Spring 3-2019

Active-Learning Quality Improvement Training Curriculum for Faculty in Hospital Medicine

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Active Learning Quality Improvement Curriculum for Faculty in Hospital Medicine

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The University of Vermont LARNER COLLEGE OF MEDICINE

DEPARTMENT OF MEDICINE QUALITY PROGRAM

Project Description

Background

- Quality in health care is a clinical, academic, and financial imperative, however faculty are unprepared to be role models for Quality Improvement (QI) efforts

Aim

- To create a training program in QI for Hospital Medicine faculty

Curriculum Goals

- Understand the Institute for Healthcare Improvement (IHI) Model for Improvement as a framework for problem solving
- Design effective change ideas using QI tools (e.g. Affinity Diagram, Driver Diagram, Process Maps)
- Write an effective aim statement (S.M.A.R.T. goal)
- Use Plan-Do-Study-Act (PDSA) cycles to test and refine interventions on small samples
- Position work for future scholarship

Program Design

- Needs based; using feedback from focus group sessions
- Active learning model; participants use QI tools to carry out their own QI project

Curriculum Assessment

- Quality Improvement Knowledge Assessment Tool-Revised (QIKAT-R) scores were used as a baseline assessment
- Survey instrument to assess self-reported QI knowledge

Curriculum Summary

Session	Topic
Baseline	Pre-survey and QIKAT-R administration
1	Introduction to Quality Improvement; *How do we define quality in healthcare?* Overview of IHI Model for Improvement
2	Set an AIM: *What are we trying to accomplish?* Create an Affinity Diagram to identify area of focus related to patient experience
3	Understand the system; Create Key Driver Diagram
4	Identify changes: *What change can we make that will result in an improvement?* Plan for stakeholder input
5	Select interventions and measures: *How will we know a change is an improvement?* Plan for PDSA Cycle 1
6	Test changes: Study, Act, Plan PDSA Cycle 2
7	Test changes: Study, Act, Plan PDSA Cycle 3
8	Finish PDSA Cycles with "Study" and Start the Poster
9	Review final poster; Present at local, regional, and national conferences
10	Mentoring future Quality Projects
11	Presenting and publishing Quality Projects
12	Wrap-up; Post-survey and QIKAT-R administration

Results

- Pre-assessments revealed poor correlation between self-reported comfort level and QIKAT-R scores within each domain, further highlighting educational opportunities
- To date, 8 sessions have been completed
- Overall participation has been high (88.1% attendance by faculty)

QIKAT-R Results

Scenario	Mean	SD
N=18	**16.78**	**4.49**
Scenario 1		
Aim	1.22	0.65
Measure	1.89	0.9
Change	2.11	1.08
Scenario 2		
Aim	1.39	0.7
Measure	2.78	0.55
Change	1.78	0.94
Scenario 3		
Aim	1.22	0.81
Measure	2.39	0.78
Change	2	1.08

Survey Results

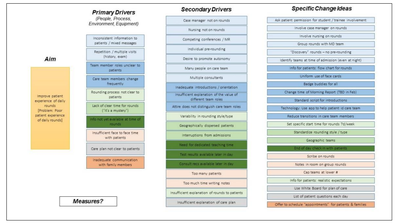
	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
Participating in a quality improvement project is useful to me	0.00% 0	0.00% 0	22.22% 4	50.00% 9	27.78% 5	18	4.06
I will use quality improvement techniques after completing this divisional QI program	0.00% 0	0.00% 0	5.56% 1	66.67% 12	27.78% 5	18	4.22

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
Setting aims for a quality improvement project	0.00% 0	22.22% 4	27.78% 5	50.00% 9	0.00% 0	18	3.28
Establishing measures for a quality improvement project	5.56% 1	22.22% 4	38.89% 7	33.33% 6	0.00% 0	18	3.00
Testing changes for a quality improvement project	5.56% 1	22.22% 4	50.00% 9	22.22% 4	0.00% 0	18	2.89
Evaluating the impact of a quality improvement project	0.00% 0	27.78% 5	50.00% 9	22.22% 4	0.00% 0	18	2.94
Presenting the results of a quality improvement project	0.00% 0	38.89% 7	38.89% 7	22.22% 4	0.00% 0	18	2.83

Quality Improvement Tools

Affinity Diagram

PDSA Cycle Process



Key Driver Diagram for QI project

Summary and Limitations

- QI training for faculty is feasible
- Using junior faculty as curriculum facilitators has been valuable in developing QI teachers and role models
- Active learning is key in engaging learners; however, time constraints were challenging
- An important aspect of the curriculum is to stress the QI process; any success within the project is a secondary gain

Conclusions and Next Steps

- The Division of Hospital Medicine successfully implemented a faculty QI curriculum that includes practical sessions using active-learning techniques
- A full evaluation of the curriculum is planned, including surveys, QIKAT-R assessments, and a faculty focus group