

COVID-19 Return to Work Guidance and Recommendations for Vestibular Clinicians

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Abstract

As states begin issuing progressive deconfinement guidelines, hospitals and institutions are starting to reopen for elective procedures and consultations. Vestibular clinicians are opening their practices to evaluate, test or treat patients with dizziness and balance problems. The following document, requested by the American Balance Society, collates the current information about the virus, including transmission from asymptomatic carriers, decontamination and other safety protocols, and provides a return to work guidance for clinicians caring for this population of patients, promoting provider, patient and staff safety.

Background

With the curve of COVID-19 starting to flatten, many states have started to implement return to work guidance and progressive deconfinement. The healthcare system was particularly affected by this crisis and the majority of elective, non-life-threatening interventions, consultations and diagnostic procedures have been put on hold.

According to the CDC (CDC, 2020a) large quantities of viral RNA can be detected in asymptomatic patients. Transmissibility is still largely unknown, but some reports have suggested that it could be similar to transmissibility from symptomatic patients (He et al, 2020; Gandhi et al, 2020; Rahimi et al, 2020).

The virus has been detected in the upper and lower respiratory tract but has also been detected in blood and stool. Transmission via contact with eyes (tears) has been suggested as well (Li et al, 2020). Transmission via vomit or sweat, all too common in the symptomatic vestibular patient, are still unknown.

Various reports analyzed the viability of viral particles on inert surfaces (Van Doremalen et al, 2020). Aerosolized particles may remain suspended for several hours but would require coughing to project the droplets into the air. Coughing can be induced by certain procedures (namely caloric testing). A mask on the patient and a face shield on the provider would be effective barrier measures to reduce that risk. Viral particles can be detected for up to 48-72 hours on stainless steel and plastic and up to 24 hours on cardboard (Van Doremalen et al, 2020). Data from other coronaviruses suggests that surface stability on glass and silicone rubber can be up to 5 days (Kampf et al, 2020). However, coronaviruses can be efficiently inactivated “by surface disinfection procedures with 62-71% ethanol, 0.5% hydrogen peroxide or 0.1% sodium hypochlorite within 1 minute. Other biocidal agents such as 0.05-0.2% benzalkonium chloride or 0.02% chlorhexidine digluconate are less effective” (Kampf et al, 2020, p246).

With the confirmation of community spread, the CDC recommended the use of face masks in the public Setting (CDC, 2020c). In the hospital setting, guidance has varied from institution to institution. The majority of hospitals in the US and Canada are mandating that their employees wear masks (cloth or surgical

masks) even when they are not involved in patient care. Wearing of N95 and respirators is traditionally reserved to care for patients that are positive for the pathogen or when a high-risk procedure is being performed. A recent meta analysis and a recent randomized controlled trial, failed to show superiority of N95 respirators over regular medical/surgical masks in preventing transmission of air-borne virus diseases (including influenzae) to health care workers (Lee et al, 2016, Smith et al, 2016, Radonovich et al, 2019). Neurologic manifestations of COVID-19 have been recently reported to be present in up to a third of infected patients (Mao et al, 2019; Asai-Pooya et al, 2020; Li et al, 2020). While some are significant and seen in acutely ill patients, who will not likely be referred for vestibular rehabilitation, other symptoms are minor and include dizziness in up to 17% of presentations (Asai-Pooya et al, 2020). It is likely that we will be seeing these patients in clinic and that we will have to manage them.

The Mission of the American Balance Society is “to serve as a multi-disciplinary organization that strives [...] to empower health care professionals to make evidenced-based, patient-centered decisions in the pursuit of improved clinical care for patients with dizziness, balance and movement disorders.”

The following recommendation from the ABS Task Force does not mandate how each practice should devise a recovery plan and a return to work schedule. It is intended as an advisory document which collates current information about the COVID-19 pandemic and how it may affect our practice as vestibular clinicians. The CDC guidance encourages every business to develop, implement, maintain and revise the plan as more information becomes available. Available resources will also dictate the individual plans. (CDC, 2020b).

The purpose of this document is to emphasize safe practices to slow the spread of COVID-19, while protecting your patients, yourselves and your staff from exposure. The main challenge is the asymptomatic carriers of COVID-19 who will make it into clinic, the vestibular laboratory and the vestibular physical therapy space.

This document is addressed to medical doctors, vestibular audiologists, vestibular therapists and laboratory technicians who assess patients with vestibular complaints. All clinicians should also refer to their respective national societies or academies for further recommendations about safety protocols. They should also implement the recommendations according to their institutional policies.

This guidance is based on current (5/8/20) information about COVID-19 and is subject to change as the international scientific community knows more about the virus.

I - Recommendations for Vestibular Lab Scheduling and Infection Control Protocols

A- Scheduling:

- a. Reducing the number of patients you will see in your laboratory is important. This will allow time for safe disinfection and cleaning between patients and procedures
- b. Consider triaging patients on the basis of acuity and clinical indications. Most third party payers as well as CMS are reimbursing teleconsultations. **Consider proceeding with a telehealth visit (phone or videoconferencing) in low acuity situations or in certain patient populations.**
 - i. BPPV patients may be easily screened clinically without the need for any equipment and referred as needed to vestibular therapy or provided with habituation exercises if they are autonomous and not at a high risk for falls.
 - ii. Meniere's disease patients getting testing prior to a scheduled surgery or ablative treatment should be seen in the laboratory. Patients with a stable meniere's disease, without significant or frequent recent flare-ups, and without scheduled interventions, should be deferred and evaluated in a telehealth setting.
 - iii. Consider rescheduling elderly patients with multiple comorbidities, or establish specific hours/times for them.
- c. Patients may not be accompanied inside the laboratory by a family member.

d. In patients scheduled for an inperson visit, a phone screening of your patient using the CDC checklist is strongly recommended before their visit (CDC, 2020d). As of 5/8/20, this checklist included: cough, shortness of breath or difficulty breathing, fever, chills, muscle pain, sore throat, new loss of taste or smell. Other less common symptoms include nausea, vomiting, diarrhea.

i. If patients have any of the symptoms above, or have been in contact with a sick person in the last 14 days, we recommend rescheduling this patient until you can get testing to rule out a viral infection.

ii. Patients who screen negative on the phone, can proceed with their scheduled visit but should be reminded of safe practices including social distancing prior to their appointment.

B- Laboratory Infection control:

a. When the patient arrives at the laboratory, another symptom screen is necessary. Patient and clinician should wear a mask and both clinician and patient should wash hands or use alcohol-based hand sanitizer upon entering the lab space.

b. Clinicians should follow basic hygiene rules including:

- i. wearing short sleeves
- ii. avoid watches, rings or jewelry
- iii. avoid make-up to prevent ruining the integrity and barrier effect of the mask and no nail polish.
- iv. disinfection of the clinician's hands after each patient contact
- v. decontaminate all surfaces that the patient was in contact with
- vi. favor single use equipment that can be disposed of after each patient encounter

- vii. in case of contamination of equipment or surfaces with body fluids (e.g., in case of vomiting), wipe off the contaminated surface until the body fluid is no longer visualized, then wipe with appropriate disinfectant (see below).

It is ABD Task Force position that the best way to avoid contamination of equipment between patients is to use disposable equipment to the extent possible. This would include electrodes with disposable wires so all can be thrown away after single use. Below are general recommendations relating to non-disposable VNG equipment and accessories.

Video Head Impulse Test (vHIT) equipment:

- a. Remove tubing/disposable foam pad and sterilize the goggle frame and tubing after each patient. Use germicidal wipes that are on the **EPA-approved List N of disinfectants** (<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>).
- b. Use a bouffant cap on the patient's head as a physical barrier. Change elastic between patients and place used strap in basin for cleaning.
- c. Clean with mild detergent and warm water.
- d. Lenses cannot be cleaned with disinfectant solvent due to the infrared coating. Wash with a solution of mild soap and warm water using a cotton ball. Rinse. Dry with a cotton ball. Use a microfiber cloth to remove any remaining lint.

Vestibular Evoked Myogenic Potential (VEMP) equipment:

- a. Use fully **disposable single-use electrodes** and leads when possible.
- b. When non-disposable leads are used, they should be cleaned with **EPA-approved List N disinfectants** between patients. Wet time will depend on the type of disinfectant solution used and can be found on the EPA website. Only clean leads should be returned to storage at end of day.

- c. Use **insert earphones**. Disinfect cords with **EPA approved List N disinfectants** between patients. Toss disposable inserts.

Videonystagmography (VNG) goggles:

- a. Use **bouffant** cap over the patient's hair.
- b. Use **EPA-approved list N disinfectant** for silicone/rubber and strap (you can coat the strap with duct tape since it is a porous surface). The Velcro should not make contact with the patient. If available, use disposable foam goggle pads.
- c. Lenses cannot be cleaned with disinfectant solvent due to infrared coating. Wash with a solution of mild soap and warm water using a cotton ball. Rinse. Dry with a cotton ball. Use a microfiber cloth to remove any remaining lint. Clean between patients and at the end of day, return goggles to drawer only when they are cleaned.

Computerized Dynamic Posturography (CDP):

- a. Consider use of polyethylene isolation gown or other barrier to prevent transmission to fabric of the safety harness since the harness is much harder to thoroughly disinfect.
- b. Use **shoe covers** on the platform and use **EPA-approved List N disinfectants** to clean platform after each patient. If shoe covers are not available, disinfecting the platform could be enough.

Rotary Chair

- a. Consider using polyethylene isolation gown or other barrier between the patient and the seatbelt of the rotary chair to facilitate disinfection following the procedure.

Chairs, counters and carts:

- a. **EPA-approved List N disinfectants** should be used to wipe down chairs and work surfaces (counters, carts, keyboards, handle on irrigator, etc.) between patients and at end of day. Follow manufacturers' instructions.

c. Doorknobs should be cleaned at least once daily using bleach. Consider cleaning those surfaces between patients. Clean/wipe down every surface the patient has been in contact within your clinic/laboratory.

C- Personal Protective Equipment (PPE):

- 1. Masks:** Both clinician and patient should be masked. Their mask is for your protection! You should change your mask after each patient and after you have disinfected the lab space between patients.
- 2. Gloves:** Gloves should be worn during testing and changed for each patient. Wash hands before and after use of gloves. If needed, change gloves to disinfect equipment as needed. Gloves are necessary if you come in contact with bodily fluids. Do not touch your face while wearing gloves.
- 3. Face Shields:** For use during caloric testing. Dispose of soiled face-shield masks (make-up or secretions). Recycle other face shield masks appropriately according to your institution's protocols.
- 4. Gowns:** There is at this point not enough evidence to suggest donning a gown throughout all procedures. In select situations, it is ABS Task Force opinion that according to available resources, you can consider putting a gown on a patient to create a barrier with some of the equipment which is somewhat harder to thoroughly clean. The following website explains the various forms of protective clothing (<https://www.cdc.gov/niosh/npptl/topics/protectiveclothing/default.html>): Only Level 4 gowns are tested for viral penetration resistance, and therefore only Level 4 gowns are considered impermeable to viral penetration using ASTM F1671. However, Level 1–3 gowns can provide increasing resistance to liquids which should be more than enough in these situations since patients are asymptomatic.

II - Recommendations for Vestibular Rehabilitation Visits

A. Scheduling:

- a. Reducing the number of patients you see in your clinic is important. This will allow time for safe disinfection and cleaning between patients and procedures and reduce the chance of person to person spread. **Consider starting with a virtual visit (phone consultation, videoconferencing) to triage patients.** If a vestibular rehabilitation plan can be done remotely, favor this method over an in-person visit (especially if patient is in a high-risk group).
- b. Adjust your waiting room and your policy about patient's companion according to the available social distancing protocols issued by the CDC. Consider not allowing family members or partners into the treatment room or in the waiting room until the patient is ready to leave.
- c. In patients scheduled for an inperson visit, a phone screening of your patient using the CDC checklist is strongly recommended before their visit (CDC, 2020d). As of 5/8/20, this checklist included: cough, shortness of breath or difficulty breathing, fever, chills, muscle pain, sore throat, new loss of taste or smell. Other less common symptoms include nausea, vomiting, diarrhea.
 - i. If patients have any of the symptoms above, or have been in contact with a sick person in the last 14 days, we recommend rescheduling this patient until you can get testing to rule out a viral infection
 - ii. Patients who screen negative on the phone can be scheduled but should be reminded of safe practices, including social distancing, prior to their appointment.
- d. When the patient arrives at the clinic, another symptom screen is necessary. Both the clinician and patient should wear a mask and wash hands or use alcohol-based hand sanitizer upon entering the lab space.

e. Consider postponing in person visits in elderly patients with comorbidities which put them at risk of complications from COVID-19 or create a specific window of time to see those patients with more spaced-out appointments.

B. Vestibular rehabilitation session

a. For BPPV and canalith repositioning maneuvers, we recommend that the clinician wear a polyethylene isolation gown, or at least a liquid-resistant gown, due to the risk of emesis and diaphoresis and unclear transmissibility within these fluids. The clinician should wear gloves to be disposed of at the end of the repositioning maneuvers. A surgical mask is recommended since the therapist will be in close proximity with the patient. The patient should wear their mask at all times.

i If the therapist is examining a patient using infrared goggles, please follow precautions listed above for VNG goggles.

b. Clinicians who use static force plates, please follow recommendations listed under Computerized Dynamic Posturography (refer to I.B.4 above)

c. Clinicians who use computerized dynamic visual assessment are advised to place a bouffant cap on the patient's head before placing the accelerometer equipment and to clean the equipment as listed in I.B for other comparable equipment

d. For subsequent vestibular rehabilitation protocols, minimizing close contact with the patient is important. In unstable patients and high fall-risk patients, using a gait belt may be necessary. Gait belts need to be disinfected following use between each patient, using an **EPA-approved list N disinfectant**. It is imperative to follow instructions about wet time and allow drying of the gait belt before using it. All surfaces need to be wiped down with bleach or other EPA-approved list N disinfectants between patients.

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