Publications/Grants

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KEEP CALM AND DON'T FREAK OUT
Your Article

- Data…Telling a Story
- Introduction
- Methods
- Results
- Discussion

…But first…who is the audience?
Who Uses the Results?

- Clinicians
- Other researchers
- Funders (regulatory approval, marketing)
- Media (medical breakthroughs sells newspapers)
- Insurers (for payment decisions)
- Investors (to buy and sell company stocks)
- Lawyers (for lawsuits and defense)

How does one write articles for so many different users?
Audience Determines the Journal

Impact Factor!!

Review Process

Editors and Editorial Board
Telling the Story

• What is your message?
• You need beginning, middle and end?
How much in one paper is too much, too little, or the just right?

Too Much Information

Single Coherent statement

“Least publishable unit”

Duplicate publication

Information
The Introduction

• What does the reader need to know?
• State your purpose
• Sometime provide your main finding..
  - “the theorem” or “jury” approach”

…BREVITY!!!!!
The Methods

- Cohort
- Approvals
- Scientific Methods applied
- Analysis plan
Results

- Demography
- Tables and Figures
- Review each Table and Figure
- The Results ARE the story
- Do NOT abbreviate the Results!!!
Discussion

• Introductory paragraph
• Discuss each result as it relates to critical literature
  - do NOT reiterate results
  - do NOT write a review article
• Explain the limitations
• Citations should be correct and accurate, parsimonious, interesting
Discussion: Common Mistakes

- Too long
- Redundant to results
- Misses the actual point of the data
- Too many citations (undisciplined)
- No real conclusion
- The Discussion is the end of the story…and can allude or lead to the next body of work
Abstract

- Write the Abstract LAST
- Review the Journal form
- Make your most important points... CLEARLY
- You only make a first impression ONCE
**Structured Abstracts**

<table>
<thead>
<tr>
<th>Background</th>
<th>Why important, need to know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>The research question</td>
</tr>
<tr>
<td>Design</td>
<td>For example, parallel group RCT</td>
</tr>
<tr>
<td>Setting</td>
<td>Referral center, community, etc.</td>
</tr>
<tr>
<td>Patients</td>
<td>How many, what characteristics?</td>
</tr>
<tr>
<td>Measurements</td>
<td>Variables, especially outcomes</td>
</tr>
<tr>
<td>Intervention</td>
<td>Type, dose, duration</td>
</tr>
<tr>
<td>Results</td>
<td>What found</td>
</tr>
<tr>
<td>Limitations</td>
<td>Internal validity and generalizability</td>
</tr>
<tr>
<td>Conclusions</td>
<td>The “bottom line”</td>
</tr>
</tbody>
</table>
Authorship Rationale

• Authorship confers both credit and responsibility
• The two are linked
• Authorship decisions should represent an honest account of what took place
• Many journals require description of contribution
Order of Authorship

Rationale

• Many different ways of determining order: contributions, “senior” last, alphabetical, equal contribution…different by field

Guidelines

• The authors decide the order
• Should includes with the manuscript
  - A description of each author’s contributions
  - How order was decided
  - Recognizing a group?
Publication Biases

• Editorial favoritism
• Negative data missing
• Unpublished clinical trials
Dissemination of Results
The Good, Bad and Ugly

• Inspire an editorial
• Write a press release
• *Hold a dissemination workshop*
BUT YOU MUST PAY

- http://grants.nih.gov/grants/funding/funding_program.htm
- http://grants.nih.gov/training/careerdevelopmentawards.htm
- http://projectreporter.nih.gov/reporter.cfm
- http://www.niaid.nih.gov/Pages/default.aspx
NIH Grant Components

- Abstract
- Specific Aims and Hypotheses
- Research Strategy
- Significance
- Innovation
- Approach
- Human Subjects (Animals)
WHAT MATTERS

• AIMS
  - you only make a first impression once

Approach
  - How are you going to do “IT” and is “IT” interesting, compelling, important and feasible?
Significance & Innovation

• Significance = positive effect of your project on science, medicine, and/or public health

• Innovation = a new or different – and better – approach
Significance
Your Preemptive Strike

• How your research will advance your field.
• How it will fill knowledge gaps -- show you are aware of opportunities, gaps, roadblocks, and research underway.
• How the work is new and unique.
• How it meets the NIH mission to improve health through science -- can lead to cures, treatments, or preventions for human disease.\(^2\)
• The contribution of your work to the field. Consider using those exact words – “This project will contribute” or “This project will lead to…”
Approach Sections

- Overview (May come after next two sections)
- Rationale (Justification & Feasibility)
- Preliminary Studies
- Study Design
- Study Setting or Site
- Study Population (Selection Criteria, Sampling, Recruitment)
- Data Collection (Questionnaire, Exam, Lab data, Quality Control, etc.)
- Measurements (Outcome, Factor of Interest, Confounders)
- Data Management and Data Analysis (Frequencies, Bivariable, Multivariable, Approach to Missing Data)
- Sample Size and Power
- Limitations
Limitations & Problems

• Be forthright in admitting limitations

• Discuss alternatives
  • - justify why you made the choice you did

• Identify potential problems – and solutions
Future Directions & Impact

• Often helpful to include a statement of where the research will lead

• Include “Impact Statement” to leave the reviewer with a positive note of what your study will contribute

• Critical in K awards, as is mentorship/training
Buy a Workbook??

- http://www.grantcentral.com/