An Intensive Healthcare Value Curriculum: Using Quality Improvement Methodology to Enhance Pediatric Resident Knowledge of Value

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Background	**Goals of the Curriculum**	**Program Objectives**
1.As national efforts are underway to improve the value of healthcare, providing an understanding of cost and value is an important component of medical training.[a] 2. A longitudinal value curriculum was implemented at our institution in 2015, including a core lecture series and monthly morning reports focused on value. 3. Evaluation of the curriculum revealed improved self-reported knowledge of cost and value in pediatric care, but this did not translate into cost savings of case based questions. *a. Hackbarth G, Boccuti C. Transforming graduate medical education to improve health care value. N Engl J Med. 2011;364(8):693–695.*	1. Improve both the knowledge and practice of high value care 2. Provide residents an opportunity to participate in a QI project	The objectives of the program are to provide residents with: 1.An opportunity to apply cost-saving principles to their clinical care 2. Protected time to think critically about standards of care and identify barriers to achieving it 3. Hands on experience in QI methodology
Resident/Fellow Learning Objectives	**Educational Strategies/Activities**	**Learner Assessment**
1.Explain the QI process including PDSA cycles and data collection 2. Design and implement a QI project on a general pediatrics unit with a focus on value and the cost of care	During the 4 week inpatient rotation, residents will have weekly activities and responsibilities which include: Week 1: Orientation and development of a SMART AIM. Orientation will be completed by a QI mentor and a Value mentor. The mentors will check in with the residents mid-week to ensure project is on track Week 2: Plan-Do-Study-Act (PDSA) #1- QI mentor to check in with the team and troubleshoot challenges. Week 3: PDSA #2- QI mentor to check in with the team Week 4: Presentation to QI education group- residents will review lessons learned and discuss potential changes	At the end of each 4-week rotation, the resident will present to a QI education group. They will review their interventions and observations and analyze their data. Based on their experience, they will share potential changes and next steps moving forward.

Modified from Niebuhr & D'Alessandro. Planning for Online Teaching-Learning Activities. Workshop at PAS Vancouver, 2010
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Program Evaluation	**Implementation**	**Lessons Learned**
We will use a previously published survey tool to assess knowledge about healthcare costs and value that employs a Likert scale 1-5, where 5 is "very knowledgeable." Residents will also answer multiple choice value based questions on clinical scenarios regarding emergent care. We will compare residents who have been exposed to our standard curriculum to those who have been exposed to both our standard and intensive curriculum. The project is ongoing, therefore no data is yet available.	We used multiple resources at our institutions to provide residents with an opportunity to implement a QI project. We collaborated with our Office of Clinical Quality Improvement to provide expert guidance for the residents. We also collaborated with technology specialists to provide logistical support for the residents. Unit leaders including nurses, respiratory therapists and the medical director were also consulted by the residents for project design and execution. Residents and QI mentors identified resident clinical obligations during the rotation as a barrier to having sufficient time to work on the QI project. In addition, significant time was needed to gather baseline data thus pushing back start date for interventions.	The project is still ongoing, however lessons we have learned thus far: 1. A Value based QI Project requires significant buy in from all stakeholders as we found most significant interventions involved RN and RT orders. 2. A resident run QI project requires significant faculty support given the limited and frequently changing nature of resident scheduled.

Comment [1]:
You definitely know more than me!!

Sample Schedule

Mon	Tue	Wed	Thu	Fri
Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**
Clinical Orientation on Unit	**Clinical Orientation on Unit**	**Clinical Orientation on Unit**	**Introduction to Value Based Care Lecture**	**Introduction to QI Lecture and Development of SMART AIM/PDSA #1**
Day 8	**Day 9**	**Day 10**	**Day 11**	**Day 12**

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PDSA #1: Implementation and Data Gathering	**PDSA #1: Implementation and Data Gathering**	**PDSA #1: Implementation and Data Gathering.** **Check in with QI Mentor**	**PDSA #1: Implementation and Data Gathering.**	**PDSA #1: Implementation and Data Gathering.**
Day 15	**Day 16**	**Day 16**	**Day 18**	**Day 19**
PDSA #1: Implementation and Data Gathering	**PDSA #1: Implementation and Data Gathering**	**PDSA #2: Implementation and Data Gathering** **Check in with QI Mentor**	**PDSA #2: Implementation and Data Gathering**	**PDSA #2: Implementation and Data Gathering**
Day 22	**Day 23**	**Day 24**	**Day 25**	**Day 26**
Data Analysis	**Data Analysis**	**Data Analysis**	**Data Analysis**	**Project Presentations and Feedback** ➢ **Group Activity: Share with QI Education Group findings and lessons learned. Provide suggestions for next steps;**

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