

[High Priority] - S0405 : [COVID-19] Medical Device Dust Filter Replacement Considerations during Pandemic [ECRI Exclusive User Experience Report] Medical Device Special Report

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Geographic Regions: Worldwide

Suggested Distribution: Anesthesia, Clinical/Biomedical Engineering, Critical Care, Emergency/Outpatient Services, Infection Control, OR/Surgery, Pulmonology/Respiratory Therapy, Diagnostic Imaging, Risk Management/Continuous Quality Improvement, Facilities/Building Management, Internal Medicine, Pain Clinic, Staff Education

Problem:

1. Inadequate precautions during routine exchange/cleaning of medical device dust filters may pose the risk of spreading COVID19.

ECRI Recommendations:

1. If practical, before entering a patient room, wait an appropriate amount of time after suspected COVID-19 patient discharge for ventilation system air exchanges to reduce potential airborne article count as set by your facility's policy.
 - Typical durations range from 30 to 70 minutes depending on the number of air exchanges in the room and the level of particle reduction set by your facility. Rooms with fewer than six air changes per hour will need more time.
 - See [ECRI Hazard Report H0595](#) for additional information on cleaning patient rooms during the COVID-19 pandemic.
2. Wear required personal protective equipment (PPE) when vacuuming or exchanging filters.
 - Required PPE includes gloves, an N95 respirator (or facemask if not available), eye protection, and gown. N95 respirators may be reused and stored in a breathable paper bag between uses.
3. If practical, seek a secluded area to minimize bystanders; exposure while servicing filters. Dust and other particles will be disturbed and become airborne.
4. For smaller disposable filters:
 - Use a plastic bag to surround the filter while removing it to minimize spread of lint and other particles.
 - Tie the bag to seal it and dispose of bagged filter following normal precautions.
5. For vacuuming cooling vents and larger filters that are reused:
 - Use an industrial vacuum with HEPA filtered exhaust.
 - Wait 72 hours after the last use of the vacuum before replacing its filter or opening it to empty.
6. Do not brush or blow filter with compressed air.
7. Do not modify the device for infection control purposes without consulting the manufacturer. Modifications of this type include using more restrictive filters than designed, covering vents or the entire device with plastic.

Background

1. The SARS-CoV-2 virus has been shown to be stable for up to 72 hours on plastic surfaces (van Doremalen et. al). Actual sustainability on dust filters is unknown.
2. Servicing dust filters typically releases some of the particles that they capture into the air.
3. The Centers for Disease Control (CDC) does not have specific guidance on medical device servicing with regard to COVID; however, CDC recommends *"In general, only essential personnel should enter the room of patients with COVID-19. Healthcare facilities should consider assigning daily cleaning and disinfection of high-touch surfaces to nursing personnel who will already be in the room providing care to the patient."* Ideally, environmental service personnel should not enter the room of a suspected COVID patient until after discharge, and then after a set time to allow the ventilation system to dilute any airborne particles. Gowns and gloves are recommended at that time. For more information, [click here](#) .
4. CDC recommends that handling waste related to COVID-19 does not require special precautions. For more information, [click here](#) .

Manufacturer's Perspectives or Comments:

GE stresses that any device modification, such as covering vents, covering the entire device, or replacing filters with more restrictive filters, may lead to overheating and device failure. For GE's perspective, [click here](#) .

References:

van Doremalen N, Bushmaker, T, Morris DH, et al. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. *N Engl J Med*. 2020 Apr 16;382(16):1564-7. Accessed 2020 May 20. Available online: [Click here](#) .
United States:

- Centers for Disease Control and Prevention. Coronavirus disease 2019 (COVID-9). Interim infection prevention and control recommendations for patients with suspected or confirmed coronavirus disease 2019 (COVID-19) in healthcare settings [online]. 2020 May 18 [cited 2020 May 21]. Available from Internet: [Click here](#) .

- Centers for Disease Control and Prevention. Coronavirus disease 2019 (COVID-9). Healthcare infection and control FAQs for COVID-19 [online]. 2020 May 20 [cited 2020 May 21]. Available from Internet: [Click here](#) .

Comments:

- This alert is a living document and may be updated when ECRI receives additional information.

Source(s):

- 2020 May 21. CDC Infection Control Recommendations [Download](#)
- 2020 May 21. CDC FAQ [Download](#)