

Coronavirus Disease 2019 (COVID-19)

Standard Operating Procedure (SOP) for Triage of Suspected COVID-19 Patients in non-US Healthcare Settings: Early Identification and Prevention of Transmission during Triage

Updated May 12, 2020

Summary of Changes

- Edits to clarify how healthcare workers can protect themselves during triage
- Update to triage algorithm to allow for fever (>38°C) OR history of fever

This document is provided by CDC for use in non-US healthcare settings.

1.

Training Slides

This slide deck is a reference for content on this page and can be used for training.



Background/Purpose

This document is intended for healthcare facilities that are receiving or are preparing to receive patients with suspected or confirmed coronavirus disease 2019 (COVID-19). This includes healthcare facilities providing either inpatient or outpatient services. It should be used to guide implementation of procedures at triage that can be effective at preventing transmission of SARS-CoV-2 (COVID-19 virus) to patients and healthcare workers (HCWs). This document was developed based on current data on COVID-19 and experience with other respiratory viruses and will be updated as more information becomes available.

1.1 What is triage

The sorting out and [classification](#) of [patients](#) or casualties to determine priority of need and proper place of [treatment](#).¹ During infectious disease outbreaks, triage is particularly important to separate patients likely to be infected with the pathogen of concern. This triage SOP is developed in the context of the COVID-19 pandemic and does not replace any routine clinical triage already in place in healthcare facilities (e.g. Manchester triage system or equivalent) to categorize patients into different urgency categories.

1.2 COVID-19 transmission

The main route of transmission of COVID-19 is through respiratory droplets generated when an infected person coughs or sneezes. Any person who is in close contact with someone who has respiratory symptoms (e.g., sneezing, coughing, etc.) is at risk of being exposed to potentially infective respiratory droplets.² Droplets may also land on surfaces where

the virus could remain viable for several hours to days. Transmission through contact of hands with contaminated surfaces can occur following contact with the person's mucosa such as nose, mouth and eyes.

2. What patients can do before and upon arrival to a healthcare facility

- Inform healthcare providers if they are seeking care for respiratory symptoms (e.g. cough, fever, shortness of breath) by calling ahead of time
- Wear a facemask, if available, during transport and while at triage in the healthcare facility
- Notify triage registration desk about respiratory symptoms as soon as they arrive
- Wash hands at healthcare facility entrance with soap and water or alcohol-based hand rub
- Carry paper or fabric tissues to cover mouth or nose when coughing or sneezing. Dispose paper tissues in a trash can immediately after use
- Maintain social distance by staying at least one meter away, whenever possible, from anyone, including anyone that is with the patient (e.g., companion or caregiver)

3. What healthcare facilities can do to minimize risk of infection among patients and healthcare workers

Communicate with patients before arriving for triage

- Establish a hotline that:
 - Patients can call or text notifying the facility that they are seeking care due to respiratory symptoms
 - Can be used, if possible, as telephone consultation for patients to determine the need to visit a healthcare facility.
 - Serves to inform patients of preventive measures to take as they come to the facility (e.g., wearing mask, having tissues to cover cough or sneeze).
- Provide information to the general public through local mass media such as radio, television, newspapers, and social media platforms about availability of a hotline and the signs and symptoms of COVID-19.
- Healthcare facilities, in conjunction with national authorities, should consider telemedicine (e.g., cell phone videoconference or teleconference) to provide clinical support without direct contact with the patient.³

Set up and equip triage

- Have clear signs at the entrance of the facility directing patients with respiratory symptoms to immediately report to the registration desk in the emergency department or at the unit they are seeking care (e.g., maternity, pediatric, HIV clinic) (Appendix 1). Facilities should consider having a separate registration desk for patients coming in with respiratory symptoms, especially at the emergency departments, and clear signs at the entrance directing patients to the designated registration desk.
- Ensure availability of facemasks and paper tissue at registration desk, as well as nearby hand hygiene stations. A bin with lid should be available at triage where patients can discard used paper tissues.
- Install physical barriers (e.g., glass or plastic screens) for registration desk (i.e., reception area) to limit close contact between registration desk personnel and potentially infectious patients.
- Ensure availability of hand hygiene stations in triage area, including waiting areas.
- Post visual alerts at the entrance of the facility and in strategic areas (e.g., waiting areas or elevators) about respiratory hygiene and cough etiquette and social distancing. This includes how to cover nose and mouth when coughing or sneezing and disposal of contaminated items in trash cans. (Appendix 2)
- Assign dedicated clinical staff (e.g. physicians or nurses) for physical evaluation of patients presenting with respiratory symptoms at triage. These staff should be trained on triage procedures, COVID-19 case definition, and appropriate personal protective equipment (PPE) use (i.e., mask, eye protection, gown and gloves).

- Train administrative personnel working in the reception of patients on how to perform hand hygiene, maintain appropriate distance, and on how to advise patients properly on the use of facemask, hand hygiene, and separation from other patients.
- A standardized triage algorithm/questionnaire should be available for use and should include questions that will determine if the patient meets the COVID-19 case definition⁴ (Appendix 3). HCWs should be encouraged to have a high level of clinical suspicion of COVID-19 given the global pandemic.

Set up a “respiratory waiting area” for suspected COVID-19 patients

- Healthcare facilities without enough single isolation rooms or those located in areas with high community transmission should designate a separate, well-ventilated area where patients at high risk* for COVID-19 can wait. This area should have benches, stalls or chairs separated by at least one meter distance. Respiratory waiting areas should have dedicated toilets and hand hygiene stations.
- Post clear signs informing patients of the location of “respiratory waiting areas.” Train the registration desk staff to direct patients immediately to these areas after registration.
- Provide paper tissues, alcohol-based hand rub, and trash bin with lid for the “respiratory waiting area.”
- Develop a process to reduce the amount of time patients are in the “respiratory waiting area,” which may include:
 - Allocation of additional staff to triage patients at high risk for COVID-19
 - Setting up a notification system that allows patients to wait in a personal vehicle or outside of the facility (if medically appropriate) in a place that social distance can be maintained and be notified by phone or other remote methods when it is their turn to be evaluated.

Triage process

- A facemask should be given to patients with respiratory symptoms as soon as they get to the facility if they do not already have one. All patients in the “respiratory waiting area” should wear a facemask.
- If facemasks are not available, provide paper tissues or request the patient to cover their nose and mouth with a scarf, bandana, or T-shirt during the entire triage process, including while in the “respiratory waiting area”. A homemade mask with cloth can also be used as source control, if the patient has one. Caution should be exercised as these items will become contaminated and can serve as a source of transmission to other patients or even family members. WHO’s guidance should be followed by patients and family members to clean these items. (<https://www.who.int/news-room/q-a-detail/q-a-on-infection-prevention-and-control-for-health-care-workers-caring-for-patients-with-suspected-or-confirmed-2019-ncov> ).
- Follow triage protocol (Appendix 3) and immediately isolate/separate patients at high risk* for COVID-19 in single-person rooms with doors closed or designated “respiratory waiting areas.”
- Limit the number of accompanying family members in the waiting area for suspected COVID-19 patients (no one less than 18 years old unless a patient or a parent). Anyone in the “respiratory waiting area” should wear a facemask.
- Triage area, including “respiratory waiting areas,” should be cleaned at least twice a day with a focus on frequently touched surfaces. Disinfection can be done with 0.1% (1000ppm) chlorine or 70% alcohol for surfaces that do not tolerate chlorine. For large blood and body fluid spills, 0.5% (5000ppm) chlorine is recommended. (Appendix 4).⁵

**definition of patients at high risk for COVID-19 will change depending on where countries are in the stage of outbreak (e.g. no or limited community transmission vs. widespread community transmission). See Appendix 2 for the different epidemiologic scenarios.*

4. What healthcare workers (HCWs) can do to protect themselves and their patients during triage

- All HCWs should adhere to Standard Precautions, which includes hand hygiene, selection of PPE based risk assessment, respiratory hygiene, clean and disinfection and injection safety practices.
- All HCWs should be trained on and familiar with IPC precautions (e.g. contact and droplet precautions, appropriate hand hygiene, donning and doffing of PPE) related to COVID-19.
 - Follow appropriate PPE donning and doffing steps (Appendix 5).

- Perform hand hygiene frequently with an alcohol-based hand rub if your hands are not visibly dirty or with soap and water if hands are dirty.
- HCWs who come in contact with suspected or confirmed COVID-19 patients should wear appropriate PPE:
 - HCWs in triage area who are conducting preliminary screening do not require PPE if they DO NOT have direct contact with the patient and MAINTAIN distance of at least one meter. Examples:
 - HCWs at the registration desk that are asking limited questions based on triage protocol. Installation of physical barriers (e.g., glass or plastic screens) are encouraged if possible.
 - HCWs providing facemasks or taking temperatures with infrared thermometers as long as spatial distance can be safely maintained.
 - When physical distance is NOT feasible and yet NO direct contact with patients, use mask and eye protection (face shield or goggles).
 - HCWs conducting physical examination of patients with respiratory symptoms should wear gowns, gloves, medical mask and eye protection (goggles or face shield).
 - Cleaners in triage, waiting and examination areas should wear gown, heavy duty gloves, medical mask, eye protection (if risk of splash from organic material or chemical), boots or closed work shoes.
- HCWs who develop respiratory symptoms (e.g., cough, shortness of breath) should stay home and not perform triage or any other duties at the healthcare facility.
- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly (<https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>).

5. Additional considerations for triage during periods of community transmission

- Begin or reinforce existing alternatives to face-to-face triage and visits such as telemedicine³.
- Designate an area near the facility (e.g., an ancillary building or temporary structure) or identify a location in the area to be a “respiratory virus evaluation center” where patients with fever or respiratory symptoms can seek evaluation and care.
- Expand hours of operation, if possible, to limit crowding at triage during peak hours.
- Cancel non-urgent outpatient visits to ensure enough HCWs are available to provide support for COVID-19 clinical care, including triage services. Critical or urgent outpatient visits (e.g. infant vaccination or prenatal checkup for high-risk pregnancy) should continue, however, facilities should ensure separate/dedicated entry for patients coming for critical outpatient visits to not place them at risk of COVID-19.
- Consider postponing or cancelling elective procedures and surgeries depending on the local epidemiologic context.

6. References

1. Medical Dictionary. Available at. <https://www.online-medical-dictionary.org/definitions-t/triage.html>  . Accessed on March 18,2020
2. World Health Organization. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. Available at: [https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125)  . Accessed on March 13, 2020
3. World Health Organization. Telemedicine: opportunities and developments in Member States: report on the second global survey on eHealth. Global Observatory for eHealth Series, 2, World Health Organization. 2009.
4. World Health Organization. Global Surveillance for human infection with coronavirus disease (COVID-19). Available at [https://www.who.int/publications-detail/global-surveillance-for-human-infection-with-novel-coronavirus-\(2019-ncov\)](https://www.who.int/publications-detail/global-surveillance-for-human-infection-with-novel-coronavirus-(2019-ncov))  . Accessed on March 13, 2020
5. Kampf G, Todt D, Pfaender S, Steinmann E. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. J Hosp Infect. 2020 Mar;104(3):246-251. doi: 10.1016/j.jhin.2020.01.022.

7. Acknowledgements

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Appendix 1: Visual Alert to Direct Patient with Respiratory Symptoms

STOP!

If you are experiencing cold or flu symptoms like:

- **Fever**
- **Cough**
- **Shortness of breath**

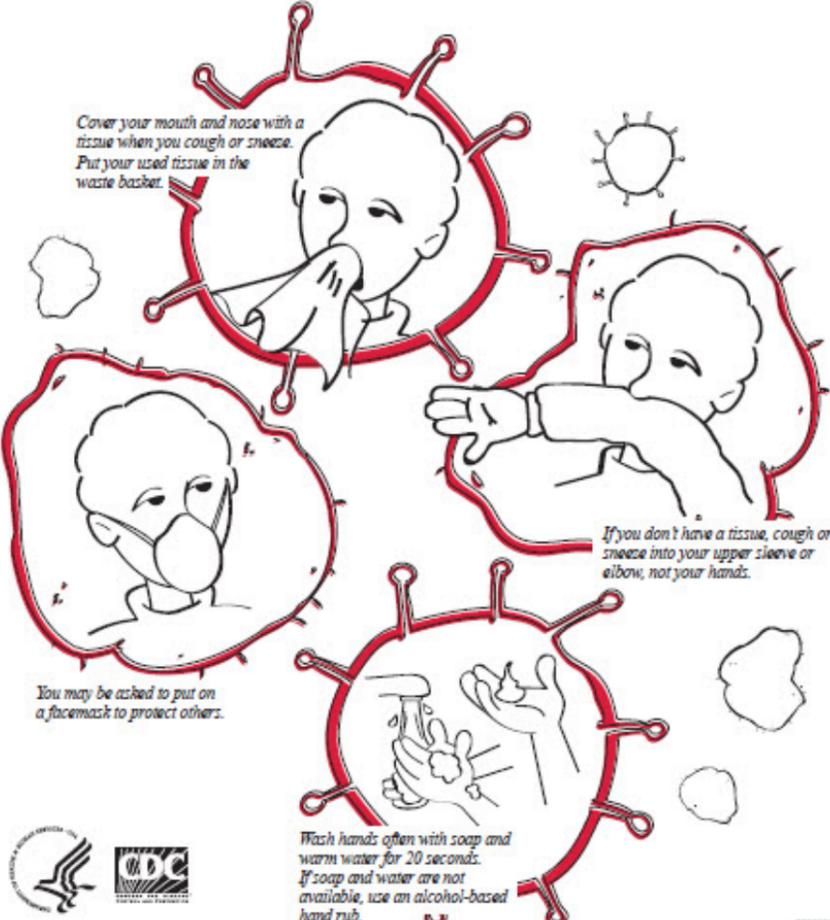
REPORT immediately to the registration desk!

 [PDF - 39 KB]

Appendix 2: Respiratory Etiquette and Hand Hygiene

Cover your Cough

— Stop the spread of germs that can make you and others sick! —



Cover your mouth and nose with a tissue when you cough or sneeze. Put your used tissue in the waste basket.

If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands.

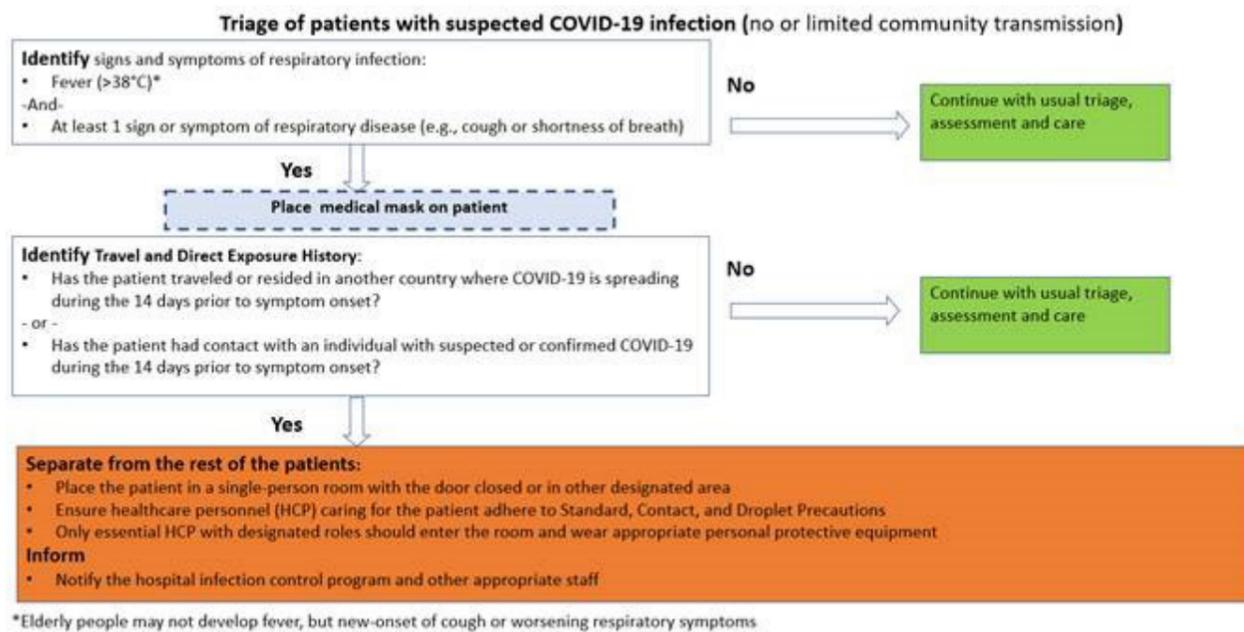
You may be asked to put on a facemask to protect others.

Wash hands often with soap and warm water for 20 seconds. If soap and water are not available, use an alcohol-based hand rub.

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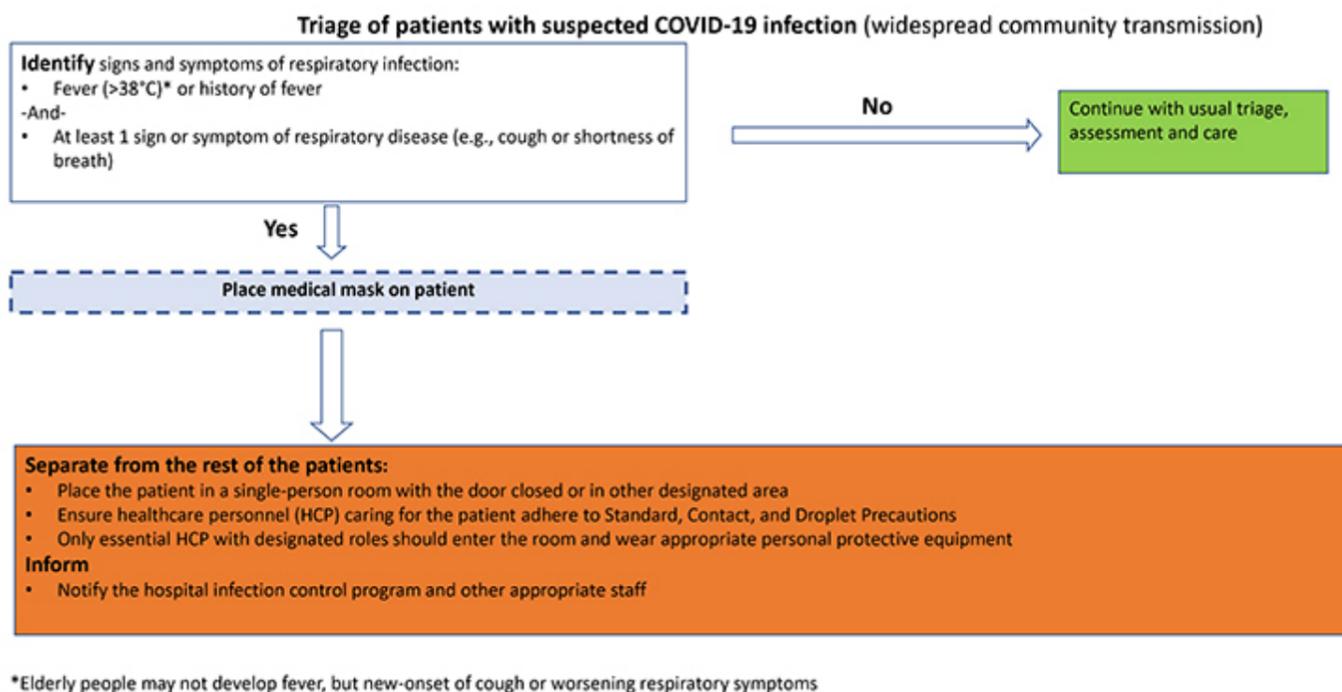
Appendix 3: Triage Protocol

Countries with no or limited community transmission (cases in the community are linked to known chain of transmission)



[PDF - 123 KB]

Countries with widespread community transmission (inability to relate confirmed cases though chains of transmission for large number of COVID-19 cases)



[PDF - 123 KB]

Appendix 4: Chlorine Solution

How to Make 0.1% (1,000ppm) Chlorine Solution

Use 0.1% (1,000ppm) chlorine solution to disinfect frequently touched surfaces and items. Make new 0.1% chlorine solution every day. Throw away any leftover solution from the day before.

From Strong (0.5%) Solution OR **From 10% (20%)** OR **From Chlorine Powder (20%)**

1. Measure 1 part strong (0.5%) solution, 10 parts water, or 1 part strong (10%) solution into a bucket.

2. Add 100 Substituents (20g) of high-test hypochlorite (20% to 20 liters of water in a bucket).

3. Add 100 Substituents (20g) of chlorine powder (20% to 20 liters of water in a bucket).

4. Stir well for 30 seconds, or until chlorine powder granules have dissolved.

5. Wait 30 minutes before use.

6. Label bucket "Strong (0.1%) Chlorine Solution - Cleaning".

7. Cover bucket with lid. Do not store in direct sunlight.

Supplies Needed: Measuring cup or liter bottle, Bucket with lid and spout, Water, Strong (0.5%) chlorine solution or 10% (20%) chlorine powder, Mask for safety, Label.

Warnings: Do NOT mix chlorine solution with other cleaning products. Do NOT put chlorine water in mouth or eyes.

[PDF - 406 KB]

How to Make Strong (0.5%) Chlorine Solution from Liquid Bleach

Use strong (0.5%) chlorine solution to clean and disinfect surfaces, objects, and body fluid spills. Make new strong (0.5%) chlorine solution every day. Throw away any leftover solution from the day before.

From 1.25% OR **From 2.6% or 8% chlorine** OR **From 3.5% or 12% chlorine** OR **From 5%**

1. Measure 1 part 1.25% bleach, 2 parts water into a bucket. Repeat until full.

2. Measure 1 part 2.6% or 8% bleach, 4 parts water into a bucket. Repeat until full.

3. Measure 1 part 3.5% or 12% bleach, 8 parts water into a bucket. Repeat until full.

4. Measure 1 part 5% bleach, 10 parts water into a bucket. Repeat until full.

5. Stir well for 30 seconds.

6. Label bucket "Strong (0.5%) Chlorine Solution - Cleaning".

7. Cover bucket with lid.

8. Store in shade. Do not store in direct sunlight.

Supplies Needed: Measuring cup or liter bottle, Bucket with lid, Water, Liquid bleach, Substituting, Label.

Warnings: Do NOT mix chlorine water with other cleaning products. Do NOT put chlorine water in mouth or eyes.

[PDF - 2 MB]

How to Make Strong (0.5%) Chlorine Solution from 70% Chlorine Powder

Use strong (0.5%) chlorine solution to clean and disinfect surfaces, objects, and body fluid spills. Make new strong (0.5%) chlorine solution every day. Throw away any leftover solution from the day before.

1. Measure 1 part strong (0.5%) solution, 10 parts water, or 1 part strong (10%) solution into a bucket.

2. Add 10 Substituents (20g) of high-test hypochlorite (20% to 20 liters of water in a bucket).

3. Add 10 Substituents (20g) of chlorine powder (20% to 20 liters of water in a bucket).

4. Stir well for 30 seconds, or until chlorine powder granules have dissolved.

5. Wait 30 minutes before use.

6. Label bucket "Strong (0.5%) Chlorine Solution - Cleaning".

7. Cover bucket with lid.

8. Store in shade. Do not store in direct sunlight.

Supplies Needed: Measuring cup or liter bottle, Bucket with lid and spout, Water, Strong (0.5%) chlorine solution or 10% (20%) chlorine powder, Mask for safety, Label.

Warnings: Do NOT mix chlorine solution with other cleaning products. Do NOT put chlorine water in mouth or eyes.

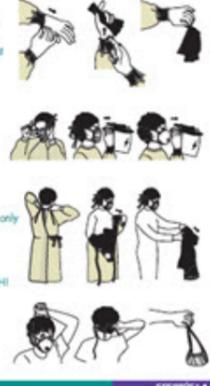
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Appendix 5: Putting on and Taking off Personal Protective Equipment to Avoid Self-

Appendix J. Putting On and Taking Off Personal Protective Equipment to Avoid Self Contamination

SEQUENCE FOR DONNING PERSONAL PROTECTIVE EQUIPMENT (PPE)	SECUENCIA PARA PONERSE EL EQUIPO DE PROTECCIÓN PERSONAL (PPE)
<p>The type of PPE used will vary based on the level of precautions required; e.g., Standard and Contact, Droplet or Airborne Infection Isolation.</p> <ol style="list-style-type: none"> 1. GOWN <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Secure ties or elastic bands at middle of head and neck Fit flexible band to nose bridge Fit snug to face and below chin Fit-check respirator 3. GOGGLES OR FACE SHIELD <ul style="list-style-type: none"> Place over face and eyes and adjust to fit 4. GLOVES <ul style="list-style-type: none"> Extend to cover wrist of isolation gown 	<p>El tipo de PPE que se debe utilizar depende del nivel de precaución, que sea necesario; por ejemplo, equipo Estándar y de Contacto o de Aislamiento de infecciones transmitidas por gatas o por aire.</p> <ol style="list-style-type: none"> 1. BATA <ul style="list-style-type: none"> Cubra con la bata todo el torso desde el cuello hasta las rodillas, los brazos hasta la muñeca y dóblela alrededor de la espalda Alinee por detrás a la altura del cuello y la cintura 2. MÁSCARA O RESPIRADOR <ul style="list-style-type: none"> Asegúrese los cordones o la banda elástica en la mitad de la cabeza y en el cuello Ajuste la banda flexible en el puente de la nariz Acomódelo en la cara y por debajo del mentón Verifique el ajuste del respirador 3. GAFAS PROTECTORAS O CARETAS <ul style="list-style-type: none"> Colóquelas sobre la cara y los ojos y ajústelas 4. GUANTES <ul style="list-style-type: none"> Extienda los guantes para que cubran la parte del puño en la bata de aislamiento 
<p>USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION</p> <ul style="list-style-type: none"> Keep hands away from face Limit surfaces touched Change gloves when torn or heavily contaminated Perform hand hygiene 	<p>EJECUTE PRÁCTICAS DE TRABAJO SEGURAS PARA PROTEGERSE USTED MISMO Y LIMITAR LA PROPAGACIÓN DE LA CONTAMINACIÓN</p> <ul style="list-style-type: none"> Mantenga las manos alejadas de la cara Limite el contacto con superficies Cambie los guantes si se rompen o están demasiado contaminados Realice la higiene de las manos

 [PDF - 762 KB]

SEQUENCE FOR REMOVING PERSONAL PROTECTIVE EQUIPMENT (PPE)	SECUENCIA PARA QUITARSE EL EQUIPO DE PROTECCIÓN PERSONAL (PPE)
<p>Except for respirator, remove PPE at doorway or in anteroom. Remove respirator after leaving patient room and closing door.</p> <ol style="list-style-type: none"> 1. GLOVES <ul style="list-style-type: none"> Outside of gloves is contaminated! Crimp outside of glove with opposite gloved hand; peel off Hold removed glove in gloved hand Slide fingers of ungloved hand under remaining glove at wrist Peel glove off over first glove Discard gloves in waste container 2. GOGGLES OR FACE SHIELD <ul style="list-style-type: none"> Outside of goggles or face shield is contaminated! To remove, handle by head band or ear pieces Place in designated receptacle for reprocessing or in waste container 3. GOWN <ul style="list-style-type: none"> Gown front and sleeves are contaminated! Unfasten ties Pull away from neck and shoulders, touching inside of gown only Turn gown inside out Fold or roll into a bundle and discard 4. MASK OR RESPIRATOR <ul style="list-style-type: none"> Front of mask/respirator is contaminated — DO NOT TOUCH! Grasp bottom, then top ties or elastics and remove Discard in waste container 	<p>Con la excepción del respirador, quite el PPE en la entrada de la puerta o en la antecámara. Quite el respirador después de salir de la habitación del paciente y de cerrar la puerta.</p> <ol style="list-style-type: none"> 1. GUANTES <ul style="list-style-type: none"> ¡El exterior de los guantes está contaminado! Agarre la parte exterior del guante con la mano opuesta en la que todavía tiene puesto el guante y quítelo Sostenga el guante que se quitó con la mano enguantada Deslice los dedos de la mano sin guante por debajo del otro guante que no se ha quitado todavía o la altura de la muñeca Quite el guante de manera que oculte cubriendo al primer guante Arroje los guantes en el recipiente de desechos 2. GAFAS PROTECTORAS O CARETA <ul style="list-style-type: none"> ¡El exterior de las gafas protectoras o de la careta está contaminado! Para quitarlas, tome las por la parte de la banda de la cabeza o de las piezas de las orejas Colóquelas en el recipiente preparado para reprocessar materiales o de desechos de desecho 3. BATA <ul style="list-style-type: none"> ¡La parte delantera de la bata y las mangas están contaminadas! Desate los cordones Desdoble solamente el interior de la bata, pásela por encima del cuello y de los hombros Voltee la bata al revés Dóblela o enróllala y deséchela 4. MÁSCARA O RESPIRADOR <ul style="list-style-type: none"> La parte delantera de la máscara o respirador está contaminada — ¡NO LA TOQUE! Primero agarre la parte de arriba, luego los cordones o banda elástica de arriba y por último quite la máscara o respirador Arrojelo en el recipiente de desechos 
<p>PERFORM HAND HYGIENE IMMEDIATELY AFTER REMOVING ALL PPE</p>	<p>EJECUTE LA HIGIENE DE LAS MANOS INMEDIATAMENTE DESPUÉS DE QUITARSE CUALQUIER EQUIPO DE PROTECCIÓN PERSONAL</p>

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