Group Model Building to Engage Patient & Clinician Wisdom to Design Primary Care
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Paradoxically, primary care is associated with better whole person and population health, sustainable cost, and equity, despite providing less evidence-based disease care than specialists. Narrowly disease focused research and a fragmented health care system are blind to the integrating, personalizing, prioritizing primary care functions needed to optimize patient-centered outcomes and promote a high value health care system.

Simulation modeling can facilitate understanding of the ways in which complex outcomes such as health, cost, and equity emerge from the interactions between individuals and their health care systems and communities. But until recently, model building has not been accessible to patients and other key stakeholders. Group model building is a novel, participatory method for involving stakeholders in developing models. Therefore, we aim to:

 1. Engage the wisdom and insights of diverse patients and primary care clinicians to develop candidate explanations for the paradox of primary care;

 2. Develop and apply an iterative, participatory group model building process to produce and refine agent based models of the paradox of primary care

3. Use this novel group modeling method to refine and calibrate models to answer PCOR questions comparing mechanisms by which primary care can be organized to maximize its value and effectiveness in advancing the health of individuals, families and communities;

 4. Disseminate the novel methodology and models to inform future PCOR research, health care policy, and patient and practice decisions regarding care.

These aims will be accomplished through a group model building method involving collaboration between transdisciplinary researchers, diverse patients - including those with multiple health conditions, low SES, and racial and ethnic minorities, - and clinicians from a network of safety net practices, working together to build, refine and calibrate agent-based simulation models. These models will allow participants to test hypotheses comparing different ways of organizing primary care to optimize patient-centered and population-important outcomes. The novel methodology, models, and emerging PCOR policy agenda will be shared interactively with diverse audiences of patients, practices, policymakers & researchers.

RELEVANCE
 The proposed research contributes to each of the three goals of PCORI. It:

Informs the PCOR **research agenda** by bringing the patient and front line primary care clinician perspective to important and under-studied PCOR questions on health care organization and to how the added value of primary care beyond disease-specific care might be actualized.

 Provides **preliminary research results** including models of how care might best be organized for high risk patient groups: those with multimorbidity, racial/ethnic minorities, and the poor.

Advances a **novel methodology** for both stakeholder engagement and comparative effectiveness research by using participatory group model building to develop and refine agent-based models of health care delivery and the mechanisms by which it might affect outcomes which matter most to patients.