

MINI REVIEW**Regular sanitizing of cell phones during the Covid-19 pandemic****Authors**

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Corresponding author-**MJ Tladi**Email: mjtladi.ortho@gmail.com**Abstract**

Cell phones are routinely used for various reasons when people are engaged in their daily activities. They play a key role in health care systems and health care workers frequently make use of these gadgets. Prevention of nosocomial infection is an integral part of health policies in order to prevent the high treatment costs. Although various micro-organisms have been found on these electronic devices from both health workers and patients, the majority of health care workers fail to decontaminate their cell phones. The world is now under attack by the Covid-19 virus that started in 2019. Many people have lost loved ones and the number of infections continues to rise globally. One of the preventive measures to combat the Covid-19 virus is through regular sanitization. However, non-health care people need to know how to sanitize their hands in order to have no micro-organisms. The aim of this brief manuscript is to highlight the importance of regular cell phone sanitization in the fight against the Covid-19 pandemic.

Keywords: cell phones, Covid-19, corona virus, pandemic

Discussion

Currently the use of cell phones has increased exponentially and considerably simplified life in numerous ways. At the same time, the fast pace of technological development has changed medicine dramatically. Health care workers can now manage a variety of tasks in a short time by using mobile electronic devices, e.g. cell phones and i-Pads, while many diseases can be easily diagnosed and rapidly treated. Meanwhile, touch screens are commonly used nowadays but nosocomial infections have been shown to be associated with the devices.(1)

The world is under attack by the Covid-19 virus that made its appearance towards the end of 2019. Many people have lost their lives while the economy worldwide has experienced a severe negative impact. Research has shown that the virus can be transmitted through contact with infected objects. Virus transmission can be reduced by following good hygiene practices that include proper hand-washing and the use of sanitizers. Other methods of preventing infection are social distancing and regular cleaning of surfaces.

Every cell phone is at risk of having bacterial colonization. Tekerekoğlu et al. found that about 86.5% of health care workers had bacterial contamination on their mobile

phones. However, patients, patients' companions, and visitors had a higher bacterial colonization (90.1%) than that of health care workers.(2) On the other hand, physicians (51.3%) have a higher cell phone colonization as compared to nurses (41.8%).(3) Ulger et al. reported that common gram-positive bacteria that can be isolated from mobile phones is *Staphylococcus aureus* while *Acinetobacter spp* accounts for gram-negative.(4) Other bacteria can also be found on the surface of mobile phones.(5,6) After microbiological analysis, bacterium that can be isolated from contaminated cell phones can have similar antibiograms and biochemical profiles to those found on the hands of health care workers.(7) Use of a cell phone by parents in a neonatal intensive care unit (NICU) can result in hand colonization even after hand hygiene. Beckstrom et al. reported that parents in NICU had contamination despite using hand gel. The reasons for this colonization might have been because the parents did not know how to use hand gel properly.(8) Viral contamination has also been reported. Cavari et al. reported that about 10% of paediatric health care workers had viral pathogens on their phones. The viruses are those that commonly cause respiratory tract infections.(9)

It is common knowledge that very few people disinfect their cell phones while only a

minority of health care workers do so. With regard to the latter, Cavari et al. reported that about 13% clean their cell phones while Szabó and Morvai noted that only 8% of health care workers observe this practice. (5,6,9,10) Badr and colleagues reported no bacterial colonization of their hands following alcohol-based hand rub by health care workers. However, about 93.7% did have bacterial contamination on their hands after using a cell phone.(7) This indicates that proper hand hygiene can eliminate cross-contamination of bacteria from a cell phone to the hands. During the period of this Covid-19 pandemic, we recommend that these devices should be cleaned with solutions that will not damage the screen and yet be able to disinfect them. The solution should contain 70% isopropyl alcohol.(11) In general, medical personnel use autoclaves to disinfect medical equipment and there is a UV sanitizing gadget that could be used for the same purpose. Online information reports that these gadgets have a 99% success rate of killing micro-organisms.(12) However, it is not known whether this gadget could be used to destroy the Covid-19 virus. We could not find any literature that reported the success

of a UV sanitizing gadget in combating the Covid-19 virus.

A mobile electronic device needs to be cleaned frequently to avoid contamination by pathogens as well as to prevent its recontamination because both bacteria and viruses can be found on cell phones. (13) Restriction of usage of these devices is impractical. People should also be careful when sharing a cell phone and putting it down on surfaces that might themselves be contaminated. We strongly advocate sound Covid-19 hygiene measures while handling a cell phone. People need to know how to sanitise properly, but we could not find information on what is a good frequency for cleaning these devices. However, as with cleaning any medical tool after every patient contact, we consider it best if a health care worker cleans the cell phone after usage between seeing patients if it was in use. As part of infection control after passing through this difficult time (post-Covid-19), health care facilities should continue to apply regular sanitization policies as most cell phones can have micro-organisms on its surface.

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