RESOLVING PEDIATRIC POPULATION-LEVEL GAPS: SUCCESS OF AN INREACH MODEL

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Background Primary care settings have implemented processes to resolve population-level care gaps, including patient reminders, health record prompts, and outreach to patients/families. When patients present outside of primary care but still within the larger health system, these primary-care based processes are not applied, and opportunities to resolve care gaps are missed. We hypothesized that we could resolve care gaps outside the primary care setting by creating an ‘inreach’ process within the larger healthcare system.

Objectives Among children 2–66 months of age within our primary care registry, we aimed to identify and resolve care gaps for children admitted to the hospital medicine service. Our goal was to contact the inpatient team for at least 80% of these patients, and to increase the percent of care gaps closed from 30% to 50%.

Methods A multidisciplinary team of physicians, nurses and improvement experts mapped the baseline process. Failure modes were predicted, and a key driver diagram was developed. A multidisciplinary team of physicians, nurses and improvement experts mapped the baseline process. Failure modes were predicted, and a key driver diagram was developed. To make the inreach process more sustainable, process recommendations were presented to the executive leadership team, and the core team was empowered to lead the implementation process.

Results

- **Maslach Burnout Inventory**
  - Emotional Exhaustion: 2.5 (1.3) vs. 2.3 (1.2) General Population, p=0.1101
  - Depersonalization: 1.0 (0.9) vs. 1.7 (1.2) General Population, p<0.0001
  - Personal Accomplishment: 5.0 (0.7) vs. 4.3 (0.9) General Population, p<0.0001

- **Areas of Worklife Survey**
  - Workload: 2.4 (0.7) vs. 3.0 (0.8) General Population, p<0.0001
  - Control: 3.2 (0.9) vs. 3.3 (0.9) General Population, p=0.4949
  - Reward: 3.4 (0.9) vs. 3.2 (0.9) General Population, p=0.0305
  - Community: 4.0 (0.7) vs. 3.4 (0.8) General Population, p<0.0001
  - Fairness: 3.2 (0.7) vs. 2.8 (0.8) General Population, p<0.0001
  - Values: 3.6 (0.6) vs. 3.2 (0.8) General Population, p<0.0001

Notes: p-Values based on two-sided one sample t-Tests. sd=standard deviation.

Abstracts Table 1 Average ratings of the Maslach Burnout Inventory (MBI) and Areas of Worklife Survey (AWS) compared to norms of participants (N=101) responding to the survey all three years. The ‘general population’ for AWS survey includes people across a diversity of organizations whereas it includes health care workers for the MBI. Participant scores for depersonalization, personal accomplishment, reward, community, fairness, and values are better than the general population. The response for reward and fairness became significantly better in 2018 and 2019 compared to 2017. The average participant score for workload is worse than the general population.

Abstracts Table 2 Average ratings of the Areas of Worklife Survey (AWS) compared to norms in 2017, 2018, and 2019. The ‘general population’ for AWS survey includes people across a diversity of organizations. Participant scores for depersonalization, personal accomplishment, reward, community, fairness, and values are better than the general population. The response for reward and fairness became significantly better in 2018 and 2019 compared to 2017. The average participant score for workload is worse than the general population.

Abstracts Table 1

<table>
<thead>
<tr>
<th>Section</th>
<th>General Population Mean (sd)</th>
<th>Pediatric Faculty 2017 Mean (sd)</th>
<th>2017 p-Value vs General Population</th>
<th>Pediatric Faculty 2018 Mean (sd)</th>
<th>2018 p-Value vs General Population</th>
<th>Pediatric Faculty 2019 Mean (sd)</th>
<th>2019 p-Value vs General Population</th>
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<td>Emotional Exhaustion</td>
<td>2.5 (1.3)</td>
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<td>4.3 (0.9)</td>
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<td>3.5 (0.8)</td>
<td>&lt;0.0001</td>
<td>3.4 (0.9)</td>
<td>0.0004</td>
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</tbody>
</table>

Notes: p-Values based on two-sided one sample t-Tests. sd=standard deviation.
Abstract 18 Figure 1

Abstract 18 Figure 2
developed. Through multiple PDSA cycles, we designed and tested a prototype inreach process. We then operationalized this process for patients admitted to the hospital medicine service, and focused on weekly failures to achieve process reliability.

Results Assessments of care gaps increased from 0% to 88% by the end of December 2018. The percentage of care gap resolution has increased from 30% to 40%.

Conclusions Using QI methods, a new process to help improve population health for children can be successfully implemented outside of the traditional domain of primary care.

19 IMPROVING HANDOFF EFFICIENCY IN THE PEDIATRIC INTENSIVE CARE UNIT

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Background Pediatric Intensive Care Unit (PICU) handoffs are vital to safe patient care. Lengthy and inefficient handoffs can cause delayed patient care and faculty dissatisfaction. In our university-based tertiary care PICU, observation of handoffs showed that only 50% concluded by scheduled time. In a survey, only 40% of PICU faculty expressed satisfaction with this handoff process.

Objectives We sought to improve efficiency of handoffs, with the aim of at least 75% of attending evening handoffs completed on time after project completion. Using Lean Six Sigma methodology, a quality improvement project to improve efficiency of evening attending handoff was implemented in a tertiary care PICU.

Methods Pre-intervention processes were studied using workflow mapping and data collection using observation and self-reported handoff times. Root causes of inefficiencies were identified, and low-effort, high-benefit interventions were sequentially implemented: 1) minimizing interruptions from PICU nurses during handoff; 2) ensuring on-time handoff initiation; 3) discussing expectations of efficient handoff at weekly PICU faculty meetings.

Results After implementation of lean management principles, evening faculty handoff efficiency was improved; 85% of handoffs were completed on-time. In addition, faculty satisfaction with the handoff process increased. The PICU census was monitored throughout the intervention period. There was no correlation between increased census and longer handoff duration.

Conclusions We successfully improved efficiency of the handoff process. While implementataions required buy-in from