DESIGNING A RESEARCH STUDY AND DEVELOPING A PROPOSAL WRITING PLAN

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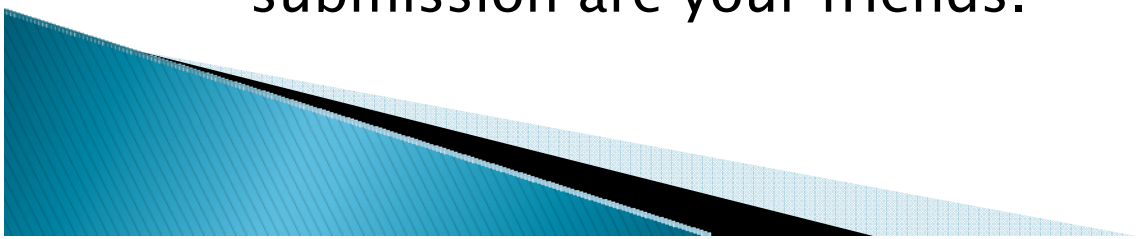
Heath Research Partnerships in Asian Communities (HRPAC)
Strengthening Partnerships & Defining Research Strategies
Cancer Prevention Institute of California

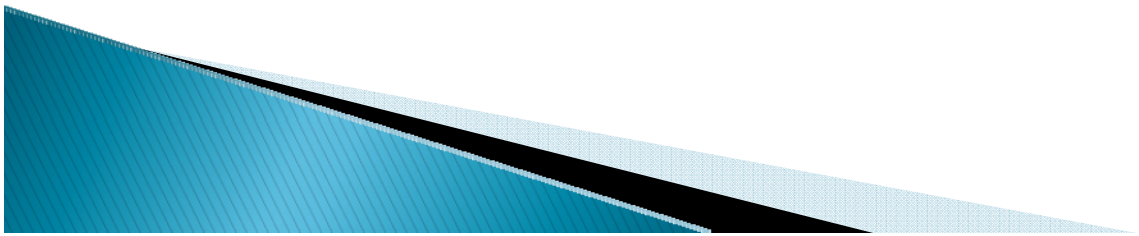
The Psychology of Writing a Good Grant, or Birth of a Salesperson!

- You are the best!
  - Your idea is brilliant, and no one knows your community like you do.
- You are the worst!
  - You need all the help you can get.
  - You have to work harder.
- Nobody cares about you!
  - It is your job to make them care.
- Wherever you go, there you are!
  - It is hard to see your blind spots.
- Research reviewers are nitpicky, retentive, sharp, and arrogant!
  - Those who criticize your grant constructively before submission are your friends.



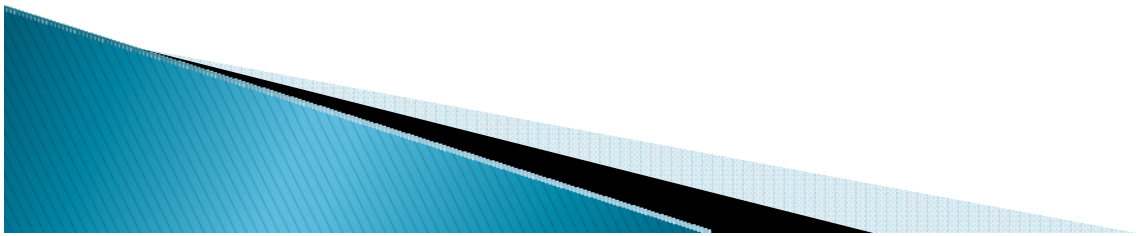
Overview

- Choosing a Topic
- Research Plans
  - Significance
  - Innovation
  - Approach
- Pitfalls and Common Errors
- Proposal Writing Plan



Choosing a Topic: Considerations

- Do you care?
- Do you have the capabilities?
- Do others care?

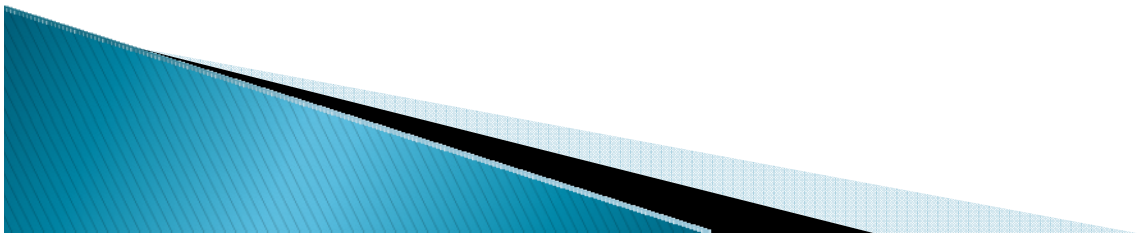


Choosing a topic: Do you care?

- Getting any project written, funded, and implemented can be a tough and long road, so it helps if there are:
  - Passion
  - Strategic Importance
- The process of choosing a topic is very important in community-based participatory research (CBPR) because it generates:
  - Discussion about matching and conflicting priorities
  - Discussion about available resources and acceptable compromises
  - Buy in

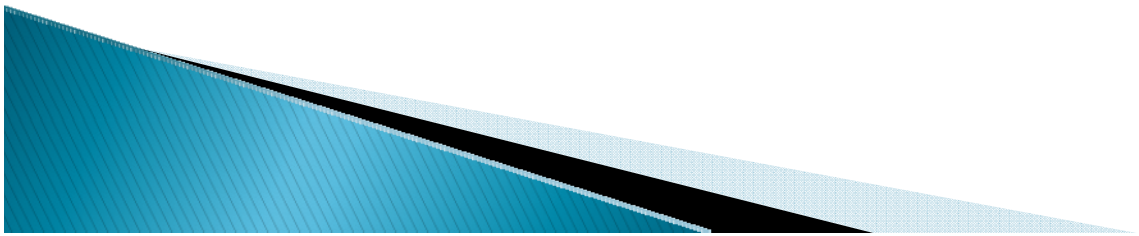
What if you do not have a topic?

- Partners should discuss potential topics
  - Be respectful of each other's passions and goals
- Keep notes because they will help you write the Background or Significance section of a CBPR grant
  - How often did you talk?
  - What were the potential topics?
  - How did you arrive at a list of priority topics and choose the current topic?



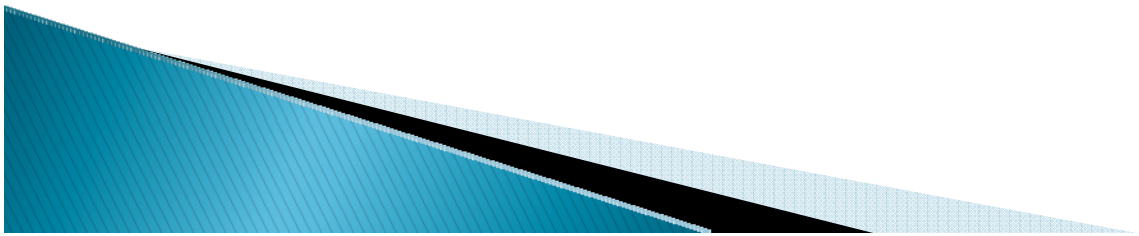
If you already have a topic…

- Each partner should write down why the topic matters to him/her.
- The partners should compare their lists and create a joint list.
  - Try to justify with data (quantitative or qualitative) each reason.
  - If you do not have data, go find the data or take the reason off the list.
- You have the beginning of your Background/Significance section!



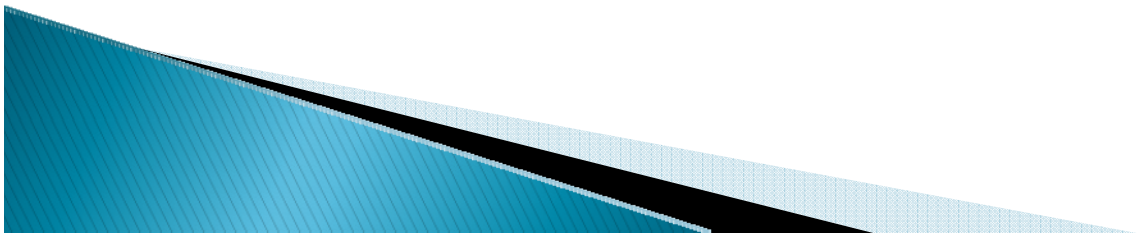
Choosing a topic: Do you have the capabilities?

- Hopefully, you chose a topic on which you have some expertise:
  - Worked with clients who deal with that topic
  - Collected preliminary data on that topic
  - Did some outreach on that topic
- If not, you need to bring in someone with expertise on the topic.
  - Will that person be a partner?
- Depending on the research plans, you may have to bring in others with needed capabilities.
  - Will they be partners?



Choosing a topic: Do others care?

- Remember that the goal here is to get a grant application funded.
  - You must be able to convince reviewers and funders of the importance.
- Assume that some people making decisions about your application do not care about:
  - You
  - Your community
  - Your passion
  - Your topic



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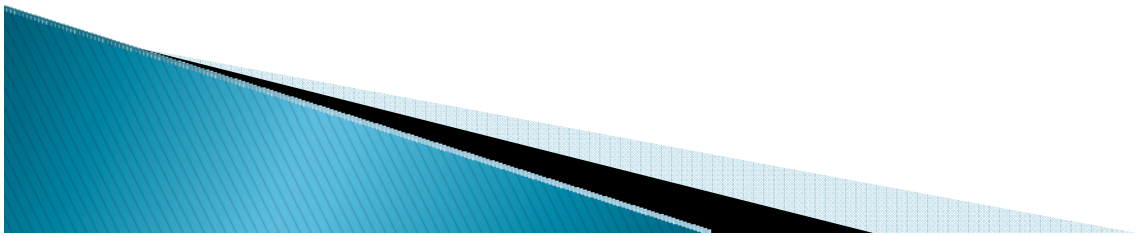
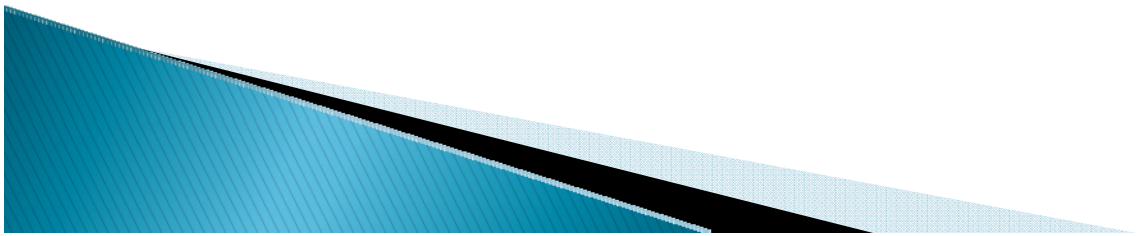


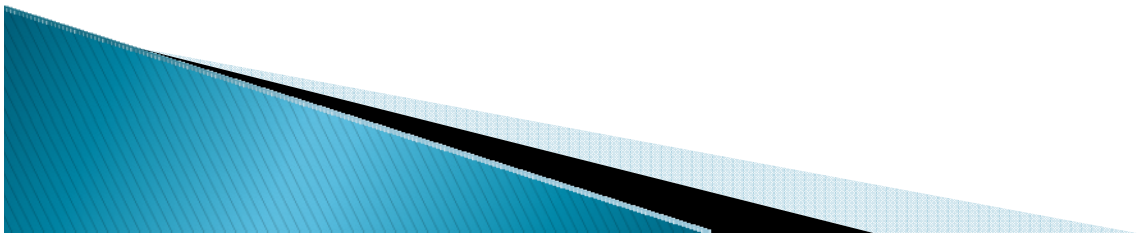
Four elements of an NIH research application

- Four main elements:
  - Specific Aims (1 page)
  - Research Strategy (6-12 pages)
    - Significance
    - Innovation
    - Approach
- Page limits (excluding Specific Aims)
  - Pilot (R03, R21): 6 pages
  - Full (R01, R18, R24): 12 pages



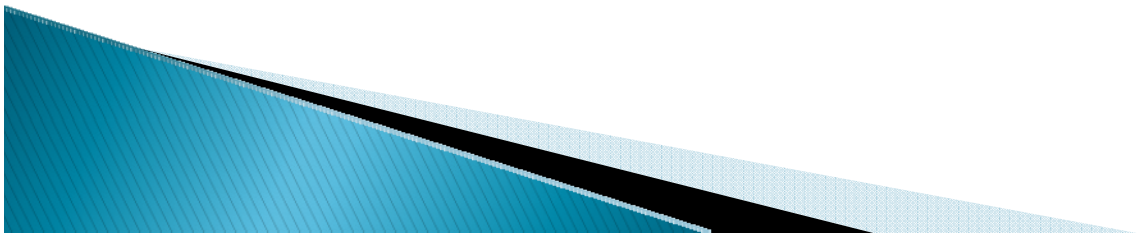
Significance

- Explain the importance of the proposal, including the overarching problems or critical barriers to progress in the field that the proposal addresses.
- Explain how the proposed activities will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive research will be changed if the overall aims are achieved.



Significance and Funders

- For a Request for Application (RFA) or Program Announcement (PA), look at the listed topics and the given examples. If your topic does not fit, you will have trouble.
  - Reframe your topic
  - Go to another priority topic on your list
- Investigator-initiated applications can be on any topic within the purvey of the funding agency, but you are more likely to encounter reviewers who do not know or care about your topic.

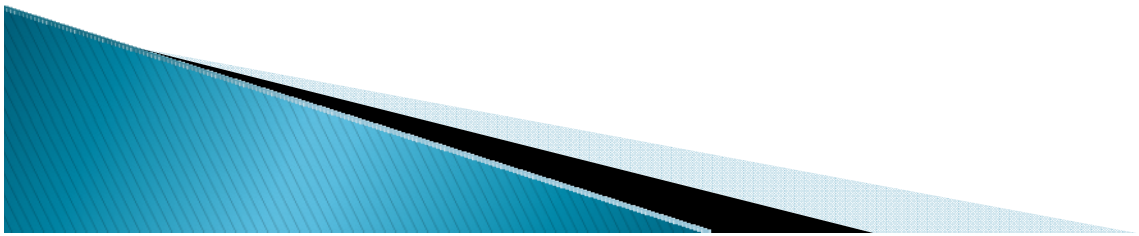


Significance: Sound Bites

- Can you sell it with one data-driven sentence to someone who does not care?
  - Liver cancer incidence among Asian Americans is 3 times higher than that among non-Latino whites.
  - Colorectal cancer screening saves lives but the screening rates among Asian Americans are lower than that of non-Latino whites.
  - The current smoking rates among Vietnamese American men are twice that of non-Latino whites.
  - Filipinos have rates of obesity and diabetes similar to that of Latinos and African Americans.
- For Asian American work, picking a topic that has an obvious disparity will get you around the problem that many reviewers view Asian Americans as small in number, are not an underserved group, or have no health disparities.

Significance: Absence of Data

- Can you sell the idea that your population is understudied?
  - Some Asian American groups may still be considered understudied in general, e.g., Asian Indians, Cambodians, Filipinos, Hmongs, Laotians.
  - Are Asian Americans understudied for your topic?
    - This works best if the topic affect a large number of people or is a priority topic for the funding mechanism.



Significance: Generalizability

- Can your topic and/or approach be generalized to other populations, or at least contribute to a broader issue?
  - Culture
  - Language
  - Communication
  - Access to care

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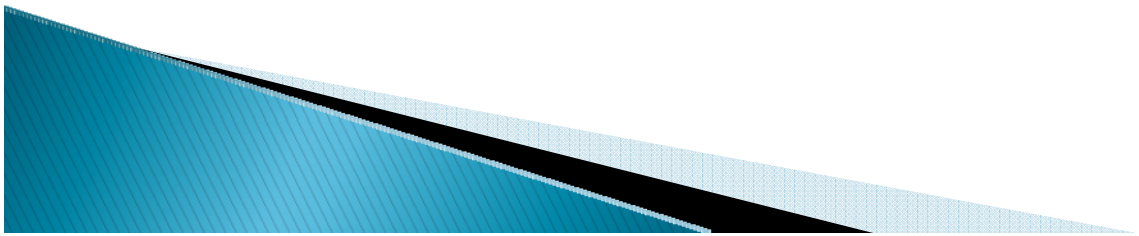
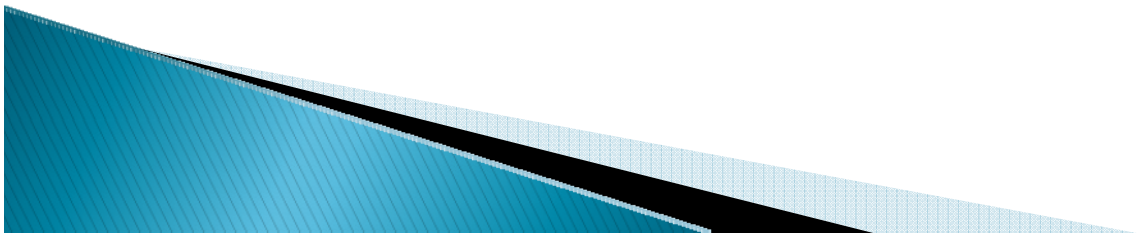


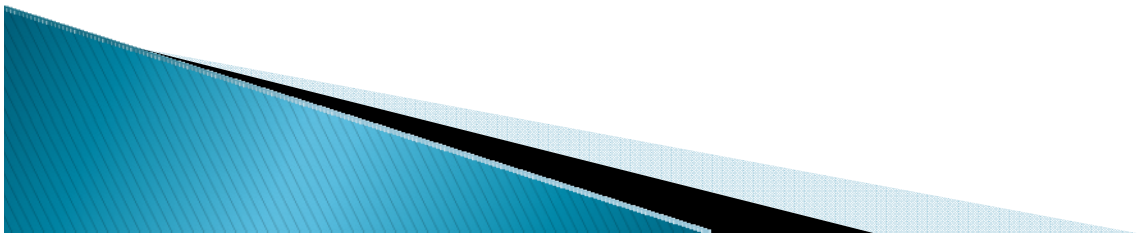
Innovation

- Explain how the proposal challenges and seeks to shift current research or clinical practice paradigms.
- Summarize novel theoretical concepts, approaches or methodologies, instrumentation or intervention to be developed or used in the project.
- Summarize how the proposal as a whole will refine, improve, or provide new applications of theoretical concepts, approaches or methodologies, instrumentation or interventions in the field.



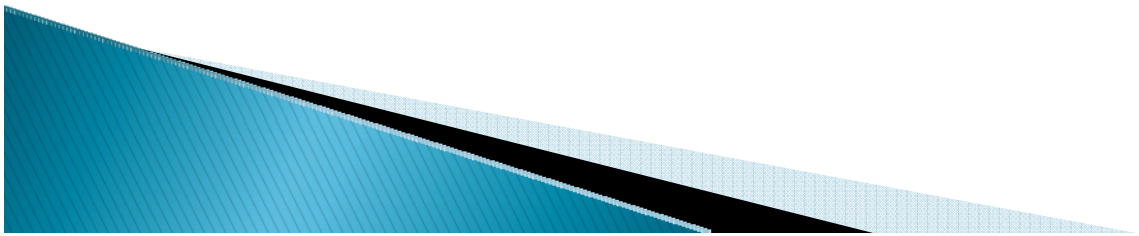
Innovation: Considerations

- The main goal of research is to create new knowledge or new interventions. Innovation is a very important part of a research plan.
- Innovation can be in:
  - Topic, if understudied
  - Population, if highly understudied
  - Intervention, if understudied (e.g., faith-based, social network, cell phone)
  - Research question (e.g., how does a known effective intervention work, how can an effective intervention be disseminated)
  - Research approach (e.g., different ways of measuring a problem)



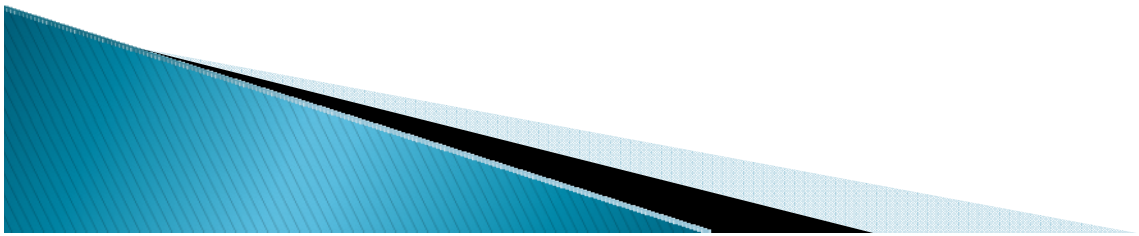
How do we come up with something innovative?

- Know the topic and its literature.
  - Read the latest review article and see what is still missing.
  - Read the latest best study and see what is still missing.
  - Ask an expert to see what he/she thinks still need to be done.
- Listen to other people talk about other topics.

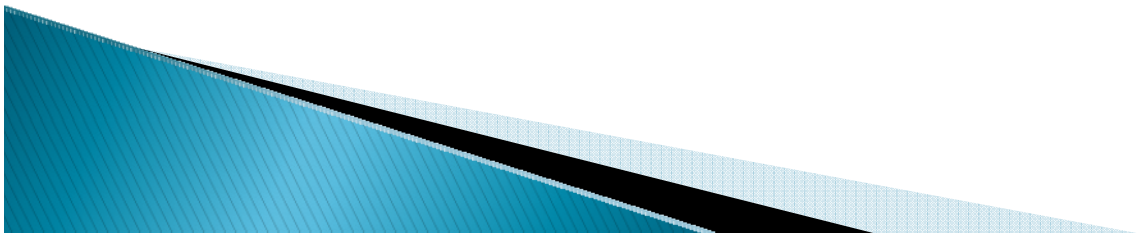


How do we come up with something innovative?

- Listen to the questions and ideas that arise out of the work you do everyday.
  - Make connections between seemingly unrelated things.
  - Write everything down, even if it seems really dumb.
- Brainstorm with your partner(s) and collaborators.
  - Give each other space to say crazy things by never saying “that won’t work” initially.
  - Write everything down first before engaging in critical thinking.

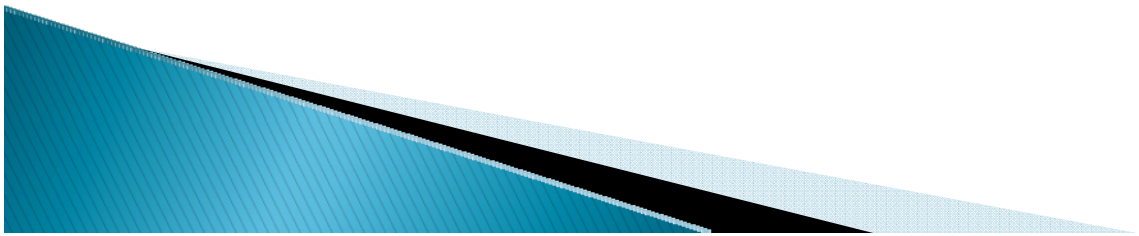


Questions and Answers



Exercise

- Partners get together for 15 minutes.
- Write down about 5 sentences about your research topic in terms of aim and activities.
- While doing it, list what you think is significant, innovative, and fundable about what you want to do.



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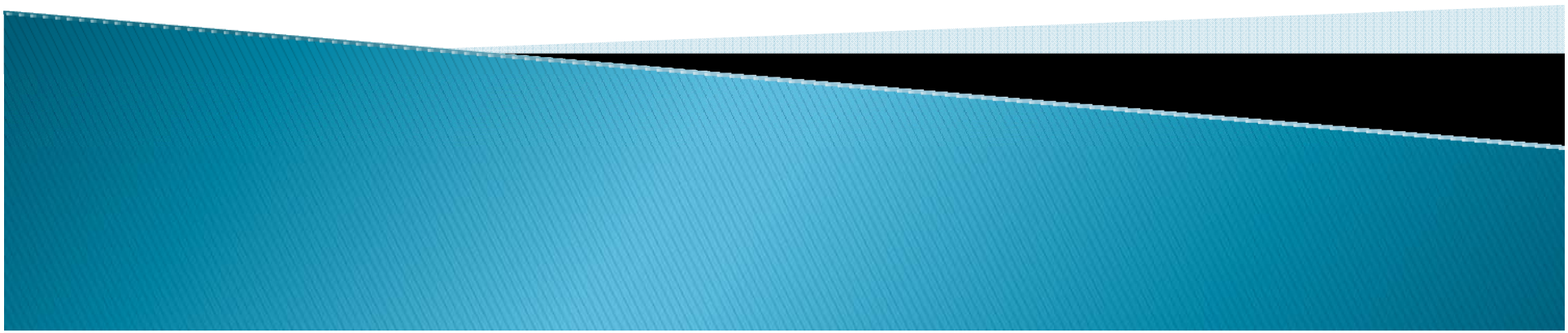
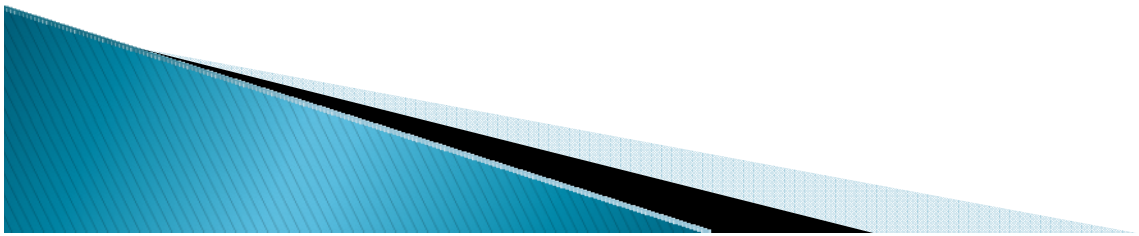


Exercise

- Share what you wrote down this morning.
- Feedback from other participants.
- What do you need to go forward?



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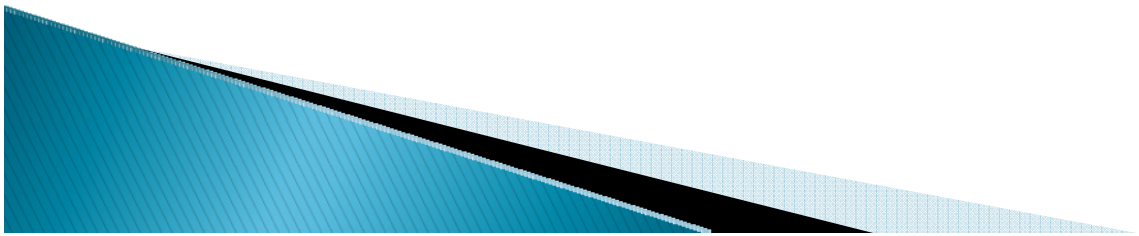
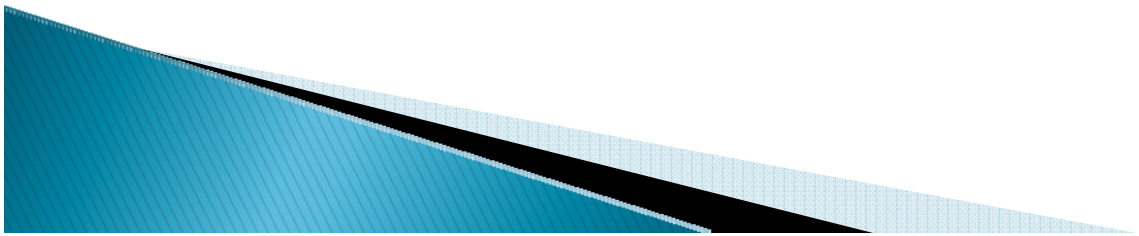


Approach

- Summarize the strategies, methodologies, and analyses to accomplish the overall specific aims and objectives.
- Address potential problems, alternative strategies and benchmarks for success in achieving the aims.
- If any part is in the early stages of development, explain how the proposal as a whole will establish strategies to enhance their feasibility and manage high risk aspects.

Approach: Considerations

- Theory and Conceptual Framework
- Intervention or not?
- Quantitative, qualitative, or mixed?
- CBPR or not?



Designing the Research Plans: Theory and Conceptual Framework

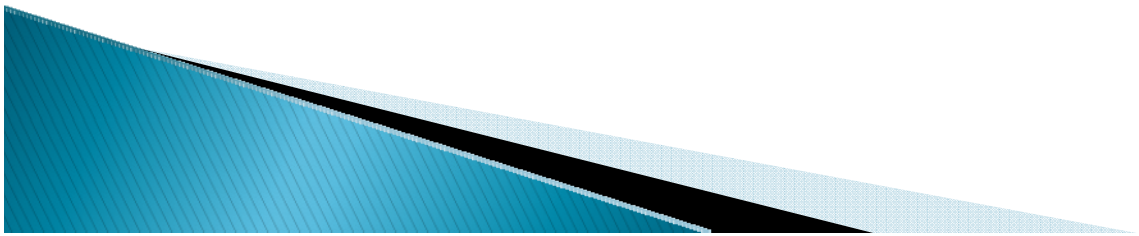
- All research grants should have hypotheses testing.
- A theory enables you to:
  - Place your hypotheses in a larger context
  - Organize your actions and measurements and their description in the grant
  - Convince a reviewer who may not care about your topic that your findings may still advance scientific knowledge
- A conceptual framework may be helpful when a single theory fails to capture the complexity of the work.

Theories

- Theory at a Glance
  - www.cancer.gov/cancertopics/cancerlibrary/theory.pdf
- Intrapersonal: Health Belief Model, Transtheoretical Model (Stages of Change, Theory of Planned Behavior
- Interpersonal: Social Cognitive Theory
- Community: Community Organization, Diffusion of Innovations, Communication Theory

Conceptual Framework

- Conceptual Framework
  - Socio-ecological Model
  - PRECEDE-PROCEED



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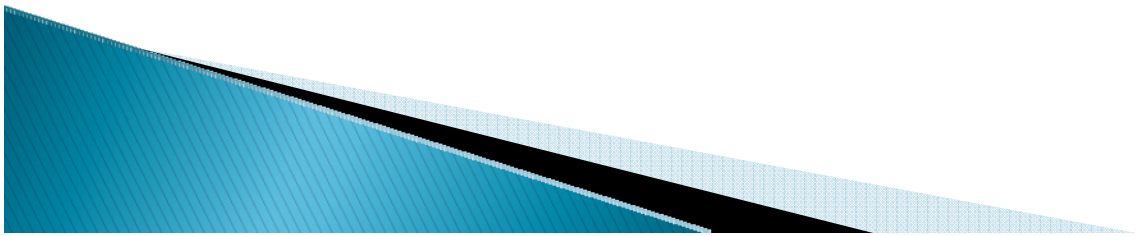
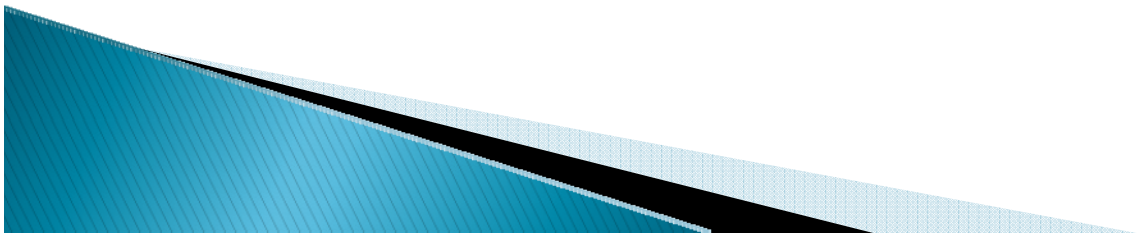


Designing the Research Plans: Intervention or Not?

- A research grant does not have to be an intervention.
  - A needs assessment grant to collect preliminary data for an intervention is appropriate if the topic is understudied.
- A previously untested intervention will likely need to be tested in a pilot grant.
- An intervention that is more "mature" will need to be tested in a controlled design.



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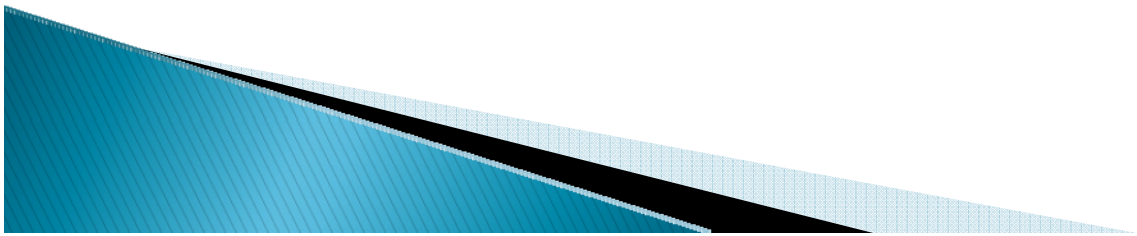
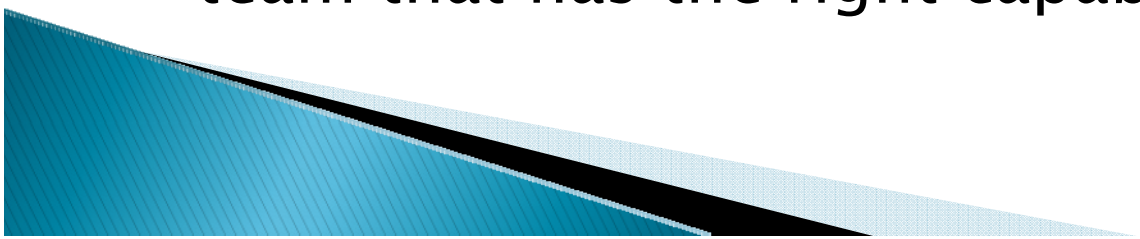


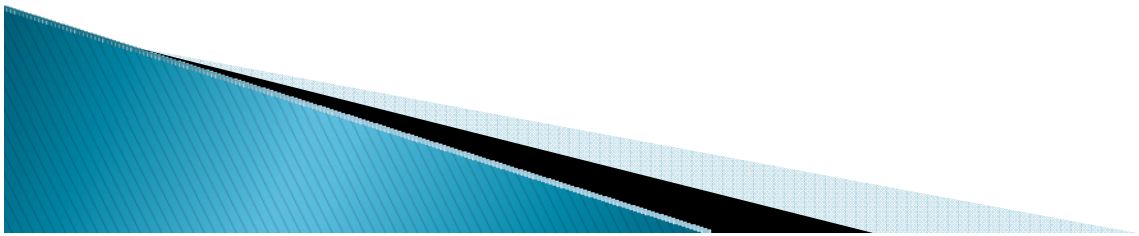
Designing the Research Plans: Quantitative, Qualitative, or Mixed?

- Quantitative studies (surveys, other numerical data) are useful in answering questions such as what, when, and whether something works.
- Qualitative studies (ethnographic observations, focus groups, interviews) are useful in answering questions such as how, why, and what happened.
- CBPR studies tend to have a strong qualitative component.
- Mixed methods studies are becoming more common.
- Whatever the methods, make sure you have a team that has the right capability!



Designing the Research Plans: CBPR or not?

- Although we want you to conduct CBPR, you should be careful about labeling your grant "CBPR".
  - CBPR reviewers will evaluate your grant on faithfulness to CBPR principles, i.e., you have created an extra hurdle for yourself.
  - You will have to explain your CBPR processes in the grant, which takes up space.
  - You may have to budget and plan for measurement of CBPR faithfulness.



What drives CBPR Reviewers Crazy

- When the argument for the study's significance and relevance in a particular community are based on national data
- When a community is described only in terms of its needs and not also its strengths and assets
- When no sound rationale is provided for the composition of the partnership
- When there is not a clear link between community-defined priorities and the proposed focus and approach
- When the study design is so specific and detailed that there is no room for a participatory process
- When no attention is paid to barriers to community participation (e.g., childcare, transportation, interpretation services)
- When attention is paid to the research methods but not the methods of building/sustaining community partnerships and community participation
- When a community board is to be established, but no detail is provided about board member recruitment, composition, role, staff support, etc.
- When there is no evidence of community capacity building (e.g., creating jobs, developing leaders, sustaining programs)
- When it is not easy to discern how funding is being divided among partners (e.g., show what % is going to the community vs. the university)
- When it is not clear who was involved in developing the proposal and how it was developed
- When most or all of the funding is retained by the applicant organization.

Adapted from Community-Campus Partnerships for Health

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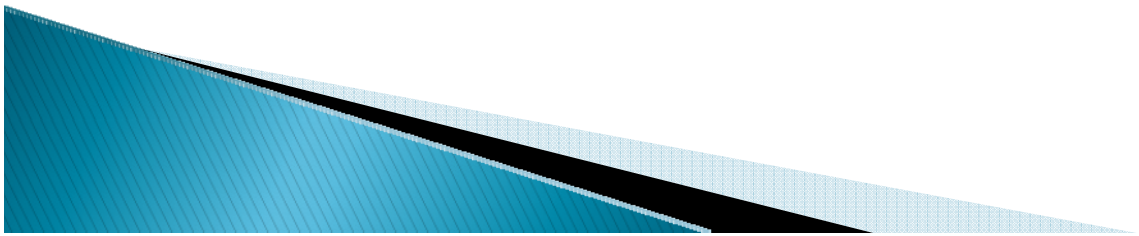
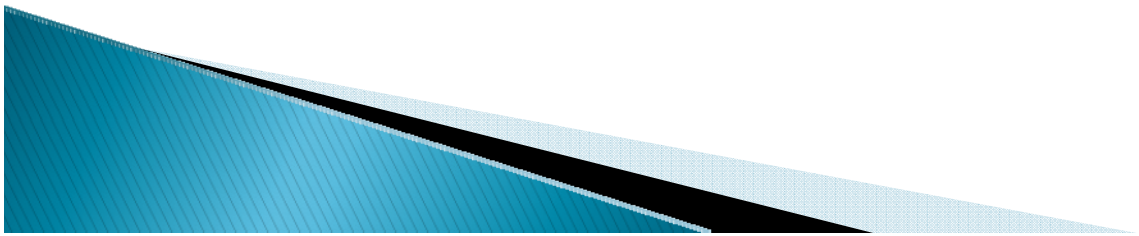


Pitfalls and Common Errors

- Not enough time
  - To discuss your plans
  - To write
  - To edit, re-write, and proofread
- Unrealistic plans for the available:
  - Budget
  - Preliminary studies
  - Capacity
- Not anticipating and addressing problems/reviewer comments



Errors that Will Make Reviewers Pick on You

- You don't follow the instructions.

- You have spelling or grammatical errors.
- You do not get to the point.
- You don't define acronyms, make up acronyms, or have too many.
- Your grant has no white space.

- You cite old data when there is new data.
- You show no evidence that you know the potential problems with what you are proposing to do.

- Your proposal narrative conflict with your budget or budget justification
- Your budget numbers do not add up, do not make sense, or are too high or too low for the proposed work.

- Your letters of support don't actually say anything (e.g., they all simply repeat the same language, they are not consistent with commitments described in the proposal narrative and/or budget)

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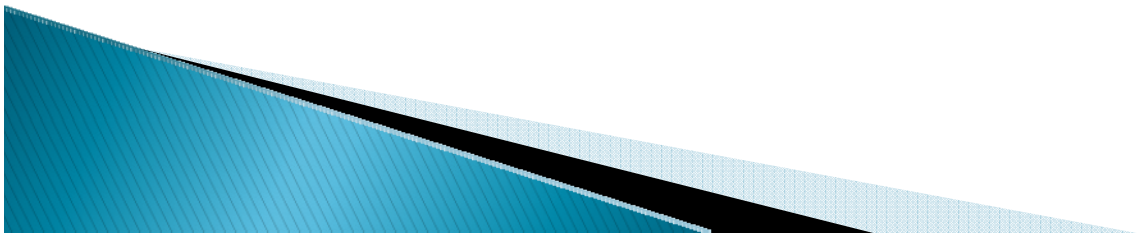
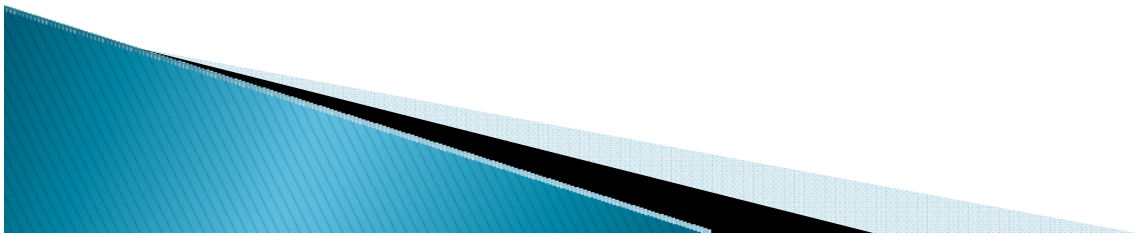


Proposal Writing Plan Tips

- Give yourself at least 6 months.
- Set aside sacred time to write weekly or biweekly for 3-4 hours.
- Set interim deadlines and hold each other to them.
- Divide the primary writing tasks (Background/Significance, Preliminary Studies, Research Plans) and have the other person review.
- Communicate frequently with your partner.

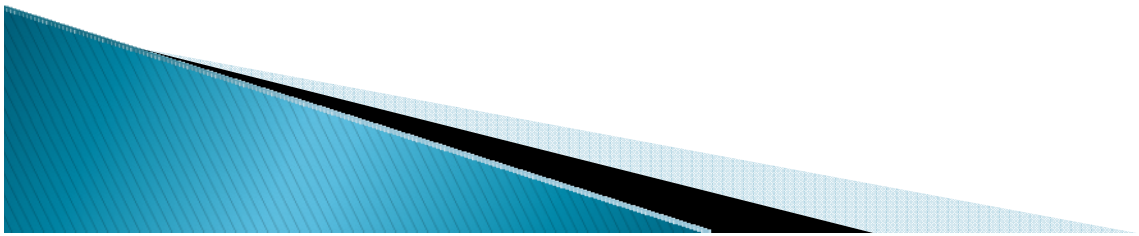
Proposal Writing Plan Tips

- Cut and paste the important sentences from the RFA/PA and keep them with your proposal.
  - Do not remove them until you are sure they have been addressed in your proposal.
- Keep an ongoing list of comments/critiques and potential responses.
- Send early draft to mentor/other reviewers to make sure you are on the right track.
- Start budgeting once you have the first draft.
- For subsequent drafts, work out review and comment logistics (e.g., who reviews first).
- There should be one person who is responsible for the final draft.



The Zen of Writing a Good Grant

- Nothing ventured, nothing gained.
- Your idea does not exist until it is written.
  - A badly written idea reflects badly on the idea, or the writer, or both.
- Time is money.
- The only way to know how your grant will be read by someone else is to have someone else read it.



The Beginning…