

# Future Directions in Research to Improve Care Transitions From Hospital Discharge

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The journey from hospital to home is hazardous and frustrating for many patients and caregivers. As they navigate the transfer of care from one provider to another, they are often unprepared for the transition, with incomplete information, unreliable access to timely advice, and a distressing burden of symptoms. Researchers and clinicians have been studying and trying to mitigate the adverse events that occur after hospital discharge, and the readmissions they are associated with, for >20 years. Attention to care transitions has become super-charged by policies promoting value-based payment models, incentivizing performance based on patient experience surveys, and penalizing providers for high hospital readmission rates. As we approach the 10-year anniversary of the Hospital Readmissions Reduction Program (HRRP), surely every hospital provider in the country has had to consider ways to improve posthospital care transitions.

Recognition of care transitions challenges and opportunities is now pervasive. We no longer need to convince anybody that the care and self-management that occurs between and outside of medical settings is important. We know that people experience multiple gaps in care after hospital discharge, and there is something close to consensus on the most important factors leading to those gaps.<sup>1,2</sup> Multifaceted care transition interventions have been shown by research trials to both improve patient experiences and reduce unplanned readmissions.<sup>3</sup> These evidence-based intervention models share common elements, such as robust medication reconciliation, improved hospital discharge processes, engagement of patients and families in care planning and preparation, and use of bridging strategies that promote patient self-care capacity and continuity between providers. Government policy mandates national measurement and public reporting of patient care transitions experiences most associated with readmission risk<sup>4</sup> through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey.

Yet progress has been slower than might be expected given the concerted focus on the challenges, defined improvement strategies, and financial incentives. Readmission rates have decreased, but are still nearly 16%,<sup>5</sup> and care transitions experience scores have improved minimally since 2013, and remain the lowest scored HCAHPS measure.<sup>6</sup> Research and improvement initiatives have demonstrated that positive patient experience scores are often, but not always, associated with lower readmission risk<sup>7,8</sup> highlighting the need to better understand, measure and address the social and contextual factors unassociated with hospital care that influence patients' capabilities to manage their health after discharge. Replicating evidence-based models has been challenging, and results vary across studies of the effectiveness of the same model.<sup>9</sup> Pragmatic effectiveness and adaptation tests often demonstrate incomplete implementation of model components,<sup>10,11</sup> leading to uncertainty about whether intervention models are less effective in "real life" scenarios, or whether such models are just difficult to implement within the current

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constraints of the US health care system.<sup>12</sup> Many studies have demonstrated beneficial reduction in postdischarge service utilization *despite* incomplete implementation.<sup>13</sup>

Part of what has been learned, or reaffirmed, is that care transitions improvement is a complex undertaking. Care transitions interventions hope to improve 2 outcomes that are imperfectly aligned: improved patient experience and reduced medical utilization after discharge; the contexts in which patients experience care are incompletely defined; and effective interventions are comprised of multiple components, some of which are easy to deliver and some quite difficult. This complexity has produced a body of evidence that is hard to synthesize into “best” approaches, much less replicate at scale. We perceive 3 important directions for future emphasis to move the field forward.

### **INCREASE MEASUREMENT AND USE OF PATIENT-DESIRED OUTCOMES**

Direct measurement of care transitions experiences is less common than measurement of readmissions, in part because readmissions are more easily measured. The HRRP has been very valuable for focusing attention on adverse events that lead to readmission, and for moving performance measurement towards outcomes that account for both quality and cost. But readmission risk reduction is only one of the important outcomes of transitional care, and under-appreciation of care experiences may be obscuring our understanding of the benefits of interventions. We have mostly treated readmission as the outcome of interest and patient experiences and perceptions have been conceptualized as modifiable indicators of readmission risk. A more productive perspective is that inadequate care during transitions produces harms, and that harms interact with patient and community contexts to increase the risk of adverse events, including readmissions. A readmission is an inexact gauge of the extent of the burden created by harms and adverse events, and is relatively insensitive for assessing or improving care transitions quality. Improvement studies often detect clinical events that occur after hospital discharge, such as drug related injuries, but harms resulting from poor transitional care may not produce a clinical marker, even if they matter greatly to patients and families. Such harms include anxiety, confusion, feelings of abandonment, and family conflict.<sup>14</sup> The aim of quality health care is to deliver care that serves people well, therefore we need further illumination around what patients experience as good care, the types of harms engendered when that standard is not met, and we need to test interventions for their capacity to reduce those harms. Providers care about the proportion of people who return home with, for example, anxiety about taking their medications correctly, even if these patients ultimately do not experience an injury or a readmission.

To improve transitions, we need a real census of the primary harms and adverse events that are occurring. The Patient-Centered Outcomes Research Institute (PCORI) and others are advancing the field by supporting the development of patient-defined outcomes<sup>14</sup> and instruments for measuring them.<sup>15</sup> Mitchell et al<sup>14</sup> found that patients identified feeling cared for and cared about by medical providers as an outcome

integral to a safe care transition. Kiefe et al<sup>15</sup> concluded that ascertainment of caregiver support is an important but currently unmeasured component of care transitions quality. They additionally note that current HCAHPS care transitions experience measures focus on patient perceptions at the time of hospital discharge, and do not assess characteristics of or challenges to patient and caregiver adaptation to daily life after discharge. Expanding our understanding of patient experiences during the postdischarge period, and routinely measuring them, would help close gaps in transitional care quality more quickly by illuminating opportunities for improvement beyond the influence of hospital discharge.

Readmission rates may become increasingly insensitive for measuring deficiencies that matter to patients and clinicians. The HRRP was an audacious innovation within the Affordable Care Act in 2010, signaling the readiness of Medicare policymakers to put relatively untested mechanisms into national policy in a quest for improved efficacy and economy. One of the assumptions behind this boldness was that the program would be refined with the fruits of experience and research. However, rapid change in the care delivery system in the past decade has rendered the original intention of creating a business case for care transitions improvement through readmissions penalties less germane. Managed care is growing, currently includes 39% of Medicare beneficiaries, and largely controls arrangements for transition from hospital to community for them. Value-based purchasing has become program policy and emphasizes patient-centered outcomes. Corona virus Disease 2019 dramatically reduced readmissions by incentivizing telemedicine for patients reluctant to enter hospitals and for hospitals without bed availability. Providers and patients are now adapted to delivering and receiving a great deal of care within the home environment, and hospital readmissions may become more uncoupled from care transitions quality as interventions are provided through remote technologies. Understanding patient-defined outcomes and harms is essential for assessing these innovations and making them work for patients.

### **DEFINE THE INDIVIDUAL AND COMMUNITY CONTEXTUAL FACTORS THAT INFLUENCE THE SAFETY OF CARE TRANSITIONS**

If one part of the reason people need to be rehospitalized is the burden of harms and adverse events during the transition, the other half of the equation is whether or not this burden exceeds their capacity to manage it. Management capacity is enormously influenced by the contexts of people's everyday lives—security in accessing necessities like housing, food, transportation; capacity to understand and follow instructions, or knowing how to find help in doing this; and access to supportive care functions in their home and community environments. Although most research adjusts patient outcomes for patient demographics and illness burden, community characteristics such as population socioeconomic status, the health care and health support infrastructure, and the social connectedness of the population are also associated with readmission risk.<sup>16–18</sup> A better understanding of patient and community factors that have an impact on patient-defined

experiences and outcomes could foster population level interventions through governmental actions, community coalitions, health systems, and advocacy organizations. This is especially needed for disadvantaged communities that experience a broad range of poor health outcomes. The Centers for Medicare and Medicaid Services has completed 2 large programs aiming to integrate medical and social care providers for connecting vulnerable Medicare beneficiaries to community health supports after hospital discharge. Both programs reduced community readmissions rates in many but not all communities.<sup>19,20</sup> Both were conducted as community-focused quality improvement initiatives and used readmissions outcomes to assess program effectiveness for vulnerable patients defined by patient characteristics. The programs neither aimed to test modification of community environmental characteristics (eg, social connectedness), nor required detailed patient-defined experience or harm measures. Future care transitions research could make valuable contributions to population health improvement efforts by defining these individual and community factors and their interactions, as contexts relevant to care transitions outcomes are likely to be applicable to health self-management generally.

### IMPROVE ASCERTAINMENT OF IMPLEMENTATION QUALITY

Implementation of care transitions interventions has been challenging to measure, because it relies on the activities of multiple providers in different settings, informal caregivers, patients, and community support agencies. Full implementation assessment requires description and measurement of every setting's effectiveness in delivering their intervention elements. This is important for interpreting results, to avoid dismissing potentially effective interventions that were not implemented as intended, and to encourage adaptations that accommodate real-world constraints in delivering the intervention.<sup>13</sup> PCORI's methodology standards emphasize ascertainment of the degree of implementation of functional components while allowing for local adaptation in how each task gets accomplished. This standard could be widely applied to both research efforts and evaluation of natural experiments occurring in hospitals across the United States. Care transitions research would also benefit from analytic strategies that can study and compare the effects of intervention components and component bundles on patient-desired outcomes. Project ACHIEVE, a PCORI-funded initiative, used a fractional factorial study design to specify comparators and estimate the individual and combined effects of key intervention components.<sup>4</sup> This project assessed the experiences of nearly 8000 patients who received care from 42 hospitals. Its findings (pending publication) also highlight the need for further definition and use of experience-based outcomes and study of their connection to unnecessary hospitalizations, and could be addressed through replication of these methods across larger hospital samples.

### CONCLUSIONS

Research and experience have shown us that the care transitions research is facing at least 3 barriers: (1) The focus

on readmissions is insensitive and nonspecific to deficiencies that matter to patients and clinicians; (2) The current approach to risk adjustment gives too much weight to acuity and too little to patient contexts, many of which we have not fully identified; and (3) Evidence-based interventions do not reach a significant portion of persons for whom they are intended and are hard to take to scale. Future research and practice should seek to address these shortcomings, using and integrating direct measurement of patient experiences to move the field toward patient-centered reinvention of care.

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