



# Management Bulletin

North Carolina State Laboratory of Public Health | Laboratory Improvement Unit

## Calling All Laboratorians: The Cell Phone Dilemma

Do you start to panic when your cell phone is misplaced? Do you frequently check your phone even when it's not ringing? Do you go out for a meal and realize that you spent more time interacting with your phone than with your dinner partner? Is it impossible for you to attend a meeting, church, movie, or other event without checking your phone at least once?

If you answered yes to any of these questions, you may be suffering from *nomophobia*. This term was coined to define the fear of being out of mobile phone contact, and it is very real to most people. Our cell phones have become an extension of *us*. We use them to stay in touch with family members, check on sick children, keep up with breaking news, and stay informed on adverse weather events. A survey of 2000 Americans by Lookout, a mobile security app maker, found that 73 percent of people panic when they misplace their phones, and 7 percent feel physically sick.

This emotional attachment to our cell phones presents huge concerns for laboratorians who are asked to refrain from using their devices in the laboratory. It is inconceivable to some employees to leave their phones behind in a locker or other secure work area, even for a short duration while performing lab-related tasks. In a 2017 review of 245 laboratorians worldwide, 60 percent said they use their phones in the laboratory, and 92 percent said they had witnessed cell phone usage by others in the lab. The top reasons given for using mobile phones

were to feel safe and secure and to be accessible.

Now that we have established the emotional attachment of people to their cell phones, let's discuss some potential hazards involved with using these devices in the laboratory.

### Risk of Contamination

This risk works both ways. Your phone can bring harmful bacteria into lab environments and is especially detrimental to sterile zones in microbiological areas, affecting test results and ultimately patient care. Case studies have shown that the average cell phone has 18 times more bacteria than a public restroom! That can amount to 25,000 bacteria per square inch, and that's not all – one in six phones have fecal matter on them!

Conversely, contamination from lab materials can also be transferred to your phone. Answering a call without removing gloves, laying the phone on a work surface, or placing the phone in the pocket of a lab coat that then becomes soiled are just several examples of ways a phone can become contaminated.

Of the 245 laboratorians surveyed in 2017, a few statements were given to rationalize why some thought they could avoid contamination and safely have their cell phones in the lab. Do any of these sound familiar?

- I *only* listen to music on my phone.
- I keep my phone in my pocket, but I *never* use it.

- I only use my phone with clean hands after I take my gloves off.
- I use a UV phone cleaner.
- I put my phone in a Ziploc bag. (Remember the number of bacteria on a phone? Just be certain not to use that bag for your snacks later!)

It is very important to think about what you do with your phone after leaving work when considering the hazards of using a mobile phone in the laboratory. Do you have small children that play with the device or even place it in their mouths? Do other family members or friends sometimes borrow your phone? Do you lay it on your kitchen counter while prepping food? Have you stopped to consider what undesirable work material may have hitched a ride home on your phone?

### **Distraction to Self and Others**

Laboratory operations demand attention to detail and full concentration. A ringing phone, a barrage of text tones, or a vibrating pocket all lead to distractions and opportunities for mistakes and wrong results. There is also the issue of phone etiquette when in the presence of others. Just as it is not pleasant to hear private conversations in a restaurant or a grocery store line, employees may not consider it entertaining or productive to listen to a coworker's latest drama while trying to give their undivided attention to their work.

### **Interference with Electronics**

Depending on the type of equipment used in your lab, it may be possible that cell phones can interfere with instrument signals and should not be used in the near vicinity of those instruments.

### **Risk of Fire or Explosions**

While this author could find no recorded cases of laboratory fires resulting from electrical sparks from mobile phones, keep in mind that many labs use

highly flammable solvents with low flashpoints. As a precaution, mobile phones should not be used in the vicinity of such vapors. To increase what has typically been a low risk, there have been numerous incidents recently of phone batteries spontaneously exploding and igniting the phones. Such an event can be especially disastrous in a laboratory where hazardous and flammable materials are housed.

### **Security of Laboratory Data**

One of the most popular features on a cell phone is the camera. While most of us are not interested in taking pictures at work, the mobile phone provides an easy means of capturing sensitive data which can be shared with interested outside parties. Most employees understand the need for and abide by privacy policies, but for those who seek to misuse confidential information, cell phones are one way to exploit privacy expectations.

After looking at some of the above ways that cell phones in the laboratory can be detrimental to personnel and to the organization, review your facility's policy on the use of cell phones. Does it address how the devices may or may not be used specifically in the laboratory? Is the policy written with employee safety in mind? Does your facility even have a policy addressing the use of phones and other personal electronics in the work environment?

You may have a strong emotional attachment to your phone, but just remember, that includes everything that comes with it! And some of that baggage from work may not be what you want to take home with you!

## References

<http://lab-training.com/2017/06/30/mobile-phones-not-permitted-laboratories/>, accessed March 2019.

<https://www.labmanager.com/lab-health-and-safety/2010/09/5-potential-dangers-of-using-cell-phones-in-the-lab#.XILFiRvsahc>, accessed March 2019.

“A Scientific and Psychological Review: Cell Phones in Laboratories”, facilitated by Sean Kaufman (Behavioral Based Improvement Solutions) and Dr. A. J. Troiano (Rhode Island Department of Public Health), published 10/23/17.

**Submitted by: Patty Atwood**  
**Lab Improvement Coordinator**



State of North Carolina • Roy Cooper, Governor  
Department of Health and Human Services  
Mandy Cohen, MD, MPH, Secretary, Division of Public Health  
[www.ncdhhs.gov](http://www.ncdhhs.gov) • [www.publichealth.nc.gov](http://www.publichealth.nc.gov)

*The Department of Health and Human Services does not discriminate based on race, color, nation origin, sex, religion, age or disability in employment or the provision of services.*