# A QUALITY IMPROVEMENT CURRICULUM WITH EXPERIENTIAL LEARNING AND COACHING FOR PEDIATRIC RESIDENTS

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## 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
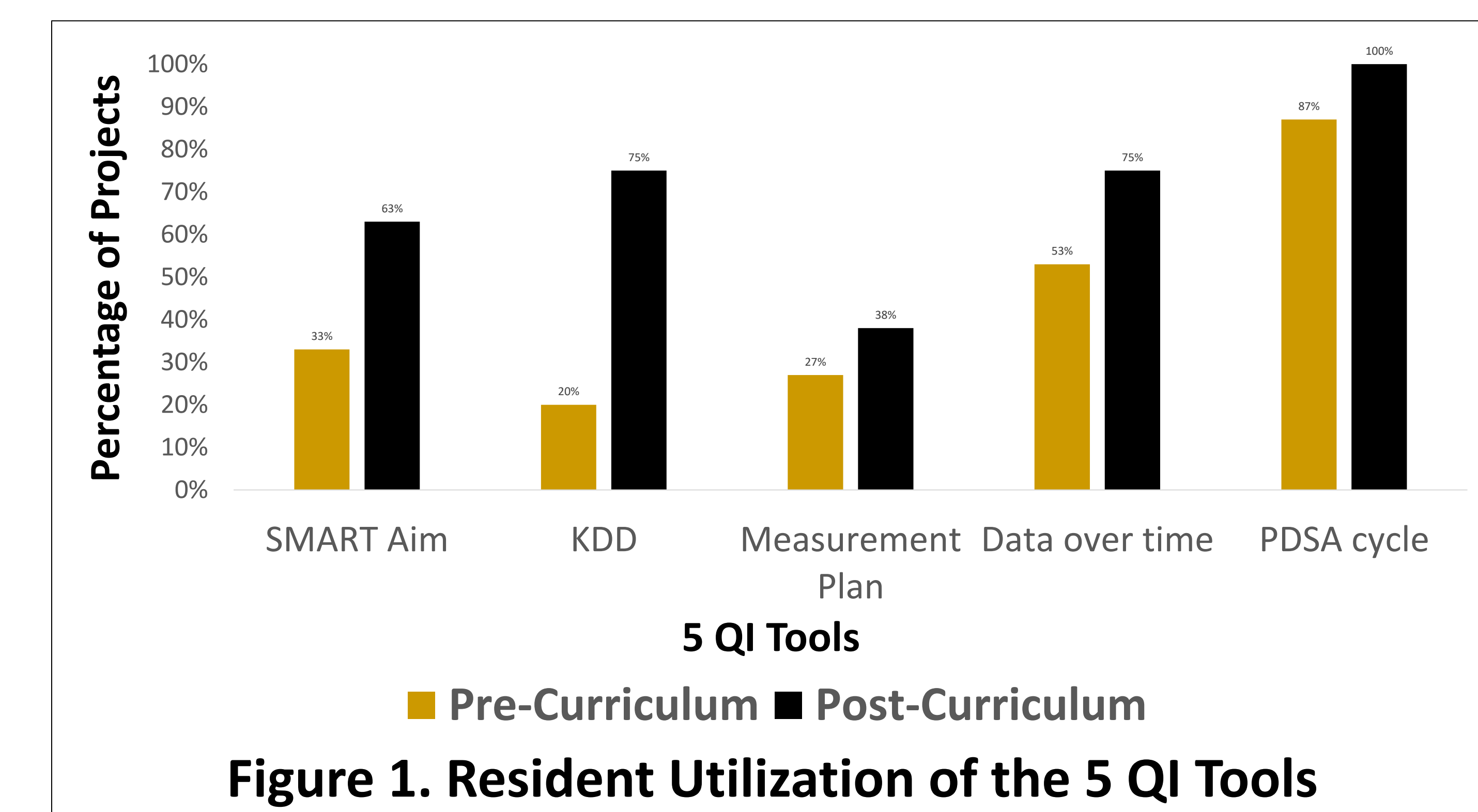
## Results

- 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

| Themes | Illustrative Quotes |
| --- | --- |
| Enhancement of learner QI skills | *"Run charts are an effective way to demonstrate how different interventions can make a change in outcome."* |
| The value of practice and application to QI projects | *"Involving examples of active projects was helpful for understanding."* <br><br> *"I enjoyed work shopping other residents QI project."* |
| Learners gained knowledge of and access to readily available QI resources | *"I learned websites and tools to utilize to use in my own QI project."* <br><br> *"There are objective methods to initiating and designing QI projects - all available via USF site."* |
| Learner change in attitude towards QI methodology | *"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."* |
| The value of coaching and application of feedback to improve resident projects | *"Thanks, appreciate one on one mentoring!"* <br><br> *"Actively working on a project and then going over it in the meeting with feedback."* |

## 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**)



Figure 1. Resident Utilization of the 5 QI Tools

## 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