Learning From Others: A Case Report from the Anesthesia Incident Reporting System

Case 2022-1: Pagers... What’s a Pager?

A 1-year-old male was undergoing a craniosynostosis procedure when the resident noted an increase in bleeding and an elevated heart rate from baseline. The resident texted his attending. The attending was not carrying her personal cellphone and did not receive the message. The other attending was not carrying her cellphone either. The attending resident and the on-call anesthesiologist at the main hospital sent an urgent chat message via the EHR to her partner that was received. Their phone was in silent mode, but the urgent message somehow set off an audible alert. The on-call anesthesiologist at the main hospital, who had been notified by text message the night before, was admitted to an emergency room. The patient returned to the operating room for an emergent exploratory laparotomy, turned a phone number page or placed a phone call, and ultimately required a second emergent laparotomy, which was complicated by continued bleeding and an elevated heart rate. The attending was not carrying her personal phone, and there was no secure chat message to the physician she was covering the patient and was not able to break through a user’s settings and alerts to preserve resilience and reduce alert fatigue.

HIPAA and Confidentiality Considerations

The HIPAA Security Rule mandates the following must be adhered to when sending patient information via text messages:

- **Access Controls:** The device must be secured with a passcode, and patient information must not be viewable unless the authorized user has accessed the device. This means apps that “preview” the message without security are not allowed.
- **Audit Controls:** These monitor who accesses what information and when. This is not available for traditional text messages. Typically a business associate agreement with the vendor is part of accessing audit trails.
- **Encryption:** Patient information must be secured end to end. Encrypting data ensures it cannot be intercepted by unauthorized users. SMS messages and many pages are not encrypted.

Access the HIPAA Security Rule at asamonitor.pub/3q5buFZ.
Recommendations

- Partner with your organization to align on a consistent method of communication for notifications and urgent communication. Develop this into a formal policy.
- Try to reduce the number of methods of communication. Ideally there would be one asynchronous method and one phone-based method.
- Train on your preferred communication methods and make sure they are reliable. Understand how “breakthrough” messages work and when to use them.
- Onboard new members to your group to ensure they are part of the paradigm and have the equipment and software logins required.
- Consider the legal and confidentiality aspects of your communication platforms. Discourage use of SMS or iMessage texts for clinical care.
- Avoid “message tennis” – when things become complicated or are clearly acute, transition to a phone call or in-person communication.
- Practice closed-loop communication. The sender is always responsible for making sure the patient receives the care that is needed. If there is no response to a message, escalate to another person.
- If you are medically directing or supervising an anesthesia care team, proactively discuss and agree on communication methods for the day.

As anesthesiologists, we are extremely facile with new technologies, as they are at the core of our practices. We are also experts in patient safety, and our peers in medicine look to us for guidance on how to apply technology to time-sensitive situations. We are in a prime position to advocate for the thoughtful review and alignment of communication tools. Our recommendation is to do exactly that.

The primary take-away from this case report and analysis is that there is still a place for phone calls, and with these new technologies, closed-loop communication becomes even more critical. Remember, when in doubt, picking up the phone or going to the bedside is always the right choice.

ACE Question

A 76-year-old woman presents for urgent exploratory laparotomy. She has been receiving several medications for the management of dementia. Which of the following medications is MOST likely to interfere with neuromuscular blockade?

- (A) Citalopram
- (B) Memantine
- (C) Donepezil

As the population ages, more patients are receiving drugs for the treatment of dementia. Many of these drugs have possible interactions with perioperative medications. The indication for some of the commonly used medications is based on a presumed link between loss of cholinergic input and dementia.

Anticholinesterase medications are also frequently used in the treatment of dementia (e.g., donepezil). These medications may prolong paralysis from succinylcholine and impact nondepolarizing muscle relaxants by decreasing or reversing their effects. In order to avoid this interaction, stopping these dementia medications a day before surgery has been suggested. For most medications in this category, the elimination half-life is short enough that this can be considered. Donepezil has a half-life of 70 hours and should ideally be discontinued two to three weeks prior to anesthesia.

If nondepolarizing muscle relaxation is needed, the patient may require higher doses of neuromuscular blockers. If a patient receives anticholinesterase for dementia treatment until the time of surgery, perioperative management would include avoidance of succinylcholine. High-dose rocuronium or vecuronium with sugammadex reversal could be used instead.

Citalopram and memantine are unlikely to interfere with neuromuscular blockade.

References:
1. Alcorn S, Foo I. Perioperative management of patients with dementia. BJA Education. 2017;17(3):4-98. doi:10.1093/bjaed/mkw038