Feedback Frequency in Competence By Design: A Quality Improvement Initiative

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ICRE
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Disclosures

- None
Background

- OHNS part of the initial wave of specialties adopting Competence By Design (CBD) model
- Progression by being “entrusted” on defined competencies
- In 2016 OHNS residents piloted EPAs prior to national rollout
EPAs in pilot

- Assessment and pre-op planning
- Epistaxis
- Initial management: emergent case
- Procedural skills
- Chart documentation
- Teaching
- Oral examinations
The Problem

○ New CBD framework makes an increased number of assessment essential

○ Feedback – it’s hard!
Designing an improvement

- **Baseline**
  - 0.22 assessments completed per resident per week on service

- **Barriers**
  - Time constraints
  - Personal discomfort in initiating
  - Lack of engagement seeking EPAs
  - Lack of staff engagement
  - Not seeking EPAs due to incomplete/suboptimal performance
  - Forgetting to seek EPAs
Intervention #1

○ Combination

1. Rules for when to seek an EPA

2. Weekly peer reminder
Reminder Intervention

Evaluations per resident per week

Mean – CL 0.22

3σ – UCL
Reminder Intervention

Evaluations per resident per week

End of first block

Mean – CL 0.22

3σ – UCL
Reminder Intervention

Evaluations per resident per week

Mean – CL 0.22

3σ – UCL

End of first block

Week of residency

Intervention #1
Reminders
Reminder Intervention

Evaluations per resident per week

End of first block

Progress check on project

Intervention #1 Reminders

Mean – CL 0.22

$3\sigma$ – UCL

Week of residency
PDSA cycle

- Number of evaluations showed no improvement
  - Stayed at 0.22 evaluations per resident per week
Analysis

Motivators in first intervention

- Resident cohesiveness
- Job obligation
- Not wanting to be the worst
- Competitive personality types
Intervention #2

- Leaderboard emailed weekly by program director’s office showing how many evaluations each of us has completed

<table>
<thead>
<tr>
<th>PGY1</th>
<th>Assessment &amp; Preop Planning</th>
<th>Chart Documentation Assessment</th>
<th>Assessment &amp; Management of Epistaxis</th>
<th>Initial Management: Emergent Case</th>
<th>Total Completed</th>
<th>Completed over the past week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident A</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Resident B</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Resident C</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Resident D</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Resident E</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>0</td>
</tr>
</tbody>
</table>
Leaderboard Intervention

Evaluations per resident per week

3σ – UCL
Mean – CL 0.22

Week of resiency
Leaderboard Intervention

Evaluations per resident per week

Intervention #1
Reminders

Mean – CL  0.22
3σ – UCL

Week of resiency
Leaderboard Intervention

Evaluations per resident per week

Week of resiency

Intervention #1
Reminders

Intervention #2
Leaderboard

$3\sigma - UCL$

Mean – CL 0.22
Leaderboard Intervention

Evaluations per resident per week

Oral exams

Intervention #1
Reminders

Intervention #2
Leaderboard

3σ – UCL
Mean – CL 0.22

Week of residency
Leaderboard Intervention

Evaluations per resident per week

Oral exams

Omitting oral exams

Intervention #1
Reminders

Intervention #2
Leaderboard

Mean – CL 0.22

3σ – UCL

Week of resiency
Results

- Leaderboard intervention showed significant improvement – 2.87 per resident per week
  - Even when excluding oral exams

- Huge spike in assessments when program-led
Limitations

- Being participant and researcher introduces bias
  - Engagement encourages evaluation completion – this is a good thing!
- Baseline unstable
- Process measurements to validate
  - Are we ignoring the emails?
Conclusion

○ **Significant improvement** in EPA completion rate was demonstrated with the leaderboard intervention
  
  • **Ownership** and **engagement** by the residents in the solution

○ Both **resident-led** and **program-led** interventions improve the frequency of assessments
Future direction

- Systems level change
  - Technical challenges with tool
  - Scheduled time for feedback
  - Decreasing number of competencies

- Expansion of leaderboard concept

- Quality of feedback