Discharge Instructions Quality: How the University of Iowa Stead Family Children's Hospital Improved their Electronic Template for Family/Caregiver Written Discharge Instructions

Abstract

University of Iowa (UI) Stead Family Children's Hospital significantly improved the quality of their discharge instructions for families during the course of the twelve-month P-HIP Learning Collaborative. They were able to do this by creating a new template in their electronic health record (EHR) system that included many of the key items contained in the measure. The new template was introduced and refined relatively quickly due to a hospital-wide discharge instructions improvement effort, brought about by a strategic goal to improve care for families and patients. Other key factors in success were a well-formed collaborative team led by a dedicated physician and expert nurse clinician and the engagement of the IT support team at the hospital.

Hospital Context for Quality Improvement Focus

UI Stead Family Children's Hospital was one of eight hospitals that participated in the 12-month Pediatric Hospital Care Improvement Project's (P-HIP) Transitions of Care Learning Collaborative. The Collaborative sought to improve overall performance on family/caregiver written discharge instruction quality.

At UI Stead Family Children's Hospital, the discharge summary is a physician-generated document, while the After-Visit Summary (AVS, a term used in the Epic EHR) is nursing-generated.

UI Stead Family Children's Hospital is part of a larger hospital system, making changes to its templates more difficult overall because they typically need to be vetted for adult patients by a group of executives who work in adult healthcare. However, prior to the start of the P-HIP Learning Collaborative, the entire system had recently begun work on a large initiative to improve the quality of their discharge materials at a system-level, so this initiative aligned well.

Despite overall enthusiasm for the initiative, during initial discussions with hospital staff, the project lead determined that many clinicians had reservations about some of the key items in the measure, so they worked to understand the resistance.

The UI Stead Family Children's Hospital team had these goals as they started this effort:

Hospital
University of Iowa Stead Family Children's Hospital, is a teaching hospital and Iowa's only comprehensive children's hospital. The hospital has 190 beds and serves the entire state.

Lead staff for improvement project
Kelly Wood, MD
Kirstin Manges, MSN, PhD

Quality measure
Family/caregiver written discharge instruction content

Children/adolescents admitted to the hospital, should have documentation of written discharge instructions provided to their family/caregivers that contained the following key items:

a) Admission and discharge diagnoses
b) Medication list at discharge
c) Pending test results
d) Follow-up tests that need to be completed
e) List of follow-up appointments
f) 24/7 telephone contact number if problems arise
g) Number to call for assistance getting needed appointments
h) Immunizations given
i) Admit and discharge dates

- Improve scores on the measure by aligning efforts with the updates to the Epic template already planned by the hospital
- Work with IT/AVS committee to explore addition of key items that are not automatically included
- Constantly evaluate and improve by verifying abstraction

Improvement Process

As with all improvement projects, forming an effective team is a crucial step. The UI Stead Family Children's Hospital team used a dyad approach with equal contributions from the Hospitalist Principal Investigator (PI) and a doctorate nurse clinician with expertise in quality improvement specifically post-discharge patient outcomes. They recruited various teams and individuals for discrete parts of the project and were therefore able to maximize their effort. The team itself was relatively small but had lots of support from key people and departments, including executive leadership.

The PI, Kelly Wood, MD, served on the P-HIP expert advisory committee. As an experienced QI researcher and the Director of the Pediatric Hospitalist Program with a long tenure at the hospital, she was a great fit for leading this initiative. At the beginning of the work, Dr. Wood was able to secure the support of Kirstin Manges, a recent Doctorate of Nursing and Healthcare Systems graduate with significant adult and pediatric nursing experience. Dr Manges was able to support the quality improvement and conceptualization of the work, and able to spearhead nursing education. After Dr Manges left UI Stead Family Children's Hospital, this role was filled by others who understood the informatics side of the work. Throughout the entire collaborative, the dyad sought the support of the discharge instructions education committee – these nurses helped them understand the document and workflow.

As hospital-to-home discharge instructions are EHR driven, having the support of the IT team is critical. The QI team was able to garner the IT team's resources early in the improvement project, and the team was eager to support the hospital-wide goal of improving discharge instructions for families. Senior IT engineers and the chief medical informatics officer supported this work and led the Epic template development after the team shared the information about the measure.

Most of the key items were relatively straightforward to add to the Discharge Instructions Template. When the discharge instructions template went live, the scores on the measure jumped significantly (see control chart below). The next few months saw even more increases due to refinement of some of the more challenging key items. The *Follow-up Tests* item was challenging logistically because they were trying to avoid all free-text. However, a second adjustment to the template was able to expand the discharge order and create a section called "What's Next" which pulls in the follow-up tests ordered at discharge. Unfortunately, the team was unable to pull in the *Pending Test Results* item due to pushback from the administration team, but a compromise was reached where a blanket statement is pulled in if pending labs are present. While this doesn't technically meet the measure for abstraction, it provides important information to the families. EHR systems often need refinements and adjustments as the process evolves, so having the IT team on board really helped as the process evolved.

Based on her experiences, Dr. Wood's advice to other teams doing this work is that once organizational buy-in is obtained and a team is ready to work with their EHR engineers, that the key items be broken into groups that make sense together. This allows the engineers not to have to do large-scale

adjustments all at once yet allows the teams to see significant progress. Also having a dyad approach allowed for productive small group work meetings with key stakeholders related to the specific area of focus.

Impact

UI Stead Family Children's Hospital started the Collaborative with a mean score of 73.7 and ended at 96.0. They were able to sustain near perfect scores for the past year.

While many teams saw important improvement, UI Stead Family Children's Hospital had the biggest jump with the highest levels of sustainability. Hard-wired changes are the easiest to maintain, so this success is due to institutional buy-in and IT commitment.

Written Family/Caregiver Discharge Instructions Contents
University of Iowa Stead Family Children's Hospital, X-bar Chart