Smartphones, tablets in the OR: With benefits come distractions

Use of personal mobile devices is pervasive in surgery departments. As in the rest of life, they bring benefits but also risks, OR Manager found in an online survey.

An overwhelming majority of respondents—86%—say they believe personal use of mobile devices in the OR sometimes distracts providers from patient care.

Yet there are benefits in convenience and communication. Summing up the dilemma, one person wrote, “We discouraged carrying cell phones and the use of them except on breaks but found that texting surgeons or direct calls to their cell phones was the most efficient way to contact them.”

Mobile devices can be a management headache. Just over half—54%—say OR personnel have been disciplined for use of a personal mobile device while on duty.

And their use potentially endangers patients. Two told of an adverse event possibly linked to personal use of a mobile device—a wrong-site surgery and a near miss involving a specimen.

To help address the problem, an anesthesiologist is advocating a new “electronic etiquette” for surgical services (p 9).

Survey invitations were e-mailed in February 2012 to 350 OR Manager subscribers. A survey link was also included in the weekly OR Manager email bulletin. In all, 124 responses were received. Two-thirds of respondents (66%) were from community hospitals, with 26% from teaching facilities, and 8% from ambulatory surgery centers.

Policies on mobile devices

In all, 13% say their OR has a policy on personal use of mobile devices, and 48% say their hospital has a policy. For 18%, both the OR and hospital have policies. For most—79%—the policy applies only to employees rather than to both employees and physicians.

Most (58%) say the hospital issues mobile devices to use for pages and calls, while 9% require the staff to use their own devices; about a third (35%) say their facility has no policy on this.

For those with a policy, 88% say it prohibits personal use of mobile devices in patient care areas.

“In our department, staff is only allowed to use their personal communication devices during their break and in specified areas (lounge and locker rooms),” one person says.

But several comment that the policy is not enforced. “While the policy prohibits it, the use is rampant,” one notes.

Surfing in the OR

Nearly all (92%) said clinicians can use the OR computers to access the Internet. Of these, two-thirds (68%) say this access had been abused.

Some note that their facility has firewalls that limit access to certain websites.

“We discourage nonclinical use, but I know it goes on,” one respondent comments. “We have filters that block social sites and specific types of sites.”
But even with restrictions, a few say some staff and physicians find a way to override them.

One person reports personnel were “watching the Masters [Golf] Tournament during a case.”

**Patient care distraction**

More than 8 in 10 say they believe personal use of mobile devices in the OR sometimes distracts providers from patient care. The majority see it as a problem for all disciplines, most commonly anesthesia personnel (80%) and nurses (69%).

Over half (55%) have received reports of an OR clinician being distracted by a mobile device during patient care, and 41% have personally witnessed distracted behavior. “Texting is the biggest problem,” one person writes. Examples were given of anesthesia providers doing crossword puzzles, playing games, or listening to music during cases.

“A CRNA [certified registered nurse anesthetist] was using his phone while hooking up leads on a patient. It was reported to his manager, and verbal discipline was given,” a respondent writes.

Another says a policy was developed after “surgeons have indicated staff are on personal devices.”

They also acknowledge the convenience. Says one, “People can get caught up in texting and not pay attention to the procedure. However, having phones does help CRNAs with having drug information, calculator, and all that information at their fingertips.”

The safety concerns were similar to those in a 2010 survey of perfusionists, in which 78% of respondents said they thought cell phone use can introduce a potentially significant risk to patients. Yet 56% said they had used a cell phone during cardiopulmonary bypass, and 49% had sent a text message.
A cause for discipline
Sanctions for inappropriate use of mobile devices range from counseling to termination. Over half (54%) of respondents say OR personnel have been disciplined for this reason. Among reasons: using a phone during work, taking inappropriate photos, and texting during cases.

A few examples:
• “Tried to take a picture of a huge knife stabbed [into a] trauma patient.”
• “Nurse was on her cell phone sitting outside in the hallway during surgical procedure in which she was circulating, and they needed her assistance in the room.”
• “I had an RN dispense the incorrect medication to the sterile field while she was on her cell phone. Even though the scrub tech was watching, the nurse failed to hear or was not paying attention at that moment. She was given a verbal warning and asked not to talk on the phone while in the OR.”

Adverse events
Six respondents of the 112 who answered this question indicated personal use of a mobile device was possibly linked to an adverse event during surgery. The 2 events described were:
• a wrong-site surgery (no details given)
• a near miss: “We almost left a specimen in a patient.”

Fielding pages, messages
Though not necessarily related to mobile-device use, pages and messages for physicians are another potential source of distractions during surgery. Only a few (5 of 115) say their OR has a policy on pages or other messages.

“Need one badly. Pager interruption has been identified as a contributing factor in a near miss root cause analysis,” said one person.

Yet another writes: “Circulators are pulled away from patient care to act as an answering service for nonessential phone calls.”

Cell phone interference
Though the risk of electromagnetic interference (EMI) between cell phones and devices is low, the possibility can’t be ruled out, ECRI Institute advises.

The institute’s position hasn’t changed since it issued a guidance article in 2006.

“We continue to believe that use of these wireless devices should be restricted in certain highly instrumented areas such as the ICU and the OR, at the very least, preventing their use within 1 meter, or 3 feet, of critical medical equipment,” says Art Augustine, senior project engineer.

Because restricting use may not be practical, the institute recommends providing an alternative, such as nearby cellphone friendly areas for patients, visitors, and staff. These might include lobbies, lounges, or general patient care areas.

ECRI Institute is a nonprofit organization that researches health care technology and services.

References

Restrict cell phone use, at least near devices, ECRI recommends. OR Manager. 2007;23(5):13.
Others note a legitimate need. “OR staff typically respond to pages when able, as we have residents who may be on call when doing surgery.” Another says that the surgical service is cooperative in setting guidelines and avoiding pages during surgery.

**Educating the staff**

About a third (30%) provide education to the staff on appropriate use of personal mobile devices, and 8% do so both for employees and physicians.

Though still a minority, 24% are harnessing mobile devices as a way to make some clinical education available to the staff.

**Infection prevention**

Studies have documented that mobile devices like cell phones and pagers carry bacteria. Yet few of the respondents—only 7 of 112 answering this question—say there are cleaning requirements for mobile devices brought into the OR. (See sidebar p 8 for research on contamination and cleaning.)
Wiping cell phones reduces bacterial contamination

OR personnel pay strict attention to changing clothes, covering their hair, and practicing hand hygiene to protect patients from pathogens. But that attention doesn’t extend to cell phones, Scottish researchers note.

They tested a cleaning protocol that was effective in reducing contamination on cell phones. Sampling cell phone keypads of 75 devices belonging to clinicians before they entered the OR, the researchers led by Richard R. Brady found 90% of the devices were contaminated with bacteria, and 12% had bacteria known to cause health care-associated infections. Over 80% of the devices had never been cleaned by their owners.

Does cleaning help?
A new study by the same group tested the effect of cleaning, sampling 87 mobile phones carried by physicians before and after cleaning.

After initial sampling, the phones were cleaned with a wipe containing 70% isopropyl alcohol. The phones were then stored overnight in their chargers and swabbed again 12 hours later before being picked up for the day’s shift.

Before cleaning, 55% of the phones had bacterial contamination, including 4% with pathogenic bacteria. After cleaning, the number of phones with the sentinel bacteria was reduced by 79%.

Another study by Beer and colleagues found wipes with 0.5% chlorhexidine-70% isopropyl alcohol were more effective in eliminating all bacterial growth compared to wipes with alcohol or quaternary ammonium compounds.

Other cleaning technologies, including antibacterial covers, UV light sanitizers, and a charging apparatus that also decolonizes the device surface have potential but haven’t yet to been fully tested in clinical trials, the researchers note.

Advice for clinicians
The researchers’ advice for health care workers to avoid transmitting bacteria from their devices:
• Carry the minimum number of electronic devices.
• Use good hand hygiene.
• Clean devices regularly.

References


A cultural change
Judging from the results, mobile devices, with their intriguing and useful features, captivate health care professionals just as they do the rest of society. They also introduce a new level of distraction into an already stressful environment.

As one respondent observes: “It has become a normal part of life. We reach for a cell phone now like we used to reach for a pen.

“It’s a challenging cultural change.”

—Pat Patterson

OR Manager acknowledges Trevor Smith, CCP, LP, for providing background on his survey of cell phone use by perfusionists in the OR.

Reference