Getting Your D&I Grant Funded

2016 Dissemination and Implementation Short Course

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Ross C. Brownson
Washington University in St. Louis
Objectives

1. Understand some key issues leading to success in grant writing/funding.
2. Provide section-by-section advice on writing a high quality D&I grant application.
What's inside the "Black Box"??

"I think you should be more explicit here in step two."
Success in grant writing

What are two key ingredients for a successful grant application?
Two sets of information

• 12 competencies from our card sorting exercise
  – classified beginner, intermediate, advanced

• Musings from study section veterans

Competency examples

Approach

• Utilize an appropriate D&I model or framework to organize a proposal and integrate research questions with clear and measurable study objectives; aims; measures, and analysis strategies.

• Identify measures that clearly assess the constructs of interest in the proposed study and are practical to apply in the proposed settings.

• Create a strategic dissemination plan for various target audiences that goes beyond the traditional publications and presentation at meetings.
What gets you funded?

**Figure 1** from “How Criterion Scores Predict the Overall Impact Score and Funding Outcomes for National Institutes of Health Peer-Reviewed Applications” by Eblen, et al.: Box Plot Distributions of Criterion and Overall Impact Scores for R01 Applications, FY 2010–2013.
Specific aims/hypotheses

• The first part read (you have one chance for a first impression!!)
• Include 2-5 realistic aims
• Address these throughout the proposal (esp. in measures/analyses)
The Essence of Specific Aims

• This is where reviewers decide whether they like your application (or not)
• Set up the general problem and your specific take on it
• Sell the **Sizzle**
  – What is your unique contribution to new knowledge on an important problem?
• **2-4 realistic aims**
  – That grandma would understand
  – That lay out what the project is about
  – That relate & follow a logical order but still can be accomplished independently
  – 1-2 lines (Not a paragraph! Not how you will accomplish them, but **what** you will accomplish)
• Sell the **Steak**
  – How you will accomplish your aims, in broad brush strokes
• Bring it home
  – Implications
  – How the world will be a better place after your project is accomplished
Tips

• **Context:**
  
  – How will a reviewer encounter this application?
    
    • Heavy load of applications to review, not enough time, tight timeline, working on weekends/night
    
    • If your application is difficult to understand, boring, or doesn’t seem important, you have no chance. And Aims is the first thing reviewers will read.
    
    • But, if they pick it up, and after the aims say to themselves “Oh, that’s interesting.” And if the reading doesn’t make them have to re-read any lines, but just draws them into a compelling story, you are halfway there.

• **Audience:**
  
  – Depending on where you submit, reviewers may know a lot about your topic or relatively little.
  
  – The way you write in those situations is quite different.
    
    • To a familiar audience, don’t belabor things that will be obvious to them;
    
    • For reviewers from another discipline, explain your ideas and work in plain language and not in the jargon of your discipline.
Tips

• **Aesthetics:**
  – An Aims page that is dense, wall-to-wall single spaced text looks overwhelming and uninviting.
  – Use a more journalistic style with smaller chunks separated by space.

• **Organization:**
  – Recognize that the structure and order of your Aims dictates how the approach section will be written.
  – Think about what a logical flow and order would be, and make sure that later sections of the application follow what you’ve established on the Aims page.
Strong focus on the approach

- Make this the core of your application
- Design
  - Design rigor matches the research questions
  - Address key threats to internal validity
  - Address external validity (often ignored)
Approach (continued)

• Conceptual framework/theory
  – Have a framework
  – Be sure it fits your aims
  – Many to choose from (over 60)
    • Avoid inventing a new one unless absolutely necessary (see Tabak RG et al., in AJPM 2012)
  – Link with aims, activities, measures, analyses
Approach (continued)

• Settings, recruitment & sampling
  – Why these settings?
  – How to recruit
    • Experience reaching the population
    • Partnership with/ engagement of stakeholders
  – Issues of external validity
  – Pilot data are often important for an R01
Approach (continued)

• Specify a measure or procedure for measuring each variable and document:
  – feasibility, reliability and validity of each measure
  – Suitability for the population(s) studied including respondent burden
  – How new/adapted measures were pretested and whether they are psychometrically sound
Approach (continued)

• Analytic methods
  – Link well with aims
  – Include estimates of power if appropriate
  – For qualitative work, show rationale for sample size and methods for analyzing and interpreting data
  – For mixed methods projects indicate:
    • how the data are to be integrated and by whom the integration will be achieved
Approach (continued)

- External validity
  - Particularly important for D&I grants
  - Often missing in the literature
  - Thoughtful approach for collecting EV data
    - Costs, adaptation, sustainability
    - Who participates or not, at multiple levels
Approach (continued)

• Management & Dissemination plan (D4D)
  – Describe how you will manage the project
  – Include a time line
  – Describe the uses of your findings
  – Can you design for dissemination? (later)
  – Sustainability
Significance

• Scope of the problem (keep it brief)
• Attributable risk (better yet, prevented fraction)
  - The meaning of “scale up”
• Careful (not exhaustive) review of key literature to set up your study
• Needs in D&I research
• Gaps in literature (the scientific premise)
Defining what “evidence-based” means...

“Then we’ve agreed that all the evidence isn’t in, and that even if all the evidence were in, it still wouldn’t be definitive.”
Innovation

• In the eye of the beholder?

• What makes your study innovative?
  – Study population (esp. disparities)
  – New method of adaptation
  – Applying a new method (systems, CBPR, network analysis)
  – Using a non-health theory
For CBPR/PCORI approaches…

- Think about framing as stakeholder engagement
- A nice theme for framing D4D
- Useful in adaptation of evidence-based approaches
Overarching issues & tips...

• Read the funding announcement carefully
• Smaller grants = easier to get funded
• Think like a reviewer (busy, quick reaction, easily irritated, may be novices to D&I research or your content area)
• Match the grant type to your project/aims
• Discuss your idea with the program officer
• Turn to your institution for pilot funding to build the foundation for a larger grant
Overarching issues & tips...

• Use tables/figures effectively

• Write, re-write, budget plenty of time to present your best work
  – Unlike a journal article, a grant application should be as close to perfect as possible

• Hold a pre (mock) study section (seek out brutal reviewers)

• Participate in a review (may be ECR)

• Just like the best baseball players have a short memory at the plate; top scientists need to learn from rejection, build on it and move on.
And decision points are not always clear...

“C’mon, c’mon – it’s either one or the other.”
Resources

- Proctor et al- Ten Tips on getting your IS grant funded
- Brownson et al—successful D&I grant writing
- NCI website- Content analysis of funded grants:
  http://cancercontrol.cancer.gov/IS/pdfs/DandI-PAR-Grant-FundedContentAnalysis.pdf
- UNC D&I website containing successful grant applications
  http://impsci.tracs.unc.edu/
It won’t always seem fair....
With the right preparation, opportunity, and hard work...
THANKS to Russ Glasgow, Matt Kreuter, Kurt Stange!!
Questions