

Measuring Handoffs: Can We Improve the Transition of Hospitalized Children?

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In early 2009, the passage in Congress of the Children's Health Insurance Program Reauthorization Act (CHIPRA) called for the establishment of Pediatric Quality Measures Program (PQMP). CHIPRA-PQMP funded 7 Centers of Excellence tasked with finding "solutions to some of the most pressing issues in child health quality measurement."¹ Patient handoffs, or transitions of care, was 1 of the areas identified by CHIPRA-PQMP as a "pressing issue" for measure development and validation. Care transitions have been previously defined as "a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location."² Although it has not been exhaustively studied and thus far mostly examined in adults, the most explored transition event is the inpatient to outpatient transition, where data suggest as many as 1 in 5 patients can suffer adverse events related to poor communication and ineffective handoffs.³

Seven years after the establishment of the CHIPRA-PQMP Centers of Excellence, we get a glimpse at some of the fruits of this effort. In this issue, Leyenaar et al⁴ report on the development and validation of quality metrics intended to evaluate transitions of care for children in the hospital setting. The investigators focused on 2 particular transition events: inpatient care to outpatient care and ICU to an inpatient unit.

This work is laudable for several reasons. The first is the evidence-based set of initial metrics that the research team developed. Although they openly describe the paucity and limited relevance to pediatrics of available evidence, the initial set of proposed metrics was based primarily on processes that have some previously described relationship to outcomes. Second, they used a robust and time-tested method to carve out the most valid and feasible metrics within the initial set. The Rand-UCLA Appropriateness Method has been used extensively in the development of quality measures, including some in pediatrics.⁵ Though still relying heavily on expert opinion, the Rand-UCLA Appropriateness Method is particularly useful when there are few data to inform decision making by combining the available evidence with a more accurate expert consensus.⁶ Additionally, to ensure generalizability, the investigators field tested the metrics at both geographically diverse tertiary care freestanding children's hospitals and at least one hospital in a community setting. Finally, the investigators took great care to test their process measures against important outcomes, in this case readmissions and length of stay. Despite the evidence-based nature and vigorous validation and testing of these metrics, no relationship was found between the proposed metrics and the studied outcomes.

The limited evidence regarding pediatric transitions may be the

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most tangible reason that explains these results. Whereas improving handoffs between pediatric residents has been shown to decrease the rates of medical errors,⁷ similar evidence for handoffs between pediatric providers in other settings does not exist. Thus, can we really expect outcomes to improve from metrics whose evidence basis is limited? To a greater extent, the main outcome against which these metrics were tested could also explain these results. Pediatric readmissions remain an outcome of unknown significance. In fact, some studies have suggested an inverse relationship between them and overall quality of care,⁸ and, more pertinent to this work, a separate study showed increasing readmission rates with improvement of follow-up documentation after hospital discharge.⁹ Most current evidence regarding pediatric readmissions narrates some common themes: Pediatric readmissions are rare, preventability is difficult to assess, and certain patient populations, such as children with medical complexity, are particularly vulnerable to them.¹⁰ As an outcome to judge the quality of care provided to hospitalized children, readmissions may be better suited to narrower patient populations (eg, children with medical complexity) and not hospitalized children as a whole.

Recently, Berwick¹¹ suggested that we need to enter an “Era 3” in medical practice where we cut what we measure by 75%. In particular, he calls out process measures as those we should target for abandonment. Few would argue that pediatrics suffers from too much measurement. However, the cautionary note articulated by Berwick should prompt us to consider what we use measures for. Can static, linear analyses and metrics truly

evaluate the complex, dynamic, and human process of communication and coordination involved in care transitions? This question is particularly germane to this process in pediatrics, where difficult-to-measure circumstances such as diverging parental and physician perspectives of discharge goals may actually increase readmission rates.¹²

So in the end, this question stands: Will these newly proposed measures improve the care of hospitalized children? We believe they can. Leyenaar and colleagues give us a well-defined and robustly developed set of metrics to at least begin standardizing some aspects of the complex discharge process. However, as has been previously advocated, these new metrics are ones that should fall in the category of improvement rather than selection.¹³ They should drive improvements to the system rather than pass judgment upon it.

ABBREVIATIONS

CHIPRA: Children’s Health Insurance Program Reauthorization Act
 PQMP: Pediatric Quality Measures Program

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