Can't Touch This... Environmental Surfaces Require Disinfection.

Have you considered disinfecting all your environmental surfaces, including trays, laptops and touchscreens?

Touchscreens have become ubiquitous in many aspects of our lives. We can't function without our cell phones, tablets, ATMs, multi-function printers and office equipment, the supermarket check-out and airport kiosks. We are constantly interacting with touchscreens used by countless other people. These surfaces are rarely cleaned and disinfected according to researchers at London School of Hygiene and Tropical Medicine.[i] The reputation for touchscreen hygiene has come under scrutiny, in many cases from sensationalized media articles, generally meant to instill fear in the general public. [ii]

While fear tactics do manage to attract readers, they do little to educate us about risks, both real, and contrived related to the use of touchscreens. It's important to point out that there are many naturally occurring bacteria, in our digestive systems and on our skin. These typically cause no problems, or only minor infections in healthy individuals. Problems arise when individuals become infected with antibiotic-resistant bacteria such as staphylococcus (staph). In addition, some viruses that cause colds and flu can be spread quickly, not only through the air and close personal contact, but through contact with a surface like a touchscreen that has respiratory viruses on it. Those with weakened immune systems are at the most risk. [iii]

What are reservoirs for bacteria and viruses?

A reservoir can be any person, animal, plant, soil, or inanimate object which harbors an infectious agent, allowing it to live and multiply. Stainless steel is an environmental surface material used in hospitals, food service, hospitality, education and retail settings. Stainless steel can promote the creation of biofilm and increase the risk of disease transmission. [iv]

Our beloved touchscreens are also reservoirs of infectious agents. A study published in 2021 by the Royal Society Open Science focused on touchscreens at airport kiosks. Their results showed that as the number of touchscreen locations rises, so does the probability of infection. The report also shows frequent touchscreen disinfecting reduces infection rate. [v] Several other studies show that even a single contact with contaminated surfaces, like a touchscreen can transfer infectious pathogens to the skin. [vi]

Touchscreens found on many office equipment devices, such as multifunction printers act as reservoirs for a variety of infectious microorganisms. The number of users, the placement in common areas, and the questionable hand hygiene practices of users, make multifunction printer touchscreens breeding grounds for pathogens. Studies have shown that these risk factors combined with the natural shedding from bodies, clothing, dust and airborne particles, can be threatening to the health of anyone who interacts with these touchscreens. [vii]

Why bother with a disinfectable drape?

The standard practice in many hospital and dental settings is to cover most environmental surfaces in single use, disposable barriers such as Cling Wrap™, or Saran Wrap®. There are several problems with this method. [viii]

1. These barriers cannot be properly cleaned or disinfected.
2. These barriers must be changed between each use to avoid contamination, or transmission of infection.
3. Droplets and aerosols can be released back into the environment while removing, disposing of, or replacing the plastic barrier.
4. This practice is not considered 'green and clean.' It adds significant medical waste to landfills and contributes to greenhouse gases as polyethylene breaks down.

Several plastics and medical equipment manufacturers market "Sterile Equipment Covers." The cost of these single-use items contributes to the overall financial burden of healthcare. [ix]

What can you do to ensure all environmental surfaces are safe and infection free?

Using silicone drapes to cover high touch environmental surfaces has many advantages and provides significant benefits to health outcomes by enhancing infection prevention protocols.

- Medical Grade™ silicone drapes can be sprayed and wiped to disinfect, as well as placed in an autoclave at 134°C for complete sterilization.
- Man & Machine's silicone drapes can be cut to size to cover many types of surfaces including laptops, touchscreens, medical equipment trays, and sterile instruments.
- Multi-function printer drapes can be placed over high touch surfaces, such as the control panel, thus reducing the risk of infection in general office, education, retail, and hospitality environments.
- Silicone drapes are not single-use items, do not end up in a landfill, do not release greenhouse gases, and are less expensive than single-use barriers in the long term.
- Silicone drapes have been tested to withstand hundreds of cleanings using hospital-grade disinfectants, as well as hundreds of cycles in an autoclave without any degradation, change in appearance or function.

Is it time to ramp up your infection control measures?

Contact us now at 301.341.4900 and mention this whitepaper or visit our website (www.man-machine.com) for more information about our disinfectable silicone drapes from Man & Machine.

Oliver Thompson, MPH
Health Minister at Man & Machine
oliver@mmimd.com

[i] Hafner, J. (2017, March 23). Your iPhone's dirtier than a toilet. *USA Today*.

[ii] No, McDonald's Touch screens are Not Contaminated with Poop. (2018). https://www.washingtonpost.com/world/2018/11/29/no-mcdonalds-touch-screens-are-not-contaminated-with-poop/

[iii] *Touchscreens are Giant Bacteria Magnets*. Tennier Sanitation. (2023, January 24). https://tennier.ca/2023/01/15/touchscreens-in-your-facility-you-should-be-cleaning-them-more-often/#:~:text=What

[iv] Jabłońska-Trypuć A, Makuła M, Włodarczyk-Makuła M, Wołejko E, Wydro U, Serra-Majem L, Wiater J. Inanimate Surfaces as a Source of Hospital Infections Caused by Fungi, Bacteria and Viruses with Particular Emphasis on SARS-CoV-2. Int J Environ Res Public Health. 2022 Jul 1;19(13):8121. doi: 10.3390/ijerph19138121. PMID: 35805776; PMCID: PMC9265696.

[v] Di Battista, A., Nicolaides, C., & Georgiou, O. (2021). Modelling Disease Transmission from Touchscreen User Interfaces. *Royal Society Open Science*, *8*(7), 210625. https://doi.org/10.1098/rsos.210625

[vi] Ławniczek-Wałczyk A, Gołofit-Szymczak M, Cyprowski M, Stobnicka A, Górny RL. Monitoring of bacterial pathogens at workplaces in power plant using biochemical and molecular methods. Int Arch Occup Environ Health. 2017 Apr;90(3):285-295. doi: 10.1007/s00420-017-1197-z. Epub 2017 Jan 25. PMID: 28124138; PMCID: PMC5360828.

[vii] Dakroub, R., & Nawas, T. (2017). VENDING MACHINE BUTTONS AND TOUCH SCREENS: A SURFACE COLONIZED BY PATHOGENIC BACTERIA. *International Journal of Innovative and Applied Research*, *5*(5).

[viii] Paul Feuerstein, DMD. (2021). Dr. Paul Feuerstein & Clifton Broumand: Washable & Sterilizable keyboards and mice for dentists. YouTube. Retrieved from https://www.youtube.com/watch?v=m_3wRytdf4E.

[ix] *Sterile equipment covers: Medical Equipment covers*. International Plastics, Inc. (n.d.). https://www.interplas.com/medical-equipment-covers