

EDITORIAL

Do Interdisciplinary Rounds Improve Patient Outcomes? Only If They Improve Teamwork

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Care of hospitalized patients requires effective teamwork within groups composed of physicians (eg, residents, hospitalists, specialists), advanced practice providers, nurses, patient-care technicians, pharmacists, social workers, and therapists. Sadly, hospital-based team members often fail to communicate. For example, 2 studies found that nurses and physicians communicated with one another on only 50% to 60% of their patients' hospital days, resulting in a lack of a mutual understanding of the plan of care.^{1,2}

Failure to communicate effectively may be because the hospital setting poses important challenges to teamwork, including the use of large teams with membership that changes frequently because of the need to provide care around the clock. Furthermore, individual team members often have high workloads, care for multiple patients simultaneously, and are seldom in the same place at the same time.

Interdisciplinary rounds (IDR) are a microsystem-level solution with the goal to share information, achieve mutual understanding, and collaboratively revise the plan of care within care teams. Though common, IDR look very different across hospitals, making studies that evaluate novel strategies to improve IDR and measure their impact of great interest to hospital medicine.

In this issue of the *Journal of Hospital Medicine*, Bhamidipati and colleagues present a systematic review of published studies evaluating the effect of IDR on patient outcomes.³ The systematic review included 22 studies, including 12 experimental/quasiexperimental and 10 observational studies. Overall, 13 studies were of low to medium quality, and 9 were high quality. Importantly, relatively few studies reported the degree to which IDR were implemented as planned. The investigators found evidence that IDR had a positive effect on length of stay (LOS) and staff satisfaction, but little evidence to support an effect on patient safety or satisfac-

tion. Furthermore, the investigators found significant variability in IDR design and team composition. Some of this variation is to be expected, as IDR, like other interventions to improve quality and safety of patient care in complex settings, should be implemented with an expectation that the team may need to make adaptations based on local contextual factors such as workload (eg, daily census), environment (eg, open vs closed intensive care unit), local politics (eg, uniquely strong support for/against the intervention), and prior experience (eg, prior failed, similar interventions).^{4,5} Moreover, objectives for IDR may differ across settings. Some hospitals may have room (and a need) to improve LOS, whereas others may prioritize improving patient safety or patient experience metrics.

Bhamidipati and colleagues explain that their review did not reveal a causal pathway between IDR design and outcomes. We believe this lack of association is because most of the included studies did not propose a causal pathway between the IDR components implemented and the outcomes assessed. That is, few studies referred to conceptual models that explain how components of the IDR intervention might influence downstream patient outcomes.

IDR have the potential to influence a number of patient outcomes, including those reflecting efficiency (eg, length of stay), patient safety (eg, adverse events), and patient centeredness (eg, patient satisfaction). However, these outcomes are influenced by many factors, including patient characteristics and other efforts to improve care. As explained by the investigators, the results of many of the included studies may have been confounded due to relatively weak study designs and statistical analyses. Importantly, few of the studies included in this review report the more proximal measure of teamwork. If we hypothesize that IDR improve patient outcomes, they do so by improving teamwork. After all, the purpose of IDR is to assemble team members so they can communicate about and coordinate care. Measuring teamwork behaviors is difficult, especially on medical services. Measuring teamwork climate, the measurable aspects of team culture, is relatively easy. A recent systematic review of teamwork climate assessments in internal medicine identified the Safety Attitudes Questionnaire and the Team Climate Inventory as having substantial validity evidence and association with improved patient outcomes.⁶

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Bhamidipati and colleagues proposed a definition for IDR and taxonomy for IDR design and reporting based on their systematic review. Although very useful, the IDR definition may be too limiting as evidenced by the fact that very few studies would be included in a systematic review using this definition as the inclusion criteria. Their proposed taxonomy should serve as a useful framework for future research efforts and appropriately recommends reporting of site characteristics, components of IDR design, and outcomes.

The systematic review by Bhamidipati et al. must also be interpreted in conjunction with another recently published systematic review by Pannick and colleagues assessing the effect of interdisciplinary team care interventions on general medical wards.⁷ Contrary to the findings of the Bhamidipati et al. study, Pannick and colleagues found that most interdisciplinary team care interventions had no effect on LOS, but that half of the studies found an improvement in complications of care. Importantly, Pannick and colleagues included only experimental and quasiexperimental studies in their systematic review (ie, no observational studies).

There is clearly more work to be done in researching IDR and other interventions to improve teamwork in general medical settings. Larger studies are needed to provide sufficient power to detect improvement in outcomes. Future studies need to report the degree to which interventions are implemented as planned and need to use stronger study designs (eg, cluster randomized control or interrupted time series) to avoid the influence of confounders. Qualitative methods should be used to assess the influence of contextual factors on the success of interventions.⁴ Most importantly, future studies should be based on conceptual models that explain how components of the intervention influence proximal measures of teamwork and downstream patient outcomes.

In the meantime, what is a hospital leader to do? We believe efforts to improve IDR are warranted, but that IDR program leaders need to first specify their primary objective(s). For example, in some hospitals, there may be little room to further reduce LOS, so another goal—reducing preventable readmissions or reducing adverse events—might be specified as the

key performance indicator. This crucial first step of creating a shared goal informs the design, implementation, and evaluation of IDR. We also believe that geographic localization of physicians to specific units is foundational to improving IDR. Physicians cannot feasibly attend IDR if their patients are spread across multiple units (or buildings). Finally, hospital leaders also need to view IDR as part of a larger set of interventions to improve teamwork. Leaders need to assess the adequacy of staffing levels, workflow, and team composition.⁸ Unit-based interdisciplinary leadership models should be used to help link efforts at various levels within a larger system.⁹ These models designate a unit medical director and nurse manager who are jointly responsible for unit performance.

In conclusion, IDR play an important role in improving patient outcomes, but only do so by improving teamwork. In redesigning IDR, leaders need to be thoughtful about what outcomes IDR can affect, how IDR affect them, and how IDR fit into larger-scale efforts to improve performance.

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