

Patient Safety Tip of the Week

February 23, 2021

Cellphones and the OR

It’s been a year since our last soapbox rant about cellphones in the OR (see our January 28, 2020 Patient Safety Tip of the Week “[Dang Those Cell Phones!](#)”). A recent “Viewpoint” in JAMA Surgery has rekindled the debate about cellphones in the OR. Cohen et al. ([Cohen 2020](#)) reviewed the benefits and harms of personal communication devices (PCD’s) or smartphones in the OR. They summarized the benefits and harms of PCD’s:

Benefits

- Ease of collaboration between physicians of different specialties and training levels
- Ability to obtain expert advice from off-site senior colleagues/ specialists
- Ability to transfer and remotely evaluate clinical images
- Allow medically underserved areas to obtain specialist guidance
- Allow synchronous communication
- Offer applications that can be used to guide medical care (eg. medication dosing, clinical guidelines, and surgical equipment/technique guides)
- Can be used to access social media platforms, which have been used to disseminate and discuss medical information

Harms

- Introduce unwanted disruptions and distractions
- Associated with cognitive disengagement from other tasks
- Associated with reclusive behaviors (eg. being more invasive, impolite, and disruptive)
- Create the expectation of increased availability and immediate responsiveness
- Make it difficult to maintain the boundaries between work and personal life
- Introduce negative work-related consequences (eg. increased work hours, absenteeism, elevated stress levels, and lower productivity)

We’ll be quick to point out that most of the benefits listed by Cohen et al. do not necessitate cellphones being in the OR. Also, the important access to medical imaging and access to tools such as medication dosing apps are already available on the computers currently in the OR, so we don’t need cellphones for access to those in the OR.

But the potential harms listed by Cohen et al. are real, particularly the unwanted disruptions and distractions and cognitive disengagement from other tasks. A previous study by Cohen et al. ([Cohen 2018](#)) had looked at the impact of PCD's during cardiovascular surgeries. They identified a total of 545 PCD-related events during 25 cases. While most individuals spent less than a few minutes attending to their PCD's, a handful of these disruptions lasted an abnormally long time. On average, each of the 545 events took 1 min, 26 s (SD = 1 min, 40 s) of attention. Most PCD use events took place during bypass (n = 233) followed by pre-bypass (n = 197) and post-bypass (n = 115). Of the 545 events, nearly half (48.81%) involved the anesthesia team, followed by the perfusion team (30.28%), circulating nurse (16.70%) and surgeon (4.22%).

While the authors could not determine exactly how the devices were being used in some of the cases, they were able to document behaviors such as texting, emailing, phone calls, and non-hospital related use. Thus, the device itself resulted in multiple types of distractions distributed across the different phases surgery.

The authors also point out that their data do not support the commonly used argument that PCD use is restricted to non-critical phases of surgery. Their data showed team members were engaged with their PCD's for approximately a minute and a half regardless of the stage of the operation. Additionally, the greatest number of PCD-use events occurred during the most critical phase of surgery, bypass.

One example provided was that the surgeon was opening patient chest when his personal cell phone started ringing. He stopped opening so that the circulating nurse could get his cell phone out of his pocket and hold up the phone to his ear so he could answer. In our August 20, 2019 Patient Safety Tip of the Week "[Yet Another \(Not So\) Unusual RSI](#)" we described a case that resulted in a retained surgical item (RSI). In that case, one of the likely contributing factors was that the surgeon's phone rang several times during the third count, before being answered by the anesthesiologist.

Cohen et al. discuss several factors that may explain such behavior in the operating room. These include comfort with the procedure and equipment, complacency, boredom in what are typically hours-long procedures, and feeling the societal pressure to answer texts, calls, and emails as soon as possible.

A 2016 APSF (Anesthesia Patient Safety Foundation) conference "Distractions in the Anesthesia Work Environment: Impact on Patient Safety" ([van Pelt 2017](#)) noted several issues related to personal electronic devices (PED's) in the OR:

- Infection risk that PED's pose when handled in proximity to sterile areas
- HIPAA-related confidentiality concerns when accessing and sharing sensitive information
- PED contribution to noise and distraction, particularly when used for nonemergent and nonpatient care activities
- Medicolegal issues

- Defense-favorable verdicts were unlikely when PED use was introduced as evidence for lack of vigilance, irrespective of purpose
- PED usage data were discoverable
- Consequences of PED-related plaintiff verdicts went beyond compensatory damages, including licensing sanctions, National Practitioner Data Bank reporting, and unfavorable media coverage

In addition to our example above of a surgeon's phone ringing several times during a surgical count as one of several factors likely contributing to a retained surgical item, our Patient Safety Tips of the Week May 21, 2013 "[Perioperative Distractions](#)", March 17, 2015 "[Distractions in the OR](#)", and July 21, 2015 "[Avoiding Distractions in the OR](#)" had detailed discussion about use of cell phones and other wireless devices in and around the OR with multiple examples of distractions related to such in the OR. There are a multitude of issues related to cell phones in the OR including not only interruptions and distractions but also infection control issues, security and confidentiality issues, and detrimental effects on communication in the OR. We have yet to see a cogent argument as to why cellphones are actually needed in the OR. Our own recommendation is for all the OR team to **leave their cellphones at the main OR desk where someone can triage incoming phone calls and messages.**

Our January 28, 2020 Patient Safety Tip of the Week "[Dang Those Cell Phones!](#)" noted an AORN (Association of periOperative Registered Nurses) proposal having several recommendations to reduce distractions and interruptions in the OR ([AORN 2019](#)). Some focused on reducing overall sources of noise pollution in the OR. But others focused specifically on cell phones. One recommendation is to "Emphasize the importance of limiting non-essential conversations, muting cell phones or limiting their use, and limiting the number of people in the OR." Another recommendation was to reiterate safe cell phone use, recognizing that some facilities allow surgical team members to carry their personal cell phone with them, Regular reminders about safe cell phone use can be helpful, such as "Personal devices may add to the overall noise pollution in the OR, which can distract personnel from clear communication and safe patient care." It goes on to emphasize minimization of distractions during critical phases of the procedure, such as the time out, anesthesia induction and emergence, surgical counts, and specimen management. Especially during those critical times, "personal devices should be left outside the OR, turned off, placed on vibrate or silent mode, and handled only when needed."

A number of questions about cell phones in the OR were addressed in a another AORN Journal article ([Ogg 2019](#)). The AORN "Guideline for a safe environment of care" recommends that personal electronic devices should be limited to use directly required for job performance. It states that health care organizations should have policies and procedures in place that specify when a cell phone may be brought into the OR. Furthermore, it states that perioperative personnel also should consider interventions to mitigate the known risks associated with bringing personal electronic devices into the OR.

They note the risks involved with bringing a personal electronic device into the OR include:

- infection
- noise pollution
- distraction
- increased potential for violations of patient privacy related to protected health information

They cite statistics on microbial contamination of cell phones and note interventions that may reduce the risk of a surgical site infection (SSI) originating from contaminated personal electronic devices include cleaning the device regularly, handling the device sparingly, and performing hand hygiene after each use.

Overall, they recommend that, whenever possible, personal devices should be:

- left outside the OR
- turned off
- placed on vibrate or silent mode to limit noise and distractions
- handled only when needed
- cleaned according to the manufacturer's instructions for use

And the other issue related to cell phones is the issue of **texting**. Orders should never be texted (see our multiple columns on the subject below). But even for messages used for communication other than orders, care must be taken so that commonly used text abbreviations and shortcuts are not mistaken by those receiving the texts.

Every facility and organization needs to have a PED policy. A report from the ECRI Institute ([Rose 2019](#)) had some very good suggestions for facilities to develop policies for use of personal electronic devices. Such policies should balance the needs of staff members, residents, visitors, and the institution as a whole while clearly defining when, where, and for what purposes PED's may be used. The policy should also include a clear definition of data ownership—that is, which data are considered owned by the facility and which are considered owned by the PED user—and clearly identify what constitutes sensitive information. It also discusses 3 approaches to allowing PED's in the facility: (1) facility-provided devices, (2) "Bring your own device" (BYOD), and (3) a hybrid approach. The facility/organization should have a committee that decides where PED's may be used. It may decide to ban PED's from certain areas or to restrict them to certain areas, such as common areas or staff lounges. It also has practical recommendations on what information may be accessed or stored on PED's, how PED's will be managed, what to do if a PED is lost or stolen, and how restrictions on PED use or misuse will be enforced.

Prior Patient Safety Tips of the Week dealing with cell phones:

- November 27, 2012 [“Dealing with Distractions”](#)
- April 16, 2013 [“Distracted While Texting”](#)
- May 21, 2013 [“Perioperative Distractions”](#)

- March 17, 2015 [“Distractions in the OR”](#)
- July 21, 2015 [“Avoiding Distractions in the OR”](#)
- February 9, 2016 [“It was just a matter of time...”](#)
- August 20, 2019 [“Yet Another \(Not So\) Unusual RSI”](#)
- January 28, 2020 [“Dang Those Cell Phones!”](#)

See our other Patient Safety Tip of the Week columns dealing with texting:

- February 9, 2016 [“It was just a matter of time...”](#)
- May 24, 2016 [“Texting Orders – Is It Really Safe?”](#)
- January 2017 [“Joint Commission Thinks Twice About Texting Orders”](#)
- June 27, 2017 [“Texting – We Told You So!”](#)
- January 30, 2018 [“Texting Errors Revealed”](#)
- January 28, 2020 [“Dang Those Cell Phones!”](#)

Prior Patient Safety Tips of the Week dealing with interruptions and distractions:

- August 25, 2009 [“Interruptions, Distractions, Inattention...Oops!”](#)
- November 3, 2009 [“Medication Safety: Frontline to the Rescue Again!”](#)
- December 15, 2009 [“The Weekend Effect”](#)
- May 4, 2010 [“More on the Impact of Interruptions”](#)
- October 12, 2010 [“Slowing Down in the OR”](#)
- March 8, 2011 [“Yes, Physicians Get Interrupted Too!”](#)
- July 31, 2012 [“Surgical Case Duration and Miscommunications”](#)
- August 28, 2012 [“New Care Model Copes with Interruptions Better”](#)
- November 27, 2012 [“Dealing with Distractions”](#)
- April 16, 2013 [“Distracted While Texting”](#)
- May 21, 2013 [“Perioperative Distractions”](#)
- July 1, 2014 [“Interruptions and Radiologists”](#)
- November 2014 [“More Radiologist Interruptions”](#)
- March 17, 2015 [“Distractions in the OR”](#)
- July 21, 2015 [“Avoiding Distractions in the OR”](#)
- August 30, 2016 [“Can You Really Limit Interruptions?”](#)
- November 8, 2016 [“Managing Distractions and Interruptions”](#)
- March 7, 2017 [“Nested Interruptions”](#)
- April 11, 2017 [“Interruptions: The Ones We Forget About”](#)
- February 13, 2018 [“Interruptions in the ED”](#)
- May 2018 [“Cost of Interrupting a Radiologist”](#)
- December 2019 [“Hospitalist Shifts Matter, Too”](#)
- January 28, 2020 [“Dang Those Cell Phones!”](#)
- September 2020 [“AORN on Distractions and Interruptions”](#)

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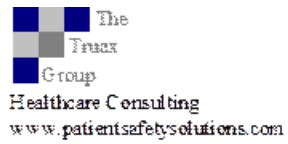
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