Pediatric Hospital Care Improvement Project (P-HIP): Improving Care of Hospitalized Children Through the After Visit Summary

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Background

- Transitions of care during hospital care are associated with threats to patient safety, including medication errors and communication failures.[1,2]

- The Centers for Medicare and Medicaid Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ) have targeted transitions of care as a priority area for the Pediatric Quality Measures Program (PQMP).

- The Pediatric Hospital Care Improvement Project (P-HIP) Transitions of Care Initiative, a collaborative of 8 pediatric hospitals, seeks to improve transitions for hospitalized children.

Aims

- The practicum experience aimed to improve the performance at Vanderbilt Children's Hospital (VCH) on 1 of 9 core metrics of the P-HIP Initiative (Table 1).

- Specific AIM Statement:
  - To improve the percentage of admitted patients with a discharge diagnosis listed on the After Visit Summary (AVS) from 30% to 60% by December 1st, 2018.

Methods

- All children admitted to VCH from December 2017 to October 2018 were eligible for inclusion, with progress tracked through random-sampling of 20 patient records each month.

- Efforts were made to increase inclusion of a discharge diagnosis on the AVS through quality improvement methodology, including clinical observations, engagement of key stakeholders, Plan Do Study Act (PDSA) cycles, and educational initiatives (Figure 1).

- Specific initiatives were targeted at inclusion of the "Principal Diagnosis" (Figures 2 & 3).

- Additional chart review was performed on all October 2018 admissions, to analyze admitting team-specific performance following educational interventions.

Activities

Table 1: Nine key metrics for inclusion on the AVS at discharge

1. **Admission and discharge diagnosis**
2. Medication list
3. List of follow-up appointments
4. 24/7 telephone contact number if problems arise
5. Number to call for assistance getting needed appointments
6. Admit and discharge dates
7. Pending test results
8. Follow-up tests to be completed after discharge
9. Immunizations given

Figure 1: Logic Model

Why your child was hospitalized
Your child's primary diagnosis was: Not on File
Your child's diagnoses also included: Vomiting, Slow Transit Constipation

Figure 2a: Example of AVS without "Principal Diagnosis" on file

Reason for Hospitalization
Your primary diagnosis was: Pneumonia of Right Lower Lobe Due to Infectious Organism (Cms/Hcc)
Your diagnoses also included: Lennox-Gastaut Syndrome (Cms/Hcc), Seizures (Cms/Hcc), Spastic Quadriplegic Cerebral Palsy (Cms/Hcc), Acute On Chronic Respiratory Failure With Hypoxia (Cms/Hcc), Gastrostomy Tube Dependent (Cms/Hcc)

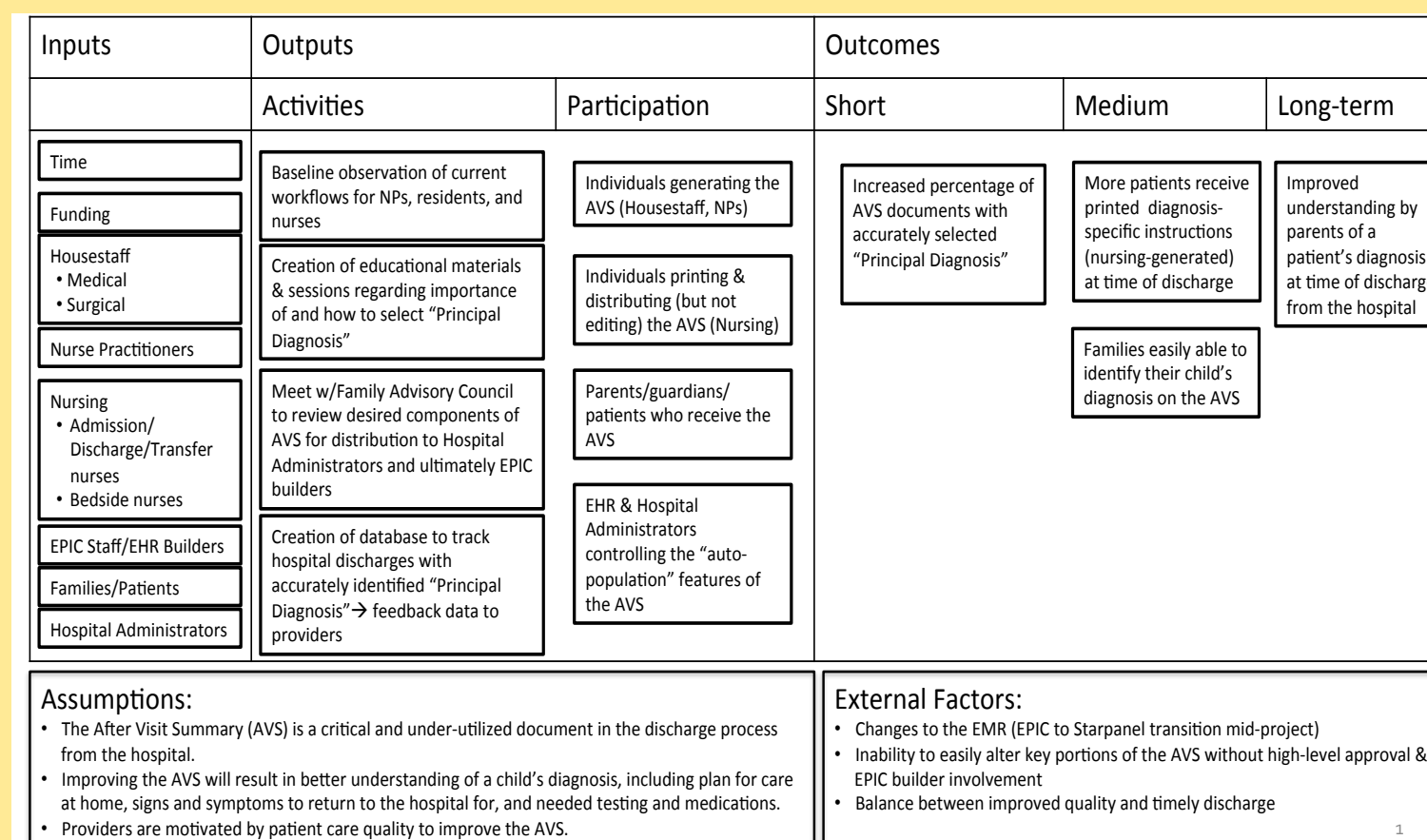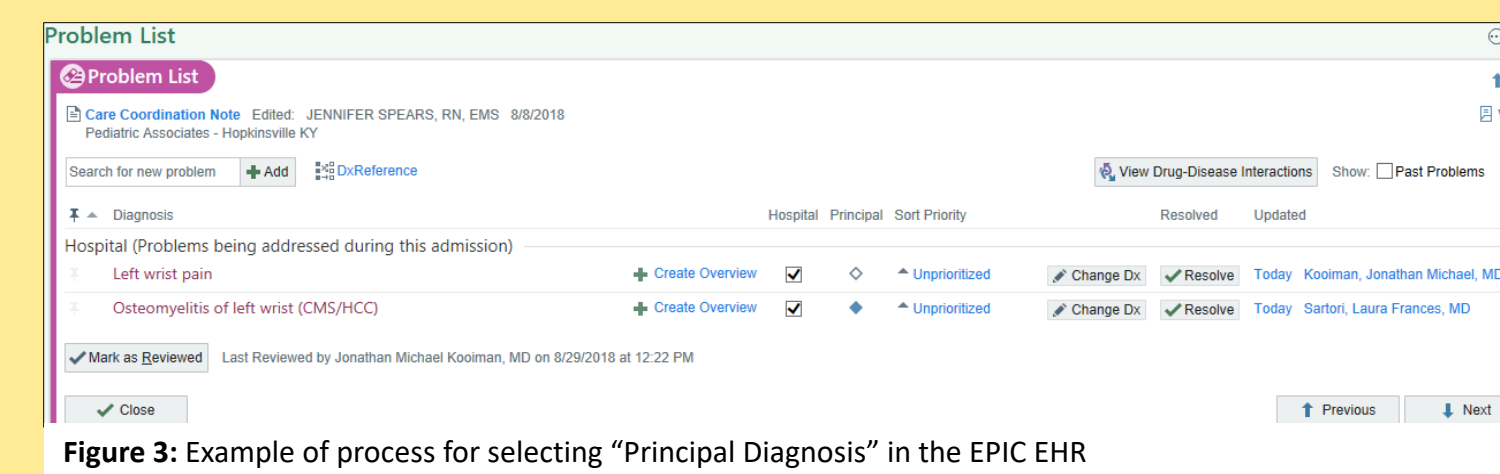**Figure 2b:** Example of AVS with "Principal Diagnosis" on file

Figure 3: Example of process for selecting "Principal Diagnosis" in the EPIC EHR

Results

Figure 4: Percent of Reviewed Charts with a Discharge Diagnosis Listed on AVS at Time of Discharge from the Hospital, By Month
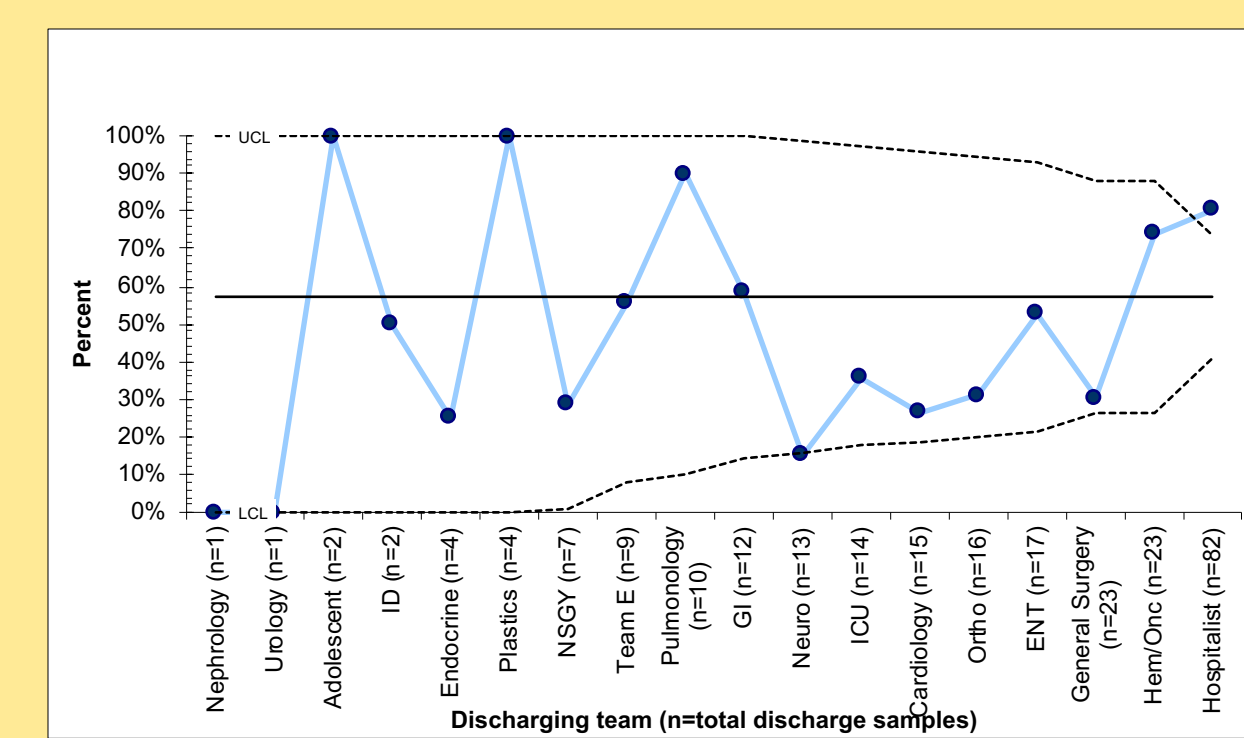
Figure 5: Funnel Plot: Percent of Admitted Patients with a Discharge Diagnosis Listed on AVS at Time of Discharge from the Hospital, By Admitting Team Type

Results & Discussion

- Changes to the Electronic Health Record (EHR) mid-project resulted in decreased performance on a previously well-performing metric, which was targeted for intervention (Figure 4).

- The percentage of reviewed charts with a discharge diagnosis on the AVS remained within common cause variation (Figure 4).

- Teams most routinely targeted for educational initiatives and PDSA cycles (Pediatric Hospitalist Service) demonstrated superior performance during a 1 month data review (Figure 5).

- Highlighted inadequacies of the AVS in both inpatient and outpatient settings through the P-HIP project resulted in the creation of an ongoing medical center-wide AVS Task Force.

Conclusions

- Educational initiatives can be beneficial, but difficult to implement.

- Long-term improvements are best achieved through "hardwiring" through the EHR; a slow process in a large medical center.

- Engaging key stakeholders (patients, families, & providers) is a crucial component in intervention development and motivation of hospital leadership.

Acknowledgements

References

- 1. Heath J, Dancel R, Stephens JR. Post discharge phone calls after pediatric hospitalization: an observational study. Hospital Pediatrics. 2015;5(5):241-248.
- 2. Hamline Y, Speier R, Vu PD, Tancredi D, Broman AR, Rasmussen LN, Tullius BP, Shaikh U, Li STT. Hospital-to-home interventions, use, and satisfacti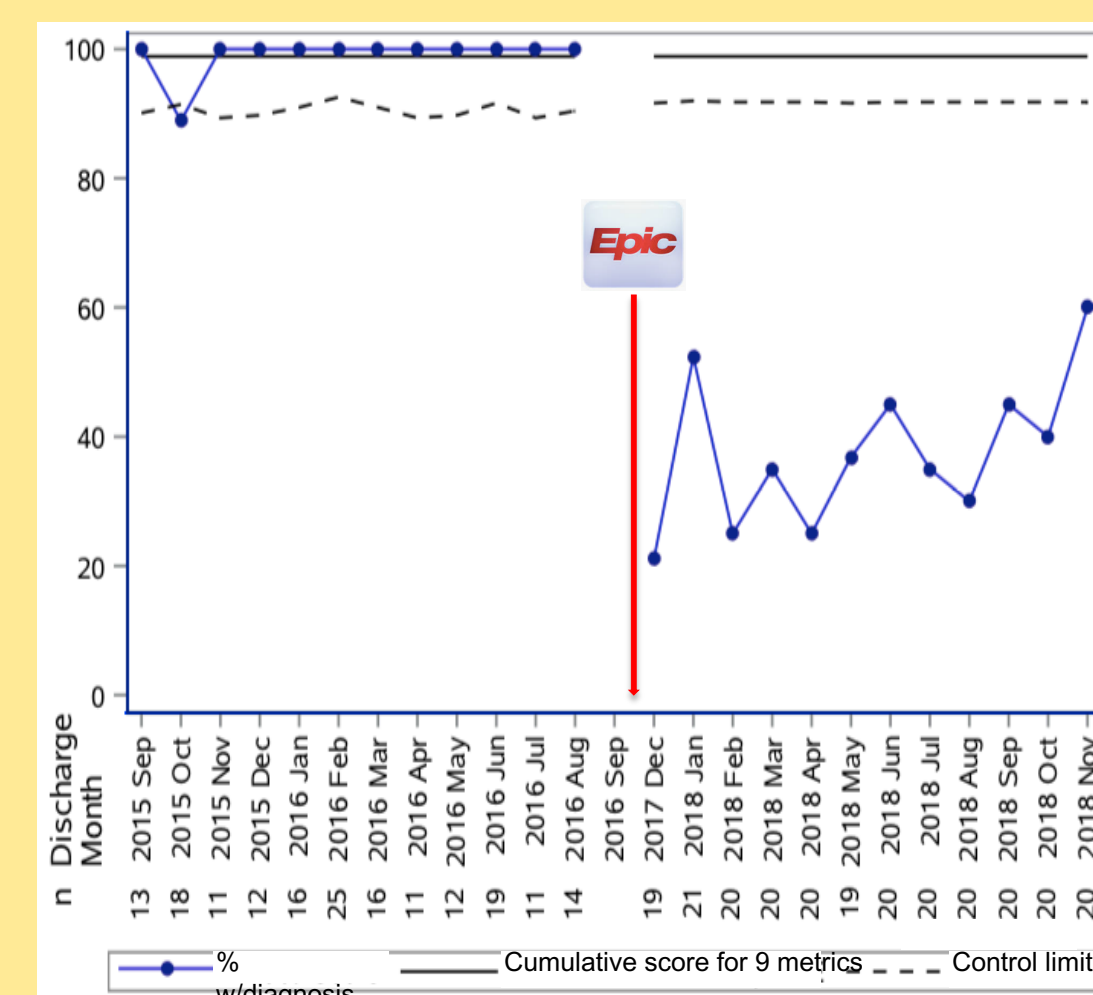on: a meta-analysis. Pediatrics. 2018; 142(5).