



Statement on Distractions

Committee of Origin: Quality Management and Departmental Administration

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Introduction

Anesthesiologists perform complex tasks and are often required to have parallel cognitive awareness of more than one patient or work stream. Distractions and interruptions from normal workflow often occur in the operating room and in procedural areas (e.g., Pre-operative holding, Cardiac Catheterization Lab, Endoscopy, Interventional Radiology, Post Anesthesia Care Unit). An essential aspect of the safe anesthesia care environment includes managing the working environment to limit, and when possible to eliminate distractions that reduce appropriate attention to the patient. Equally important is the harmful effect distractions have on anesthesia providers, resulting in higher mental stress and poorer teamwork.¹ It is important to understand the multitude of possible distractions in order to mitigate potential detrimental effects.^{2,3}

Categories of Distraction

Technology required for direct patient care

The use of technology is integral to the anesthesiologist's workday. Electronic technologies including computers, smartphones, and handheld tablets are ubiquitous in the care environment and can improve medical decision making through rapid access to needed medical information and improved communication. Although the use of this technology is an essential part of medical practice, anesthesiologists must be disciplined in the use of these tools while providing direct patient care to avoid distraction.^{3,4,5} Technologies appropriate for concurrent use during patient care may include the electronic medical record, internet searches for clinically related information, and professionally relevant email correspondence. Telephone use and texting should be limited to professionally related activities and kept to a minimum.

Other technology

Personal electronic devices (PEDs) represent existing and evolving technologies that can become a direct and indirect source of occupational distraction and potentially contribute to patient harm. PEDs include, but are not limited to cell phones, tablets, smart watches, and laptop computers. Anesthesiologists, as leaders of the anesthesia care team, should defer nonessential activities such as social media, personal email, and other non-context relevant web searches.⁶

Interruptions related to the care of other patients

Whether practicing solo or in an anesthesia care team model, anesthesiologists are often responsible for the simultaneous care of multiple patients. Interruptions and distractions related to the care of other patients are inevitable and can occur even during critical periods. While focusing on the care of one patient in the operating room, an anesthesiologist may receive calls from the Post Anesthesia Care Unit (PACU) or pre-operative area regarding clinical management, orders, or medication changes of other patients. These types of interruptions may be unavoidable, and techniques should be considered to mitigate the impact of these distractions when possible. Ensuring that best practices for perioperative handoffs are followed, with attention to contingency planning and closed-loop communication may also help reduce the need for post-operative interruptions.



Distractions due to Administrative Responsibilities

In addition to those distractions that may occur as a result of direct patient care, anesthesiologists may also be faced with a variety of distractions related to administrative responsibilities necessary for the functioning of the operating rooms. These may include answering pages and phone calls related to the management of the operating room schedule, allocating resources for urgent or emergent cases, pre-operatively reviewing future surgical cases, and addressing immediate and future staffing needs. When possible, activities related to these responsibilities should be avoided by those providing direct care for patients or should be delayed until another clinician can safely assume direct care of the patient.

Ancillary Noise and Alarms

Excessive noise in the operating room environment makes it difficult to discern and understand information, hinders the ability to communicate effectively, and may lead to miscommunication, errors, and adverse patient events.^{7,8,9} It is known that noise negatively impacts concentration and task performance among anesthesiologists as well as reduces the ability to detect signals from monitors and other equipment.^{4,10,11} The Environmental Protection Agency (EPA) recommends that background noise in hospitals should not exceed 45 decibels (db) during the day, however the average noise in the operating room is 66 db, and can be significantly higher during some surgical procedures (e.g. orthopedics, otolaryngology, and trauma).^{12,13,14} In addition, studies focused on anesthesia have found the noisiest periods during surgery are associated with induction and emergence of anesthesia.¹⁵

Care-related or intrinsic sources of noise in the operating room include monitors and their alarms, surgical and anesthetic equipment and devices (e.g. lasers, robotics, forced air warmers, powered surgical tools), team communications (time outs and post-operative debriefs), hand-offs and case-related conversations with anesthesia colleagues, and education of trainees. Anesthetic equipment alarms are meant to reduce harm and focus attention, and thus play a crucial role in safe anesthetic practice.¹⁶ The reality is that 85-95% of alarms in the operating room do not require clinical intervention.¹⁷ The high frequency of these “false alarms” and clinicians’ responses to address them, can be a significant operating room distraction for anesthesiologists.¹⁰ This cycle can ultimately lead to “alarm fatigue,” due to the continuous effort required to differentiate true from false alarms. The Joint Commission has proposed the introduction of “smart alarms” for patient specific needs, clinician input and standardized evidence-based design criteria during operating room equipment development, as well as creation of tools to assist in institutional alarm safety protocols.^{18,19}

Extrinsic or non-patient care related causes of noise in the operating room include music, irrelevant conversation, and excessive OR traffic.²⁰ Music volume, genre, and lyrics must be selected with sensitivity to all team members, and must be modulated during periods of critical care.²¹ Irrelevant and parallel conversations should be minimized, and operating room traffic should be controlled for both distraction and infection control reasons.

While eliminating all sources of noise in the OR is not feasible as many are necessary and unavoidable, organizations should consider a systems approach to minimize noise and improve patient safety and staff performance.²² Perioperative Team members should define “no-interruption zones” also referred to as “sterile cockpit” protocols.^{23,24,25} These are critical times in the operating room when any excessive noise or distraction may interfere with the patient’s safety and outcome. Some of these critical phases include time-outs, induction and emergence from anesthesia, critical surgical dissections, surgical counts, and post-operative debriefs.²⁶ In addition to no-interruption



zones, other actions to modulate noise include staff education on sources of noise and noise reduction strategies, creation of a safety culture where OR personnel comfortably communicate and speak up for silence when appropriate, and establishment of a policy and code of conduct to minimize noise.²⁴

Recommendations and Conclusions

Anesthesia groups and departments should work within their organizational structures to develop mechanisms and implement policies and procedures to address the impact of distractions on the safe delivery of patient care.¹⁰ Development of local standards should always take into account Society and National accrediting body guidelines. Mitigation strategies and interventions may include:

- Establish a risk-stratified policy for acceptable and unacceptable use of PEDs
- Develop protocols for institutional alarm safety and use of “smart alarms”
- Establish guardrails regarding optional noise such as music played in critical areas
- Define “no-interruption zones” also referred to as “sterile cockpit” protocols
- Monitor and reinforce adherence to pre-procedure safety time out without distraction
- Ongoing evaluation of new technologies for benefit and potential risk of distraction

Given the multi-factorial nature of distraction, policies should be developed locally to allow for flexibility based on the group or facility’s unique circumstances. Education about distraction and mitigation strategies can increase an organization’s and individual’s self-awareness and also provide tools to engage effective responses at both the individual and organizational level.

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⁹ van Pelt M, Weinger MB. Distractions in the Anesthesia Work Environment: Impact on Patient Safety? Report of a Meeting Sponsored by the Anesthesia Patient Safety Foundation [published online ahead of print, 2017 Jun 9]. *Anesth Analg*. 2017;10.1213/ANE.0000000000002139.



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