Enhancing Communication Skills in Anesthesia Residents

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BACKGROUND

- Lapses in communication often at the root of critical events in patient care
- Goal: To improve anesthesia residents' communication skills
- Communication skills not commonly part of residency curricula
- Previous pilot study
  - Developed a patient survey tool based on the Four Habits Coding Scheme (4HCS) to assess residents' communication skills
  - Used results from paper survey to design and implement a simulation-based curriculum
  - Overall improvement after curriculum

METHODS

- Intervention in December 2014:
  - Showed residents survey results
  - 2 simulation sessions (Figure 2)
  - Customized set of reflective questions
  - All residents completed at least one session in person or online
- Primary data analysis:
  1. Calculated overall survey rating for each survey (average of responses)
  2. Calculated each resident's pre- and post-intervention mean overall survey rating
  3. Compared pre- and post-intervention ratings using Wilcoxon signed-rank test for residents starting with <4
- Secondary data analysis (for each question):
  1. Calculated each resident's pre- and post-intervention mean rating
  2. Compared pre- and post-intervention ratings using Wilcoxon signed-rank test for residents starting with <4
  3. Applied the Bonferroni correction to outcomes

Figure 1: Survey to assess residents' communication skills
Figure 2: Screenshots from simulation sessions
RESULTS

- Response rate:
  - 2911 potential cases
  - 52% not approached (unavailable or unable to respond)
  - 1162 patients responded (83.3% of approached patients)

- Post-intervention ratings higher than pre-intervention:
  - Overall survey (p = 0.005; Figure 3)
  - Questions 3, 4, and 8 (p = 0.0026*, p = 0.0021**, p = 0.0001**; Table 1)

Figure 3: Average overall survey scores

CONCLUSIONS

- Overall improvement in communication skills
- Response rate increased from pilot study
- Survey tool able to detect significant differences overall and for individual questions
- Improved questions focused on patient expectations

Table 1: Average scores for individual questions

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean ± Std Dev</th>
<th>Median (IQR)</th>
<th>Mean ± Std Dev</th>
<th>Median (IQR)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>3.94 ± 0.053</td>
<td>3.96 (3.94 to 3.98)</td>
<td>3.97 ± 0.045</td>
<td>4 (3.96 to 4)</td>
<td>0.2135</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>3.86 ± 0.136</td>
<td>3.89 (3.8 to 3.95)</td>
<td>3.95 ± 0.083</td>
<td>4 (3.91 to 4)</td>
<td>0.0097*</td>
</tr>
<tr>
<td>3</td>
<td>26</td>
<td>3.83 ± 0.152</td>
<td>3.87 (3.8 to 3.95)</td>
<td>3.95 ± 0.097</td>
<td>4 (3.94 to 4)</td>
<td>0.0026**</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>3.55 ± 0.403</td>
<td>3.74 (3.37 to 3.85)</td>
<td>3.84 ± 0.199</td>
<td>3.92 (3.76 to 4)</td>
<td>0.0021**</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>3.79 ± 0.365</td>
<td>3.87 (3.82 to 3.93)</td>
<td>3.93 ± 0.091</td>
<td>3.97 (3.9 to 4)</td>
<td>0.0138*</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>3.8 ± 0.242</td>
<td>3.91 (3.75 to 3.94)</td>
<td>3.94 ± 0.093</td>
<td>4 (3.9 to 4)</td>
<td>0.0093*</td>
</tr>
<tr>
<td>7</td>
<td>18</td>
<td>3.85 ± 0.178</td>
<td>3.91 (3.82 to 3.96)</td>
<td>3.93 ± 0.102</td>
<td>4 (3.89 to 4)</td>
<td>0.0582</td>
</tr>
<tr>
<td>8</td>
<td>22</td>
<td>3.86 ± 0.151</td>
<td>3.9 (3.83 to 3.95)</td>
<td>3.98 ± 0.03</td>
<td>4 (3.97 to 4)</td>
<td>0.0001**</td>
</tr>
<tr>
<td>9</td>
<td>30</td>
<td>3.47 ± 0.398</td>
<td>3.52 (3.3 to 3.79)</td>
<td>3.71 ± 0.298</td>
<td>3.83 (3.51 to 4)</td>
<td>0.0175*</td>
</tr>
<tr>
<td>10</td>
<td>30</td>
<td>3.52 ± 0.357</td>
<td>3.65 (3.32 to 3.79)</td>
<td>3.67 ± 0.295</td>
<td>3.73 (3.5 to 3.93)</td>
<td>0.1779</td>
</tr>
</tbody>
</table>

*Significant without the Bonferroni correction (α = 0.05)
**Significant with the Bonferroni correction (α = 0.005)

REFERENCES


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