

# Expanding the Toolbox:

Methods to Study  
and Refine Patient-Centered  
Medical Home Models



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## Expanding the Toolbox: Methods to Study and Refine Patient-Centered Medical Home Models

The patient-centered medical home (PCMH) is a promising primary care approach that emphasizes patient-centered, comprehensive, coordinated, accessible care, with a systematic focus on quality and safety. The goal of these models is to improve quality, cost, and patient and provider experience.

The Agency for Healthcare Research and Quality (AHRQ) recognizes that revitalizing primary care is key to achieving high quality, accessible, and efficient health care for all Americans, and that improving the research infrastructure will equip evaluators across the country to provide information that will help shape PCMH models to achieve those aims. To do so, PCMH evaluations must generate evidence that stakeholders (including patients, payers, providers, and employers) can use to improve primary care. This requires both understanding the different evidentiary needs of stakeholders and using the right tools to meet those needs.

To help evaluators and researchers produce robust evidence that can be used to improve primary care, AHRQ conceptualized and commissioned a series of briefs to expand the toolbox of methods to evaluate and help refine PCMH models and other primary care delivery interventions. The series was co-edited by Debbie Peikes, Dana Petersen, and Aparajita Zutshi of Mathematica Policy Research<sup>1</sup>, and David Meyers and Janice Genevro of AHRQ.

Our interest in improving methods for studying PCMH models and other practice-level innovations began when we conducted a review of the current evidence on PCMHs (Peikes et al., 2012a, 2012b). At the time, we and many thought leaders, providers, and researchers had concerns about the adequacy of traditional methods for evaluating PCMH models.

Like many health care delivery system interventions, PCMHs are particularly challenging to evaluate. The challenges include: (1) describing the changes implemented, (2) identifying barriers and facilitators to implementation, (3) accounting for the practice- and health care system-level contextual factors, (4) shortening the time frame needed for large-scale evaluations, (5) deciding when randomly assigning practices to become a PCMH model is viable, (6) drawing accurate conclusions from small samples, (7) integrating qualitative and quantitative findings from implementation and impact evaluations, and (8) analyzing the findings to determine whether an intervention worked and what factors contributed to its success.

With these challenges in mind, we invited nationally recognized thought leaders in research methods and PCMH models to prepare briefs that describe various methods and approaches and how they might be used to study and refine PCMH models. The topics cover both “evolutionary” ways to improve evaluations—by using traditional health services research methods—and “revolutionary” approaches that draw on novel methods from other fields such as anthropology, organizational analysis, engineering, and political science. Our goal is to ensure that evaluations focus on answering not only “Does it work?” but also “*How* does it work?”

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Each brief introduces a method or approach and discusses some ways in which PCMH researchers have used it or could do so. The briefs then discuss advantages and limitations of the method, and provide resources for researchers to learn more about the method. The table below lists the topics and authors of the briefs, provides summaries of the content, and indicates whether the approaches are suitable for implementation or impact analyses, or for a synthesis of the two.

We hope these methods briefs will spur discussion, provide inspiration, and serve as valuable resources for evaluators and funders of interventions to improve primary care across the country. We believe that an expanded toolbox can help guide refinements to PCMH models, to best enhance primary care delivery and ultimately quality, cost, and patient and provider experience.

## Overview of Briefs

Topic and Authors	Summary	Uses		
		Implementation	Impact	Synthesis
Anthropological Approaches <i>Roberta E. Goldman and Jeffrey Borkan</i>	Anthropology explores the whys and hows of human culture, behavior, and expression using ethnographic methods. It excels in uncovering unexpected insights by studying a topic in person, in situ, over time, and from diverse perspectives. The ethnographic method uses multiple methods of data collection to construct a holistic and contextual view of the phenomena under study.	X		
Cognitive Task Analysis <i>Georges Potworowski and Lee A. Green</i>	Cognitive task analysis (CTA) is a family of methods designed to reveal the thinking involved in performing tasks in real world contexts. CTA methods can be used to uncover and describe key patterns, variations, opportunities for improvement, and leverage the knowledge work—not just the physical work—of primary care staff and clinicians implementing PCMH models.	X		
Efficient Orthogonal Designs <i>Jelena Zurovac, Deborah Peikes, Aparajita Zutshi, and Randy Brown</i>	Efficient orthogonal designs can compare the effectiveness of different ways of deploying each component of a PCMH.		X	X
Formative Evaluation <i>Kristin Geonnotti, Deborah Peikes, Winnie Wang, and Jeffrey Smith</i>	Formative evaluations provide ongoing, concrete feedback to PCMH implementers and other stakeholders to identify when the model is not being delivered as planned or not having the intended effects, so they can modify the intervention as it unfolds.	X	X	
Fuzzy-Set Qualitative Comparative Analysis and Configurational Comparative Methods <i>Marcus Thygeson, Deborah Peikes, Aparajita Zutshi</i>	Qualitative comparative analysis is an invaluable tool to link implementation and impact findings. It distills different constellations of factors associated with successful and unsuccessful outcomes.			X

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		Implementation	Impact	Synthesis
Implementation Research <i>Laura Damschroder, Deborah Peikes, and Dana Petersen</i>	Implementation research focuses on understanding how programs are implemented, translated, replicated, and disseminated in “real world” settings. It expands the focus of traditional research from discovering <i>what</i> works to also discovering <i>how</i> the implementation works <i>in specific contexts</i> .	X		
Mixed Methods <i>Jennifer Wisdom and John Creswell</i>	Mixed methods studies systematically integrate or “mix” quantitative and qualitative data to improve our understanding of implementation and impact findings.	X	X	
Optimal Use of Logic Models <i>Dana Petersen, Erin Fries Taylor, and Deborah Peikes</i>	A logic model—also known as a program model, theory of change, or theory of action—is a graphic illustration of how a program or intervention is expected to produce desired outcomes. Logic models are not only useful evaluation tools that guide data collection activities, but also valuable planning tools that can help develop strong interventions.	X	X	
Pragmatic Clinical Trials <i>Deborah Peikes, Kristin Geonnotti, and Winnie Wang</i>	Pragmatic clinical trials (PCTs) are randomized, controlled trials that better meet the needs of decisionmakers regarding adoption of a PCMH. PCTs test PCMH models in typical practices and on typical patients; evaluate a comprehensive set of quality, cost, and patient and provider experience outcomes; study the intervention as each practice adapts it to fit its own context, and refines it over time; and combine implementation and impact findings to distill the best approaches to a PCMH in different settings.		X	
Statistical Process Control <i>Jill A. Marsteller, Mary Margaret Huizinga, and Lisa A. Cooper</i>	Statistical process control detects changes in process or outcome variables that are measured frequently over time and depicts them using graphical representation; thus, it can yield insights into data more quickly and in a more understandable manner for stakeholders.	X	X	X

## References

Peikes D, Zutshi A, Genevro J, et al. Early Evidence on the Patient-Centered Medical Home. Final Report (Prepared by Mathematica Policy Research, under Contract Nos. HHSA2902009000191/HHSA29032002T and HHSA2902009000191/HHSA29032005T). Rockville, MD: Agency for Healthcare Research and Quality; February 2012a. AHRQ Publication No. 12-0020-EF.

Peikes, D, Zutshi A, Genevro J, et al. Early evaluations of the medical home: building on a promising start. *Am J Manag Care* 2012b;18(2):105-16.

