Care Transitions: A Complex Problem That Requires a Complexity Mindset

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In recent years, there has been increased scrutiny of transitions of care in medicine, particularly at hospital discharge. Much focus has been on preventing readmissions, motivated at least in part by the Affordable Care Act's Hospital Readmissions Reduction Program, which financially penalizes hospitals for higher-than-expected readmission rates.[1] However, the problem of transition from hospital to home is not just a readmissions issue—it is a quality and patient safety issue.[2] Therefore, measuring readmissions alone is inadequate. More effective systems for transition from hospital to home are needed in order to deliver high-quality care that actually restores patient well-being after hospitalization.

In this month's issue of *Journal of Hospital Medicine*, Schnipper and Samal, et al report the results of a stepped-wedge randomized trial examining the effect of a multifaceted intervention on postdischarge patient-centered outcomes when compared with usual care.[3] At 30 days after discharge, adverse events were reduced from 23 per 100 patients in the usual care group to 18 per 100 patients in the intervention group, with an incidence rate ratio of 0.55 (95% CI, 0.35-0.84) after adjustment for study month and baseline characteristics. Interestingly, there was no statistically significant difference in nonelective readmissions, and penetrance was notably poor: The majority of components of the intervention were received by fewer than half of intended patients, and 13% failed to receive any component at all.

With such incomplete implementation, what explains the reduction in adverse events? To best answer this, it is helpful to recognize the transition from hospital to home as a complex problem rather than a complicated one.[4] The difference is key. Complicated problems follow a predictable set of rules that can be thought of and planned for, and when the plan is methodically followed, complicated problems can be solved. Complex problems, on the other hand, have a more unpredictable interplay between multiple nonindependent and sometimes unknown factors. Complex problems cannot be solved by merely following a well-designed plan; rather, they require tremendous preparation, adaptability, and active management as the problem plays itself out.

Fortunately, Schnipper and Samal, et al properly identified the problem of transition from hospital to home as complex and approached it from a complexity mindset. In their design of a multifaceted intervention, they aimed high and cast a wide net. Understanding that different practices have different cultures and resources, they standardized the function of the intervention components rather than the exact form. As the trial progressed, they allowed for modification of the intervention, incorporating input from multiple stakeholders and feedback from early failures. Thus, by recognizing and embracing the complexity of the problem, the authors set themselves and their patients up for success. The most likely explanation for the observed effect of the intervention on this complex problem is therefore quite simple: The study design allowed for the components most likely to work to be most readily implemented on a patient-by-patient and practice-by-practice basis.

While the trial aims to imitate the "real world," it does not leave clear-cut answers for real healthcare professionals. Without knowing if any individual component of the intervention was effective on its own, it may be difficult for institutions to justify the cost of implementation. And while there should be adequate incentive to action for any intervention that improves how patients function or feel, without a reduction in readmissions, the financial downside may in some instances be prohibitive.

Despite these limitations, the path forward is clear. Institutions looking to implement a similar program now should approach the problem with a complexity mindset, even if their downstream interventions may differ. Researchers looking to design similar trials should focus on narrowing the scope of the intervention while maintaining a complexity mindset, which might help lead to more widespread implementation of evidence-based interventions in the future. In teaching us more about the *approach to finding* a solution than the solution itself, the present study marks an important next step in hospital to home transitions of care and transitions-of-care research.

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