

CORONAVIRUS UPDATE

What is Coronavirus?

Coronaviruses are a family of viruses first discovered in the 1960s and named for the crown-like spiked proteins found on their surface.¹⁻² Some coronaviruses are frequent causes of the "common cold," while others, including the 2019 Novel Coronavirus (2019-nCoV) have led to severe respiratory illness and even death in some individuals.³ 2019-nCoV is thought to have originated in animals, but has since spread to and between humans.³

What We Know thus Far: An Evolving Story

Impact

With each passing day, the number of confirmed cases continues to rise. As of March 4th, 2020, the World Health Organization (WHO) reports that there have been 93,090 confirmed cases of COVID-19 in 77 countries, with the majority of cases occuring in China.⁴ Additionally, of the 3,198 COVID-19 associated deaths, 214 have been outside of China.⁴ While this is a significant number of deaths in a short time span, it is worth noting that the Centers for Disease Control and Prevention (CDC) estimate this season's current death toll for influenza in the United States to be approximately 10,000.⁵ And although both the WHO and CDC have declared the outbreak of the 2019-nCoV a public health emergency, the CDC states the health risk for the general American public is low.³

Symptoms

Symptoms of COVID-19 infection typically appear within 2 to 14 days of exposure. In most affected individuals, symptoms are respiratory in nature and include:⁶

- Fever
- Cough
- · Shortness of breath

In some patients, infection can lead to pneumonia, severe acute respiratory syndrome, kidney failure, and even death (WHO).⁷ Data collected by the WHO suggest only 20 percent of affected individuals will experience severe illness.⁸

Spread

The CDC acknowledges that "much is unknown about how 2019-nCoV spreads" and that "current knowledge is largely based on what is known about similar coronaviruses," but evidence suggests transmission occurs primarily via respiratory droplets produced by an infected person coughing or sneezing. There are recent reports, however, that the virus can be spread even when the infected patient is symptom-free. The WHO estimates that if proper containment measures aren't taken, each new case of coronavirus could infect roughly 2.6 additional people.

What is known about the environment and 2019-nCoV? Not much at this early juncture. The CDC states that "It's currently unclear if a person can get 2019-nCoV by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes." The WHO states that "it is still not known how long the 2019-nCoV virus survives on surfaces, although preliminary information suggests the virus may survive for a few hours or up to several days." Given the novelty of 2019-nCoV, the CDC explains that "Current knowledge is largely based on what is known about similar coronaviruses" including MERS-CoV and SARS-CoV. In their SARS: Infection Control in Healthcare Facilities Guidelines, however, the CDC acknowledged that "epidemiologic and laboratory evidence suggests that the environment could play a role in transmission." Similarly, studies evaluating MERS demonstrated significant environmental contamination with the virus.



CORONAVIRUS UPDATE

Prevention

The CDC recommends everyday <u>preventive actions</u> for the general public to help prevent the spread of respiratory viruses, ¹⁵⁻¹⁶ including 2019-nCoV, as well as more detailed guidance for healthcare personnel, including environmental services (EVS) staff. ¹⁷ Among the key recommendations are:

Hand Hygiene for the General Public—How16:

- Wash hands with soap and water for at least 20 seconds.
- If soap and water are not readily available, use an alcohol-based hand rub (ABHR) with at least 60% alcohol.
- · Always wash hands with soap and water if hands are visibly soiled.
- Hand hygiene supplies should be readily available to facilitate compliance.

Hand Hygiene for the General Public-When¹⁶:

- Before, during, and after preparing food
- Before eating food
- · Before and after caring for someone at home who is sick with vomiting or diarrhea
- Before and after treating a cut or wound
- After using the toilet
- After changing a diaper or cleaning up a child who has used the toilet
- After blowing your nose, coughing, or sneezing
- After touching an animal, animal feed, or animal waste
- · After handling pet food or pet treats
- After touching garbage

Hand Hygiene in Healthcare-How¹⁷:

- Use an alcohol-based hand rub (ABHR), with a minimum alcohol concentration of 60%, before and after all
 contact with patients, potentially infectious materials, and donning/removal of personal protective equipment.
- Wash hands with soap and water for at least 20 seconds before use of an ABHR if hands are visibly soiled or as an alternative to ABHR.
- Ensure access to hand hygiene supplies for all personnel in every care location.

Hand Hygiene in Healthcare-When^{16,17}:

- The healthcare setting necessitates hand hygiene for certain circumstances beyond those included for the general public
- Before and after all patient contact
- Before and after contact with potentially infectious material
- Before putting on and after removing all personal protective equipment including gloves

Environmental Infection Control in Healthcare¹⁷:

- Use dedicated equipment for patient care.
- Clean and disinfect all non-dedicated, non-disposable medical equipment according to manufacturer instructions and facility policies.
- Ensure consistent and correct environmental cleaning and disinfection procedures.
- Use of disinfectant products with EPA-approved emerging viral pathogen claims.



CORONAVIRUS UPDATE

How can Rubbermaid Commercial Products Assist with Environmental Cleaning and Disinfection?

Rubbermaid Commercial Products (RCP) is committed to assisting commercial facilities maintain a clean environment.

Washroom:

Proper hand hygiene is critical in preventing the spread of illness.¹⁶⁻¹⁸ The Global Handwashing Partnership reports that diarrhea and pneumonia are the leading causes of death for children under the age of five and that handwashing alone can cut diarrheal and acute respiratory infections by roughly fifty and twenty five percent, respectively.¹⁸

Rubbermaid Commercial Products *have not* been tested against the newly-identified 2019-nCoV. Our <u>Enriched Foam Alcohol Sanitizer</u> (SKU: 2080802), which has a 70% alcohol content, can be used in connection with the CDC's <u>Hand Hygiene in Healthcare Settings Guidance</u> and Interim Infection Prevention and Control Recommendations. Additionally, the freestanding <u>Autofoam Hand Sanitizer Station</u> (SKU: FG750824) can be used to ensure access to hand hygiene supplies in all care locations as directed by the CDC.¹⁶

Cleaning:

The CDC describes environmental cleaning as a "fundamental intervention for infection prevention and control." While we await more definitive answers on the role of the environment and 2019-nCoV, it is imperative to employ the most effective and practical strategies in achieving environmental cleaning and disinfection.

Microfiber cleaning products (e.g. cloths and mop pads) have been shown in a number of studies to achieve superior surface cleaning compared to traditional cotton products.²⁰⁻²³ Microfiber products are not only more effective at capturing and removing microbes from surfaces, but their use as part of a larger infection prevention and control strategy has been associated with reductions in HAIs.²⁰

Microfiber's split fiber design creates a larger surface area for microbe removal.²¹ At the same time, the positive charge of the microfiber attracts negatively-charged particles including dirt and microorganisms.²²

Rubbermaid Commercial Cleaning products *have not* been tested against the newly identified 2019-nCoV. Our HYGEN™ Disposable Microfiber Cloths, HYGEN™ Disposable Microfiber Mop Pads, launderable HYGEN™ Microfiber Cloths, and launderable HYGEN™ Microfiber Wet Pads ave been shown to remove 99.9% of certain microbes when used with water alone*, but we do not have test data to indicate how they will perform against 2019-nCoV. Our HYGEN microfiber cloths and mop pads provide effective microfiber cleaning with built-in scrubbing power. HYGEN disposable microfiber cloths and mop pads are quat safe and bleach safe. Importantly, *our disposable microfiber products are manufactured in the United States and our launderable microfiber products are manufactured in Vietnam*, so there are no anticipated shipping delays.

Refuse:

Additionally, our <u>Step-On Container</u> serves as a safe, "no touch receptacle for disposal" of soiled tissues and other potentially contaminated items. This is a measure referenced in the <u>"Minimize Chance for Exposures"</u> section of the CDC's Interim Infection Prevention and Control Recommendations for 2019-nCoV.¹⁷ By eliminating the need for manual operation, the Step-On Container helps mitigate the potential cross-contamination that could occur when multiple hands open and close a waste receptacle.¹⁷ Importantly, *all of these products are manufactured in the United States*, so there are no anticipated shipping delays.

Rubbermaid Commercial Products is ready to assist distribution partners and commercial facilities in their efforts to promote and maintain a clean and safe environment.



References

- 1. Centers for Disease Control and Prevention. Coronavirus. 2020. Available from: https://www.cdc.gov/coronavirus/types.html Accessed 3 February 2020.
- 2. Li F. Structure, Function, and Evolution of Coronavirus Spike Proteins. Annu Rev Virol 2016; 3(1): 237-61.
- 3. Centers for Disease Control and Prevention. 2019 Novel Coronavirus (2019-nCoV) Situation Summary. Available from: https://www.cdc.gov/coronavirus/2019-nCoV/summary.html. Accessed 3 February 2020.
- World Health Organization. Novel Coronavirus (2019-nCoV) situation reports. Situation report-24. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports Accessed 7 February 2020.
- Centers for Disease Control and Prevention. Influenza: Weekly U.S. Influenza Surveillance Report. Available from: https://www.cdc.gov/flu/weekly/index.htm Accessed 3 February 2020.
- 6. Centers for Disease Control and Prevention. 2019 Novel Coronavirus: Symptoms. Available from: https://www.cdc.gov/coronavirus/2019-ncov/about/symptoms.html Accessed 3 February 2020.
- 7. World Health Organization. Coronavirus. Available from: https://www.who.int/health-topics/coronavirus Accessed 3 February 2020.
- 8. World Health Organization. WHO, China leaders discuss next steps in battle against coronavirus outbreak. Available from: https://www.who.int/news-room/detail/28-01-2020-who-china-leaders-discuss-next-steps-in-battle-against-coronavirus-outbreak#.XjgPbM2BgIl.email
- 9. Centers for Disease Control and Prevention. 2019 Novel Coronavirus: How 2019-nCoV Spreads. Available from: https://www.cdc.gov/coronavirus/2019-ncov/about/transmission.html Accessed 3 February 2020.
- Imperial College London. MRC Centre for Global Infectious Disease Analysis. Report 3: Transmissibility of 2019-nCoV. Available from: https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus/ Accessed 1 February 2020.
- World Health Organization. Q&A on Coronaviruses. Available from: https://www.who.int/news-room/q-a-detail/q-a-coronaviruses
 Accessed 5 March 2020.
- 12. Centers for Disease Control and Prevention. SARS: Infection Control in Healthcare Facilities. Available from: https://www.cdc.gov/sars/guidance/i-infection/healthcare.html Accessed 3 February 2020.
- 13. Bin SY, Heo JY, Song MS, Lee J, Kim EH, Park SJ. Environmental Contamination and Viral Shedding in MERS Patients During MERS-CoV Outbreak in South Korea. Clin Infect Dis 2016; 62(6): 755-60.
- Song JY, Cheong HJ, Choi MJ, Jeon HJ, Kang SH, Jeong EJ, et al. Viral Shedding and Environmental Cleaning in Middle East Respiratory Syndrome Coronavirus Infection. Infect Chemother 2015; 47(4): 252-255.
- Centers for Disease Control and Prevention. 2019 Novel Coronavirus: Prevention and Treatment. Available from: https://www.cdc.gov/coronavirus/2019-ncov/about/prevention-treatment.html Accessed 3 February 2020.
- Centers for Disease Control and Prevention. Handwashing: when and how to wash your hands. Available from: https://www.cdc.gov/handwashing/when-how-handwashing.html Accessed 7 February 2020.
- 17. Centers for Disease Control and Prevention. 2019 Novel Coronavirus: Interim Infection Prevention and Control Recommendations for Patients with Known or Patients Under Investigation for 2019 Novel Coronavirus (2019-nCoV) in a Healthcare Setting. Available from: https://www.cdc.gov/coronavirus/2019-nCoV/hcp/infection-control.html
- 18. Global Handwashing Partnership. Why Handwashing? Available from: https://globalhandwashing.org/about-handwashing/why-handwashing/Accessed 7 February 2020.
- 19. Centers for Disease Control and Prevention. Best practices for environmental cleaning in healthcare facilities in resource-limited settings. Available from: https://www.cdc.gov/hai/pdfs/resource-limited/environmental-cleaning-508.pdf Accessed 7 February 2020
- 20. Lister DM, Kotsanas D, Ballards SA, Howden BP, Carse E, Tan K, et al. Outbreak of vanB vancomycin-resistant Enterococcus faecium colonization in a neonatal service. Am J Infect Control 2015; 43: 1061-5.
- 21. Trajtman AN, Manickam K, Alfa MJ. Microfiber cloths reduce the transfer of *Clostridium difficile* spores to environmental surfaces compared with cotton cloths. Am J Infect Control 2015; 43: 686-9.
- 22. Rutala WA, Gergen MF, Weber DJ. Microbiologic evaluation of microfiber mops for surface disinfection. Am J Infect Control 2007; 35: 569-73.
- 23. Gillespie E, Brown R, Treagus D, James A, Jackson C. Improving operating room cleaning results with microfiber and steam technology. Am J Infect Control 2016; 44: 120-2.