Writing Competitive NIDRR and NIH Research Grant Proposals: An Integrated Workshop

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FROM SPECIFIC AIMS TO LIMITATIONS:
Key points for successful grantsmanship
SPECIFIC AIMS

• Proposal “responds to PA [number]” + brief quote
• NIMH PA-11-271 calling for studies “to develop, implement, and evaluate strategies for addressing factors that negatively affect the implementation of [CDC] EBIs.”
• Any other calls?
• Key point of the grant and how it can help fill a gap
• Brief introduction to the literature
• Brief introduction to preliminary work by PI and team of researchers
• Brief introduction to what this grant will do
QUANTITATIVE AIMS:

• Verb + what + who + where + when
• Verb = assess; identify, examine etc.
• What = influences, predictors, factors, etc.
• Who= research participants
• Where= location
• When= design (cross-sectional, longitudinal, RCT, etc.)
• Example: To assess predictors of changes in interagency collaboration and intention to among HIV prevention providers over time.
QUANTITATIVE AIMS:

• Hypotheses: What will happen—based on the literature, your experience and preliminary work?
• What will increase or decrease?
• Why?
• How will variables behave? Moderation? Mediation?
• Connecting independent to dependent variables
QUALITATIVE AIMS

- Verb + what + who + where + when
- Verb = assess; identify, examine, etc.
- What = specify variables of interest influences, predictors, factors, etc.
- Who = research participants
- Where = location
- When = design (cross-sectional, longitudinal, etc.)
- Example: To investigate barriers to implementation of mental health services and the specific ways practitioners can collaborate in order to overcome these barriers.
- Hypotheses: NO! Expectation: YES!
PUBLIC HEALTH IMPACT
(a few sentences bringing the aims together)

- What will the study do in terms of public health?
- What is the innovation?
- What will be added to the literature?
RESEARCH STRATEGY: SIGNIFICANCE

• Stats on the problem or concern (epidemiological data, etc.)
• What is known about the key concern and what is missing?
• Secondary concerns? What is known about secondary concerns and what is missing? How will the study fill gaps?
• Example: X is known, but we still do not know Y
RESEARCH STRATEGY:
THEORETICAL FRAMEWORK

- Single theory or interrelated theories
- Connect theory to the specific variables in the Aims
- Remind reviewer about hypotheses

Figure 1: The role of IC in DEBI implementation
RESEARCH STRATEGY: INNOVATION

• Sample
• Type of data collected
• Design
• Data collection and recruitment approaches
• New variables
• Different usage of an existing theory
RESEARCH STRATEGY: APPROACH

• Introduction
• Study design & overview: What will happen and when?
• Choice of study design and sampling
RESEARCH STUDY: PRELIMINARY WORK

- Research team: who and why (expertise)
- Has the research team work together before?
- Affiliation with centers (institutional capacity)
- Support: Who supports this study? Letters of recommendation
RESEARCH STRATEGY

• Feasibility study 1: sample; measures; personnel; recruitment; RESULTS
• Feasibility study 2: sample; measures; personnel; recruitment; RESULTS
• Feasibility study 2: sample; measures; personnel; recruitment; RESULTS
• Demonstrating feasibility and potential for advancing research
• Summary
## RESEARCH STRATEGY:
### STUDY TIMELINE SUMMARY

hiring staff; sample; recruitment; data collection; justification

<table>
<thead>
<tr>
<th>Months</th>
<th>1-3</th>
<th>4-12</th>
<th>13-15</th>
<th>16-24</th>
<th>25-27</th>
<th>34-42</th>
<th>42-44</th>
<th>44-60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Tasks</strong></td>
<td>Hiring staff and preparing measurements</td>
<td>Recruitment and Baseline</td>
<td>Collaboration training</td>
<td>Web-based launching</td>
<td>12-month follow-up</td>
<td>In-depth interviews</td>
<td>30-month follow-up</td>
<td>In-depth interviews</td>
</tr>
</tbody>
</table>
RESEARCH STRATEGY
QUANTITATIVE AIM – RECRUITMENT

• Who?
• How?
• Preliminary work: feasibility
RESEARCH STRATEGY: QUANTITATIVE AIM – DATA COLLECTION

• Who / How / Where / Why
• Attrition
• Strategies for retention and tracking
RESEARCH STRATEGY:
QUANTITATIVE AIM – MEASUREMENTS

• Primary outcome: define and provide measurement
• Independent variables: define and provide details in a table
• Have all instruments been piloted? How?
• Summary: connect the variables to aims and hypotheses
RESEARCH STRATEGY: QUANTITATIVE AIM – ANALYTIC APPROACH

• Specify the type of data (cross-sectional, longitudinal, RCT?)
• How does the data analysis connect to aim and hypotheses?
• Specify analysis for each hypothesis
• Mathematical equations; collaborate with a statistician
• Sample size and power
RESEARCH STRATEGY:
QUANTITATIVE AIM – DATA MANAGEMENT & SECURITY

• Who will handle the data?
• Where the data will be handled
• Training for staff? Data collectors?
• Protections
RESEARCH STRATEGY: QUALITATIVE AIM

• Sampling
• Recruitment
• Training and supervision of interviewers
RESEARCH STRATEGY:
QUALITATIVE AIM – INTERVIEW PROCEDURES & PROTOCOL

• Where and how the interview will be conducted
• Who will conduct the interview
• Any preparation needed? Folders, etc?
• Describe the protocol (examples of questions and structure)
• Appendix
• Remind reviewer of aim and expectations
RESEARCH STRATEGY:
QUALITATIVE – DATA MANAGEMENT & TRANSCRIPTION

• Who will transcribe?
• Where interviews will be stored and managed? ATLAS? NVivo?
RESEARCH STRATEGY:
QUALITATIVE AIM — ANALYTIC APPROACH

• Introduction: How will analysis follow theories?
• Procedures will follow techniques documented in literature as follows...
• Developing records: demographics; agency affiliation; contact info; etc.
• Individual-level analysis
• Comparative analyses: Within-group and across-group
• Building a codebook and marking text
• Rigor and validation: data triangulation; debriefing during data analyses; negative cases member check; code-and-retrieve software
STUDY LIMITATIONS

• Location
• Design, methods and recruitment
• Sample diversity and generalizability
• Feasibility

DESPITE LIMITATIONS ...
• Public health impact and gap filled
• Pilot work (feasibility)
• Innovation