Background

- ACGME requires pediatric residents to receive training in quality improvement (QI) processes
- Our residency’s curriculum led to few projects utilizing 5 essential QI Tools:
  - Specific, Measurable, Applicable, Realistic, Timely (SMART) aim
  - Key driver diagram (KDD)
  - Measurement plan
  - Data display over time
  - Plan-Do-Study-Act (PDSA) cycle

Objectives

To develop, implement, and evaluate a longitudinal QI curriculum for pediatric residents using coaching and experiential learning as a conceptual model

Methods

- Developed a longitudinal curriculum
- Adhered to Kern’s 6-steps of curriculum development
- Focused on the IHI Model for Improvement
- Included 5 interactive sessions facilitated by faculty trained in QI methodology with didactics and small group work to practice and apply QI tools to resident projects
- Provided 1-on-1 faculty coaching to address project progress and barriers
- Implemented in December 2021 for all pediatric residents
- Evaluated by resident survey and qualitative analysis of open-ended survey questions, as well as resident completion of learning sessions and utilization rates of the 5 QI Tools in resident projects

Results

- Survey results revealed 93% of residents reported being “extremely” or “somewhat likely” to use the 5 QI Tools after completing the curriculum
- Qualitative analysis of open-ended survey questions revealed 5 themes regarding the impact of the curriculum (Table 1)

Table 1. Five themes obtained from open-ended survey questions and related illustrative quotes by residents

<table>
<thead>
<tr>
<th>Themes</th>
<th>Illustrative Quotes</th>
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<tr>
<td>Enhancement of learner QI skills</td>
<td>“Run charts are an effective way to demonstrate how different interventions can make a change in outcome.”</td>
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<td>The value of practice and application to QI projects</td>
<td>“Involving examples of active projects was helpful for understanding.”</td>
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<td>Learners gained knowledge of and access to readily available QI resources</td>
<td>“I enjoyed work shopping other residents QI project.”</td>
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<tr>
<td>Learner change in attitude towards QI methodology</td>
<td>“I learned websites and tools to utilize to use in my own QI project.”</td>
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<td>The value of coaching and application of feedback to improve resident projects</td>
<td>“I thought going through resident's specific projects made the presentation much more meaningful, as giving live feedback is helpful for the projects that are currently ongoing but also solidifies the knowledge for future projects.”</td>
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Results Continued

- By June 2022, 94% of residents (n=36) completed all 5 learning sessions
- After curriculum implementation, a greater percentage of resident QI projects demonstrated increased utilization of the 5 QI Tools (Figure 1)

Conclusions

- Our curriculum increased resident utilization of essential QI Tools
- Residents reported improvement in QI skills, knowledge, and attitudes
- Results highlight the value of both feedback and practice of QI tools and applying them to active resident projects

Future Directions

- Evaluate the impact of 1-on-1 coaching through focus groups
- Provide coaching dedicated to the development of measurement plans