Writing implementation research grant proposals: 10 key ingredients...and a few reflections

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Materials adapted from
a) Enola Proctor and Washington Univ. colleagues
b) Univ. of Colorado School of Medicine ACCORDS D&I Program

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Session overview

• Challenges facing D&I

• Ten tips for D&I grant writing

• Additional reflections and recommendations

• Importance of working with program staff

http://www.crispebooks.org/DIFundingTips
Challenges universal to all grant writers

How to successfully communicate:

• How your proposal is innovative and state of the science

• Why you and your team should be funded at this time

• That you can complete the study as proposed
Additional challenges for implementation science researchers

- Rising scientific bar:
  - Science of implementation demands moving beyond documentation of barriers and facilitators
- Implementation research is **complex, contextual** & complicated
- Literature scattered across disciplines
- Implementation science is setting specific, but must advance generalizable science
- Addressing **both internal and external validity**

Presuming a Compelling Question

Ten Key Ingredients of a Competitive D&I Grant Application

(no application will have all 10)
1. Need for improvement....reducing gap between care that is and could be

Contribution: Project’s public health significance & impact

Important to demonstrate:
- Poor health services or wide variation
- Potential to improve care through proposed work

How?
- SUCCINCT Literature review
- Preliminary data
2. Evidence-based intervention to be implemented

Demonstrate:

Strong **evidence*** of efficacy and/or effectiveness

**Cochrane** or other systematic review (ideally also pragamtism/PRECIS)

Ready for implementation

How your proposal is different or contributes to what already known

**How?**

**SUCCINCT Literature review**

Preliminary data

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3. Conceptual model/ theoretical framework

Selection and Contribution:

– **Why this model is applicable** (and not others)
  – Innovation for implementation science
  – Scientific impact & generalizable knowledge gain

Justifies key variables to be tested

How?

– Published papers using the model

– **Use the theory throughout proposal methods, measures, hypotheses, analyses!**

  Dissemination-implementation.org
4. Stakeholder priorities, engagement in change & study

Contribution: Significance, impact, & feasibility of success.

- Meaningful involvement THROUGHOUT and with MULTIPLE stakeholders, at different levels (patients, staff, decision makers)

How?

- Preliminary data (qualitative, quantitative)
- Evidence of current and past partnerships (joint publications)
- Method details (partnered research)
- Letters- unique (not form letters) and from key decision makers
5. Setting’s readiness to adopt new intervention

Contribution:

– Scientific generalizability & impact
– Shows PI knowledge of study setting
– Minor caveat- if large scale (e.g., national) dissemination, may want to take settings with a ‘range of readiness’

How to convey?

– Preliminary data
– Letters from specific organizations and national coordinating or professional organizations
6. Implementation strategy/process

The observed/introduced change STRATEGY

Contribution:
  – Public health significance
  – Impact
  – Feasibility- address likely challenges

How?
  – Detail in planned approach- differentiate impl. strategy vs. Interv.
  – Literature cited
  – Preliminary studies
  – Specify, provide manuals
7. Team experience w/ setting, treatment, implementation

Contribution:

– Feasibility
– Capacity to complete study as proposed, including experience addressing expertise, recruitment, diversity, attrition

How?

– Build team, cite work
– Describe relevant experience in preliminary studies
– **Personalized** Biosketches, adequate budget justifications
– Personalized, unique letters of support
8. Feasibility of proposed research design & methods

Value: Conveys-
- Feasibility of completing study as proposed
- Investigator capacity (understanding of unique D&I issues and challenges)
- Balance of internal and external validity

How?
- Detailed “approach” section- save space for this!
- Address choice junctures & contingencies
- Preliminary recruitment & enrollment data
- Letters (re: willingness to be randomized)
9. Measurement and analysis detail

Contribution:
- Approach
- Feasibility of completing study as proposed
- Relates to theory; advances measurement science

How?
- Detailed measurement plan - PRAGMATIC measures*
- Variation data and well-justified power analysis
- Unit of analysis specified & consistent
- Specified analyses that will exploit data and answer Q’s

10. Policy environment will leverage, support, sustain the change

Contribution:
- Public health significance and impact
- Sustainability
- Feasibility- including costs, resources and burden- to both participants and settings

How?
- Background literature on adaptations and sustainability models and research
- ‘Fit’ with changing context; feasible and sustainable in these settings
- Letters with strong, specific commitment to continue
- Resources & Environment

Chambers, Glasgow & Stange. Dynamic sustainability framework. Implementation Science 2013, 8:117
Can’t fit it all in!

Relative importance in eyes of experienced reviewers?

The Questions, the Aims, and Approach, Approach

Most essential:

- Background of Evidence based Tx to be implemented
- Methods and the team’s experience with setting/Tx/implementation strategies and process
- Research environment’s capacity to support IR
How to address these challenges?

• Make strategic use of all grant application parts...especially Aims and summary

• Draw on your experiences and unique strengths
  – pilot studies
  – work & research training experiences

• Caveat: Not every application can/should include equal detail on each component

Brownson. Video on aims. https://www.youtube.com/watch?v=twKT2CL7Z6o
Russ’s Reflections and Biases

• Work with your program officer - contact multiple ones if needed
• Importance of Aims and Abstract - for both assignment and reviewers initial impression
• Tables and Figures - clarify and worth a lot of points
• Address tough decisions and weaknesses head-on
• Consider using PRECIS-2 Figure
• Consider using Standard Reporting for Research in Implementation (StaRI) reporting criteria

Pinnock et al. StaRI statement. BMJ Open, doi:10.1136/bmjopen-2016-013318)
https://www.precis-2.org/
**StaRI Reporting Criteria**

27 criteria - includes almost all CONSORT items .... PLUS:

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<thead>
<tr>
<th>Implementation Strategy</th>
<th>Implementation Outcome(s)</th>
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<td>Logic Pathway</td>
<td>Harms and Unintended Consequences</td>
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<td>Context and Representativeness</td>
<td>Context Changes</td>
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<td>Fidelity</td>
<td>Adaptations*</td>
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<th>Costs and Resources Used</th>
<th>Policy Implications</th>
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Acknowledgments and Key Resources

Enola Proctor, Ross Brownson, Ana Bauman and team at Washington University
• Proctor et al. Writing IR grants. Implementation Sci 2012 7:96

NIH Program Officers

Univ. of Colorado School of Medicine ACCORDS D&I team:
• https://goo.gl/84ePnd
• http://www.crispebooks.org/DIFundingTips
FOR A FAIR SELECTION EVERYBODY HAS TO TAKE THE SAME EXAM! PLEASE CLIMB THAT TREE