Development of an Integrative Quality Improvement Curriculum for Pre-Clinical Medical Students

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Background

In 2017, Stanford University School of Medicine established its IHI chapter. As part of our mission to educate medical students in Quality Improvement and empower them through participation in hands-on learning, we established the Stanford Quality Improvement Interest Group. This program provides medical students with the opportunity to participate in an elective pre-clinical curriculum to learn about fundamental QI concepts, and apply the material to the development of QI projects within the Stanford Health Care system.

Specific Aims

🌟 To assess the interest of a QI program among pre-clinical medical students in Stanford University School of Medicine
🌟 To perform a QI curriculum needs assessment using a standardized questionnaire
🌟 To develop an elective QI curriculum that integrates a variety of learning resources
🌟 To connect pre-clinical students with high-impact QI projects within Stanford Health Care

Needs Assessment

<table>
<thead>
<tr>
<th>1. Demographics</th>
<th>2. Reasons for Participating in QI Project/Curriculum</th>
<th>3. Student Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>27 pre-clinical students</strong> participated in Stanford QI Interest Group Fall 2017</td>
<td>• Hands-on experience with Quality Improvement • Work on a QI project from beginning to end • Learn about QI through a structured curriculum • “See if that is a research direction that I want to go in” • Opportunity for publications • Learn more about IHI • Complete curriculum now, project in the future</td>
<td>• “Gain a broader toolset in understanding quality improvement studies and practices” • Publish and present QI projects • Skills in planning, strategies, business, negotiation • Understand QI and root-cause analysis • Learn quantitative methods to analyze QI • Learn about current QI initiatives in the field</td>
</tr>
<tr>
<td>Demographic</td>
<td># Students</td>
<td>Demographic</td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td>Year</td>
</tr>
<tr>
<td>1</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>Degree Program</td>
<td></td>
<td>Degree Program</td>
</tr>
<tr>
<td>MD</td>
<td>26</td>
<td>MD</td>
</tr>
<tr>
<td>PA</td>
<td>3</td>
<td>PA</td>
</tr>
<tr>
<td>Previous Experience in QI/PS</td>
<td></td>
<td>Previous Experience in QI/PS</td>
</tr>
<tr>
<td>Yes</td>
<td>24</td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>QI Interest Group Program</td>
<td></td>
<td>QI Interest Group Program</td>
</tr>
<tr>
<td>QI Project + Curriculum</td>
<td>24</td>
<td>QI Project + Curriculum</td>
</tr>
<tr>
<td>QI Curriculum Only</td>
<td>3</td>
<td>QI Curriculum Only</td>
</tr>
</tbody>
</table>

5. Beliefs and Attitudes

Level of agreement/disagreement:

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

<table>
<thead>
<tr>
<th>My medical education should include a QI component</th>
<th>My likelihood to be involved in preclinical QI projects is high</th>
<th>I am likely to be involved in QI projects in my residency</th>
<th>I am likely to be involved in QI projects in my medical training</th>
<th>QI/PS will be a core component of my future career</th>
<th>My medical education needs to be integrated into curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly disagree</td>
<td></td>
</tr>
</tbody>
</table>

6. Learning Modes

Scale (averages): 1- Not important, 2- Less important, 3- Neutral, 4- Important, 5- Very important

- Online readings/videos: 3.37
- Classroom lectures: 2.96
- Small group discussions: 3.44
- Case-based sessions: 4.19
- Interactive workshops: 3.78

Future Directions

🌟 Support ongoing QI project developments
🌟 Obtain feedback for curriculum improvement following conclusion of the academic quarter
🌟 Analyze curricular data to evaluate successful integration of the QI curriculum