Writing Abstracts - the “sure fire” formula!

meiko.cte@gmail.com

Kathryn Braun, DrPH
Prof, Public Health
Chair, DrPH program

kbraun@hawaii.edu
Introductions

• Kathryn L Braun
  – Army brat
  – Peace Corps
  – MPH/DrPH
  – The Queen’s Medical Center (10 years)
  – UH (20+ years)
    • 170+ peer reviewed publications
    • 150+ conference presentations
    • $25 million in grant funding
Introductions

• Affiliation within UH:
  – College of Health & Social Welfare (Med, Nurs, PH, SW)
  – Hawaiian Knowledge
  – Arts & Sciences
  – Education
  – CTAHR
  – Business

• What did you bring to work on?
  – Abstract for conference presentation
  – Abstract for manuscript
  – Abstract for report
  – Abstract for a grant proposal
Writing abstracts for manuscripts, reports, proposals
# Abstracts, Reports, Proposals

<table>
<thead>
<tr>
<th></th>
<th>Abstract for paper or presentation</th>
<th>Report</th>
<th>Grant Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Word/space limits</strong></td>
<td>100-250</td>
<td>1 - 3 pages</td>
<td>0.5 - 1 page</td>
</tr>
<tr>
<td><strong>Uses</strong></td>
<td>Apply to present paper at conference</td>
<td>Often called “Executive Summary”</td>
<td>Often called “Specific Aims”</td>
</tr>
<tr>
<td></td>
<td>To summarize manuscript</td>
<td>To summarize a longer report</td>
<td>To summarize grant proposal</td>
</tr>
</tbody>
</table>
Why are they important?

- For conference presentations, they are the only thing a reviewer reads.
- For manuscripts, reports, and grant proposals, they may be the only thing a reviewer or student reads.

Decisions are made (or opinions colored) based on the abstract.
Abstracts are structured

5 areas to address, in this order!

• Problem
• Purpose
• Methods
• Findings
• Implications

Also may be called

• Introduction, background, rationale
• Objectives
• Approach
• Results
• Conclusions or recommendations
## The Formula for Abstracts and Reports

<table>
<thead>
<tr>
<th></th>
<th>Abstract for manuscript or conference</th>
<th>Report or proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem</strong></td>
<td>1-2 sentences</td>
<td>1 paragraph</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>1 sentence</td>
<td>1 paragraph</td>
</tr>
<tr>
<td><strong>Methods</strong></td>
<td>1-3 sentences</td>
<td>1 paragraph</td>
</tr>
<tr>
<td><strong>Findings</strong></td>
<td>1-3 sentences</td>
<td>1-3 paragraphs</td>
</tr>
<tr>
<td><strong>Implications</strong></td>
<td>1-2 sentences</td>
<td>1 paragraph</td>
</tr>
</tbody>
</table>
**1st Activity**

- Review some abstracts submitted for presentation at a **conference** (250 words)

<table>
<thead>
<tr>
<th>Formula</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>1-2 sentences</td>
</tr>
<tr>
<td>Purpose</td>
<td>1 sentence</td>
</tr>
<tr>
<td>Methods</td>
<td>1-3 sentences</td>
</tr>
<tr>
<td>Findings</td>
<td>1-3 sentences</td>
</tr>
<tr>
<td>Implications</td>
<td>1-2 sentences</td>
</tr>
</tbody>
</table>
Abstract Reviewer Guidelines

• **Introduction, background, problem, or rationale** must state the “issue” of concern and why it is a concern.

• **Purpose or objectives** must outline the expectations of the project, or outline the content of the presentation.

• **Methods or approach** must provide a clear description of the methods, which must be appropriate to the objectives.

• **Results or findings** must indicate clear findings, fulfilling the purpose or objectives.

• **Conclusion or implications** must follow from the results and provide direction to researchers and/or practitioners concerned about the problem.
NOTE:
Abstracts that indicate
– "the work is in progress" or
– "the results will be discussed"
are usually not accepted!
Comparison of low birth weight across Asian subgroups in California

• **Background**: Low-birth weight (LBW) babies are at higher risk of complications and developmental delays than normal weight babies. Although Asian Americans usually are treated as one categorical group in studies about low-birth weight, in fact this category includes more than 50 unique cultural groups, and LBW may vary by group.

• **Objective**: This study sought to examine differences in the risk of delivering a LBW infant across 8 Asian subgroups.

• **Methods**: California birth certificate data from 2009-2010 were analyzed for 8 groups of Asian women delivering singleton births, including Chinese (n=26,729), Japanese (n=4,758), Korean (n=9,873), Vietnamese (n=14,203), Filipino (n=27,820), Asian Indian (n=19,543), Pacific Islander (n=4,632) and Cambodian/Laotian/Hmong (n=10,068) women. Multivariate logistic regression analyses were performed to examine the risk of LBW while controlling for maternal characteristics.

• **Results**: Of 1.04 million California live births, 128,140 (or 12.4%) births were to Asian mothers. Asian Indian and Filipino women were 2 times more likely to have delivered a LBW infant than non-Hispanic whites (OR=2.3, 95% CI 2.2, 2.5; OR=2.2, 95% CI 2.1, 2.3 respectively).

• **Conclusions**: Risk for delivering a LBW infant varies across Asian subgroups. Heterogeneity of this population should be considered when developing and targeting clinical and public health prevention efforts.
1st Activity

- Review some abstracts submitted for presentation at a **conference** (250 words)

<table>
<thead>
<tr>
<th>Formula</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>1-2 sentences</td>
</tr>
<tr>
<td>Purpose</td>
<td>1 sentence</td>
</tr>
<tr>
<td>Methods</td>
<td>1-3 sentences</td>
</tr>
<tr>
<td>Findings</td>
<td>1-3 sentences</td>
</tr>
<tr>
<td>Implications</td>
<td>1-2 sentences</td>
</tr>
</tbody>
</table>

- In pairs
- Review
- Share
  - Good ones
  - Bad ones
Writing abstracts for grant applications
NIH Grant Review Criteria

• **Significance**
  – Does the project address an important problem or a critical barrier to progress in the field? If aims are achieved, how will knowledge and/or practice be improved?

• **Investigator(s)**
  – Are the researchers well suited to the project? Do they have appropriate experience and training? Do they have preliminary data?

• **Innovation**
  – Does the application propose novel theoretical concepts, approaches or methodologies, instrumentation, or interventions?

• **Approach**
  – Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project?

• **Environment**
  – Will the scientific environment in which the work will be done contribute to the probability of success?
The Formula for Proposal Summaries is a bit different, because you don’t have findings.

<table>
<thead>
<tr>
<th></th>
<th>Proposal Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>1 paragraph</td>
</tr>
<tr>
<td>Purpose</td>
<td>1 paragraph</td>
</tr>
<tr>
<td>Preliminary Findings</td>
<td>1-2 paragraphs</td>
</tr>
<tr>
<td>Methods</td>
<td>1-3 paragraphs</td>
</tr>
<tr>
<td>Why proposal should be funded—significance, investigator, innovation, approach, environment</td>
<td>1 paragraph</td>
</tr>
</tbody>
</table>
Include in Proposal Summary

• **Introduction, background, problem, or rationale** states the “issue” of concern and why it is a concern.

• **Specific Aims (objectives)** outlines the specific objectives and tasks of the proposal.

• **Preliminary data** outlines relevant work of YOUR TEAM.

• **Methods or approach** must provide a clear description of the methods, which must be appropriate to the objectives.

• **Why this proposal should be funded**
  - Significance
  - Investigator
  - Approach
  - Innovation
  - Environment.
2nd Activity

- Write your own abstract or research summary

### Formula for Abstract

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>1-2 sen</td>
</tr>
<tr>
<td>Purpose</td>
<td>1 sen</td>
</tr>
<tr>
<td>Methods</td>
<td>1-3 sen</td>
</tr>
<tr>
<td>Findings</td>
<td>1-3 sen</td>
</tr>
<tr>
<td>Implications</td>
<td>1-2 sen</td>
</tr>
</tbody>
</table>

### Proposal Summary

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>1 para</td>
</tr>
<tr>
<td>Aims (Objectives)</td>
<td>1 para</td>
</tr>
<tr>
<td>Prelim Findings</td>
<td>1-2 para</td>
</tr>
<tr>
<td>Methods</td>
<td>1-3 para</td>
</tr>
<tr>
<td>Sig, Inv, Inn, App, Env</td>
<td>1 para</td>
</tr>
</tbody>
</table>
Sharing and Questions

• Sharing
  – Abstracts for conference presentation
  – Abstract for manuscripts
  – Summary for grant proposal
Take-Home Messages

• Presume that decisions will be made (or opinions colored) by the abstract
• Follow abstract instructions
• Follow the formula
• Submit on time and as directed

• Write first, using the structure.
• Get feedback!
• Keep revising
More info
kbraun@hawaii.edu