Writing and Reviewing for the Journal of Trauma: A Primer

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Disclosure Information
NOTHING TO DISCLOSE
Objectives

- The research question and hypothesis
- Anatomy of a research publication: soup to nuts:
  * Introduction → Discussion
  * Example: “crash test dummy”
- Reviewing: why and how
- Dealing with rejection
William Strunk Jr. and E.B. White
The Elements of Style
The research question

- Addresses an area of uncertainty
- Characteristics (FINER):
  - It must be feasible
  - It should be interesting
  - It should be novel
  - It must be ethical
  - It should be relevant
Efficacy vs Effectiveness

• **Efficacy**: the classic PRCT in which **everything** is tightly controlled
  – Nurses assuring patient compliance with the study drug, placebo
  – Follow-up assured

• **Effectiveness**: “real world” experience
  – Patients are non-compliant with drugs and followup, etc

• There is a need for clinical effectiveness studies
The hypothesis

- Frames the research question:
  - Summarizes the main elements of a study
  - Identifies the sample and specifies the predictor and outcome variables
- Establishes the basis for tests of statistical significance
- Requires a lot of thought: variables, confounders, etc
- It is the ‘true’ north of the work
CONCISELY establishes:

- The background and relevance of the topic to trauma: what is currently “known”
- An area of uncertainty: what is not “known”
  - Identifies the specific “knowledge gap”
  - Provides the rationale for the investigation
- The specific objectives and/or hypotheses
  - Objectives without an hypothesis: descriptive study
"crash test dummy"

The changing nature of death on the trauma service

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J Trauma Acute Care Surg 2013; 75: 195-201
The Introduction

- What is known:
  - Recent innovations in care (DCR, \( V_t \), etc) have increased survival after injury
  - The “silver tsunami” of trauma patients with comorbidities exists and is increasing
  - Area of uncertainty: Effect of these changes on the cause of death following trauma
The research question

- “What is the effect of these changes in care on the cause of death following injury?”

- FINER:
  - Feasible: adopted DCR, $V_t$ in 2006, we admit 2600 pts/year, we have MAC and post-mortem exams on every death
  - Cause of death is interesting & the question is novel
  - Approved by IRB: ethical
  - Death studies in trauma are relevant
The hypothesis

- “We hypothesized that the increase in elderly injured patients combined with recent care innovations have altered the cause of death after trauma”

- Frames the research question
  - Identifies the sample (died after trauma) and specifies the predictor (care innovations, elderly injured) and outcome (cause of death) variables
  - Establishes the basis for tests of statistical significance
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Peer Review

- The process by which material submitted for publication is critically assessed by external “experts” who are not part of the editorial staff.
- It is the “quality control” mechanism of that particular journal, filtering for interest and relevance to its readership.
- Widespread and “standardized” by 1950.
  - Oversees 1.8 million published scientific articles each year.
Peer Review

Is not perfect:

- It has failed to recognize innovation (H. pylori)
- Occasionally lacks objectivity
- Has a poor record in detecting fraud
- It is labor intensive and slow

It is what it is:

- A form of professional service
- Educational for the “experts”
- Assists the author
The Reviewer

- Should prevent the publication of flawed research:
  - Assure that the work will be relevant and of interest to the readership
  - Check that the research has no major flaws in research design or methodology
  - Assure that the results are interpreted and reported correctly
  - Provide evidence for the editor to make a decision for rejection, re-consideration, or acceptance
The Review: Parameters

Overall novelty and interest

Coherence/completeness of the background

Hypothesis/study objective

Adequacy of methods/approach

Data presentation and analysis

Conclusion/translatable message

Clarity of presentation

Additional comments to author

Comments to Editor
The Review

- Should assist the author in improving the manuscript—whether or not it is published:
  - Constructive comments regarding the need for revision
  - Explanation of judgments, with citations as necessary
  - Identify the major flaw leading to rejection:
    - one that cannot be addressed by revision
- Authors are customers, but they are not always right
Overall novelty/interest:
Reviewer #2: “Unusual but too broad to be instructive”

Completeness of background:
Reviewer #2: “No substance or detail”

Hypothesis
Reviewer #2: “No significant hypothesis”
Because the design of this study was descriptive, using a retrospective cohort, we had no hypothesis. Our objective was to describe the factors associated with morbidity and mortality...

Methods
Reviewer #2: “Poor”
Without some specificity it is impossible to address this criticism.

Conclusion/translatable message
Reviewer #2: “to general to be useful”

This reviewer has done the Journal and the author a disservice by not providing the examples of his/her criticisms
Examples and specificity

Overall novelty/interest of research question

The research question is not articulated very well, if at all. For example, the abstract states the “purpose of the study was to correlate the success rate of ... after blunt pelvic trauma with the severity of the pelvic fracture” while the introduction states the purpose was to “determine the ... success rate with the severity of pelvic fracture using the Young-Burgess classification system.” From this I derived that the purpose of work was to assess the relationship of the severity of the pelvic fracture to the success of... using the Young-Burgess classification system. This clarification and specificity is important to the novelty of the work because previous work has addressed ... management of partial (as opposed to complete disruption) due to blunt and penetrating injuries (USC group-their reference #17). In summary, what makes this unique is ...
Clarification

Adequacy of methods/approach
The Methods section lacks clarity:
1. Why was the 7 year study period selected? Did it have to do with the arrival of a surgeon, new equipment, or what?
2. More information is needed on the process of care, how was the diagnosis made, what sequence of treatments was used with respect to angioembolization, packing etc—please see Hadjizacharia P et al, J Trauma 2008; 64:1443.
3. The references to “images” is confusing—do the authors mean figures?
4. What are radiologic pressure studies?
How I do it

• I make it a priority and do it ASAIC reasonably—I shoot for 48 hours

• I set aside an hour to read and make notes on the downloaded hard copy—usually takes less than an hour

• I utilize the online search for similar articles

• I do not write the formal review for 24 hours

• I write the review on my computer and cut and paste it into the JoT form…total time 1.5-2 hours
Value

- *It is scholarly activity and has currency with committees on P&T*
- *It is a CME activity 1:1 hours of work*
- *You will develop skills to critically assess the literature*
- *Every review is graded...with good reviews you could be invited to join the Editorial Board*
Dealing with rejection

1. Take a deep breath…it happens to all of us

2. Put it away for 24 hours, but let the co-authors know that it has been rejected.

3. Fatal flaws often cannot be rectified:
   - wrong comparator group, etc.

4. Review the critique carefully—the work may be more applicable in another journal.

5. Learn from the review.
Summary

- Research question: FINER
- Essential components of the hypothesis
- Anatomy of a research publication
  * Introduction → Discussion
- Reviews: specific with examples & citations
- Rejection is a learning experience