

Background

- Computers, telephones, mobile devices, beepers add to OR process distractions
- Hyper-vigilance lessened by routine programming for elective procedures contribute to adverse events
- Team communication necessary to prevent adverse outcomes
- Multitasking is a common justification for distracting cell phone use
- Disruptions and equipment failures are top interferences in safe OR team performance and outcomes

Clinical Question

How do distractions and interruptions impact teamwork, communication, and patient safety in the operating room?



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Case Report

- 62-year-old man with a body mass index of 43kg/m² presented for bilateral laparoscopic extraperitoneal inguinal hernia repair with planned GETA
- Pertinent medical history includes morbid obesity and obstructive sleep apnea (OSA)
- Scrub tech received call during case from mobile device alerting of family emergency
- Personal matter discussed among OR team-scrub tech continued to work when emotionally troubled
- Scrub tech was replaced after exiting and re-entering room and making several phone calls on speaker phone
- After procedure and uneventful extubation, supplies not included in the original count and items observed from previous case discovered in OR
- Patient detained in OR for 30- minutes for x-ray to rule out retained foreign body secondary to incorrect count
- Additional medication (antibiotic, midazolam and fentanyl) required along with complex airway management related to OSA

Level of Evidence

Antoniadis et al. *J Surg*, 2014– Melnyk & Fineout-Overholt Level IV
Hu et al. *J Surg Res*, 2012– Level IV
ElBrardissi et al. *Surg Clin North Am*, 2012- Level VI
Bohomol et al. *Acta Paul Enferm*, 2013- Level V
Bubric et al. *ORNAC J*, 2019- Level V
Kertesz et al. *J Radiol Nurs*, 2020- Level IV
Murji et al. *Surg Endosc*, 2016- Level III

Evidence Based Discussion

- Operating teams are distracted or interrupted 9.82 times per hour
- Most frequent distractions: staff entering/exiting the OR, phone calls/beeper pages
- Anesthetist interruptions average - 4.85 times/case
- Communication failures (often result of distractions and interruptions) contribute to 88.7% of flow and safety errors
- All team members are responsible for eliminating factors that may contribute to errors
- Surgical count errors can be reduced by treating counting times as a quiet time, involving everyone in the room
- Patients with comorbidities and complex disease processes are at increased risk for complications related to safety errors
- Mobile device use should be reserved for case related activities
- Mobile phone distraction leads to repetition of verbal orders
- Risks for adverse outcomes due to the complex activities of monitoring vital signs, IV equipment and infusions, as well as ventilation requirements make interferences with anesthetists critical

Level of Evidence (cont.)

Mason et al. *Cochrane Database Syst Rev*, 2015- Level I
Sergeeva et al. *Health Informatics J*, 2016- Level V
Wheelock et al. *Ann Surg*, 2015- Level IV

Translation to Practice

- Instrument safety is multidisciplinary
- Efficiency of care hand-off might be improved with standardization
- Protocols for mobile devices could limit non-work-related use
- Each operating facility should study their unique interruption and distraction patterns and develop facility specific protocols to improve team focus
- Preventing or limiting room exiting and entering may prevent distraction intraoperatively
- The anesthetist is responsible for voicing concerns about distractions and interruptions to the team
- More research is needed to determine how technology can interfere with workflow of the anesthetist and OR team

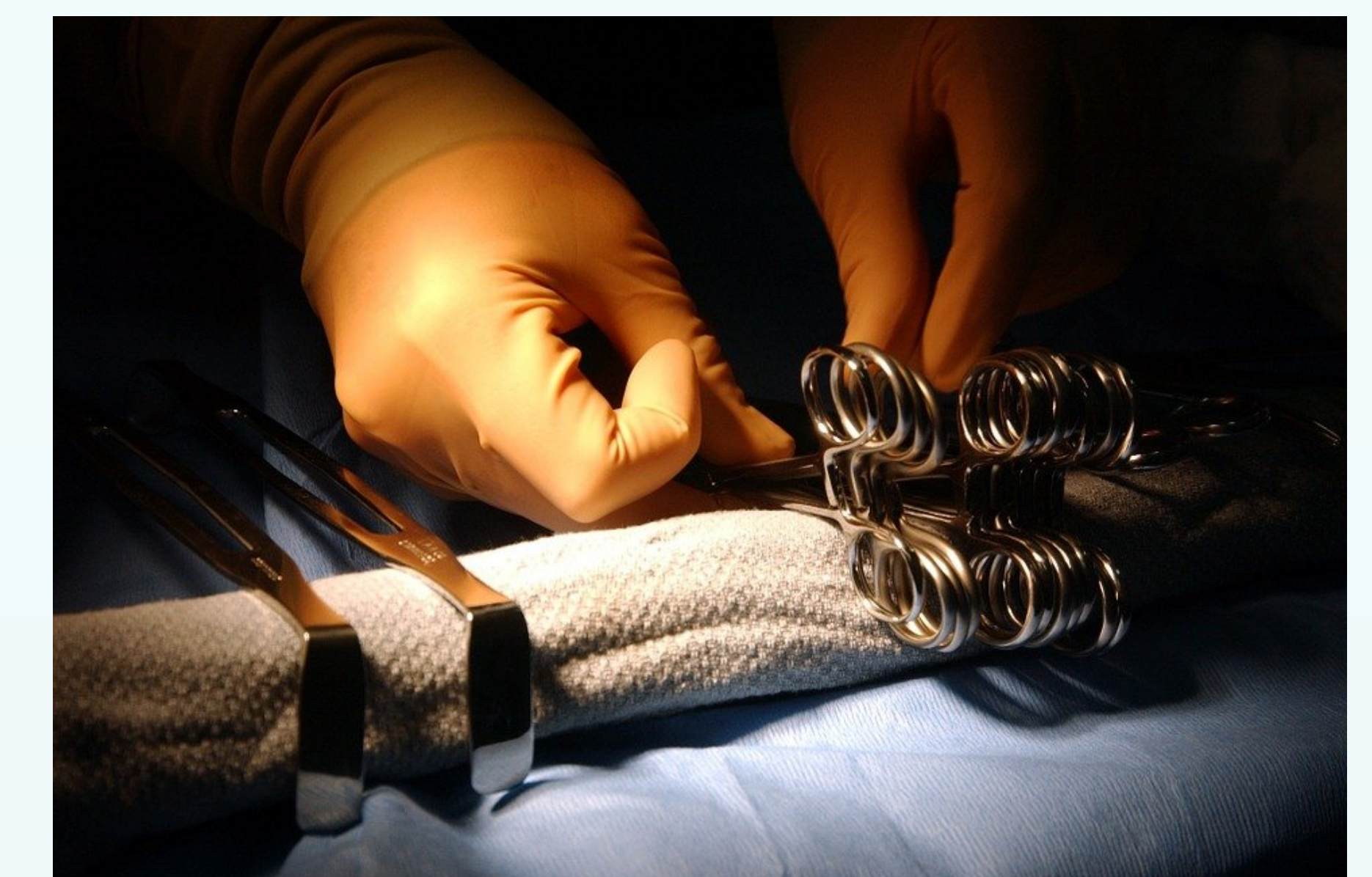
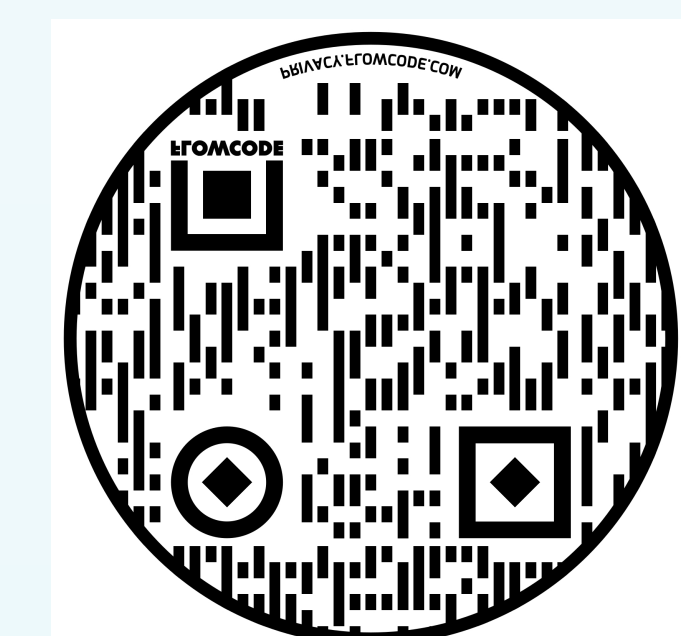


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References

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Questions?

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