Quality Improvement Education & Participation in Surgical Critical Care Fellowship Programs

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Background

A multidisciplinary focus on quality improvement (QI) is essential for surgical intensivists. The surgical critical care (SCC) fellowship is an early opportunity to teach and develop QI skills. The Accreditation Council for Graduate Medical Education (ACGME) requires that a “fellow must have the opportunity to participate in interprofessional quality improvement activities” and “must receive training and experience in quality improvement processes. Despite this requirement, it is unclear to what extent SCC fellowship programs emphasize QI during fellowship.

Research Objectives

The objectives of this study are 1) to determine the status of quality improvement (QI) education and participation by fellows in surgical critical care (SCC) fellowship and 2) to identify both the barriers to and successes of implementation of this educational goal.

Methods

A survey was sent via email to 129 SCC program directors in the United States. The survey included 26 questions, addressing program demographics, current QI education provided, fellow participation in QI programs, and perceived barriers limiting education and fellow involvement.

Study data were collected and managed using REDCap.

Results-Basic Demographics

37/129 (29%) of SCC Fellowship PD responded

- 70% were one year programs
- 76% 1-2 fellows per year
- 76% of programs had a faculty member with QI training
- 81% of fellows completed at least one QI project during residency

Results

Types of QI Education

<table>
<thead>
<tr>
<th>Types</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty mentoring</td>
<td>7 (100)</td>
</tr>
<tr>
<td>Hands-on multidisciplinary team</td>
<td>6 (85.7)</td>
</tr>
<tr>
<td>Online curriculum</td>
<td>1 (14.3)</td>
</tr>
<tr>
<td>Assigned readings</td>
<td>1 (14.3)</td>
</tr>
<tr>
<td>QI dept meetings</td>
<td>1 (14.3)</td>
</tr>
</tbody>
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7/37 (18.9%) provide formal education

Results-QI participation: 28/37 (75.7%) involved in QI projects

- Fellow lead projects: 23 (82.1)
- Non-fellow lead projects: 16 (57.1)

Other participants in fellow QI projects

<table>
<thead>
<tr>
<th>Types</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>28 (100)</td>
</tr>
<tr>
<td>Nursing staff</td>
<td>18 (64.3)</td>
</tr>
<tr>
<td>Unit/program manager</td>
<td>17 (60.7)</td>
</tr>
<tr>
<td>Registry staff (TCIP, BQIP, etc.)</td>
<td>15 (53.6)</td>
</tr>
<tr>
<td>QI specialist/consultants</td>
<td>13 (46.4)</td>
</tr>
<tr>
<td>Hospital administration</td>
<td>9 (32.1)</td>
</tr>
<tr>
<td>Fellows from other critical care programs</td>
<td>3 (10.7)</td>
</tr>
</tbody>
</table>

Results- SCC Program Director Opinions

- QI training should be a component of the SCC competencies: 25 (67.6)
- It is feasible for a SCC fellow to complete a QI project within one year: 24 (64.9)
- Your graduating fellow (s) will be capable to independently lead QI projects after fellowship completion: 16 (43.2)
- I would support an online curriculum for QI training for SCC fellows: 31 (83.8)
- Participation in the institutional trauma performance improvement process is adequate to satisfy the ACGME requirement for QI: 29 (51.3)
- If a fellow completed a QI project in residency, it is unnecessary for him/her to complete a QI project in fellowship: 7 (18.9)

Results-Summary

Only 18.9% of SCC programs have formal QI education

67.6% of SCC program directors feel that QI training should be part of SCC competencies

76% of SCC programs have fellows participate in a QI project

Only 43.2% of SCC program directors feel their fellows could independently lead a QI project after fellowship

83.8% of SCC program directors support an online QI education

Limitations

- 29% Response Rate
- Views and opinions of fellows were not surveyed.

Conclusions

In the SCC fellowship, core competencies related to quality improvement education and participation are not being met, whether this is a shortcoming of the programs themselves or an unattainable requirement.

Future Directions

- Survey fellows on their opinions regarding QI education
- Inform the SCC Program Directors Society of the need to address this educational deficiency
- Create an online curriculum tailored to the needs and goals of SCC fellows