3,2,1 Handoff: An Intensive Intervention vs A Simple Handoff Tool for Teaching Perioperative Patient Handoffs

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Abstract

This study compares the effectiveness of an intense multimodal educational intervention with a simple mnemonic tool to teach CA-1 (PGY-2) anesthesiology residents how to effectively conduct a postoperative patient handoff. The effectiveness of these educational interventions were measured using an ISBARQ checklist evaluation (fig. 1) completed by Post Anesthesia Care Unit (PACU) nurses. These educational interventions on patient handoffs can be adapted by programs seeking to optimize patient safety. The data obtained from this investigation may serve as a pilot for a larger study of patient handoffs. Effective handoff training, utilizing a standardized approach to patient handoffs, may assist health care providers to improve the quality of patient care. However, from a practical standpoint, utilizing an intensive intervention may not be merited when a simple handoff tool may be adequate.

Background

A patient handoff occurs when one healthcare provider transfers responsibility, care, and information about a patient to another healthcare provider. Incomplete patient handoffs have been shown to have lower 30-day mortality rates for patients admitted for pneumonia. The ISBARQ handoff tool (fig. 1) was given a simulated sign out. Post-intervention, each resident returned to the same PACU nurses for re-evaluation using a new mock OB record of similar complexity. The ISBARQ pre-test and post-test checklist. This checklist was used by PACU nurses to evaluate mock patient handoffs performed by residents.

Methods

Methods (continued)

Subjects

Group 1: 15 PGY-2 residents starting July 2012
Group 2: 13 PGY-2 residents starting July 2013

Multimodal Educational Intervention (Group 1, July 2012)

- The ISBARQ handoff tool (fig. 1)
- A lecture on patient handoffs and the ISBARQ tool
- A role playing exercise involving patient handoffs and peer feedback
- A simulation session that required a patient handoff.

Simple Educational Intervention (Group 2, July 2013)

Group 2: 13 PGY-2 residents starting July 2013
- Multimodal educational intervention with a simple intervention.

Experimental Procedure

- Post intervention, each resident underwent the same post-test evaluation, with the same mock patient and PACU nurses as the group 1 posttest.

Experimental Procedure (cont)

Results

A mean improvement of 6.8 points out of 23 (P=0.001) was noted (p<0.0001) between the pre- and post-tests of group 1. The average group 1 post-test was only 1 point greater than group 2.

Discussion

Teaching residents to effectively transfer patient care is a crucial component of medical education. This investigation demonstrates that a simple handoff tool results in similar test scores when compared to an intensive intervention. One interesting difference in post-test scores is that group 1, after receiving the intensive intervention, had a smaller range of scores with a greater majority of the group scoring above a 22/23. The group 1 intervention brings more individuals into the top quartile range. While removal of an outlying participant may affect statistical significance of the similarity of the two post tests, practical consideration of the data could suggest that the intensive intervention may not merit using time and resources to improve average scores by one point. This is a consideration that all residency program directors must take into account when trying to efficiently train residents while adhering to duty hour restrictions and utilizing limited resources for educational experiences.

References


The two groups are considered statistically similar with means that are quite close together (14.13 vs.15.18, P =.152). However, when looking at the histograms, it is clear that Group 1 has more data points with a significantly higher score on the posttest than Group 2, but the extreme outlier is pulling down the mean of Group 1.

Figure 1 (left). ISBARQ checklist. This checklist was used by PACU nurses to evaluate mock patient handoffs performed by residents.

Figure 2 (above). The simple ISBARQ handoff tool. Neither group was allowed to use the tool during the actual testing.