Anesthesia Resident Implementation of a Standardized Intraoperative Handoff Checklist Tool in Apex during Surgical Case Handovers.

Resident Champions: Janice Y. Man, MD, Janine Ajalat, MD, Alex Edwards, MD, Stephanie Lim, MD, and Shin-e Lin, MD

Faculty Mentor: Rondall Lane, MD

Department of Anesthesia and Perioperative Care, University of California, San Francisco

AIM OF PROJECT

• Patient handoffs play a key role in ensuring the continuity, quality, and safety of patient care; however these handoffs are complex, high-risk, and often error-prone events.

• Intraoperative patient handovers are prone to communication errors, and with the increasing number of intraoperative patient handovers due to work-hour restrictions, this can negatively impact patient safety.

• Current literature on handover of care from the operating room to post-anesthesia or intensive care units recommend and support the standardization of the handover process through the use of checklists and protocols, and demonstrate an association between poor-quality handovers and adverse events.

• Prior to this project there was no standardized intraoperative handover process at UCSF during a surgical case.

IMPLEMENTATION OF PROJECT

• Introduction and promotion of the ARCH (Anesthesia Resident Checklist for Handoffs) project at our departmental Grand Rounds.

• Monthly Apex reports generated and monthly audits results were reported via departmental emails.

• Residents with 100% compliance with the ARCH tool for all their surgical case handovers were recognized in departmental emails.

• Residents with poor compliance with the ARCH tool for all their surgical case handovers were sent private emails for feedback and to encourage utilization.

• Project goal: residents will have at least 75% compliance with the use of a standardized intraoperative handoff checklist tool in Apex during surgical case handovers from July 1, 2013 to June 30, 2014.

TIPS FOR SUCCESS

• The ARCH Project was an important issue amongst residents.

• Handoffs between anesthesia providers occurred prior to this ARCH tool, however now this was a more standardized process.

• The ARCH tool was readily available in an electronic form in Apex, a pdf file that could be used on personal electronic devices, and a laminated card located in the anesthesia carts.

• Quarterly departmental and monthly individual email reminders as well as weekly afternoon text page reminders to residents during handover periods.

GOAL: Residents will have at least 75% compliance with the use of a standardized intraoperative handoff checklist tool in Apex during surgical case handovers.

HANDOFF CHECKLIST TOOL

HANDBOOK RECORDS

• Resident Compliance Rate (%)

<table>
<thead>
<tr>
<th>Month</th>
<th>Jul-Aug</th>
<th>Sep-Oct</th>
<th>Nov-Dec</th>
<th>Jan-Mar</th>
<th>Apr-May</th>
<th>May-Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td>74%</td>
<td>89%</td>
<td>93%</td>
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RESULTS

• Providers had an increase from 42% to 85% with their satisfaction of receiving intraoperative handoff information from another anesthesia provider after implementing the ARCH tool.

• Providers had an increase from 65% to 87% with their satisfaction of being able to communicate intraoperative handoff information to another provider confidently after implementing the ARCH tool.

• Providers had an increase from 65% to 80% when surveyed about their confidence in their intraoperative and postoperative management of patients after receiving a handoff from another anesthesia provider after implementing the ARCH tool.

FUTURE DIRECTION

• Continuation of the use of the ARCH tool for the future.

• Looking for a relationship between number of handoffs and likelihood of remaining intubated postoperatively or unanticipated ICU admissions.

• Development of handoff communication education for incoming anesthesia residents.

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REFERENCES


Moirer T, Fister S. Effective handover communication: An overview of research and improvement efforts. Best Practice & Research Clinical Anaesthesiology 2010; 24:531-40.
