Winning Strategies for CPH-NEW Pilot Grants

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Learning Objectives

- To understand the goals of the CPH-NEW pilot grant mechanism
- To understand the role of pilot grants
- To understand important elements to include in each proposal

Goals of the CPH-NEW RFA

- To support research in the area of workplace health and safety
  - Combine occupational safety and health with workplace health promotion
- To support pilot projects that will inform future larger studies
- To promote interdisciplinary teams with a goal of achieving Research to Practice

NIOSH's "Total Worker Health™" program

- The integration of occupational safety and health ("health protection") with health promotion to advance health, safety and well-being of workers.

http://www.cdc.gov/niosh/programs/totalworkerhealth/

What is Health Protection? Reducing hazards in the workplace

- Chemical toxins
- Physical factors
- Safety hazards
- Biological agents
- Organizational stressors

What is Health Promotion? Fostering positive decision-making about health

- Traditional focus on the individual's behavior
  - Stop smoking, healthier diet, cope with stress
- "Social health promotion" - activities at the community or societal level [WHO]
  - Environmental conditions that foster healthy behaviors
  - Positive human relations at work that foster decision-making and self-efficacy

CPH-NEW's own research projects have some common goals:

1. **To implement and evaluate models for improving worker health by combining:**
   - **Worksite health promotion**
   - **Workplace health & safety**

2. **To promote participatory approaches that engage all levels of an organization in the design of effective, sustainable workplace interventions.**

Sustainability

- **NIOSH Research to Practice (r2p) initiative**

"focused on the transfer and translation of knowledge, interventions, and technologies into highly effective prevention practices and products which are adopted into the workplace. r2p is a way of conducting research to help ensure that it is relevant to our stakeholders and results in the reduction of workplaces injuries, illness, and fatalities"

Participatory Research

Principles of Community Engagement

- "…the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the wellbeing of those people. It is a powerful vehicle for bringing about environmental and behavioral changes that will improve the health of the community and its members. It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices (CDC, 1997)."

Examples of Eligible Research

- Feasibility studies to develop and test new intervention approaches of applications
- Pilot laboratory or biomarker development or application
- Research with newly defined or underserved at-risk working populations
- Study of effectiveness of Research to Practice translation of prior research findings

Eligible Applicants

- Graduate students at accredited academic institutions
- Post-doctoral trainees
- Faculty members
- Non-academic individuals from community or other organizations

*Can apply individually or as part of collaborative teams

Questions About Proposal Content/ Focus?

Goals of Pilot Studies

- To inform future research
  - Develop interventions/programs
  - Demonstrate feasibility of protocols
    - Recruitment/retention, intervention, assessment, sample size estimation
  - Develop and/or validate survey measures
  - Develop research questions
  - Explore potential associations
  - Describe a need/problem

What Do You Want To Inform?

- Working Toward a “Research Program” or Larger Project
- Work backward……
  - What will you need to be able demonstrate?

Pilot Proposal Challenges

- Length
- Scope
- Budget
- Time

Research Proposal Elements

- Specific Aims
- Background and Rationale
- Research Strategy

Specific Aims

- Describe the broad, long-term objectives of the proposed study
- Provide a brief study rationale
- Describe the specific research questions and hypotheses to be answered
- Provide a brief overview of the methodology to address the specific research questions

Importance of the Specific Aims

- Usually considered the most important section of the grant
- First introduction to the grant
- Sets the stage for the rest of the grant

Be Sure Your Specific Aims…

- Can stand alone
- Are clearly conceptualized and logical
- Are concise
- Are feasible
- Take up no more than 1 page

Important Elements of the Specific Aims

- A clear statement of the problem or question you plan to investigate. (What-General)
- Public health significance. (Why)
- Why your proposal is innovative and needs to be done. (Why)
- What you plan to do (When, Where, How)
- Specific aims, research questions or hypotheses (What-Specific)
- Long-term objective

Aims Should Be….

- Feasible
- Interesting
- Well-defined, Specific
- Novel
- Of public health importance
- Clearly linked to your long-term research goals

Research Questions

- Express the objective of the study in the form of a question

Hypotheses

- Testable propositions that can be accepted or rejected on the basis of empirical testing
- Specify expected relationships between two or more variables
- Derived from your research questions

Writing Research Questions and Hypotheses

- Each should be
  - Understandable
  - Testable
  - Adequately supported by background and/or preliminary work
  - Related to the long-term objective of the proposal
  - Attainable within your proposed timeline
  - Written concisely (one sentence)

4 Research Question Elements: PICO

- Problem/Patient/Population
- Intervention/Indicator
- Comparison
- Outcome

Significance and Rationale

- A well-conceived argument for why your study is important.
- It demonstrates:
  - Why the health problem you are addressing is important
  - What research has been done to date on the problem
  - What the gaps are
  - How your proposal will fill these gaps
- It is NOT a review article.
- It is NOT a laundry list of previous studies.
- It IS a synthesis.

Background and Rationale

- The problem your study will address
  - Define/describe conditions as needed
- Why the problem is an important public health concern (Use local data where available)
  - Incidence, Prevalence, Mortality, Survival, Cost, Disparities

Background and Rationale

- What others have done to address this problem
  - Provide a chronology or otherwise logical flow of the work that has been done in the area
    - Include a concise description of the strengths and weaknesses of the previous approaches
  - It should highlight what has been learned as well as important gaps

Background and Rationale

- Put your proposal into context
- Provide a coherent argument for why your research is important and what specific gaps it will fill
- Be specific and focused to the research questions you are addressing

Background and Rationale

Innovation

- How the work is new and unique
- How it will add significantly to what's known
- How it can shift a current paradigm
- How it can refine, improve, or propose a new application of an existing concept, method, instrumentation, or clinical intervention

Background and Rationale

Innovation

- Get the reader excited about your proposal, without overselling
- Come directly from gaps identified in the significance section
- Be direct and to the point, and fairly brief

Research Strategy Section

- Describes the scientific methodologies of your proposal
- Should detail and justify how you plan to accomplish each of the specific aims

Study Design

- Describe design chosen
- Justify why it is appropriate

Study Setting and Participants

- Setting
  - Why this setting?
- Subjects/participants
  - Why this population?
  - Inclusion/exclusion criteria, recruitment and informed consent procedures
- Include a justification for the selected sample size

Intervention

- Evidence-base
- Theoretical framework
- Content
- Materials
- Procedures
- Protocols

Data Collection Procedures

- What are the methods of data ascertainment?
  - Surveys
  - Records
  - Clinical measurements
    - E.g. blood pressure, blood tests, anthropometric measures
  - Direct observation
  - Qualitative assessments
    - E.g. focus groups, semi-structured interviews

Measures

- Describes and justifies the data collection methods and procedures
- Describes and justifies specific measures to be used

Specific Measures

- For each measure used, specify:
  - What is the variable's purpose?
  - What is the conceptual variable you are trying to measure? (conceptual definition)
  - How will this be measured? (operational definition)
    - Why was this instrument chosen?
  - How will the variable be used in analysis? (variable definition)

Statistical Analysis

- For each specific aim, describe how you will analyze the data collected in order to address the aim / test the relevant hypotheses.
- Be specific about how the result of the analyses will test the research question or hypothesis.
- Discuss particular statistical approaches to be used.
- Include discussion of potential analytic pitfalls and how they will be identified & addressed.

Next Steps

- New research grants
- Scientific publications and presentations
- Communication back to participants
- Communication to worksites
- How will study results be used in collaboration with partnering worksites to improve worker health and safety?

Proposal Review and Award Criteria

- Importance of the research question and potential for improvements in worker health (30%)
- Extent to which the proposal is novel or innovative, especially proposals that examine new topics or test new methods and/or theories (15%)
- Scientific merit of the research plan, including sound methods and plans for interpreting the results (30%)
- Relevance to the mission and priorities of CPH-NEW and NIOSH Total Worker Program (25%)

Summary of Suggestions

- Be realistic….don’t over promise
- Stay on topic
- Have clear research questions/Don’t be too exploratory
- Make the larger research agenda clear

Questions?

Any unanswered questions?

Please send your further questions to:

CPHNEW@UML.EDU

And they will be answered by reply e-mail and/or in a FAQ document on the CPH-NEW website.