

Automated Notifications Improve Time to Anesthesia Induction: Integrating Health Information Technology Systems to Enhance Perioperative Efficiency

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Objective: To evaluate the effects of health information technology systems integration on perioperative efficiency of anesthesiologists. Investigate if automatic notifications that patients have arrived in the operating room leads to decreased time to induction.

Methods: We performed a retrospective chart review of all outpatient and short-stay patients who received General Anesthesia at Josie Robertson Surgery Center between July 1, 2017 and June 30, 2018.

Time was used as a measure of efficiency between the two comparison groups. The two comparison groups were as follows:

Group 1: Pre-event notification implementation (July 1, 2017-Dec 31, 2017)

Group 2: Post-event notification implementation (Jan 1, 2018 – June 30, 2018)

Event is defined as the launch date of the automatic text page notifications to anesthesia attendings that patient has arrived in the operating suite. This text page is driven by the real time locating system (RTLS) badge that all patients now wear throughout the hospital stay. In this study, our primary outcome measure duration (DUR) was collected from patient electronic medical records:

DUR: Time (duration in minutes) between anesthesia start and induction of anesthesia, exclusively for first case of the day.

Results: Duration of induction was significantly shorter post-event notification implementation compared to pre-event implementation (median duration, 6 min vs 7 min; $p=0.001$).

Conclusion: We demonstrate that health information technology systems integration improves perioperative efficiency of anesthesiologists at our institution. Further investigation is warranted to provide data to support provider buy-in and greater uptake and implementation of these systems to enhance patient care and coordination in the healthcare setting.