CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

Public Health Statement on COVID-19 Exposure from Reusable Plastic Bags and Other Objects and Surfaces in Public Spaces

April 2, 2020

Questions have been raised to our Department and to health departments in other states about the risks to the public and to grocery store and other retail employees for becoming infected with COVID-19 coronavirus (SARS-CoV-2) from the surface of reusable plastic bags and other surfaces. We have prepared this brief to offer our view of the current science to assist policymakers with continuing decision-making.

Most of what we know about the survival time on surfaces comes from a single study performed by the National Institute of Allergy and Infectious Disease (NIAID) and published in the New England Journal of Medicine.[1] In that study, researchers found that, under ideal laboratory conditions, the survival time for COVID-19 coronavirus on surfaces is in the range of hours to days. It is unknown at this time what the likely survival time for COVID-19 coronavirus is when exposed to various outside environmental conditions (i.e. outside of ideal laboratory conditions with exposure to sun, high/low humidity, wind, and temperature variations), but it is likely to be much less viable in most outside environments. The NIAID study also indicated that, while the COVID-19 coronavirus is most persistent on plastic and stainless steel surfaces compared to cardboard and copper, the viral load is reduced exponentially over time, with an expected half-life of approximately 6 hours on plastic or stainless steel under ideal laboratory conditions. Another link in the chain of infection involves transferring a viable infectious dose of COVID-19 coronavirus from a surface onto mucous membranes, such as those found in the eyes, nose, and mouth. It is well known that soap and water, alcohol-based sanitizers, and common widely-available disinfection products are all very effective in killing coronaviruses[2] like the one that causes COVID-19, and that frequent hand-washing with soap and water and wiping of surfaces with cleaning and disinfecting products effectively eliminates viable coronaviruses from surfaces and prevents them from being transferred to mucous membranes.

Given the most current scientific information we have, at this time we do not feel that reusable plastic bags or most other objects (referred to as "fomites" in the infection control world) or surfaces will serve as a significant source of infection for COVID-19 coronavirus in the general population, especially in light of the ease of spread of the virus from person-to-person via the close contact route and airborne droplets. Workers may be slightly more at risk for exposure to COVID-19 coronavirus to the extent that they might touch more fomites from different sources, for example if they are working as a grocery bagger using many different customers' reusable plastic grocery bags. In both theory and practice, minimizing contact with potentially contaminated objects for any individual will maximize their protection against COVID-19 coronavirus infection. With that in mind, to the extent worker contact with multiple potentially contaminated objects and surfaces can be minimized using engineering controls and modified work practices, it should. However, even in a scenario involving high-volume retail workers, the determination of the Department is that following the basic public health precautions that are currently advised by CDC and CT DPH, including frequent hand-washing (for 20 seconds or more using soap and water) or use of alcohol-based hand sanitizer, avoiding touching of the face (especially the eyes, nose, and mouth) with unwashed hands, and routine cleaning of public spaces and frequently handled items will be sufficient to protect workers from infection with COVID-19 coronavirus from surfaces or objects.

References:

1. Neeltje van Doremalen, Trenton Bushmaker, Dylan H. Morris, Myndi G. Holbrook, Amandine Gamble, Brandi N. Williamson, Azaibi Tamin, Jennifer L. Harcourt, Natalie J. Thornburg, Susan I. Gerber, James O. Lloyd-Smith, Emmie de Wit, Vincent J. Munster. **Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1**. *New England Journal of Medicine*, 2020; DOI: 10.1056/NEJMc2004973

2. https://news.northeastern.edu/2020/03/20/heres-why-washing-your-hands-with-soap-for-20-seconds-protects-you-from-covid-19/