




Protection and disinfection of a hand-held ultrasound device during COVID-19 pandemic


This protocol is a guideline only. It should be modified as needed based on available resources and local infection control policies

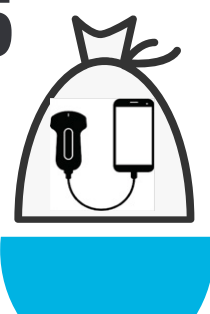
outside patient room

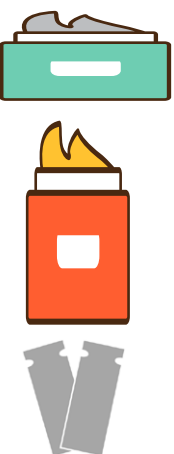
1  Put gloves on

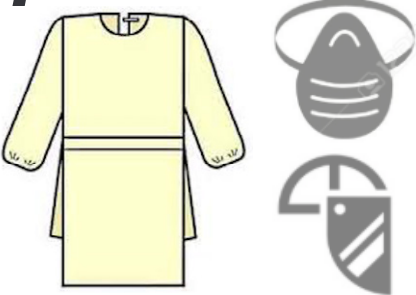
2  Clean device with wipes


3  Apply gel to probe face

4  Apply protective cover to entire device. Secure with elastic bands


5  Place covered device in clean basin


6  Place tissues (4), wipes (3), and gel packs (2) in basin


7  Don PPE with TWO pairs of gloves


8  Bring basin with device, tissues, wipes, and gel into patient room


inside patient room


1  Leave basin close to door, either on table, cart, or floor. Leave tissues and wipes in basin


2  Scan patient

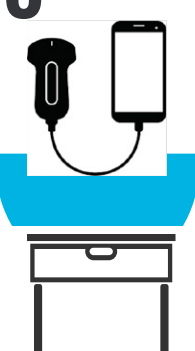
3  When finished scanning, discard gel packs

4  Sanitize gloved hands with alcohol


5  2m (6ft) away from patient, remove device cover and allow device to slide gently into basin
DO NOT allow device cover to touch basin. Discard device cover
DO NOT touch uncovered device or basin with gloved hands


6  Remove outer pair of gloves (if one pair of gloves, sanitize with alcohol)


7  Remove gel with tissues. Clean device with wipes. Place device in basin. Discard tissues and wipes


8  Open door and place basin on another table outside door or slide basin outside with foot


outside patient room


1  Discard gloves


2  Perform hand hygiene


3  Discard gown, keep mask and eye protection on


4  Perform hand hygiene


5  Put new gloves on

6  Remove device from basin and disinfect device with wipes

7  Place device on a clean surface OR in a second clean basin. Air dry

8  Discard basin(s) if disposable, or disinfect with wipes if reusable

9  Discard gloves

10  Perform hand hygiene

11  Doff remaining PPE

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notes

- The protocol should be used in ALL patients who are suspected or confirmed to be infected with COVID-19. The protocol can also be used in any situation where a patient is isolated for infectious disease.
- For patients who are low risk for COVID-19 infection AND local infection control guidelines dictate that gown, gloves, mask, and eye protection are not required for close patient encounters (i.e. examinations), please defer to local infection control and manufacturer policies for cleaning the device.
- PoCUS can benefit patients who have actual or potential COVID-19 infection. This includes assessment of lung pathology, cardiac function, fluid tolerance, vascular access/procedural guidance, and confirmation of endotracheal intubation.
- PoCUS can also benefit patients who have non-COVID-19 related complaints and concomitant COVID-19 infection.
- The utility of PoCUS may increase during a pandemic, as access to plain films, CT, radiology performed ultrasound and echocardiography become limited.
- As community transmission of COVID-19 increases, patients infected with COVID-19 may present without respiratory symptoms or fever. Once local infection control guidelines advise gown, gloves, mask, and eye protection for ALL close patient encounters, regardless of symptoms, then this protocol should be used for ALL patients when performing PoCUS.
- PoCUS may also cause harm if strict infection control protocols are not followed. The ultrasound machine, the user, and the ultrasound gel can act as infectious fomites, putting patient and clinicians at risk.
- Hand-held devices are easier to protect from contamination and easier to disinfect after use than cart-based systems. Note that devices may have decreased image generation capabilities when compared to cart-based systems.
- Consider acquiring a dedicated display for use with the hand-held probe to avoid using personal phone/tablet

definitions

- **Device:** Any hand-held ultrasound device that may consist of wireless or wired probes used with tablets, phones, or integrated screens.
- **Wipes:** Cleaning supplies that include both solutions and wipes. The chemical composition of wipes should be compatible with manufacturer recommendations for each device AND should be effective at eliminating the COVID-19 virus. Cleaning the device should always include cord if present.
- **Don:** To put on personal protective equipment (PPE).
- **Doff:** To remove PPE.

tips

- The key to this cleaning protocol is ONE thorough wipe of the device before scanning and TWO thorough wipes of the device after scanning.
- Ungloved hands should never touch something dirty. If in doubt, wash hands again.
- Always handle device with gloved hands.
- If probe covers are not available, use small clear garbage bags, sandwich bags, or wet umbrella bags with elastic bands. These covers do NOT have to be sterile.