

Some of these documents may be updated from what is included here.

For the most current information, please visit:

University of Wisconsin COVID-19 Hub:

<https://uconnect.wisc.edu/clinical/references/infection-control/infection-control/emerging-pathogens/coronavirus-disease-2019-covid-19/>



Coronavirus Disease 2019 (COVID-19)

Preventing the Spread of Coronavirus Disease 2019 in Homes and Residential Communities

Recommended precautions for household members, intimate partners, and caregivers in a nonhealthcare setting¹ of

A patient with symptomatic laboratory-confirmed COVID-19

OR

A patient under investigation

Household members, intimate partners, and caregivers in a nonhealthcare setting may have close contact² with a person with symptomatic, laboratory-confirmed COVID-19 or a person under investigation. Close contacts should monitor their health; they should call their healthcare provider right away if they develop symptoms suggestive of COVID-19 (e.g., fever, cough, shortness of breath) (see [Interim US Guidance for Risk Assessment and Public Health Management of Persons with Potential Coronavirus Disease 2019 \(COVID-19\) Exposure in Travel-associated or Community Settings.](#))

Close contacts should also follow these recommendations:

- Make sure that you understand and can help the patient follow their healthcare provider's instructions for medication(s) and care. You should help the patient with basic needs in the home and provide support for getting groceries, prescriptions, and other personal needs.
- Monitor the patient's symptoms. If the patient is getting sicker, call his or her healthcare provider and tell them that the patient has laboratory-confirmed COVID-19. This will help the healthcare provider's office take steps to keep other people in the office or waiting room from getting infected. Ask the healthcare provider to call the local or state health department for additional guidance. If the patient has a medical emergency and you need to call 911, notify the dispatch personnel that the patient has, or is being evaluated for COVID-19.
- Household members should stay in another room or be separated from the patient as much as possible. Household members should use a separate bedroom and bathroom, if available.
- Prohibit visitors who do not have an essential need to be in the home.
- Household members should care for any pets in the home. Do not handle pets or other animals while sick. For more information, see [COVID-19 and Animals.](#)
- Make sure that shared spaces in the home have good air flow, such as by an air conditioner or an opened window, weather permitting.
- Perform hand hygiene frequently. Wash your hands often with soap and water for at least 20 seconds or use an alcohol-based hand sanitizer that contains 60 to 95% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Soap and water should be used preferentially if hands are visibly dirty.

- Avoid touching your eyes, nose, and mouth with unwashed hands.
- The patient should wear a facemask when you are around other people. If the patient is not able to wear a facemask (for example, because it causes trouble breathing), you, as the caregiver, should wear a mask when you are in the same room as the patient.
- Wear a disposable facemask and gloves when you touch or have contact with the patient's blood, stool, or body fluids, such as saliva, sputum, nasal mucus, vomit, urine.
 - Throw out disposable facemasks and gloves after using them. Do not reuse.
 - When removing personal protective equipment, first remove and dispose of gloves. Then, immediately clean your hands with soap and water or alcohol-based hand sanitizer. Next, remove and dispose of facemask, and immediately clean your hands again with soap and water or alcohol-based hand sanitizer.
- Avoid sharing household items with the patient. You should not share dishes, drinking glasses, cups, eating utensils, towels, bedding, or other items. After the patient uses these items, you should wash them thoroughly (see below "Wash laundry thoroughly").
- Clean all "high-touch" surfaces, such as counters, tabletops, doorknobs, bathroom fixtures, toilets, phones, keyboards, tablets, and bedside tables, every day. Also, clean any surfaces that may have blood, stool, or body fluids on them.
 - Use a household cleaning spray or wipe, according to the label instructions. Labels contain instructions for safe and effective use of the cleaning product including precautions you should take when applying the product, such as wearing gloves and making sure you have good ventilation during use of the product.
- Wash laundry thoroughly.
 - Immediately remove and wash clothes or bedding that have blood, stool, or body fluids on them.
 - Wear disposable gloves while handling soiled items and keep soiled items away from your body. Clean your hands (with soap and water or an alcohol-based hand sanitizer) immediately after removing your gloves.
 - Read and follow directions on labels of laundry or clothing items and detergent. In general, using a normal laundry detergent according to washing machine instructions and dry thoroughly using the warmest temperatures recommended on the clothing label.
- Place all used disposable gloves, facemasks, and other contaminated items in a lined container before disposing of them with other household waste. Clean your hands (with soap and water or an alcohol-based hand sanitizer) immediately after handling these items. Soap and water should be used preferentially if hands are visibly dirty.
- Discuss any additional questions with your state or local health department or healthcare provider. Check available hours when contacting your local health department.

Footnotes

¹Home healthcare personnel should refer to [Interim Infection Prevention and Control Recommendations for Patients with Known or Patients Under Investigation for Coronavirus Disease 2019 \(COVID-19\) in a Healthcare Setting](#).

²Close contact is defined as—

a) being within approximately 6 feet (2 meters) of a COVID-19 case for a prolonged period of time; close contact can occur while caring for, living with, visiting, or sharing a health care waiting area or room with a COVID-19 case

– or –

b) having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on).

Page last reviewed: March 6, 2020

Content source: [National Center for Immunization and Respiratory Diseases \(NCIRD\), Division of Viral Diseases](#)



Discharge talking points (COVID-19)

Based on public health and medical evaluation, some people who are confirmed to have, or being evaluated for, COVID-19 infection and do not require hospitalization for medical reasons may be cared for at home. Prior to releasing a person to home care, please consult with the UW Health Special Pathogen MD. Call paging at _____ to facilitate a page to _____ to reach the UW Health Special Pathogen MD.

Give the following information to patients who are being evaluated for COVID-19 infection and will be discharged:

- Stay home except to get medical care.
- Wear a mask when you are outside of your home (e.g. for medical care).
 - Provide 1 mask per adult patient
 - Provide 1 mask per pediatric patient and 1 mask per care giver
 - **Do not provide** patient with N95 respirator, as this is not necessary.
- Seek prompt medical attention if your illness is worsening (e.g. difficulty breathing). Call ahead before seeking medical care and tell your medical care provider that you have, or are being evaluated for, COVID-19 infection.

References/links you can provide to patients as handouts:

- CDC discharge instructions: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread.html>
- Simplified Chinese translation: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread-chinese.html>
- Spanish translation: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread-sp.html>



COVID-19 Medical Hotel Referral Protocol

Who can make the referral?

Emergency Rooms, Inpatient Units, and local clinics staff

Who is eligible?

Patients recommended for self-isolation at home for COVID-19 concerns and identified as homeless, meaning the discharge destination will be emergency shelters or streets

Individuals and families who are doubled up or in other unstable housing situations must be diverted from the hotel resource whenever possible, as limited hotel units are available. People in these situations can call The Salvation Army diversion case manager: xxx-xxx-xxxx during office hours.

Referral Protocol

1. Obtain consent from the patient to contact the Salvation Army and share information.

The duration of stay in the hotel will be determined based on the test results and medical recommendations. Therefore, patient must agree the healthcare provider can share such information with Salvation Army for the duration of stay.

2. Review the COVID-19: Hotel Voucher Participant Agreement Form with patient and ask to sign. Answer any questions patient may have.

3. Send the Hotel Voucher Referral Form and Hotel Voucher Participant Agreement Form to the Salvation Army, xxx-xxx-xxxx (Attn: Medical Voucher)

4. Contact the Salvation Army staff to confirm receipt of the referral and wait for a call or email back from the Salvation Army.

Salvation Army staff will contact hotels and arrange for a room and then relay hotel information to medical staff that made the referral. Salvation Army will strive to respond with details within 30 minutes. If you do not hear back in more than 30 minutes, call again.

- Mon-Fri during business hours (8am-5pm): Call or email
 - Email:
 - Phone:
- Outside of business hours call Salvation Army Shelter cell phone
 - Phone:

- 5. Inform patient how many days of hotel stay was authorized.**

- 6. Arrange transportation to the hotel for the patient.** Provide a mask and ensure patient wash their hands for the ride. The patient should be transported directly to the designated hotel from the hospital, not to Salvation Army. (Instructions for special transportation may be available soon.)

- 7. For PCPs following up with the patient**

Send the Referral Form for extension, as needed, following the step 3 & 4 above.
Reauthorization referrals will be processed by the Salvation Army weekly on Mondays.



COVID-19: Hotel Voucher Participant Agreement

This agreement is between the Salvation Army of Dane County and the persons listed below (list everyone in the household who will be staying at the shelter):

Name: _____ DOB: _____
 Name: _____ DOB: _____
 Name: _____ DOB: _____
 Name: _____ DOB: _____

Best way to contact the participant (cell phone, email): _____

All guests who have been provided with a voucher to stay at a motel by the Salvation Army must adhere to the following rules. Please read it thoroughly and refer as needed.

For a Safe and Secure Stay:

1. **You were provided with this hotel stay for self-isolation. Please follow all healthcare guidelines for isolation.**
2. No family or friends who are not on the voucher are allowed to stay in the room. This includes hanging out with friends or family not on the voucher, parties, loud gatherings, and disturbances of any sort.
3. Guest must allow housekeeping staff to clean the room on a regular basis when the hotel staff requests to clean the property.
4. Guests must keep their own room in order and clean. The hotel has the right to not let you stay on their property if you damage the room. This includes food stains, destroyed or damaged linens, towels, and carpets, or food that is not kept in appropriate refrigeration or sealed packages. Guests are responsible to cover costs of damaged items.
5. Guests must supervise their children at all times. It is the guests' responsibility to ensure that their children do not disturb other guests. Children are not allowed to play in common areas and halls of the hotel.
6. Disorderly Conduct will result in immediate cancellation of your voucher. This includes but is not limited to:
 - Threats, acts of violence and/or compromising the safety of others
 - Engaging in illegal activities
 - Burning of items in the building/dismantling of security systems (i.e. fire alarms)
 - Theft and/or destruction of property
 - Weapons or weapon-like items on property
7. Guests are responsible for all charges incurred while staying at the hotel. (Damage to property/long distance phone calls.

I have read or have been read, understand, and agree to abide by these rules.

Client Signature: _____ Date: _____



COVID-19: Hotel Voucher Referral Form

(To be completed by medical staff)

Fax to : Salvation Army
Fax:

And Call: Mon-Fri during business hours (8am-5pm), call or email

- Email:
- Phone:

Outside of business hours call Salvation Army Shelter cell phone

- Phone:

From: Hospitals/Clinic: _____

Staff: _____

Call back phone: _____

Referred Patient Name: _____ (DOB: _____)

Check one of the options:

- Initial authorization (up to one week, through the following Monday)
- Request for extension (processed weekly on Mondays by Salvation Army)

Request Period: ___/___/___ to ___/___/___

Special needs, if any: _____

I have examined the patient listed above and the symptoms require isolation. Either I or someone I appointed has reviewed the Participant Agreement with the patient and obtained a signed agreement which I am enclosing with this fax.

Provider Signature: _____ Date: _____

Print Provider Name: _____

Revised COVID-19 Testing Criteria for ADULT AMBULATORY Patients

MAR 15, 2020 · U-CONNECT

POSTED BY HOSPITAL INCIDENT COMMAND SYSTEM (HCIS)

JEFF POTHOFF, MD, CHIEF QUALITY OFFICER, AND INCIDENT COMMANDER, COVID-19 RESPONSE

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NASIA SAFDAR, MD, MEDICAL DIRECTOR, INFECTION CONTROL AND PREVENTION

MATT ANDERSON, MD, MEDICAL DIRECTOR, PRIMARY CARE

EFFECTIVE MARCH 15, 2020: Use This Testing Criteria Going Forward

Adult Ambulatory Testing Criteria

Ambulatory

1. If **no close contact** with a case* AND at least one priority item (see below) with acute respiratory symptoms such as in list below:
 - Fever (could be low grade or a subjective fever) **PLUS** any of the following acute influenza like illness (ILI) symptoms:
 - Cough-could be productive or not
 - Shortness of breath/chest tightness
2. If **close contact** with a case AND **any** of the following acute respiratory symptoms such as in the list below:
 - a. Fever (could be low grade or subjective fever)
 - b. Cough-could be productive or not
 - c. Sore throat
 - d. Shortness of breath/chest tightness

For referral to ED/urgent care: DO NOT refer to ED/Urgent Care solely for testing, refer to Urgent Care/ED as one would with any other acute illnesses.

***Priorities for Testing in No Particular Order**

1. **High risk due to vulnerability:**
 - a. Pregnancy
 - b. Immunocompromised or high-risk condition such as: Diabetes, TNF blocker or other drug causing immune suppression, stem cell transplant, organ transplant ever, prednisone \geq 15 mg/day, chronic lung disease/asthma on daily therapy, advanced renal disease, chronic liver disease. This is not an exhaustive list.
2. **High risk due to exposure:**
 - a. Congregate living facility
 - b. Healthcare worker

Important to Note

1. Those with mild symptoms and no high-risk conditions or exposure should not be tested, but the public health recommendation is to self-isolate for 14 days in such cases.
2. Asymptomatic persons should not be tested (e.g., someone exposed to a case but asymptomatic may request testing but should not be tested).
3. PPE for evaluating patients should be special pathogen precautions but NO requirement for negative pressure room or keeping room vacant for 1 hour after patient has left.
4. The 4400 pager is NOT required to approve testing any longer in the ambulatory setting.
 - However, for multiple reasons we do NOT want testing samples being collected in our usual Specialty or Primary Care Clinics
 - When patients meet criteria for testing, providers/care team members should document their conversation with the patient, close the encounter and send an RE: message to: "UWH COVID-19 Centralized Triage" pool
 - Patients should be advised that they will be contacted regarding next steps in the testing evaluation (testing should NOT be guaranteed) and that such contact may take 72 hours. Infection Control will handle subsequent follow up.
5. If patient tests positive for flu, COVID-19 testing does not need to be done.

Stay up-to-date

Remember to check the [COVID-19 hub](#) regularly for the latest updates, [FAQs](#) and resources. In this fast-changing response to an unprecedented challenge, our hub is the best place to find up to date info.

Script for Contacting Patients With a Positive COVID-19 Test

MAR 16, 2020 · U-CONNECT

POSTED BY HOSPITAL/HEALTHCARE INCIDENT COMMAND SYSTEM

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PETE NEWCOMER, MD, MMM, CHIEF CLINICAL OFFICER, AND MEDICAL BRANCH OFFICER, COVID-19 RESPONSE
NASIA SAFDAR, MD, MEDICAL DIRECTOR, INFECTION CONTROL AND PREVENTION

"I am calling from UW Health with your COVID-19 test results. We have found that your test has come back positive. This means that you are infected with COVID-19, also called coronavirus. Most people with COVID-19 experience mild symptoms and do not need medical care. There is currently no treatment for this illness.

It is important that you monitor your symptoms carefully. If your symptoms get worse (especially if you have high fever, if you have difficulty breathing) call your Primary Care or healthcare provider immediately to tell them your symptoms. You can also call the UW Health COVID-19 Hotline: (608) 720-5300. They will tell you what to do. If you need to go to the ED or urgent care, always call ahead to explain that you are positive for COVID-19 so that they are prepared.

Because COVID-19 is highly contagious, you must self-isolate at home. Isolation is the separation of a person who has an illness from others in order to prevent spread of the disease."

COVID - 19 Positive Result Workflow

What Does Self-Isolation Mean?

- Stay home. This means do not go to work, school or public areas. If you need medical care, it is important you follow the instructions above. While at home separate yourself from other people in your home. As much as possible, you should stay in one specific room and away from other people in your home. Also, you should use a separate bathroom, if available.
- COVID-19 is spread by droplet (being within about 6 feet of someone who is coughing or sneezing)
- COVID-19 can also be spread if someone touches items contaminated with the virus and then touches their eyes, nose or mouth. Examples of items that may be contaminated in the home include:
 - Surfaces that have been sneezed on
 - Surfaces that the ill person touched after blowing their nose or sneezing or coughing into their hands
 - Used tissues used to blow the nose
- Avoid sharing personal household items. You should not share dishes, drinking glasses, cups, eating utensils, towels or bedding with other people in your home. After using these items, they should be washed thoroughly with soap and water. Wash your hands often and practice good hygiene.
- Cover your mouth and nose with a tissue when you cough and sneeze then discard into a lined waste container
- Postpone all non-essential medical appointments until you are out of isolation. If you have an essential appointment during the isolation period, please tell your health provider so they can help coordinate the visit.

Isolation May be Discontinued When

1. You are free of fever, productive cough and other acute symptoms of respiratory infection for **72 hours**. AND
2. 7 days has elapsed from the day the you first experienced symptoms.

Your close contacts (family members, roommates, etc) are to be under quarantine. Quarantine is used for people who have been in contact with someone with COVID-19, but who are not currently sick. The measures listed below are taken because they might become ill. Persons exposed usually begin to show within 2 to 14 days.

What Does Quarantine Mean?

For the 14 days after your last contact with the person who has COVID-19:

- Stay home. This means do not go to school, work, public areas or attend large gatherings, such as parties, weddings, meetings and sporting events. If they need medical care, call their healthcare provider. Call ahead before going to the doctor's office or to an emergency room. Tell them symptoms and that they have been in contact with a COVID-19 positive family member/friend.
- Postpone all nonessential medical appointments (for example, dental cleaning, eye exam, routine check-up) until they are out of quarantine. If they have an essential appointment during the quarantine, please call the provider ahead of time.
- Consider minimizing contact with people and animals in your home (stay in your own room and, if possible, use your own bathroom). Avoid sharing personal household items such as dishes, towels and bedding.
- Do not use public transportation, ride-sharing or taxis.
- Do not go out to restaurants or have guests over to your house
- Postpone any travel
- Wash hands often and practice good hygiene
- As long as the quarantined person feels well, they may leave the home (in a private vehicle) for a limited time to take care of routine and necessary activities, such as grocery shopping or visiting the pharmacy. Try to avoid busy times of day.

They can be released from the quarantine 14 days after the last time they were in close contact or shared an indoor living environment with you. Day 1 of the quarantine for someone living with you will be the day after you are free of fever, productive cough and other acute symptoms of respiratory infection. This does not apply to a family member who works in healthcare, they are to reach out to their employer to give them directions.

If your family member or close contact develops any new onset respiratory symptoms (fever, cough, sore throat) they need to reach out to their healthcare provider immediately.”

Other Resources

- [Public Health Guidance for Discontinuation of Home Isolation and Voluntary Home Quarantine for Individuals Infected with or Exposed to COVID-19](#)
- [Self-Isolation for Individuals Being Evaluated for COVID-19](#)
- [DHS COVID-19 \(Coronavirus Disease\)](#)
- [CDC Guidance on Disinfecting Your Home if Someone is Sick](#)

Stay-Up-to-Date

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COVID-19 Isolation Practice: Lower Risk vs Higher Risk Scenarios

Changes have been made to align COVID-19 isolation practice with current guidance from CDC, in order to reserve airborne infection isolation (All) rooms for aerosol generating procedures and therapies. For more information see UConnect: [COVID Isolation and PPE Resources](#)

Lower Risk: Outpatients and General Care Inpatients Not Requiring Aerosol Generating Procedures/Therapies.

Acceptable masks:

Any: Barrier, procedure, surgical, or N-95 (regardless of whether you have been fit tested or not).

Acceptable gowns:

Any: disposable or reusable gowns. Use long-cuffed gloves if gown cuff leaves wrists exposed.

Special Pathogens Precautions:
OUTPATIENT AND GENERAL CARE INPATIENTS

Visitors Not Permitted to Enter Room



MASK *plus* FACE SHIELD
REQUIRED FOR ENTRY

Barrier mask, surgical mask or non-fitted N-95 respirator acceptable.



GOWN and GLOVES
required for entry.

Disposable or reusable gowns acceptable. Long cuff gloves should be used if gown cuff leaves wrist exposed.



Clean Hands Before Leaving Room

Alcohol gel or soap and water may be used.

For questions, contact Infection Control on pager #2570.

Standard Precautions must be observed with all patients at all times.
If patient is isolated at discharge this sign should remain posted. Environmental Services personnel will remove this sign after terminal room-cleaning. Clean one hour earlier than after discharge for required isolation and one hour earlier than after discharge for urgent care locations.



Barrier/procedure/surgical masks, and **non-fitted** N-95: all are adequate for lower risk patient care.

Higher Risk: IMC and ICU Level Patients, and Patients Receiving Aerosol Generating Procedures or Therapies.

Special Pathogens Precautions:
IMC, ICU, AEROSOL GENERATING PROCEDURES/THERAPIES

Visitors Not Permitted to Enter Room



N-95 RESPIRATOR *plus* FACE SHIELD
—OR—
PAPR
REQUIRED FOR ENTRY

PAPR = Powered Air Purifying Respirator



GOWN and GLOVES
required for entry.



Airborne Infection Isolation Room required for aerosol generation



No Patient Transport Without Prior Infection Control Approval



Clean Hands Before Leaving Room

Alcohol gel or soap and water may be used.

For questions, contact Infection Control on pager #2570.

Standard Precautions must be observed with all patients at all times.
If patient is isolated at discharge this sign should remain posted. Environmental Services personnel will remove this sign after terminal room-cleaning. Clean one hour earlier than after discharge for required isolation and one hour earlier than after discharge for urgent care locations.



N-95 Respirators: non-fitted adequate for lower risk patient care. **Must be fit tested to care for higher risk patients.**

Acceptable Respiratory Protection:

- N-95 respirator of the size and type for which you are successfully fit tested, either in the prior year or previously.*
 - PAPR - powered air purified respirator.
- *If you have experienced significant weight gain or loss since being fit-tested, or the N-95 fails the fit check, use a PAPR, or consult Employee Health Services.

Acceptable gowns:

Any: disposable or reusable gowns. Use long-cuffed gloves if gown cuff leaves wrists exposed.

Aerosol-generating procedures/therapies include:

- Intubating/extubating
- Nasogastric tube insertion
- Sputum induction
- Nebulized therapies
- Bronchoscopy
- Oropharyngeal and nasal suction
- High flow O₂
- CPAP/BiPAP

Note: Some procedures not recommended for COVID-19 patients. See [Guidelines for Aerosol-Generating Procedures](#)



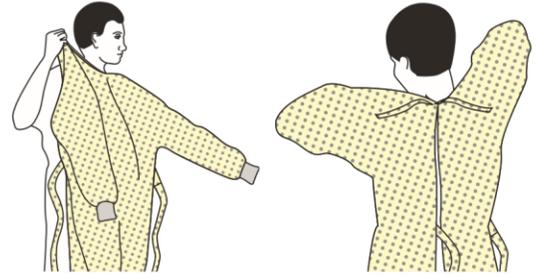
PAPR (powered air-purifying respirator)

SEQUENCE FOR **PUTTING ON** PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- If using PAPR apply at this point, as it must be placed under gown



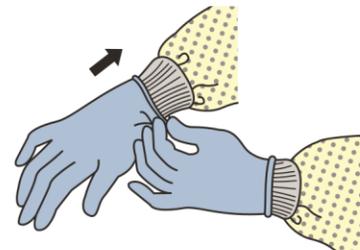
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit
- If using PAPR no goggles or face shield needed



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:**

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



- If using a PAPR this step is not needed

3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container



4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — **DO NOT TOUCH!**
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. IF USING PAPR

- Remove Hood and disconnect tubing, place hood on table/ isolation cart
- Remove PAPR belt from waist, place PAPR on table/ isolation cart
- Turn PAPR off and sanitize with CAVI wipes
- Remove gloves and perform hand hygiene

PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



Recommendation for PAPR and Face Shield Re-use in ALL Patient Care Areas

MAR 20, 2020 · U-CONNECT

POSTED BY HOSPITAL INCIDENT COMMAND SYSTEM (HICS)

LINDA STEVENS, DIRECTOR, NURSING QUALITY AND SAFETY

JOHN MARX, SENIOR INFECTION CONTROL PRACTITIONER

To assist UW Health with conservation of select personal protective equipment while continuing to provide needed patient care and ensure employee safety, nursing and infection control have endorsed a new recommendation on Powered Air Purifying Respirator (PAPR), Face Shield and goggle re-use in all patient care areas.

In the OR staff uses goggles with a mask. Goggles are impervious and can be easily disinfected (with Cavi wipe, Oxycide, or bleach, let dry, then use an alcohol wipe to remove any residue). The goggles should only be reused by one person.

Goggles can also be used instead of a face shield in Special Pathogens Isolation for Ambulatory and General Care patients.

Below Are the Recommended Changes for Cleaning PAPR Hoods and Face Masks

- All nursing staff caring for suspected/confirmed COVID patients are given a face shield/PAPR when the need arises for them to work with the patient
- The team member will label the face shield/PAPR with their name
- The face shield/PAPR will be used by the team member until it needs replacement due to damage, soiling or opaqueness in the shield that impairs the ability to see clearly

Each Team Member Should

- Clean her/his face shield/PAPR with Cavi wipes before leaving the room
- Let it dry for 2 minutes
- Then use an alcohol wipe to eliminate residual residue

At the end of the respective shift, the staff member will store her/his clean face shield/PAPR in an area designated on the unit—this could be a locker, breakroom, or other designated area—to be used again by that same team member, at a later date.

[COVID-19 Isolation Practice: Lower Risk vs Higher Risk Scenarios](#)

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COVID-19 UWHC Guidelines for Aerosol-Producing Procedures and Respiratory Support Options

MAR 14, 2020 · U-CONNECT

Background

Recent reports indicate that COVID-19 carries an approximately 25% risk of severe illness requiring intensive care, with approximately 10% of cases requiring mechanical ventilatory support (1). The 2019-nCoV virus is transmitted via exposure to respiratory droplets and fomites, so aerosol-generating procedures are associated with a high risk of transmission to healthcare workers.

Significant risks for healthcare worker acquisition of COVID-19 may include the use of non-invasive positive pressure ventilation (NIPPV), nebulized therapies, manual ventilation, tracheostomy and cardiopulmonary resuscitation (3, 4, 5). The following practice guidelines are intended to ensure timely, safe, and effective care of patients with severe respiratory failure in the setting of confirmed or suspected COVID-19.

Definition of Aerosol-Producing Bedside Procedures

1. High-risk aerosolizing therapies include:

- Nebulized therapies
- Oropharyngeal and nasal suction
- NGT insertion
- Sputum induction
- Oxygen supplementation
 - Supplemental oxygen > 6L/min likely leads to a higher risk of aerosolization
 - Venturi masks, aerosol masks, and Oxymasks are open systems with increased aerosolization
 - Non-rebreather masks are relatively closed systems with decrease risk of aerosolization
 - High flow nasal cannula units may have increase aerosolization at high flow rates
- Non-invasive positive pressure ventilation (NIPPV)
 - CPAP and bilevel PAP therapies have high levels of aerosolization
- Endotracheal intubation
- Bronchoscopy

2. General Recommendations

- Avoid routine (“per protocol”) procedures/maneuvers without specific indication(s)
- Strict airborne PPE should be used for high-risk aerosolizing therapies
- **MINIMUM PPE for all providers in the room**
 - *Airborne precautions*: N95 mask + eye protection (goggles or face shield) or PAPR
 - *AND*
 - *Contact precautions*: cap + gown + gloves
 - PAPR with hood should be highly considered for intubations and bronchoscopy

Specific Recommendations for Common Respiratory-related Procedures

1. Nebulized therapies: **should be AVOIDED**

- a. Nebulized bronchodilators are **NOT** recommended for COVID-19 patients
 - In specific populations (e.g. asthmatics), HFA and MDI therapies should be favored over nebulized therapies
- b. Other Nebulized therapies should **NOT** be routinely considered in COVID-19 patients (i.e. hypertonic saline, Mucomyst, Pulmozyme)
- c. The Metaneb system is also high-risk for aerosolization and should not be used with COVID-19 patients
- d. Nebulized therapy, in the rare instance required, should ideally be administered in a negative pressure room

2. Oropharyngeal and nasal suction

- a. Routine ("per protocol") suction procedures should be discouraged if not clinically indicated

3. NGT insertion

- a. Follow recommended airborne PPE recommendations for insertion

4. Sputum induction

- a. In general, sputum production should **NOT** be performed on COVID-19 patients

5. Bedside maneuvers

- a. Vital capacity maneuvers should be **AVOIDED** in almost all instances
- b. Bedside spirometry should be **AVOIDED** in almost all instances

6. Airway Clearance Therapies

- a. As above, Metaneb should be **AVOIDED**
- b. Aerobika valves used with a nebulizer should be **AVOIDED**
- c. Acapella valves, PEP, and incentives spirometers are possible considerations
- d. High-frequency chest wall oscillation (Vest therapy systems) are unlikely to have value in COVID-19 patients as the disease state does not appear to be particularly suppurative

7. Bronchoscopy: **VERY HIGH-RISK**

- a. In general, bronchoscopy of COVID-19 patients should be uncommon
- b. Risks of bronchoscopy:
 - May cause deterioration in clinical condition and oxygenation
 - **VERY HIGH-RISK** of viral transmission to providers
 - High resource-usage (PPE, providers, support team)
- c. Benefits of bronchoscopy
 - Typically NP or OP swab should be adequate in diagnosing COVID-19
 - Treatment of COVID-19 is supportive and advanced diagnostics are unlikely to change management
 - Diagnosis of other conditions is where the value lies (i.e. PJP in immunosuppressed patient)

Non-Invasive Respiratory Support

1. Nasal cannula oxygen

- a. Typically set at **1-6 liters per minute**
- b. Concern for increased aerosolization above 6 liters per minute

2. Oxygen masks

- a. Non-rebreather masks represent the “most closed” system for increased levels of supplemental oxygen and should be **FAVORED**
- b. Venturi masks, aerosol masks, and Oxymasks have high-risk aerosolization and should be **AVOIDED**

3. High flow nasal cannula: **HIGH RISK, but available for use**

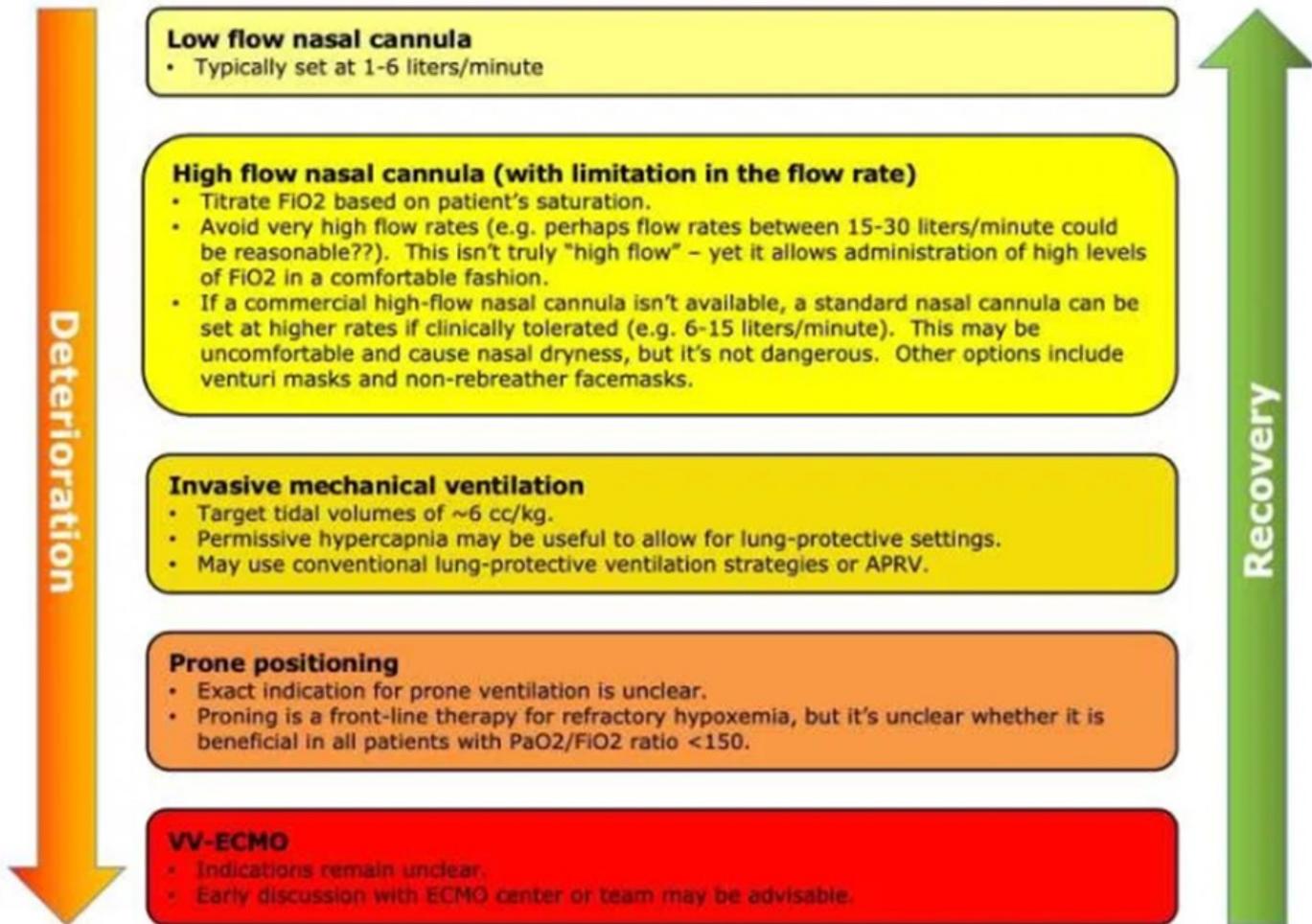
- a. High-risk aerosolization
- b. Patients should be in a negative pressure room
- c. Current recommendations suggest **LIMITATION OF FLOW RATE**
- d. **GOAL to KEEP FLOW RATES between 15-30 liters per minute**
- e. Titrate FiO_2 based on patient saturations
- f. One case series from China suggested that HFNC was associated with higher rates of survival compared to NIPPV and mechanical ventilation (likely biased with less sick patients)⁶
- g. Some centers are avoiding HFNC and favoring non-rebreather masks

3. Non-invasive positive pressure ventilation (NIPPV): **HIGH RISK**

- a. There exist major concerns that NIPPV does not decrease risk for intubation⁷
- b. Very **HIGH-RISK aerosolization**
- c. PAP therapy may be an option for mild COVID patients with pre-existent hypercarbia or hypoventilation (e.g. COPD on home BiPAP, neuromuscular disease)
- d. NIPPV use may be of increased consideration if access to mechanical ventilation is rationed
 - Expiratory filter is mandatory in non-negative pressure rooms
- e. For patients with home nocturnal CPAP and BiPAP use, clinical assessment needs to guide the ability to stop these therapies.
 - If able to stop home PAP therapies:
 - Ensure HOB increased to 30 degrees
 - Consider nasal cannula oxygen if cyclic desaturations are severe (<80%)
 - If unable to stop PAP therapy based on clinical situation
 - A brief initial trial without PAP on night 1 to assess if PAP is needed
 - Ensure patient is in negative pressure room
 - If patient not in negative pressure room, expiratory filter required

5. Endotracheal intubation and Mechanical Ventilation

- a. Early intubation is preferred as emergent procedures increase the risk to healthcare providers
- b. Indices that should prompt consideration of early elective intubation in adults include:
 - RR>30
 - SpO₂<92% despite 6 L/min via nasal cannula
 - Altered mental status
 - Abdominal paradox
 - Recruitment of accessory muscles
- c. Ideally, all planned intubations should be performed in a negative pressure room
- d. Please see separate COVID-19 intubation policy for additional considerations

General schema for respiratory support in patients with COVID-19

The optimal strategy for respiratory support in COVID-19 remains unknown. The above strategy seems reasonable, adapted largely from experience with other types of viral pneumonia. Patients with more complex respiratory disease (e.g. COPD plus COVID-19) might benefit from BiPAP.

-The Internet Book of Critical Care, by @PulmCrit

Table 2. Risk of SARS Transmission to HCWs Exposed and Not Exposed to Aerosol-Generating Procedures, and Aerosol Generating Procedures as Risk Factors for SARS Transmission

Aerosol Generating Procedures	Odds ratio (95% CI)		
	Point estimate	Pooled estimate; I ²	
→ Tracheal intubation (4 cohort studies)	3.0 (1.4, 6.7) [25]	6.6 (2.3, 18.9); 39.6%	
	22.8 (3.9, 131.1) [26]		
	13.8 (1.2, 161.7) [27]		
	5.5 (0.6, 49.5) [29]		
→ Tracheal intubation (4 case-control studies)	0.7 (0.1, 3.9) [23]	6.6 (4.1, 10.6); 61.4%	
	9.2 (4.2, 20.2) [21]		
	8.0 (3.9, 16.6) [20]		
	9.3 (2.9, 30.2) [24]		
→ Suction before intubation (2 cohort studies)	13.8 (1.2, 161.7) [27]	3.5 (0.5, 24.6); 59.2%	
	1.7 (0.7, 4.2) [25]		
→ Suction after intubation (2 cohort studies)	0.6 (0.1, 3.0) [27]	1.3 (0.5, 3.4); 28.8%	
	1.8 (0.8, 4.0) [25]		
Nebulizer treatment (3 cohort studies)	6.6 (0.9, 50.5) [27]	0.9 (0.1, 13.6); 73.1%	
	0.1 (0.0*, 1.0) [28]		
	1.2 (0.1, 20.7) [25]		
Manipulation of oxygen mask (2 cohort studies)	17.0 (1.8, 165.0) [27]	4.6 (0.6, 32.5); 64.8%	
	2.2 (0.9, 4.9) [25]		
Bronchoscopy (2 cohort studies)	3.3 (0.2, 59.6) [27]	1.9 (0.2, 14.2); 0%	
	1.1 (0.1, 18.5) [25]		
Non-invasive ventilation (2 cohort studies)	2.6 (0.2, 34.5) [26]	3.1 (1.4, 6.8); 0%	
	3.2 (1.4, 7.2) [25]		
Insertion of nasogastric tube (2 cohort studies)	1.7 (0.2, 11.5) [27]	1.2 (0.4, 4.0); 0%	
	1.0 (0.2, 4.5) [25]		
Chest compressions (1 case-control study)	4.5 (1.5, 13.8) [24]	1.4 (0.2, 11.2); 27.3%	
Chest compressions (2 cohort studies)	3.0 (0.4, 24.5) [25]		
	0.4 (0.0**, 7.8) [27]		
Defibrillation (2 cohort studies)	0.5 (0.0**, 12.2) [27]	2.5 (0.1, 43.9); 55.3%	
	7.9 (0.8, 79.0) [25]		
Chest physiotherapy (2 cohort studies)	1.3 (0.2, 8.3) [27]	0.8 (0.2, 3.2); 0%	
	0.5 (0.1, 3.5) [25]		
High-frequency oscillatory ventilation (1 cohort study)	0.7 (0.1, 5.5) [26]	0.4 (0.1, 1.7) [25]	
→ High flow oxygen (1 cohort study)	0.4 (0.1, 1.7) [25]		
Tracheotomy (1 case-control study)	4.2 (1.5, 11.5) [20]		
Intubation, tracheotomy, airway care, and cardiac resuscitation (1 case-control study)	6.2 (2.2, 18.1) [22]		
Manipulation of BIPAP mask (1 cohort study)	6.2 (2.2, 18.1) [27]		
Endotracheal aspiration (1 cohort study)	1.0 (0.2, 5.2) [27]		
Suction of body fluid (1 case-control study)	1.0 (0.4, 2.8) [23]		
Administration of oxygen (1 case-control study)	1.0 (0.3, 2.8) [23]		
Mechanical ventilation (1 cohort study)	0.9 (0.4, 2.0) [25]		
→ Manual ventilation before intubation (1 cohort study)	2.8 (1.3, 6.4) [25]		
	Manual ventilation after intubation (1 cohort study)		1.3 (0.5, 3.2) [25]
	Manual ventilation (1 cohort study)		1.3 (0.2, 8.3) [27]
Collection of sputum sample (1 cohort study)	2.7 (0.9, 8.2) [25]		

Meta-analysis of the risk of transmitting SARS to healthcare workers, due to various interventions. Intubation and associated procedures carry the most risk (red arrows). HFNC actually trended towards *reduced* risk of transmission. This suggests that using HFNC to avoid intubation might *reduce* transmission risk. (Tran K et al. 2012)

1 Del Rio et al. COVID-19—New Insights on a Rapidly Changing Epidemic. JAMA Feb 2020.

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3. Cooper A, Joglekar A, Adhikari N. A practical approach to airway management in patients with SARS. Canadian Medical Association Journal. 2003;169(8):785-787.

4. Raboud J, Shigayeva A, McGeer A, et al. Risk Factors for SARS Transmission from Patients Requiring Intubation: A Multicentre Investigation in Toronto, Canada. Montgomery JM, ed. PLoS ONE. 2010;5(5):e10717.
5. Fowler RA, Guest CB, Lapinsky SE, et al. Transmission of Severe Acute Respiratory Syndrome during Intubation and Mechanical Ventilation. Am J Respir Crit Care Med. 2004;169(11):1198-1202.
6. Yang et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. Lancet Respir Med 2020
7. Alraddadi et al. Noninvasive ventilation in critically ill patients with Middle East respiratory syndrome. Influenza Other Respir Viruses. 2019 Jul; 13 (4) 382-390
8. General Schema for respiratory support in patients with COVID-19. The Internet Book of Critical Care; @pulmCrit

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