture\_sloan\_manuscript\_writing\_092508\_final  
10/14/2008 6:11 PM

Edward P. Sloan, MD, MPH, FACEP

