

# Designing A Quality Improvement Curriculum: Optimizing Valuable Resident Time



Lauren Destino, MD<sup>1</sup>, Shilpa Patel, MD<sup>1</sup>, Madelyn Kahana MD<sup>2</sup>

<sup>1</sup>Clinical Instructor, Department of Pediatrics, Stanford University, <sup>2</sup>Professor, Associate Chair for Education, Department of Pediatrics, Stanford University

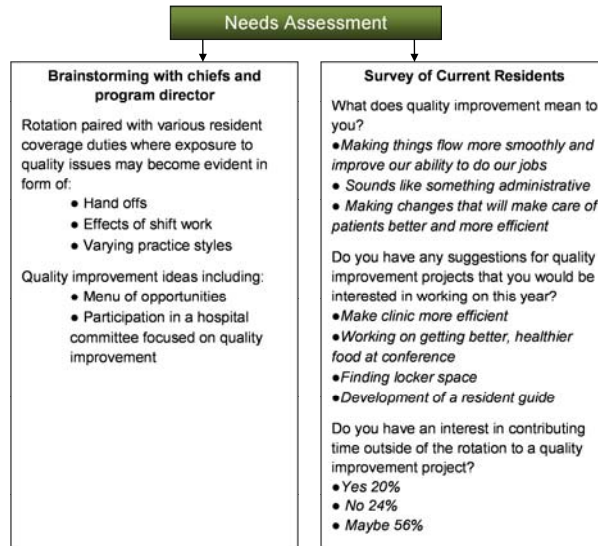
## Context

- Quality Improvement is a relatively new ACGME requirement with which residency programs may struggle due
  - Lack of time
  - Lack of previous training
- Many programs have developed a continuum of education focused on Quality Improvement however this can take significant faculty investment and resident time
- In the Pediatric Residency Program at Stanford University, Lucile Packard Children's Hospital an opportunity exists to participate in Quality improvement through the Stanford Advocacy Track
- This track gives residents exposure to Quality Improvement, however not all residents participate
- Developing a Quality Improvement curriculum was essential to
  - Address Quality Improvement concepts
  - Direct experience in project development
  - Comply with ACGME requirements

## Objective

To demonstrate the development of a Quality Improvement curriculum mandatory for all pediatric residents

## Program Development



Time	Monday	Tuesday	Wednesday	Thursday	Friday
0800-0830	Morning Report	Morning Report	Morning Report	Morning Report	Grand Rounds 8-9am
0830-1200	QI		QI; meeting with advising faculty	Valley Outpatient	QI
1200-1300	Conference	Conference	Conference	Conference	Conference
1300-1700	Continuity Clinic	Acute Care Clinic	Inpatient ward	Valley Outpatient	Acute Care Clinic

## Program Development

### Background Literature

A series of articles were reviewed and selected for self directed learning:

- Quality Improvement Methodology
- Plan Do Study Act cycles
- Root Cause Analysis
- Error and Harm in Pediatrics and Difficulties in Measurement
- Differences in the Scientific Process and the Quality Improvement Process
- Cultural and Systemic Barriers to Safe Healthcare
- Lessons from *Too Err is Human*
- Examples of Quality Improvement in action across the country

### Goals and Objectives Defined

Goal	Appreciate the impact and complexity of the logistics and infrastructure required to deliver healthcare	
Resident Objective	Instructional Strategies	ACGME Competency Goals
1. Demonstrate knowledge of safeguards	Write down all the steps involved in medication administration Discuss keys to being a good supervisor Discuss expectations for interns Supervise hand offs and discuss an ideal hand off	Patient Care Problem Based Learning and Improvement Systems Based Practice
2. Demonstrate understanding of core body of literature	Critically appraise articles and discuss with rotation directors	Medical Knowledge
Goal	Develop critical thinking skills related to systems and related errors and acquire practical knowledge about how to effect change	
Resident Objective	Instructional Strategies	ACGME Competency Goals
1. Identify a situation you have encountered with a potential or actual poor patient outcome	Write down the situation and outline the processes surrounding the faulty system	Systems Based Practice Interpersonal and Communication Skills
2. Gather data on factors impacting the system error	Investigate the <b>historical context</b> of the system, alternative systems and solutions Identify <b>key players</b> to ensure success  <b>Barriers and solutions to barriers</b>	Systems Based Practice Interpersonal and Communication Skills
3. Contribute to a project addressing an institutional deficiency that will impact patient care or education	Overview of existing project(s) Review previous documentation Set and accomplish goals Document steps taken on project	Systems Based Practice
Goal	Develop awareness of ongoing hospital improvement initiatives and identifying methods to expand these initiatives in the resident setting	
Resident Objective	Instructional Strategies	ACGME Competency Goals
1. Attend a Quality Improvement Meeting focused on hospital wide	Observe details involved in large QI projects Identify outcome measures utilized Learn about evaluation How is success measured and sustained?	Systems Based Practice

## Quality Improvement Projects

- Projects formulated by residents and guided by program directors
- Initial focus was initiation of morbidity and mortality conference
  - Education gap in pediatric residency
  - Opportunity to focus on safety and systems issues
  - Basis for future Quality Improvement initiatives
- Current projects chosen from issues raised in morbidity and mortality conferences based on
  - Feasibility
  - Resident Interest
  - Potential practical solution to systemic problem
  - Institutional significance

## Conclusions

- This Quality Improvement curriculum developed for this residency is easily adaptable to other programs
  - Brief rotation
  - Requires nominal amount of resident time
  - Requires nominal amount of faculty time
- Introduces Quality Improvement concepts
  - Necessary for ongoing patient care improvement
  - Necessary for ACGME compliance
  - Necessary for maintenance of pediatric board certification
- We expect residents leave this rotation with
  - A better sense of the systems that influence patient care
  - A heightened interest in quality improvement
  - Skills and desire to help create "Ideal Healthcare" according to the Institute of Medicine

Safe  
Effective  
Patient Centered

Timely  
Efficient