



# Value of Information Analysis for Research Prioritization: Webinar

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Patient-Centered Outcomes Research Institute

# Webinar Agenda

- About PCORI
- Prioritization at PCORI
- How can we use Value of Information?
- PCORI RFI on VOI
- Next steps
- Discussion, questions

# PCORI's Mission and Vision

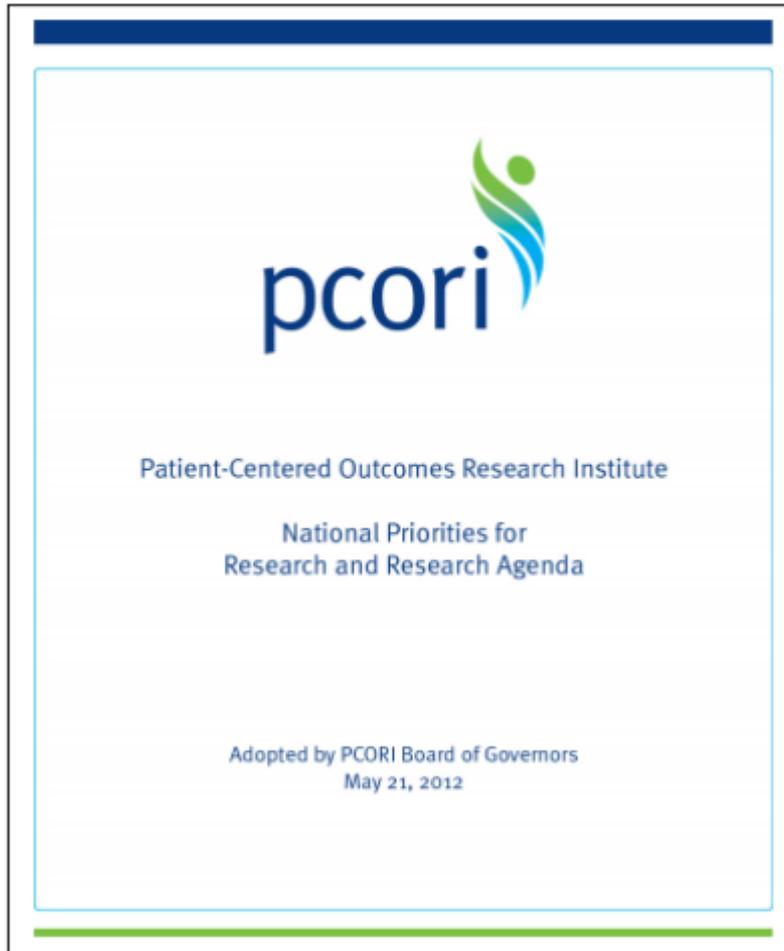
## Mission

The Patient-Centered Outcomes Research Institute (PCORI) helps people make informed healthcare decisions, and improves healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from research guided by patients, caregivers, and the broader healthcare community.

## Vision

Patients and the public have information they can use to make decisions that reflect their desired health outcomes.

# PCORI's National Priorities for Research



Assessment of Prevention, Diagnosis,  
and Treatment Options

Improving Healthcare Systems

Communication and Dissemination  
Research

Addressing Disparities

Accelerating Patient-Centered Outcomes  
Research and Methodological Research:  
Methods and Infrastructure

# Prioritization at PCORI: Two Paths

## National Priority PFAs

- General funding announcements in line with National Priorities for Research
- Multiple cycles per year
- Investigator driven

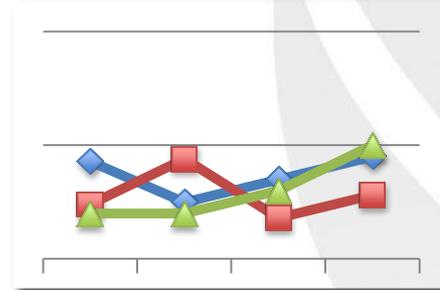
## Topic Generation and Prioritization

- Topics solicited directly from patients and stakeholders
- Reviewed for research gaps
- Presented to Advisory Panels for prioritization
- Developed into Targeted Funding Announcements

# PCORI Prioritization Criteria



Patient-Centeredness



Impact on Population and Individual Health



Differences in Benefits and Harms & Reduction in Uncertainty



Implementation in Practice



Durability of Information

# Value of Information: A Way Forward

- Value of Information (VOI) methods seek to quantify the expected gains from additional information
  - Such analyses can be used to inform priorities for research
- The PCORI Methodology Report specifically cites VOI as a viable method for prioritization
- PCORI has utilized “conceptual VOI” in its prioritization, but no formal quantitative analysis
  - Prioritization criteria developed using this framework
- In Spring 2012, PCORI commissioned two white papers on VOI to identify its potential use



## RESEARCH IN PRACTICE: Analyzing the Value of Information

*In choosing what research to fund, PCORI must balance the cost of a project against the potential usefulness of the information it can produce. Value-of-information (VOI) analysis is a tool for making such choices. A recent study looked into whether VOI analysis would be useful in a process in which healthcare stakeholders help decide which research to fund (Carlson et al. 2013). In this study, the researchers worked with stakeholders who were advising a group that funds trials of cancer treatments. Josh Carlson, MPH, PhD, is an assistant professor at the University of Washington and an affiliate faculty member at the Fred Hutchinson Cancer Research Center, both in Seattle.*

### How did you explain VOI to the stakeholders in your study?

**Josh Carlson:** We prepared an educational document on value of information. It was only three pages long. We tried to use simple language to describe VOI. We also gave presentations based on that document and allowed the stakeholders to ask questions and interact with us.

### In the educational document, did you use an example to illustrate the concept?

**Carlson:** One example we used was a drug prescribed for advanced breast cancer. It was approved based on data from a single phase two trial that showed that the drug had an effect on the cancer but did not show that it increased quality or length of life. The Food and Drug Administration approved the drug. But doctors and policy makers were unsure whether they should offer the drug to patients now or wait for additional evidence given the remaining uncertainty.

### What did your study show?

In our study, we asked thirteen stakeholders to rank three potential cancer genomic research areas. They indicated their preferences both before and after receiving VOI information. The VOI information appeared to influence stakeholder rankings, with seven changing their ranking. Further, most of the stakeholders reported that they had found the analysis useful in their decision making.

### How do you see VOI analysis being integrated into deciding what healthcare research to fund?

**Carlson:** VOI analysis is useful in that it can help people compare across a range of technologies but can best serve as one factor among multiple decision-making criteria. I think it works best within specific research areas. It gets a bit harder when you ask people to decide between completely different research programs. Ultimately, the goal is to help maximize the impact of research.

# **The Use of Value of Information Analysis for Research Prioritization:**

## **Request for Information**

# Request for Information

## Purpose

- To gather input from stakeholders about opportunities and priorities for future research related to Value of Information analysis
  - Our emphasis is on *research that will inform the appropriate incorporation of VOI analysis into PCORI-related activities*
- No direct link to funding

# Possible Activities

- Could include (but are not limited to):
  - Research comparing and examining the appropriateness of parametric, nonparametric, and expedited (for example, minimal modeling) approaches to VOI for informing different types of research funding and prioritization decisions, including sensitivity analyses and their impact on prioritization and funding decisions
  - Research examining the time, expertise, and resource requirements of conducting VOI, again comparing parametric, nonparametric, and expedited approaches
  - Pilot work that applies VOI analysis to currently funded PCORI projects or to current PCORI funding announcements
  - Development of guidelines for reporting modeling assumptions and results to allow easy comparison of the potential value of different areas of research

# Possible Activities cont'd

- Could include (but are not limited to):
  - Opportunities to develop novel computer programs to overcome the computational challenges in estimating VOI
  - Opportunities to develop minimal modeling techniques for chronic health conditions
  - Analysis of the experience of other research sponsors with the use of VOI analysis, including organizations such as the National Health, Lung and Blood Institute, the Agency for Healthcare Research and Quality, and the National Institute for Health and Care Excellence
  - Research into mechanisms for improving the patient-centeredness of VOI analysis either by involving patients in the development of VOI models or by expanding or altering model inputs

# How the Information Will Be Used

- To decide whether to pursue a funding announcement in this area
  - *PCORI has not made a commitment to procure any of the services discussed*
- To help determine the appropriate scope and content of the funding announcement (if one is pursued)

# Discussion

## Open, facilitated discussion

## Questions to consider include:

- (1) Are there evidence gaps that are not listed in the RFI that you consider to be important to the field of Value of Information analysis?
- (2) Are there evidence gaps listed that you feel are unimportant and should therefore be removed or not considered a priority area?
- (3) Which evidence gaps are most important to address?
- (4) For gaps identified as a priority, please discuss the scale, timeframe, and/or cost to conduct research to address those gaps.

# Thank you!

- Thank you for your participation in this call.
- For any further questions related to PCORI or submission of the RFI, please contact:  
[RFP@pcori.org](mailto:RFP@pcori.org)
- The RFI can be found at: [www.pcori.org](http://www.pcori.org)
  - Get Involved -> Opportunities for Public Input