Specialist By Day, Generalist By Night - A Needs Assessment Approach For Anesthesiology

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Conflict of Interest Disclosures

Dr. Valerie Schulz & Michael Brock

• We have not had in the past 3 years, a financial interest, arrangement or affiliation with one or more organizations that could be perceived as a direct or indirect conflict of interest in the content of this presentation.
Learning Objective

Following today’s presentation attendees should be able to:

1. Summarize the approach taken to identify perceived and unperceived needs within the department of Anesthesia & Perioperative Medicine, Schulich School of Medicine & Dentistry, Western University
“A Night on call” – For Anesthesiology

- Faculty retreat identified a desire for additional professional development opportunities.
- CPD, Schulich school of Medicine & Dentistry, Western University – Needs assessment
- Anesthesia specialist by day, generalist by night
Overarching Project Goals

‘A night on-call’

Report Identified educational needs of Anesthesia & Perioperative Medicine faculty based on:

1. Expert opinion
2. Learner self-reports

Next Steps – Development of targeted education.
Needs Assessment Phases

• **Phase 1**: Educational topics for “*A Night On-Call*

• **Phase 2**: Online Delphi of Anesthesiology experts

• **Phase 3**: Online Qualtrics survey for all Anesthesiology faculty

• **Phase 4**: Deliver personalized reports to participants highlighting topics of strength, and topics where educational opportunities exist.
Phase 1

- **Methodology:** Committee meeting with subspecialty experts (faculty/educators) in the department of Anesthesia & Perioperative Medicine

- **Outcomes:** A finalized list of 36 topics (formatted as learning objectives) for the surveys to follow.

- **Theme:** “A Night On-Call”
Phase 2

**Methodology:** 2-round Delphi survey of sub-clinical experts (N = 10) on the 36 Topics previously identified (In Phase 1).

**Outcomes:**
Expert Delphi: Topics scored on expected ability of faculty members

Ex.

2. Communicate effectively within a team-based setting

<table>
<thead>
<tr>
<th>Ability</th>
<th>Low</th>
<th>High</th>
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<tbody>
<tr>
<td>-/4</td>
<td></td>
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</table>
Phase 3

Methodology: Qualtrics survey for faculty members (N = 34) on the 36 Topics previously identified

Outcomes: Self-reported for ability and desire to learn for each topic.

Ex.

<table>
<thead>
<tr>
<th>No ability</th>
<th>End of Residency</th>
<th>Mastery</th>
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</table>
Survey Methods

Comparisons between these surveys allowed for prioritization of educational needs with regards to the 36 topics.
Results

Realize your role following a Significant complication (or death)

Employ point of care ultrasound (POCUS) to enhance patient care

Manage the "can't intubate, can't ventilate" scenario

Additional interesting results:

• Obstetrical topics were deemed low in educational gap and desire to learn. Existing educational efforts may be sufficient and effective?
• Topics that suit simulation-based education were highly desired (I.e. Emergency scenarios)
Individualized Learner Reports

- All results are dependent on average Expert scores and average peer scores.
- Strength: Value > +0.5 SD of Peer average
- Opportunity: Value > -0.5 SD of Peer OR Expert average.
- Priority Opportunity: Value > -1.0 SD of Peer AND expert averages.
Individualized Learner Reports

- Visualizes how the learners self-reported abilities compare to their peers and the expectations of the experts
- Can aid in the development of personalized learning plans, and potentially self-assessment opportunities (Section-3 credits) if reviewed alongside peers.

<table>
<thead>
<tr>
<th>Topic List</th>
<th>Strength</th>
<th>At Par</th>
<th>Opportunity</th>
<th>Priority Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage the &quot;can't intubate, can't ventilate&quot; scenario</td>
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<tr>
<td>Recognize and manage local anesthetic toxicity</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognize and manage anaphylaxis</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify and manage Malignant Hyperthermia</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Insert a cardiac pacemaker</td>
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<td></td>
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</tbody>
</table>

A partial example of what a report looks like
18 Faculty Members desired a report to be generated.

The topics with the greatest frequency of Priority Opportunity for ‘A Night On-Call’

- Insert a cardiac pacemaker [8/18]
- Perform pre-op/intra-op transesophageal echocardiogram (TEE) monitoring (e.g. For hemodynamically unstable patients [7/18]
- Employ POCUS [5/18]
- Manage obstetrical hemorrhage [5/18]
So - what’s the next step?

With Anesthesia’s educational needs identified the next steps…

- Presenting outcomes at Grand Rounds  
  [Complete]

- Discussion of results with Anesthesia’s CPD team  
  [Complete]

- Directing future education and research  
  [Underway] - Can’t intubate, Can’t ventilate
Thanks for listening!

Questions?