# 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?

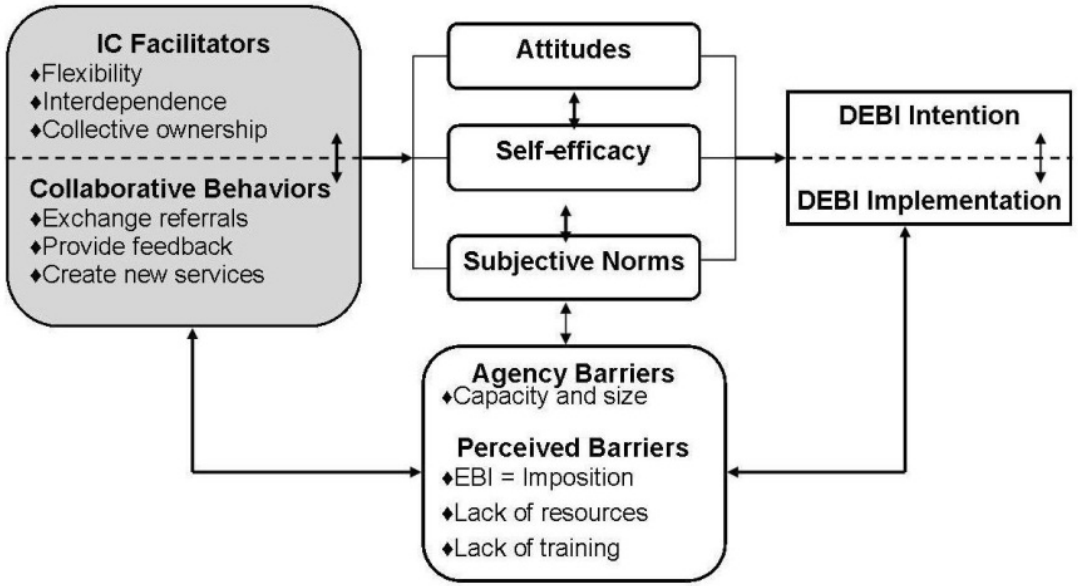
# RESEARCH STRATEGY: SIGNIFICANCE

- 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

| Months | 1-3 | 4-12 | 13-15 | 16-24 | 25-27 | 34-42 | 42-44 | 44-60 |
|---|---|---|---|---|---|---|---|---|
| Key Tasks | Hiring staff and preparing measurements | Recruitment and Baseline | Collaboration training Web-based launching | 12-month follow-up | In-depth interviews | 30-month follow-up | In-depth interviews | Data analysis, manuscript writing and dissemination |

# 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