

THE EFFECTS OF PATIENT HANDOFF PROCESSES ON COMMUNICATION AND CARE TRANSITIONS: A QUALITY IMPROVEMENT PROJECT



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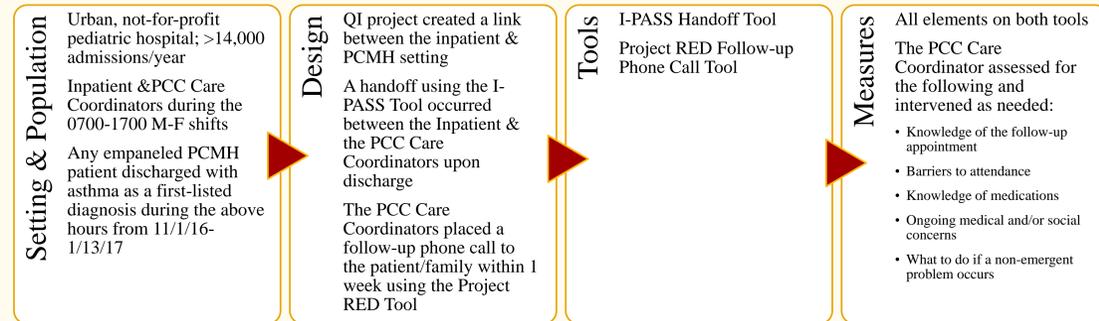
INTRODUCTION

- Asthma accounts for nearly 1/3 of pediatric asthma costs and upwards of 40% of those are repeat admissions (Kenyon et al, 2014).
- 2/3 of sentinel events are caused by communication errors with 1/2 involving handoff failures (Starmer et al, 2014).
- Handoff failures & poor communication result in inadequate treatment, delays in care, & adverse events after hospitalization. (Arora & Johnson, 2006; Desai, Popalisky, Simon, & Mangione-Smith, 2015).

Literature Review

- By using the I-PASS handoff mnemonic, the medical-error rate decreased by 23% between the pre- and post-intervention periods and the rate of preventable adverse events decreased by 30% (Starmer et al, 2014)
- 3 Children's Asthma Care (CAC) core process measures linked the family and the PCP to give the family support and follow-up treatment (Bergert et al., 2014, Patel et al, 2013).
- For those children hospitalized with asthma, adherence to asthma core measures & attendance at follow up appointments resulted in decreased readmission rates (Bergert et al., 2014)
- Follow-up phone allow families/patients to ask questions, troubleshoot unforeseen problems and guide medical care (Harrison, Hara, Pope, Young, and Rula, 2011)

MATERIALS & METHODS



I-PASS Handoff Tool for Care Coordinators

Patient Name: _____ MRN: _____

Illness Severity

Patient Summary

Reason for Admission: _____

Admission Date: _____

Discharge Date: _____

Action List

Pending Tests? _____

Appointments to be scheduled? _____

Situation Awareness/Contingency Planning

Any issues to be aware of? _____

Synthesis by Receiver

Questions? _____

Notes: _____

Person handing off: _____
Completed by: _____
Date: _____

I-PASS Handoff Tool

Project RED Transitions of Care Follow-Up Phone Call Documentation Form
(*Need to identify before the phone call takes place)

Patient Name: _____ MRN: _____

Caregiver(s) Name*: _____

Relationship to Patient: _____

Any special notes (social issues, etc)*: _____

Person Making Phone Call (Name and Job Title): _____

Admissions and Discharge Dates*: _____

Principal Discharge Diagnosis*: _____

Interpreter needed?: Yes No

Call Completed? Yes No

With Whom? _____

Number of hours between discharge and phone call: _____

Date and Time Call Completed: _____

Second Attempt Made? Yes No

If not completed: Answering Machine No answer Declined to talk
 Busy Rescheduled (Date and Time scheduled) _____

Identified Risk Factors*:

____ Education of Others _____ Clinical/ Medical Problem
____ Medication _____ Vendor / Home Care Services
____ Psychosocial / Adherence _____ History of Readmissions

Project RED Transitions of Care Follow-Up Phone Call Documentation Form

PICOT & OBJECTIVES

PICOT

For empaneled PCMH patients discharged with a first-listed diagnosis of asthma (P), how does the use of a standardized handoff process by the care coordinator (I) compared to a non-standardized handoff process (C) affect the nurses ability to complete the post-discharge follow up call to assess for medication adherence, self-care, scheduled follow-up appointments, and/or patient/family questions, and, subsequently, readmissions and ED follow up visits (O) over a three month period (T)?

Objectives

- 100% of Primary Care Clinic (PCC) care coordinators and Inpatient care coordinators will be educated on the use of the I-PASS Tool and the Project RED Tool by October 15, 2016;
- Between November 1, 2016, and January 15, 2017, 100% of empaneled PCMH patients discharged with a first-listed diagnosis of asthma, will have their important healthcare needs communicated to the PCC care coordinators using the I-PASS Tool;
- Increase the number of PCMH empaneled patients, with asthma as a first-listed diagnosis, who are successfully called using the Project RED Tool to review the patient's medications by 50% by January 15, 2017; and
- Increase the number of PCMH empaneled patients, with asthma as a first-listed diagnosis, who are successfully scheduled for a post-discharge follow-up appointment by 50% by January 15, 2017.

RESULTS

- 19 empaneled PCMH patients admitted with first-listed diagnosis of asthma during the timeframe.
- 15.8% of patients-admitted with asthma exacerbation diagnosis (n = 3), 26.3% admitted with status asthmaticus diagnosis (n = 5), and 57.9% were admitted with asthma diagnosis (n = 11).
- There was no statistically significant difference in the reason for admission and asthma illness severity, $\chi^2(6) = 6.152, p = 0.41$.
- The admitting diagnosis of status asthmaticus was a highly motivating factor in keeping post-hospital follow up appointments, $\chi^2(2) = 6.116, p = 0.05, \phi = 0.6$.
- Those admitted with general asthma were more likely to miss their follow up appointment, $p = 0.05, \phi = 0.6$.
- Some patients had other needs such as homelessness, home environmental concerns (mice and mold), and previous history of not keeping appointments (51 previous no shows for clinic appointments).
- Compared to the same time frame in the previous year, there was a 73.7% increase in the number of patients who were successfully called using the Project RED Follow-up Phone Call Tool after discharge.
- Anecdotally, the PCC care coordinators report of the nine patients who did not keep their follow-up appointment, they were able to reach 8 via the phone; seven (77.7%) parents shared they were unaware there was a follow-up appointment scheduled for their child.

OUTCOMES

OBJECTIVE 1 MET: 100% care coordinators educated on the use of the tools

OBJECTIVE 2 MET: 100% empaneled PCMH patients with first-listed diagnosis of asthma had important medical needs communicated to PCC Care Coordinators using I-PASS Tool

OBJECTIVE 3 MET: 73.7% increase in patients successfully called using Project RED Tool after discharge

OBJECTIVE 4 MET: 100% of patients admitted during the project timeframe were scheduled for post-hospital follow-up appointment

CONCLUSIONS

- All 4 objectives were met
- Project Limitations:
 - Seasonal variation in illness
 - Small Sample Size
 - repeating this project during spring or fall to capture weather-related asthma exacerbations or
 - expansion to include patients who see a primary care provider in the West location, the Beacon (Complex) Clinic, and/or the Teen Clinic
- There is interest in expanding this process to include all PCMH patients admitted to the hospital or Emergency Department

REFERENCES

- Agency for Healthcare Research and Quality (AHRQ). (2016). Re-engineered discharge (RED) toolkit . Retrieved from <http://www.ahrq.gov/professionals/systems/hospital/red/toolkit/index.html>
- Arora, V., & Johnson, J. (2006, November). A model for building a standardized hand-off protocol. *Joint Commission Journal on Quality and Patient Safety*, 32(11), 646-655. Retrieved from <http://uthscsa.edu/gme/documents/Competencies/Sleep,Fatigue,Dutyhours/PatientHandoffReference.pdf>
- Bergert, L., Patel, S. J., Kimata, C., Zhang, G., & Matthews, Jr., W. J. (2014, February 10). Linking patient-centered medical home and asthma measures reduces hospital readmission rates. *Pediatrics*, 134(1), 249-256. <http://dx.doi.org/10.1542/peds.2013-1406>
- Desai, A. D., Popalisky, J., Simon, T. D., & Mangione-Smith, R. M. (2015). The effectiveness of family-centered transition processes from hospital settings to home: A review of the literature. *Hospital Pediatrics*, 5(4), 219-231. <http://dx.doi.org/10.1542/hpeds.2014-0097>
- Harrison, P. L., Hara, P. A., Pope, J. E., Young, M. C., & Rula, E. Y. (2011). The impact of postdischarge telephonic follow-up on hospital readmissions. *Population Health Management*, 14(1), 27-32. <http://dx.doi.org/10.1089/pop.2009.0076>
- Kenyon, C. C., Melvin, P. R., Chiang, V. W., Elliott, M. N., Schuster, M. A., & Berry, J. G. (2014, February). Rehospitalization for childhood asthma: Timing, variation, and opportunities for intervention. *The Journal of Pediatrics*, 164(2), 300-305. <http://dx.doi.org/10.1016/j.jpeds.2013.10.003>
- Starmer, A. J., Spector, N. D., Srivastava, R., West, C. D., Rosenbluth, G., Allen, A. D., ... Landrigan, C. P. (2014, November 6). Changes in medical errors after implementation of a handoff program. *New England Journal of Medicine*, 371(19), 1803-1812. <http://dx.doi.org/10.1056/NEJMs1405556>
- US Department of Health & Human Services. (2007). Guidelines for the diagnosis and management of asthma (EPR-3). Retrieved from <https://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines>

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