

**Abstract Title:** A PROSPECTIVE OBSERVATIONAL STUDY OF EHR-BASED VERSUS VIRTUAL DESKTOP-BASED ACCESS TO PEDIATRIC ANESTHESIA EMERGENCY ALGORITHMS

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**Introduction:** When pediatric anesthesia emergencies occur, situations can deteriorate rapidly. At our hospital, the Society for Pediatric Anesthesia's (SPA) emergency algorithms are used as cognitive aids during crises, and nurses are tasked with accessing the algorithms. Operating room nurses' typical workflow includes continuous display of the of the electronic health record (EHR) intraoperative navigator, which can delay navigating to the virtual desktop window and the algorithms' icon. Thus, we implemented a button in the intraoperative navigator's toolbar to access the algorithms with one click. We conducted an observational study of the time required to access and display overhead an algorithm using the new button and old method. We surveyed participants on usability.

**Methods:** The quick access button was implemented in the EHR (Epic, Verona, WI) in October 2022. Nurses were oriented to the purpose and function of the new button prior to using it. The study team timed perioperative nurses as they accessed the algorithms using the new button and then with the virtual desktop icon. A usability survey link was shared after each timing session.

**Results:** Nine nurses completed the timing sessions. Accessing algorithms took significantly less time using the new EHR button compared to the virtual desktop method (16.3 vs. 32.3 s,  $p = 0.025$ ). On the usability survey, 8 of 9 respondents strongly agreed that the new button was easy to use, facilitated access to the algorithms, and was faster than the old method.

**Conclusion:** EHR-based access to pediatric anesthesia emergency algorithms is feasible and took significantly less time to access algorithms than a virtual desktop icon in a cohort of perioperative nurses. User experience survey responses were highly favorable overall. Plans include additional testing and analyzing the use of the tool during simulation sessions and actual emergencies.