

# CELL PHONES & HEALTH CARE

Written by: Kathi Salley-Randall, RN, MSN, CNS, NNP  
GRN NICU CONSULTING, INC.  
PO BOX 6228, RANCHO BELLAGO, CA 92554

## **BACKGROUND:**

As mobile devices have moved from a place of convenience for many to a place of necessity, the potential for transferring potential pathogens from cell phone to user must be recognized and appreciated by health care providers and facility management. Bacterial contamination of mobile communication devices could be an important issue impacting the efficacy of infection control measures and might have an impact on efforts to reduce cross-contamination of equipment and patients.<sup>1</sup>

In the health care field, mobile communication devices have become an important part of recording patient history, observing patient records, and routine medical communication between staff. Cell phones and other devices are used by health care providers for both personal and professional tasks each day. For patients, mobile devices are a way of communicating with primary physicians and family members. For visitors, mobile devices are the new camera, video camera and entertainment source all in one; and one study stated that when asked, patients believed that phones were vital to their inpatient stay.<sup>8</sup>

## **PHONES AS FOMITES - HOW BAD IS THE PROBLEM?**

Multiple studies have demonstrated that mobile devices carried by health care professionals, patients, family members and visitors are universally contaminated with potentially pathogenic microorganism. Although surface cleaning and hand hygiene are effective ways to decrease the microorganism load, this may not be enough to protect the clinical environment from contamination by mobile devices.<sup>6</sup>

In a study of 200 cell phones carried by health care workers, 94.5% of the phones cultured demonstrated evidence of bacterial contamination.<sup>7</sup> In a study done over a six-month period involving 288 health care providers, 109 (43.6%) carried infective organisms on their cell phones.<sup>2</sup> Another study revealed a higher level of contamination in patients' and their visitors' cell phones than those of the health care workers. These studies also found that mobile devices could also carry multi-drug-resistant hospital pathogens.<sup>3</sup>

One of the most disturbing facts is that phones can carry up to 500 times more bacteria than a toilet seat.<sup>4</sup> It is recommended that people clean phones at least once a day using antibacterial or alcohol wipes, but when asked the majority of people, including parents visiting the NICU or health care workers in general, do not clean their personal mobile devices routinely.

Recommendations for proper cleaning of personal cell phones brought in to the hospital or clinical setting have not yet been established; and to complicate the matter, many phone manufacturers recommend against using alcohol to clean their phone.<sup>5</sup>

## **SPECIAL CONSIDERATIONS FOR THE NEWBORN INTENSIVE CARE UNIT:**

For parents of newborns in the NICU, hand washing is often emphasized before entering the NICU or handling their delicate baby. However, as they grab their phones to take a couple of pictures of their precious baby many are completely unaware of the potential bacterial exposure they may be bringing into their child's world. "Bacteria transmitted from cell phone to hands may not be eliminated using anti-microbial gel. Development of a guideline regarding hand hygiene and cell phone cleaning is needed for bedside cell phone use."<sup>6</sup>

## **A NEW SOLUTION:**

Just as there are signs everywhere reminding staff and visitors to wash or disinfect their hands, and hand sanitizers are found in every hallway and patient room, the time has come to provide a convenient and helpful solution in protecting the patients, visitors, and staff in the hospital from contaminated mobile devices. This is especially true for those who are in NICUs, ICUs, ERs, ORs or other high-risk areas. The same focus given to hand washing, equipment decontamination, isolation protocols, and blood borne pathogen training should be used in keeping mobile devices clean. All the current training and decontamination protocols are rendered ineffective if a contaminated device is handled moments later.

The Neotech Cell Shield is a disposable barrier for mobile devices. This product provides an affordable and obvious solution to the problem of mobile phone contamination and may even heighten the awareness of health care professionals, patients, families and visitors to risk that mobile devices pose to the hospital environment.

The Neotech Cell Shield may get its start in the hospital setting, but will likely reach out to Doctor's Offices, Urgent Care facilities, and other off-site medical facilities.

## **CONCLUSION:**

Mobile devices have become an essential part of our daily life, and are used for communication in every location with the hospital setting, including the Operating Room and ICU. Since no universal standards for use or decontamination of mobile devices exist<sup>7</sup> individuals are left to recognize the risk of contamination themselves and disinfect their personal device at their own discretion and timing. Although hand hygiene will continue to be the primary strategy to minimize the risk of hospital-acquired infections and contamination of the patient environment, policies and strategies that increase the awareness and decrease the risk of openly using contaminated mobile phones in high-risk areas of the hospital are far overdue.

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