

# Grantwriting Strategies

**Justine Sunshine**

Tier III Webinar

# Overview

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- General writing strategies
- PCORI Funding Opportunities for 2017
- Strategies for writing PCORI LOIs
- Strategies for PCORI Proposals
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# Resources Cited

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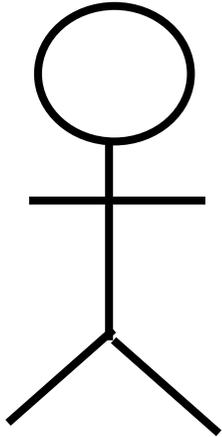
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1. Williams, Joseph. 2013. *Style: Lessons in Clarity and Grace* (11<sup>th</sup> edition). Boston: Pearson
2. Purdue Online Writing Lab
  - <https://owl.english.purdue.edu/owl/>
3. Duke Graduate School Scientific Writing Resource
  - <https://cgi.duke.edu/web/sciwriting/index.php>
4. The English Edition
  - <http://www.theenglishedition.com/wordpress/?p=283>
5. Jaisri Lingappa, Professor, Department of Public Health, University of Washington

# Justine and the Three Reviewers

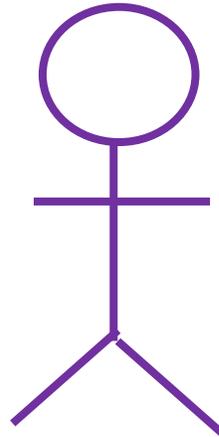
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**Me**



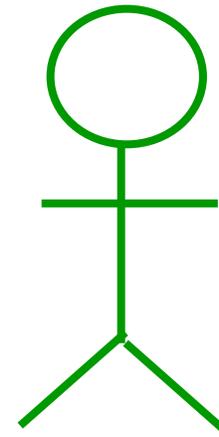
**Reviewer 1**

*Thoughtful, sincere,  
highly intelligent*



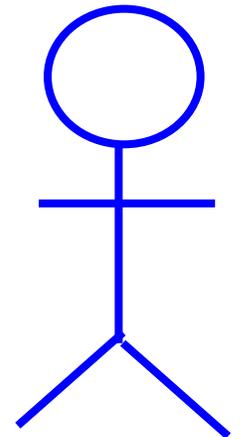
**Reviewer 2**

*Forgot about the study  
section deadline and read all  
proposals in the last 36 hours.  
And mine was last*



**Reviewer 3**

*Out to get me*



Topic is important and addresses a clear evidence gap. However, the **study design is highly confusing** and unclear how each of the comparators are going to be measured throughout the study period. The outcomes of the study are poorly defined. As such, it is difficult to recommend funding

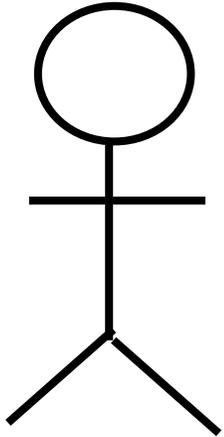
Clear evidence gap. But proposal is very unclear. Can't figure out what they are trying to do.

This is **crap**

# Justine and the Three Reviewers

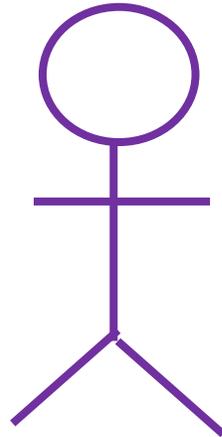
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**Actual Me**



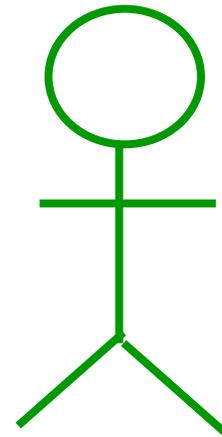
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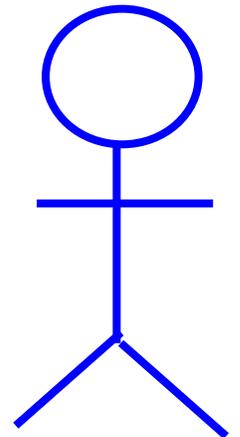
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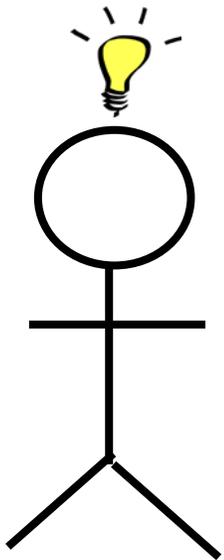
“Wow, they really missed the point. I’m actually embarrassed for them ”

# Justine and the Three Reviewers

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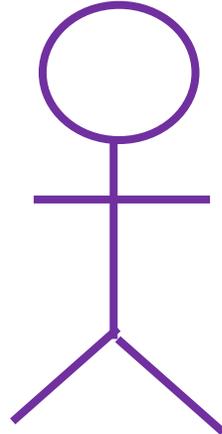
**Enlightened**

**Me**



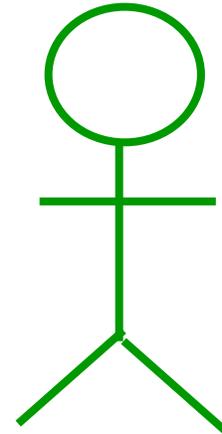
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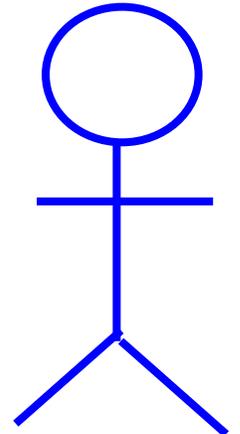
**Reviewer 2**

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**Reviewer 3**

*Out to get me*



“Hmmm...something about the writing is not clear”

# Clarity

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“The biggest reason most of write unclearly is that we cannot predict when readers will think our writing is unclear, much less what makes it so.”

Joseph Williams

# Why people write unclearly

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- You don't know what to say
- The subject is confusing
- Assume that complexity signals deep thought and high intelligence



“Monica and Chandler would make good parents because they have big hearts and care about all people”



“Monica and Chandler would make virtuous parental figures because they have gargantuan cardiac muscles and are attentive and sympathetic to Homo Sapians”

# Tips to Improve Clarity

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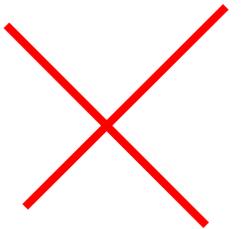
## Sentence Structure

Subject → Verb  
Character → Action  
Person or thing → Doing something



- Nominalizations are often used in scientific writing but it can lead towards confusion
  - Nouns that are created from verbs or adjectives, usually by adding –tion, -ence, -ment, -cy, etc.
    1. Interference-----interfere
    2. Argument-----argue
    3. Reduction-----reduce

Subject → Long string of nominalizations → Verb  
Character → Long string of nominalizations → Action  
Person or thing → Long string of nominalizations → Doing something



# Examples

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*Examples:*

- Non scientific:

The **discussion** of the group was about how to surprise the girl with the birthday without her knowing

The group discussed how to plan the surprise party

*But...nominalizations are not always bad!*

The fact that he assumed the meeting was canceled was frustrating

His assumption that the meeting was canceled was frustrating

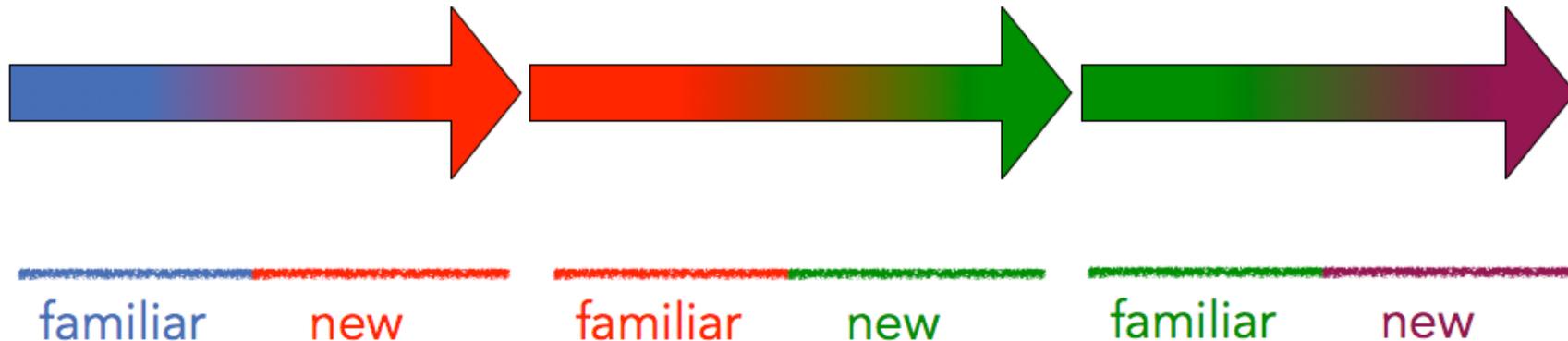
# Tips to Improve Clarity

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## Cohesion

*Refers to a sense of flow, the 'glue' that holds your sentences together*

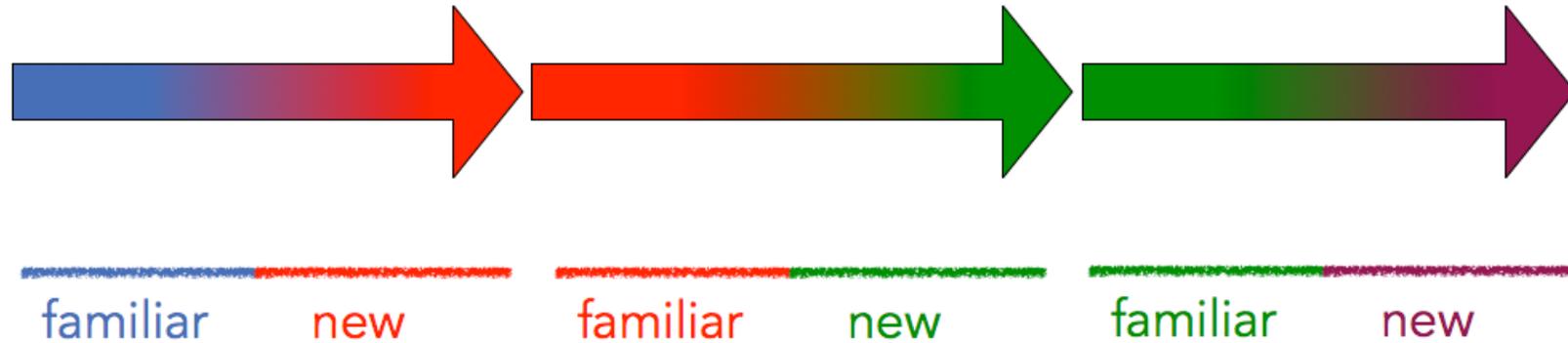
- Prioritize familiarity
- Each sentence should start with the familiar and progress to the more complex
- Key words that raise themes or represent important points should be placed at the end of the first sentence



# Cohesion Examples

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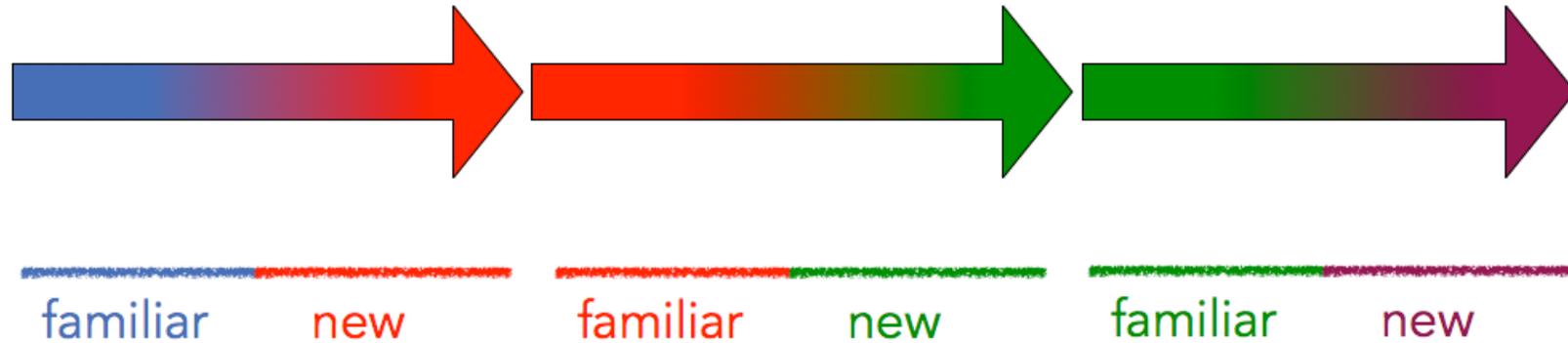
Some astonishing questions about the nature of the universe have been raised by scientists studying black holes. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole. The fabric of space around so much matter compressed into so little volume can then change in puzzling ways.



# Cohesion Examples

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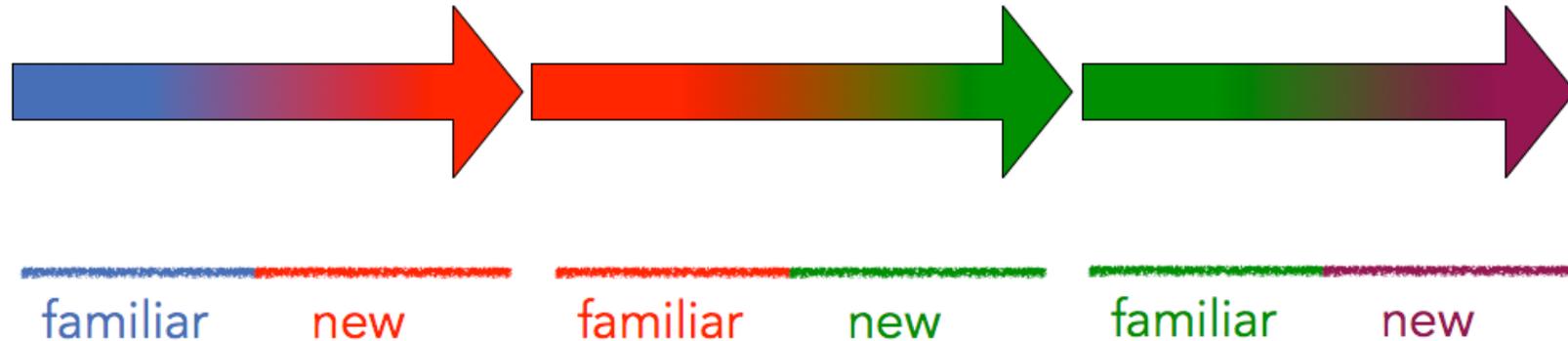
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# Cohesion Examples

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Some astonishing questions about the nature of the universe have been raised by scientists studying black holes. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole. The fabric of space around so much matter compressed into so little volume can then change in puzzling ways.



Some astonishing questions about the nature of the universe have been raised by scientists studying black holes. A black hole is created by the collapse of a dead star into a point perhaps no larger than a marble. So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.

# Tips to Improve Clarity

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## Coherence

*A sense of the whole*

Saynor, Wisconsin is the snowmobile capitol of the world. The buzzing of snowmobiles fills the air and their tank-like tracks crisscross the snow. The snow reminds me of Mom's mashed potatoes, covered with furrows I would draw with my fork. Her mashed potatoes usually make me sick- that's why I play with them. I like to make a hole in the middle of the potatoes and fill it with melted butter.

# Tips to Improve Clarity

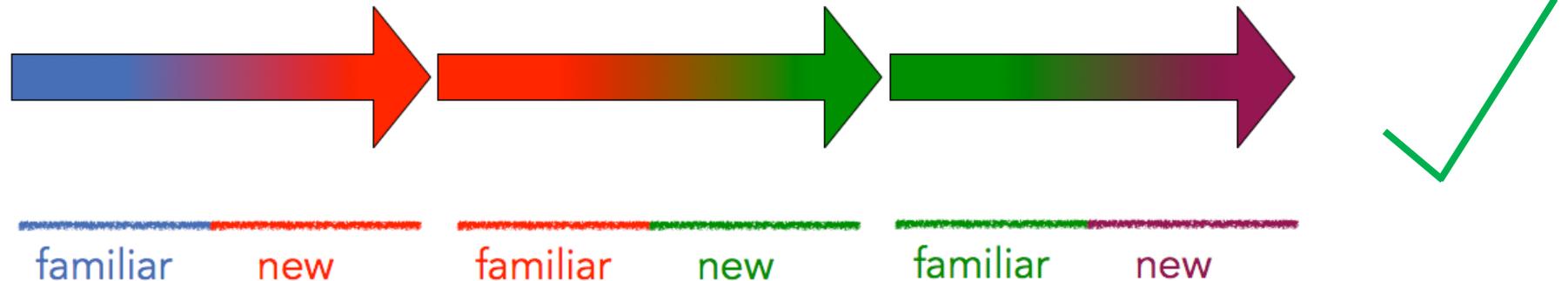
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## Coherence

*A sense of the whole*

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*Cohesive?*



# Tips to Improve Clarity

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- Achieving **Coherence**

- Relevance

- Chronological

- *First, then, finally*

- Coordinate

- *First, second, third*
    - *Also, another, in addition*

- Logical

- Example and generalization
    - Premise and conclusion
    - *For example, therefore*

- In grant writing, you want to motivate your reader

- Establish a shared context (familiar)
  - State the problem
  - State the solution

# Summary I

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- It is difficult to judge the clarity of your own writing
- “Good” scientific thinking does not necessarily translate into good writing
- Use nominalizations wisely
- Apply principles of cohesion and coherence to improve overall clarity

# PCORI Funding Opportunities 2017

Cycle	LOI Due Date	Proposal Due Date	Topics
1	2/14/2017	5/17/2017	Assessment of Prevention Diagnosis and Treatment Options
			Addressing Disparities
			Communication and Dissemination Research
			Improving Healthcare Systems
			Improving Methods for Conducting PCOR
			Pragmatic Clinical Studies to Evaluate Patient-Centered Outcomes
			Dissemination and Implementation of PCORI Funded Patient-Centered Outcomes Research Results and Products in Real World Settings
			Comparison of Surgical and Nonsurgical Options for Management of Chronic Nonspecific Low Back Pain
			Optimal Treatment Sequences for Nonspecific Chronic Low Back Pain
2	7/25/2017	10/25/2017	Pragmatic Clinical Studies to Evaluate Patient-Centered Outcomes
			Dissemination and Implementation of PCORI Funded Patient-Centered Outcomes Research Results and Products in Real World Settings

# PCORI Funding Opportunities 2017

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Cycle	LOI Due Date	Proposal Due Date	Topics
3	10/31/2017	2/6/2018	Assessment of Prevention Diagnosis and Treatment Options
			Addressing Disparities
			Communication and Dissemination Research
			Improving Healthcare Systems
			Improving Methods for Conducting PCOR
			Pragmatic Clinical Studies to Evaluate Patient-Centered Outcomes
			Dissemination and Implementation of PCORI Funded Patient-Centered Outcomes Research Results and Products in Real World Settings

# Strategies for writing PCORI LOIs

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- There are new templates for PCORI funding topics
- Make sure your proposal aligns well with that specific topic and that department's funding priorities
- Each LOI component will have instructions (*in italics*) on what information needs to be included in that specific section
  - There are no strict guidelines on how to format each of these sections
  - Be sure to include all required information per component but remember “the big picture” you are crafting throughout your entire LOI

# Strategies for writing PCORI LOIs

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<b>Broad PFA</b>	<b>Methods for PCOR</b>	<b>Pragmatic Clinical Studies</b>
Specific Aims	Specific Aims	Specific Aims
Background	Background	Background
Significance	Significance	Significance
Study Design	Study design	Study design
Engagement approach	Study population and sample size	Engagement approach
Study population and setting	Primary data collection methods	Study population and setting
Comparators	Data sources and data sets	Comparators
Outcome	Analytic methods	Outcomes
Analytic plan		Analytic Plan
Sample size and power		Sample size and power
		Prior relevant experience
		Anticipated impact
		Duration and total costs

# Strategies for writing PCORI LOIs

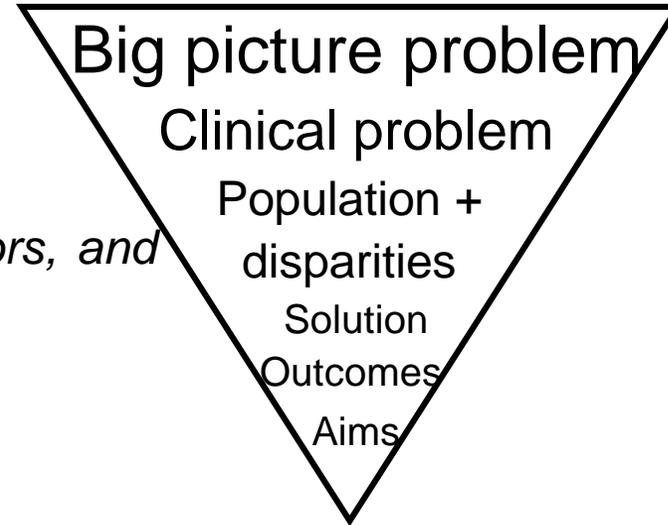
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Bringing *cohesion* and *coherence* into writing PCORI LOIs

## Addressing Disparities

### **Specific Aims:**

*State the goals of the proposed research, the comparators, and the expected outcomes*



# Strategies for writing PCORI LOIs

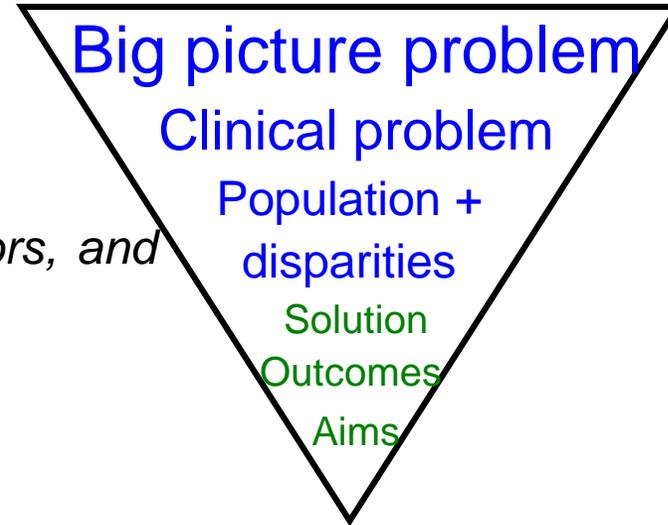
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Bringing *cohesion* and *coherence* into writing PCORI LOIs

## Addressing Disparities

### **Specific Aims:**

*State the goals of the proposed research, the comparators, and the expected outcomes*



**Familiar**

|  
|  
|  
|  
|  
|  
*Set the stage for  
the reader to  
know what lies  
ahead*

**New**

# Strategies for writing PCORI LOIs

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Bringing *cohesion* and *coherence* into writing PCORI LOIs

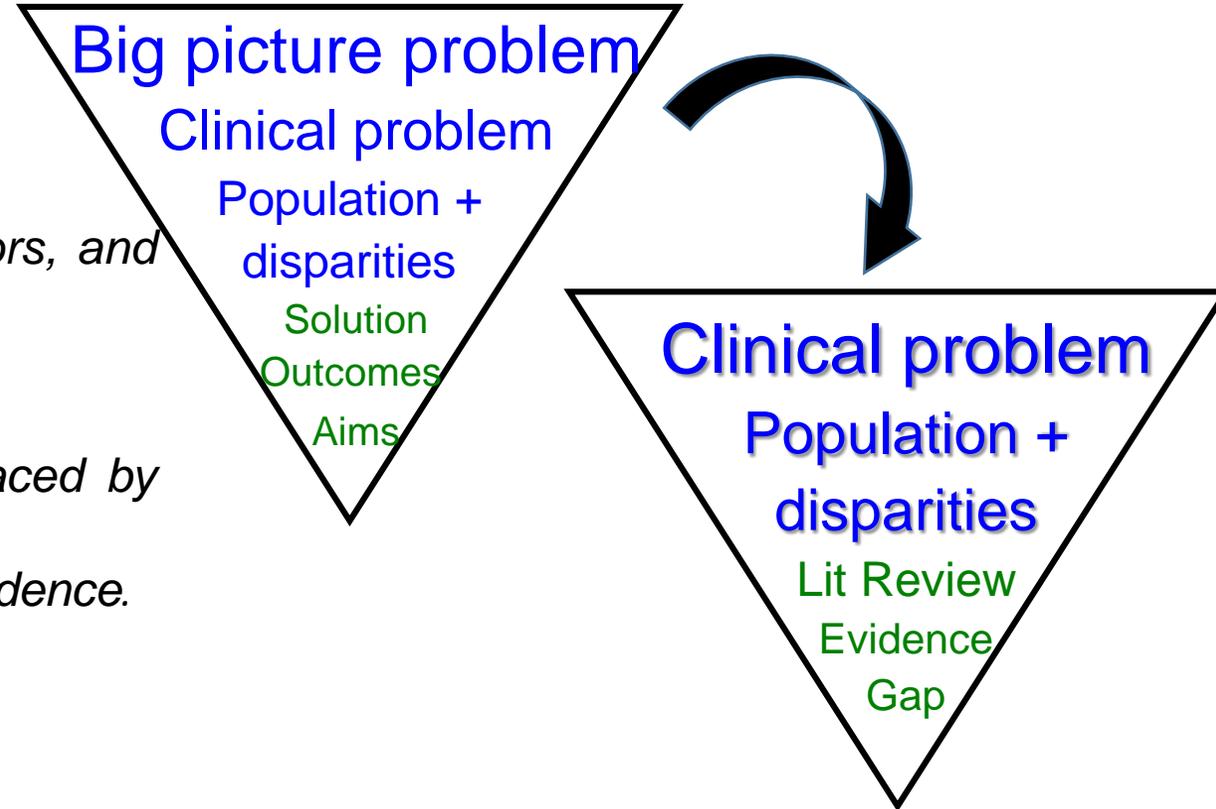
## Addressing Disparities

### **Specific Aims:**

*State the goals of the proposed research, the comparators, and the expected outcomes*

### **Background:**

*State the evidence gap that underlies the uncertainty faced by patients, clinicians, and other decision makers by referencing systematic review(s), guidelines, and other evidence.*



# Strategies for writing PCORI LOIs

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Bringing *cohesion* and *coherence* into writing PCORI LOIs

## Addressing Disparities

### **Specific Aims:**

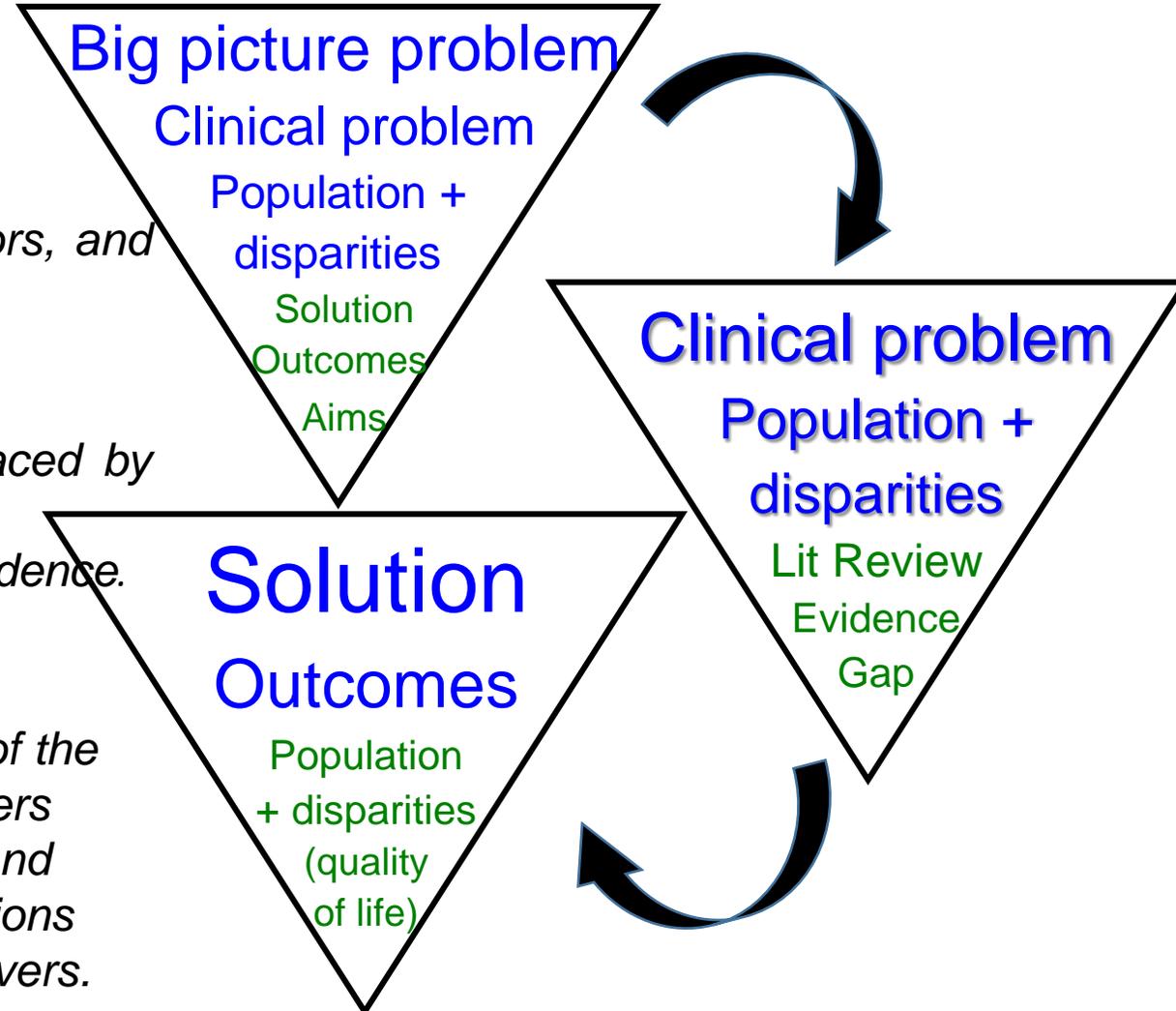
*State the goals of the proposed research, the comparators, and the expected outcomes*

### **Background:**

*State the evidence gap that underlies the uncertainty faced by patients, clinicians, and other decision makers by referencing systematic review(s), guidelines, and other evidence.*

### **Significance:**

*Describe the potential for the study to improve the quality of the evidence available to help patients and relevant stakeholders make informed health decisions and improve health care and outcomes. Describe how the research is focused on questions that affect outcomes of interest to patients and their caregivers.*



# Summary II

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- Balance the requirements of each LOI component with the “big picture”
- Engage with an Program Officer prior to working on a specific topic in order to know that your proposal is a potential good fit

# Strategies for writing PCORI Proposals

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- The research plan template is similar across PCORI funding topics
- Each section contains instructions (*in italics*) that explain which Review Criterion is used for the section as well as which PCORI methodology standards should be included
  - Merit reviewers are trained on these criterion and standards so be sure to address them explicitly
- Your merit reviewer panel will be comprised of individuals with very different backgrounds. Your proposal will be reviewed by those with a researcher, stakeholder, or patient perspective. Be sure to make your proposal accessible to all

# Strategies for writing PCORI Proposals

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## *The 5 Criterion*

- ★ 1. Potential for the study to fill critical gaps in evidence?
  - 2. Potential for the study findings to be adopted into clinical practice and improve delivery of care?
  - ★ 3. Scientific Merit (Research Design, Analysis, Outcomes)
  - 4. Patient-centeredness
  - 5. Patient and Stakeholder engagement
- ★ *Not required for Patient and Stakeholder reviewers*

# Strategies for writing PCORI Proposals

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## RESEARCH STRATEGY

### Background

- *Describe the impact of the condition on the health of individuals and populations. (Criterion 1. Potential for the study to fill critical gaps in evidence)*
- *Identify gaps in evidence. (RQ-1)*

# Strategies for writing PCORI Proposals

## Background

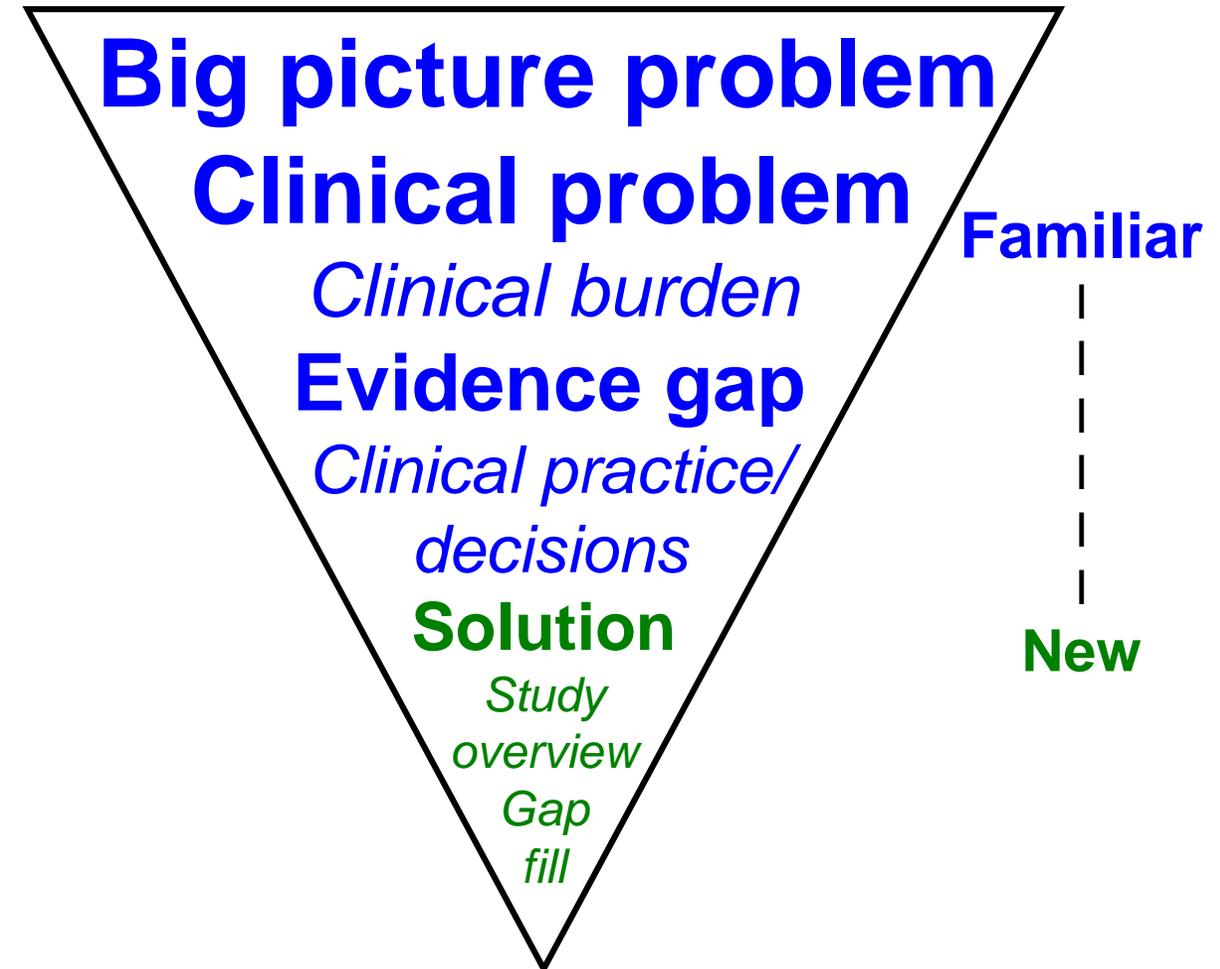
- Describe the impact of the condition on the health of individuals and populations. (*Criterion 1. Potential for the study to fill critical gaps in evidence*)
- Identify gaps in evidence. (*RQ-1*)

## Criterion 1:

**Potential for the study to fill critical gaps in evidence?**

*Does the Application:*

Convincingly describe the clinical burden?
Identify a critical gap in current knowledge as noted in systematic reviews, clinical practice guidelines, or previous research prioritizations
Identify a critical gap in current knowledge evidence by inconsistency in clinical practice and decision making?
Would research findings from the study have the potential to fill these evidence gaps



# Strategies for writing PCORI Proposals

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## Significance

- *Describe the potential for the study to improve the quality of the evidence available to help patients and relevant stakeholders make informed health decisions and improve health care and outcomes. (Criterion 2. Potential for the study findings to be adopted into clinical practice and improve delivery of care)*

## Criterion 2:

### Potential for the study findings to be adopted into clinical practice and improve delivery of care

#### *Does the Application:*

	YES	NO
Identify who will make the decision (i.e., the decision maker) or use (i.e., the end-user) the study findings (not the intervention) produced by this study, such as local and national stakeholders		
Identify potential end-users of study findings, such as local and national stakeholders, and describe strategies to engage these end-users		
Provide information that supports a demand for this kind of a study from end-users		
Would research findings from this study have the potential to inform decision-making for key stakeholders		
How likely is it that positive findings could be reproduced by others, resulting in improvements in practice and patient outcomes		
Identify the potential barriers that could hinder adoption of the intervention by others		
Describe a plan for how study findings will be disseminated beyond publication in peer review journals and national conferences		

# Strategies for writing PCORI Proposals

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## Significance

- Describe how the research is focused on questions that affect outcomes of interest to patients and their caregivers. (*Criterion 4. Patient-centeredness*)

### **Criterion 4:**

#### **Patient-centeredness**

##### *Does the Application:*

	YES	NO
Include a thorough description about which outcomes (both benefits and harms) are important to patients, and are those outcomes included in the study plan		
Provide information that indicates that closing the evidence gap is important to patients and other stakeholders		
Are the interventions being compared in the study available to patients now, and are they the best options for comparison (including whether they would be chosen by patients and their healthcare providers for managing the condition being studied)		

# Strategies for writing PCORI Proposals

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## Significance

- Describe how the research is focused on questions that affect outcomes of interest to patients and their caregivers. (**Criterion 4. Patient-centeredness**)

### **Criterion 4:** **Patient-centeredness**

*Does the Application:*

*Can link to other sections (i.e. see  
Engagement plan, etc)*

	YES	NO
Include a thorough description about which outcomes (both benefits and harms) are important to patients, and are those outcomes included in the study plan		
Provide information that indicates that closing the evidence gap is important to patients and other stakeholders		
Are the interventions being compared in the study available to patients now, and are they the best options for comparison (including whether they would be chosen by patients and their healthcare providers for managing the condition being studied)		

# Additional Criterion

**Criterion 3:**  
**Scientific Merit (Research Design, Analysis, Outcomes)**

<b>STUDY DESIGN</b>
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***Does the Application:***

	YES	NO
Describe a clear conceptual framework anchored in background literature which informs the design, key variables, and relationship between interventions and outcomes being tested		
Provide justification that the outcome measures are validated and appropriate for the population		
Research plan describe rigorous methods that demonstrate adherence to PCORI's Methodology Standards?		
Are each of the comparators (e.g., active intervention arm and comparator arm) clearly described and well justified? If "usual care" is one of the arms, is it sufficiently justified and will it be sufficiently measured		
Are the sample sizes and power estimates based on careful evaluations of the anticipated effect size? Is the effect size adequately justified in relation to the size or dose of the intervention and the research design		
Is the project timeline realistic, including specific scientific and engagement milestones		
Is the strategy for recruiting participants feasible		
Are assumptions about participant attrition realistic, and are plans to address patient or site attrition adequate		

# Additional Criterion

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**Criterion 5:**  
**Patient and Stakeholder engagement**

*Does the Application:*

Engagement Plan  
Research team/environment

	YES	NO
Provide a well-justified description of how the research team is interdisciplinary		
Include the right individuals (researchers, patients, clinicians, and other stakeholders) to ensure that the project will be carried out successfully?		
Show evidence of active engagement among scientists, patients, and others throughout the entire research process (e.g., formulating questions, identifying outcomes, monitoring study, dissemination, and implementation)?		
Are the frequency and level of patient and stakeholder involvement sufficient to support the study goals		
Is the proposed engagement plan appropriate and tailored to the study		
Are the roles and the decision-making authority of all study partners and investigators clearly described		
(Dual-PI Option Only) Does the leadership plan adequately describe and justify roles/areas of responsibility of the PIs		
Are the organizational structure and resources appropriate to carry out the project		

# Summary III

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- Review the Merit Reviewer Criterion to better prepare what you should include in each of your proposal sections
  - Reviewer forms available through CFPHE
- Pay special attention to the PCORI Methodology standards to make sure they are reflected throughout your proposal
- Balance these requirements with the overall big picture