**Guidance on Cleaning Fire Stations Following a COVID-19 Patient Exposure**

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Conversation captured from the IAFC EMS KnowledgeNet on March 12, 2020.

There is no specific guidance on cleaning a fire station following the management of a patient that has actual or possible COVID disease. I am familiar with cleaning procedures related to many dangerous organisms and chemicals, due to my work as an emergency physician and Fire EMS medical director for more than 30 years. I researched the topic and have received a number of reference materials related to the topic. None are specific to fire stations.

Detailed information on environmental infection control in healthcare settings can be found in CDC’s [Guidelines for Environmental Infection Control in Health-Care Facilities](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm) and [Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings](https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html) [section IV.F. Care of the environment].

***Here is CDC guidance on cleaning for hospitals:***

Implement Environmental Infection Control

* Dedicated medical equipment should be used for patient care.
* All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer’s instructions and facility policies.
* Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly.
* Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product’s label) are appropriate for COVID-19 in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed. Products with EPA-approved emerging viral pathogens claims are recommended for use against COVID-19. These products can be identified by the following claim:
  + “[Product name] has demonstrated effectiveness against viruses similar to COVID-19 on hard non-porous surfaces. Therefore, this product can be used against COVID-19 when used in accordance with the directions for use against [name of supporting virus] on hard, non-porous surfaces.”
  + This claim or a similar claim, will be made only through the following communications outlets: technical literature distributed exclusively to health care facilities, physicians, nurses and public health officials, “1-800” consumer information services, social media sites and company websites (non-label related). Specific claims for “COVID-19” will not appear on the product or master label.
  + See [additional information about EPA-approved emerging viral pathogens claimsexternal icon](https://www.epa.gov/pesticide-registration/guidance-registrants-process-making-claims-against-emerging-viral-pathogens).
  + If there are no available EPA-registered products that have an approved emerging viral pathogen claim for COVID-19, products with label claims against human coronaviruses should be used according to label instructions.
* Management of laundry, food service utensils, and medical waste should also be performed in accordance with routine procedures.
* Detailed information on environmental infection control in healthcare settings can be found in CDC’s [Guidelines for Environmental Infection Control in Health-Care Facilities](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm) and [Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings](https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html) [section IV.F. Care of the environment].

***I received a copy of a local hospital system cleaning process for patient rooms where care is provided to COVID patients. It is here:***

“Special Airborne/Contact Precautions 1”/COVID-19 Guidance for Environmental Services Personnel

Identification of patient rooms housing patients exhibiting signs and symptoms consistent with COVID-19

The “Special Airborne/Contact Precautions 1” signage will be utilized.

Daily Cleans

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. If this responsibility is assigned to Environmental Services personnel, they should wear a gown, gloves, N-95 or higher-level respirator, and eye protection when in the room. PPE should be removed upon leaving the room, immediately followed by performance of hand hygiene. \*N-95 or higher-level respirator should be removed after leaving the room.

Discharge/Terminal Cleans

Non-Isolation airborne isolation equivalent/compliant room for Person Under investigation and/or confirmed COVID-19 – Delayed Entry; Close patient room door after discharge and wait 2 hours prior to performing normal terminal clean

Imaging areas: If you are cleaning a room after a patient under investigation has received imaging services, using standard, hospital-grade cleaning agents to properly disinfect as normal is sufficient. This is due primarily to the large size of the room and the very limited amount of time the patient has been there.

Outpatient/Urgent Care Physician Offices: (if non-isolation non-negative airflow room): Delayed Entry; Close patient room door after discharge and wait 2 hours prior to performing normal terminal clean

***The CDC published guidance for business cleaning related to COVID***, which is contained in “Interim Guidance for Businesses and Employers”

<https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>

It contains this guidance:

* Perform routine environmental cleaning:
* Routinely clean all frequently touched surfaces in the workplace, such as workstations, countertops, and doorknobs. Use the cleaning agents that are usually used in these areas and follow the directions on the label.
* No additional disinfection beyond routine cleaning is recommended at this time.
* Provide disposable wipes so that commonly used surfaces (for example, doorknobs, keyboards, remote controls, desks) can be wiped down by employees before each use.

There is experience in cleaning schools, including those directly impacted by COVID.

The school districts in the impact zone in Seattle have distributed information regarding the cleaning process for schools, including the one where a student was found to be infected by COVID.

This is the descriptor of the cleaning process:

## CORONAVIRUS COMMUNICATIONS TO FAMILIES, STAFF, COMMUNITY

Our professional custodial staff are working hard every day to keep schools clean and healthy places for all students and staff. Specifically, our efforts to protect students and teachers from flu-like symptoms include sanitizing touchpoints, places that are touched frequently throughout the day:

* Door Handles / Knobs
* Door Push Bars
* Light Switches
* Sink Fawcett Handles / Knobs
* Drinking Fountains
* Paper Towel Dispensers
* Electric Hand Dryers
* Hand Soap Dispensers
* Stairwell Handrails
* Toilet / Urinal Handles
* Toilet Stall Door Handles
* Counter Tops
* Elevator Control Buttons

Products used include:

Virex, an EPA certified disinfectant with ammonium compounds found in household cleaners that are designed to kill germs. The same cleaning materials used in healthcare facilities where cleaning and prevention of cross-contamination are critical. Bactericidal, virucidal and fungicidal. Kills MRSA and VRE.

Oxivir, accelerated Hydrogen Peroxide kills common pathogens, critical viruses and bacteria in the healthcare environment. Effective for soft surface sanitizing, and is non-irritating to eyes and skin, and requires no safety warnings.

# ***Cleaning of Ambulances***

Very importantly, the CDC has published an interim guideline on cleaning of ambulances following the transport of actual or suspected COVID patients. Reminder that the ambulances are being cleaned following patient transport focusing on horizontal surfaces.  That is the guidance given to ambulance units in the Seattle area.

# The CDC guidance is called: **Interim Guidance for Emergency Medical Services (EMS) Systems and 911 Public Safety Answering Points (PSAPs) for COVID-19 in the United States**

This guidance applies to all first responders, including law enforcement, fire services, emergency medical services, and emergency management officials, who anticipate close contact with persons with confirmed or possible COVID-19 in the course of their work. This was updated guidance on March 10, 2020 and contained at this link: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html>

## **Cleaning EMS Transport Vehicles after Transporting a PUI or Patient with Confirmed COVID-19**

The following are general guidelines for cleaning or maintaining EMS transport vehicles and equipment after transporting a PUI:

* After transporting the patient, leave the rear doors of the transport vehicle open to allow for sufficient air changes to remove potentially infectious particles.
  + The time to complete transfer of the patient to the receiving facility and complete all documentation should provide sufficient air changes.
* When cleaning the vehicle, EMS clinicians should wear a disposable gown and gloves. A face shield or facemask and goggles should also be worn if splashes or sprays during cleaning are anticipated.
* Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly, to include the provision of adequate ventilation when chemicals are in use. Doors should remain open when cleaning the vehicle.
* Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product’s label) are appropriate for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.
* Products with EPA-approved emerging viral pathogens claims are recommended for use against SARS-CoV-2. Refer to [List Nexternal icon](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2) on the EPA website for EPA-registered disinfectants that have qualified under EPA’s emerging viral pathogens program for use against SARS-CoV-2.
* Clean and disinfect the vehicle in accordance with standard operating procedures. All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls, work surfaces) should be thoroughly cleaned and disinfected using an EPA-registered hospital grade disinfectant in accordance with the product label.
* Clean and disinfect reusable patient-care equipment before use on another patient, according to manufacturer’s instructions.
* Follow standard operating procedures for the containment and disposal of used PPE and regulated medical waste.
* Follow standard operating procedures for containing and laundering used linen. Avoid shaking the linen.

***Summary and Recommendation***

Review of the cleaning materials for vehicles and buildings involved in the care of actual or suspected COVID patients is focused on use of standard cleaning processes. There is an emphasis on the cleaning of high-touch and horizontal surfaces.  That should be our guide regarding our fire EMS response vehicles on a routine basis.

Fire stations house members that are involved in the care of a patient that may have or are proved to have COVID. The patient encounters, with use of our PPE, are expected to generate very little, if any, infectious material. The crew members that are within six feet of the patient should particularly attempt to avoid gross contamination of him/herself or any of our equipment. The care of the patient in the ambulance should result in cleaning of the transport vehicle as noted above. The PPE used in contact with the patient, and in cleaning the vehicle, should be disposed of at the appropriate area of the hospital, and not transported in FD vehicle.

Little, if any infectious material from the patient should be tracked into a fire engine or other non-transport vehicle. Even less material should be tracked into a Fire Station. The crew members themselves would not have been expressing any infectious material, as they were not ill at the time, and even if they received an infectious amount of the virus, would not have been reproducing it within their bodies. That process takes somewhere around 5 days, according to current research.

The load of infectious material in any Fire Station would be extremely low, and not concentrated in any particular area of the building. After some short period of time, probably lasting in minutes to hours, there would not be expected to be any viral material left that would be considered infectious.

With an abundance of caution, a thorough cleaning of the relevant areas of the building would allay all fears of infectivity.

A general cleaning of the building should be focused on the bathroom, kitchen, sleeping quarters, and day area of the building.

* Routine cleaning and disinfection procedures (e.g., using an EPA-registered, disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product’s label) are appropriate for COVID in healthcare settings. This would focus on the horizontal surfaces in the kitchen, bathroom, sleeping quarters, and day areas of the station.
* Refer to [List Nexternal icon](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2) on the EPA website for EPA-registered disinfectants that have qualified under EPA’s emerging viral pathogens program for use against COVID. That list is attached.
* Clean and disinfect the building in accordance with standard operating procedures. All surfaces that may have come in contact with the crew should be thoroughly cleaned and disinfected using an EPA-registered disinfectant in accordance with the product label.
* Follow standard operating procedures for containing and laundering used linens. Avoid shaking the linen.
* Kitchenware should be cleaned using standard process
* Follow standard operating procedures for the containment and disposal of used PPE by the cleaning crew, and remove all garbage from the building.
* Fresh air ventilation of the building and living areas, if possible, should remove the remnants of any disinfection process.

The Fire Department offices should inspect the building after any cleaning to reinforce to all members that cleaning has been performed, and that no chemical residues are left from the cleaning process.