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Teaching Quality Improvement in a Pediatric Residency Program

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Background

- The ACGME requires residents to demonstrate abilities in practiced-based learning and improvement and systems-based practice
- Educational programs have been shown to increase knowledge and understanding of QI methods and perceived ability to undertake QI projects
- About 30 % of pediatric residents report that their QI training did not adequately meet their needs and 25 % did not feel ready to use QI methods in practice.
- Implementing a successful QI educational program is dependent on overcoming barriers such as lack of faculty expertise and time constraints.

Learning Objectives

By the completion of this QI curriculum, pediatric residents will:

- 1) Demonstrate understanding of quality improvement methods as demonstrated by a score of 80% or greater on a multiple choice quiz
- 2) Demonstrate attitudes necessary to continue performance improvement as demonstrated by average scores of 4 out of 5 points on a self-assessment survey
- 3) Demonstrate the ability to design and implement a performance improvement as evidenced by evaluation of their team practice improvement project.

Discussion

- This curriculum improved the education our residency program provided in QI primarily by adding a structured road map for our residents
- Capitalizing on the opportunity created by the PBLI project in the resident group practice, allowed us to provide a hands-on experience
- The experiential component of the curriculum should engage residents and cement QI science better than just relying on didactic education
- This experience also develops residents' abilities to work in groups

References

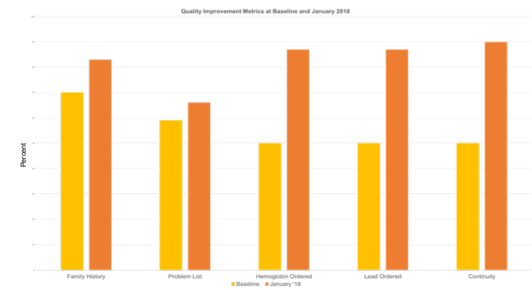
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Innovation in Practice

- Interns receive an introductory workshop on the science of QI and are introduced to problem identification, developing an aim statement, identifying areas for change, designing a Plan-Do-Study-Act (PDSA) cycle, and evaluating their data.
- Each resident is assigned to a continuity team for their primary clinic practice made up of about 8 residents with one team leader.
- The team leaders were asked to pick areas of improvement for their and groups gathered baseline data on the metrics they perceived as most important
- All residents then received 1-hour refresher talk on QI science
- This was followed by a second 1-hour talk one month later in which residents reviewed the baseline data they had gathered in their practice groups
- Using a problem-based-learning design, we had residents choose a quality problem to improve, compose a specific aims statement, evaluate the process, and develop a plan for improvement.
- Resident groups were then tasked with implementing their plan for improvement and gathering post-intervention data.
- Residents then came together for a didactic session which covered data analysis for QI and analyzed the post-intervention data from their projects.

Results

- Resident teams chose the following metrics for their QI projects:
 - 1) Provider continuity
 - 2) Up-to-date family history
 - 3) Current medical problem list
 - 4) Lead and hemoglobin screening
- Each resident team has designed and implemented a process improvement plan



- Data collection for process improvement plans is ongoing
- Data collection to learning objectives 1 and 2 will occur later in the academic year
- Resident feedback on curriculum will be collected later in academic year

Challenges

- Implementing sessions when residents can collaborate with team members due to time constraints and patient care obligations
- Adequate faculty with experience in QI who are able to commit time to mentor resident projects
- The ability of residents to translate achievement in a structured QI project to an unstructured real-world environment