

## **MEDS TO BEDS: A QUALITY IMPROVEMENT INITIATIVE TO INCREASE FILLING OF ANTIMICROBIAL PRESCRIPTIONS PRIOR TO DISCHARGE**

**Lead Author:** Sheena Gupta, MD, MBA

**Contributing Authors:** Brittany Winckler, MD, MBA, Huay-ying Lo, MD

**Category:** Quality, Cost, Value

### **Background**

Poor medication compliance correlates with increased health care utilization in children. Delivery of medications to the bedside prior to discharge allows opportunities for patients to ask medication-related questions, avoidance of potential dosing or compounding issues at community pharmacies, identification of financial barriers, and eliminates an additional task to be performed after discharge. This study aims to increase the percentage of patients discharged from the Pediatric Hospital Medicine (PHM) service with an antimicrobial prescription who fill the prescription prior to discharge from 11.3% to 80% by October 2018.

### **Methods**

We assembled a multidisciplinary team comprised of pharmacists, nurses, social workers, care managers, electronic medical record (EMR) analysts, and physicians at our quaternary care children's hospital. A process map was created for "Meds to Beds," a new hospital initiative to deliver medications to the bedside with pharmacist education prior to discharge. Data regarding percentage of prescriptions filled prior to discharge was obtained through the EMR. Scripted telephone surveys in English and Spanish were conducted with parents/guardians of PHM patients prescribed an antimicrobial medication within 4 weeks of discharge. Survey questions primarily assessed barriers to compliance with the prescribed regimen. This study was approved by our institution's Institutional Review Board.

### **Interventions**

Multiple Plan-Do-Study-Act (PDSA) cycles were completed to increase utilization of "Meds to Beds." In the first cycle, the program was only available for antimicrobial and asthma-related medications. The second cycle expanded the program to all medications. A third PDSA cycle involved modification of EMR patient lists to clearly communicate patients' participation in "Meds to Beds" to providers.

### **Results**

Prior to "Meds to Beds," 22% (10/46) of parents reported difficulties filling discharge antimicrobial prescriptions. Common difficulties included limited pharmacy hours, transportation issues, time required for prescription processing, and inability to obtain correct formulation. After our intervention bundle, only 7% (2/29) of parents reported difficulties. Both occurred at non-hospital outpatient pharmacies due to limited pharmacy stock and insurance issues. The percentage of patients filling antimicrobial prescriptions prior to discharge increased from 11.3% pre-intervention to 45.5% after "Meds to Beds,"  $p < 0.001$ . A Statistical Process Control chart showed special cause variation was achieved (Figure 1). Additional surveys and data collection are ongoing.

### **Discussion**

While "Meds to Beds" significantly increased the filling of antimicrobial prescriptions prior to discharge, we have not yet reached our goal of 80%. The percentage of patients reporting difficulties obtaining prescriptions decreased after "Meds to Beds" implementation; however this was not statistically significant, likely due to limited post-intervention survey numbers. Future directions include cost analysis to demonstrate equivalence between in hospital and outpatient medication pricing, exploring the possibility of making "Meds to Beds" an opt-out program, and additional interventions to remove barriers to discharge medication compliance, and thus improve health outcomes.