

## **AAST May 26 Town Hall Q&A**

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### **Testing Patients for COVID-19**

There were many questions posed regarding screening and testing patients for COVID-19.

Questions included:

- Are you pre-screening patients?
- What are some specific questions that should be asked for prescreening?
- How do you manage temperature checks in a private lab? Do you assign someone to check in patients?
- Do you recommend Covid-19 for titration studies only or also for diagnostic PSG?
- What is the timeframe for Covid-19 screening prior to testing date?
- Are you testing Covid-19 testing patients needing PAP or split-night testing?
- If testing patients and the result for Covid-19 comes back negative, how do you trust that patient will quarantine themselves for 48 hours considering that is how long the results take?
- Is anyone providing COVID-19 testing or does the patient have to go to the hospital?
- How are you getting COVID-19 test results in 24 hours?
- If point-of care (PCR) testing is done, who informs the patient if test is positive? Technologist? MD? RN/NP?
- Is there a difference in testing requirements for diagnostic vs. titration? Do diagnostics need COVID-19 testing?
- Are you doing COVID-19 testing for HSAT set-ups in the lab?
- Are you phone screening family members if you use a reusable HSAT equipment?

Most of these questions do not yet have definitive answers. The [CDC guidelines](#) are the best starting point for all sleep centers as they plan for re-opening their sleep centers to patients. Many are screening using some form of the CDC checklist of possible symptoms of COVID-19.

These include:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

Others are performing temperature checks upon patient arrival and sending home any patients who have a temperature of 100 degrees F or higher. Many are performing both screening questionnaires and temperature checks. Some are asking screening questions upon scheduling, when the appointment is confirmed, and again when the patient arrives in the sleep center. Each sleep center needs to determine its own process for re-opening their sleep centers and develop a [safety plan](#) for all to follow.

There were also many questions regarding COVID-19 testing. There are two types of testing that is being performed for COVID-19: [viral tests](#) and [antibody tests](#). The viral test is most useful for determining if someone has a current infection. Antibody testing only determines if someone has had a previous infection, and there is no information available yet to indicate if having antibodies means you cannot be infected again or if you have protection from re-infection. Most antibody testing is currently being used in research, rather than for current practical informational needs.

The CDC is still primarily recommending testing for those with symptoms. However, the CDC guidelines also refer us to our state and local guidelines, which may be more specific in the use of testing for screening purposes. Some sleep centers may opt to test all patients prior to bringing them into the sleep center for any testing and ask them to self-quarantine between the time they are tested and the study appointment. Others are using point of care testing on the testing day. Still others are not testing at all, but are screening patients using questionnaires and taking temperatures, and using personal protective equipment (PPE) for all patient contact.

There are numerous tests available for COVID-19, each with their own timeframe ranging from 10 or 15 minutes to hours or days for results. Whether or not to test patients, whether to test diagnostic patients or only titration patients or to test HSAT patients coming to the sleep center for set-up education and instruction is going to be determined by your medical director in conjunction with the guidelines in your area. Keep in mind that if you are only testing titration patients you never know when you may need to implement an emergency split-night titration. If you are testing patients for COVID-19 prior to bringing them into your sleep center for testing, point of care testing is most efficient. Your medical director should determine who will provide information to any patient that tests positive. He or she should also determine the timeframe for testing performed in advance. Most are testing 48 to 72 hours prior and asking patients to self-isolate between the time they are tested and their appointment for sleep testing. These are medical decisions that need to be determined by your medical director and spelled out in your safety plan.

Whether or not to test HSAT patients will also fall within your safety plan and should be determined by your medical director. Screening family members of HSAT patients is an interesting question. In my sleep center we have not done that, but this is an interesting question. Presumably someone in the household that has COVID-19 could potentially

contaminate reusable HSAT equipment. However, HSAT equipment always requires disinfection upon return and today we assume all equipment being returned could have been exposed and disinfected based on that assumption. We will discuss this further in the cleaning and disinfection section.

### Testing Staff for COVID-19

Similar themes appeared in the questions related to staff screening and testing.

- Are you Covid-19 testing your sleep technologists prior to reopening?
- Are you using screening techniques for your sleep center staff?
  - Questionnaires? Temperature monitoring?
- What is the most accurate means for taking temperatures?

Most if not all US hospitals are either actively screening staff or having them self-screen and report any symptoms of COVID-19. Few, if any, are performing COVID-19 testing on any employee without symptoms. Healthcare workers in many areas of the country are now able to participate in drive by COVID-19 screening at will. All sleep centers, including privately owned centers, need a plan for staff screening and/or testing as part of their re-opening safety plan. Consider using the CDC recommended screening questions and/or temperature monitoring for staff. Any standard temperature thermometer is fine for self-use. There are even some phone apps available for employee self-monitoring that some employers are using to log daily checks. This process will be determined by your sleep center's administration and medical director and should be documented in your safety plan. Once you develop your plan assure that staff follows it consistently.

On June 4, 2020, the U.S. Centers for Disease Control and Prevention (CDC) updated its Public Health Guidance for Community-Related Exposure. This update addresses how to handle potential exposures to *asymptomatic* individuals who have **tested positive** for COVID-19. The CDC recommends individuals who have "close contact" with an asymptomatic person who tests positive for COVID-19 to stay home for 14 days while monitoring for symptoms. Close contact means within 6 feet of the infected person for a period of 15 minutes or longer (or 10 minutes for those in the healthcare industry). The bottom line is that, under this new guidance, when an employee tests positive for COVID-19 but does not have symptoms, employers should determine if anyone else had close contact with the person starting two days before he or she took the COVID-19 test. If anyone has had close contact in that timeframe, the employer should ask those individuals to stay home for 14 days to monitor for symptoms in the same manner as if they were exposed to a person with symptoms. (Note: critical infrastructure employers may choose to allow the asymptomatic exposed employee to continue to work subject to the CDC's critical infrastructure guidance.)

### Performing PSG and HSAT

For those currently primarily performing only diagnostic testing questions revolved around ways to decrease potential contamination, including using PPE and implementing use of disposable equipment.

- Have you considered switching to disposable leads and sensors for PSG testing?
- What is the cost of disposable leads compared to re-usable?
- HSAT equipment is not disposable. Is it safe to reuse after disinfection?
- Is anyone considering or using disposable HSAT equipment?

As we move through the pandemic and begin to re-open, we need to assure safety for our patients and our staff. The CDC recommends providing care in the safest way possible and following recommended infection control practices. Any way that we can reduce the risk of disease transmission will likely improve safety. Many sleep centers have moved to disposable PAP interfaces to avoid the onerous record keeping requirements for disinfection of this equipment. Disposable thermocouples and thermistors are standard in most sleep centers. Disposable effort belts, EEG leads, and other sensors are all readily available today. Some sleep centers have also moved to disposable PAP tubing and humidifier chambers. Many are concerned about the expense of moving to all disposable equipment. In many cases, the costs related to cleaning and disinfecting all equipment actually outweigh the cost of moving to disposables. Consider the equipment, supplies and staff time involved when you evaluate this option for your sleep center.

There are a variety of models being used for HSAT testing. One option is the single-use, fully disposable device and component. Another HSAT option is using a mail to home service model that ensures patients do not have to leave their home to receive or return the device. This will require a way to educate the patient remotely, such as instructional brochures, video or telemedicine consultations to ensure proper set-up. In this case, handling and disinfection of returned equipment require an action plan. Individuals responsible for cleaning reusable HSAT devices and components must wear appropriate PPE and diligently log check out, check in and cleaning of the unit.

Both of these options follow [CDC guidelines to provide care in the safest way possible](#) utilizing telehealth when available and appropriate. As sleep centers, we need to consider the use of telehealth in our future work plan. Each sleep center will need to determine if this is a viable option for them.

### **PAP Titration**

As expected, the discussion regarding PAP titration was broad and diverse, with questions ranging from when to begin to perform PAP titrations and what safety measures are needed, to what equipment or procedures might be available to reduce aerosolization.

- When can we start to perform PAP titration studies?
- How many labs have resumed titrations and if so when?
- How can PAP titrations be performed to assure staff safety?
- What is the standard for technologists using N-95 masks when performing PAP studies?
- Is there a particular way PAP titration studies need to be done?
- Are any labs considering making their sleep rooms negative pressure or airborne infection isolation room (AIIR) rooms?

- What, if any, modifications are being made to filter PAP flow? Is anyone using viral PAP filters?
- Do you have special way of doing titrations? Hose, mask, and viral/bacterial filter? Filter on machine or between hose and mask? Or both?
- Is anyone using HEPA filters for titrations?
- Is anyone using non-vented masks with AB filters for PAP titration?
- Is anyone using dry PAP titrations instead of heated humidity titrations?
- Has anyone considered using non-vented masks?
- When using bacterial/viral filters for PAP titrations, how is it set up?
- How is mask fitting being performed?

At least some sleep centers have resumed performance of PAP titrations, and each is using their own unique set of processes, developed in conjunction with their medical director, to perform these studies with patient and technologist safety being the primary focus. The timing surrounding restarting PAP titrations will be unique to each sleep center and based on local conditions. The [AASM](#) has provided a list of suggestions for re-opening sleep centers on their website, and links to many resources, including the [CDC framework for providing non-Covid-19 care](#). It is also important to review you state and local healthcare department information.

Oxygen and PAP administration have been shown to increase the risk of [aerosolization](#) however a cough or sneeze also is effectively aerosolization. Use of appropriate PPE and other mitigation efforts are recommended. Negative pressure rooms are helpful, but in many situations not available. Converting existing sleep centers to negative pressure rooms can be complicated and quite costly. It is helpful to know the status of your HVAC system, so you know if your rooms are isolated and vented to the outside or part of a system that is recirculated throughout you sleep center or even the entire building. HEPA filters are often used when negative pressure is not available, even in hospitals.

HEPA filters are air filtration systems that mechanically force air through a filter, trapping harmful particles as small as 0.3 microns. They effectively remove fine airborne particles. There are also [UV light air purifiers](#) that are capable of neutralizing airborne particles. These are frequently used in dental offices where aerosolization is common. Note that these UV light purifiers are different than the UV-C light discussed during the webinar that are used for cleaning rooms and surfaces. These will be discussed in the cleaning and disinfection Q&A section.

[Preparation and planning](#) are key to performing PAP titrations safely. Provide appropriate PPE and instructions for use for all staff. Properly fitted N-95 masks for staff are essential for performing PAP titrations. Limit access to the sleep center. Many healthcare facilities, including hospitals, have limited visitors to essential only, such as a parent with a child or caregiver for those with essential needs. Plan how you will physically distance patients from each other as well as distance staff in control rooms during the night. Complete paperwork in

advance if possible, provide patient instruction for testing via telemedicine or written instruction. Use telephone translation services in place of a translator. Consider staggering arrival times for patients. Place distancing marks on floors to remind all to practice social distancing. Remind patients to wear a mask and have them remain masked as much as possible until lights out. Have patients and staff practice good hand hygiene, and frequently disinfect all surfaces. Assure adequate cleaning supplies are available, and that hand sanitizer is accessible to all, including patients.

Some are adapting procedures to include oronasal (full face) masks for PAP titrations and adding expiratory port filters to mitigate possible virus spread. Work with your equipment vendors to determine what recommendations they can provide for filtering for your specific titration equipment. CPAP manufactures have posted product support and COVID-19 information on their websites. [Philips Respironics](#), [ResMed](#) and [Fisher Paykel](#) have issue statements, product support and COVID-19 Information. It is important to check with the manufactures as adding filters or valves in an unapproved manner may lead to altering the flow dynamics of the systems and increase dead space or cause other safety issues. PAP titration can be done without the use of humidification, but in either case we are still dealing with aerosolization. This is an individual center decision and should be determined by your medical director as well as outlined in your safety plan. Mask fitting generally requires turning on the PAP machine, so this should be done inside of the patient room with the use of a HEPA filter or negative pressure if possible, and with staff using appropriate PPE including an N-95 mask. Do your due diligence to determine what the right answers are for your sleep center and your patients. And please remember, these decisions should be made in conjunction with your medical director!

### **PPE, Cleaning and Disinfecting**

- For those who have started to perform titration studies, what is your PPE protocol?
- If a patient tests negative for COVID-19 is the recommendation for the technologist to wear full PPE for the study?
- What do you do with patients or parents of patients that don't wear masks?
- If using a 1:2 tech to patient ratio, does the technologist need a separate set of PPE for each patient room?
- How is don and dof of PPE handled if a technologist needs to go in to a room to adjust wires?
- How many labs have more than one technologist in the control room?
- How do you disinfect PAP devices after titration studies?
- Are you quarantining rooms for 48 hours and/or alternating room use?
- What process are people using to disinfect PAP masks after a titration study? Are you reusing them or disposing of them?
- What are you using to disinfect patient rooms?
- Is UV light recommended to disinfect the PAP rooms after testing?

- There have been recommendations to limit use of in lab PAP machines for 48-hour intervals. Anyone else following this recommendation?
- Which infrared systems are facilities using? What is the estimated cost of these systems? What is the risk of damage to equipment since infrared lighting is known to be bad for plastics and most diagnostic testing equipment is housed in plastic?
- Is anyone using UV light to disinfect HSTs before processing?
- Do you feel that we will need to quarantine the HST units for 72 hours forever?

We should all be well aware of the requirement for use of universal precautions in any healthcare setting to assure patient and staff safety. Most sleep centers have kept and used some form of PPE routinely. Surgical masks and gloves as well as gowns should be standard equipment in any sleep center. Face masks or goggles and N-95 masks are essential for working with PAP patients, where aerosolization is likely. Remember that for an N-95 mask to be effective each staff member must be FIT tested. Full PPE is also essential for working with patients who are positive for COVID-19.

In most cases, patients will not be coming to the sleep center if they are actively positive for COVID-19, however all patients should be treated as if they might be positive, which means most sleep centers have opted to use full PPE including N-95 masks for performing diagnostic testing as well as for PAP titration studies.

Once again, I will remind you that you need a safety plan specific to your sleep center made in conjunction with your medical director, and all staff need to be educated on how to implement the plan. Patients should wear masks at all times while in the sleep center. Cloth masks are acceptable. In most cases this means until setup is completed, and they are ready for lights out, and in the morning once facial sensors and electrodes are removed until they leave the sleep center. Your center should have a policy regarding the use of face masks for patients and those accompanying them, as well as for staff. Be prepared to provide a surgical mask for any patient or person who arrives without one. Many hospitals refuse entry to anyone who refuses to wear a mask unless they have a medical condition that interferes with their ability to wear one. Your policy should address how you will handle those who refuse to wear a mask.

It is important for all staff to know the proper procedures for [donning and doffing](#) PPE. Staff should practice these procedures and you might want to consider implementing a competency to assure they are comfortable with the process. There is still a shortage of PPE equipment in many areas, so consider how you will manage PPE for your staff. If you are able to staff at a 1:1 patient to technologist ratio one set of PPE is adequate. The technologist should remove PPE after leaving the patient room and hang it near the door for access when they need to re-enter the room. Gowns, gloves and N-95 masks used in a patient room should not be worn in the control area. A surgical mask is, however, necessary in the control area, particularly if you have more than one technologist sharing the space. Remind you technologists to social distance in the control area as well. For technologists managing two patients, our infection control has instructed us to use a separate gown and gloves for each patient, but that the same N-95 mask

can be used in both rooms. The PPE is again left outside of the patient rooms between uses. Determine what, if any, PPE will be cleaned and re-used, and what will be discarded at the end of the shift. N-95 masks should be stored in [paper bags instead of plastic bags](#), as the virus only lasts a few hours in paper bags. Assure that you have adequate PPE for your staff and patient load. As with everything we have discussed this far, you need a plan specific to your sleep center and your staff must understand the implement the plan. If possible, involve your infection control staff when developing your plan, and include your medical director.

Cleaning reusable equipment requires following manufacturer recommendations as always. If possible, PAP equipment should be disposable or given to the patient to take home. Any PAP equipment that is cleaned for re-use must stringently follow CDC guidelines for sterilization of respiratory equipment. Follow [CDC infection control recommendations](#) to clean patient rooms. Routine cleaning and disinfection using hospital approved disinfectants for all surfaces in the patient room is essential. It is important to establish and assure that all staff follow cleaning and disinfection procedures according to policy. Use routine procedures for management of laundry. Staff, technologists or others, should use full PPE while cleaning rooms and equipment.

The length of time that a room may remain contaminated following aerosolization procedures is unknown. This depends on a number of factors such as room size and air exchange. Thorough cleaning, the use of HEPA or UV filters during the procedure, and the ability to thoroughly clean the room all determine how long the room should be unoccupied. Many hospitals are using UV-C light to terminally clean hospital rooms used by COVID-19 patients. When this technology is used, disposable sensors that change color placed in the corners of the room can determine when the room has been adequately sanitized. The amount of time that UV-C light sanitization requires is based on the size of the room and the layout of the room. An alcove or attached bathroom may require separate sanitizing. It is essential to understand that UV-C light used for room sanitization is not the same as UV light sanitization mentioned above. UV-C light is extremely dangerous, and no one can enter the room while the light is in use. These units are used in hospital rooms, ambulances, operating rooms and other areas that require sanitization. The units are available as large robotic devices or small portable devices. Search for UV-C disinfection to find manufacturers and prices for this equipment.

We have ordered a unit similar to those used in ambulances for use in our sleep center rooms. In conjunction with our infection control personnel we have determined it will take about 30 minutes total to clean our 10 x 14 rooms with an alcove and a bathroom; 15 minutes for the main room and another 15 minutes for the alcove and bathroom. Of course, we have yet to test this as our unit is on backorder.

In the meantime, we are using HEPA filters in patient rooms and thoroughly cleaning rooms, as well as alternating rooms used for PAP titrations when possible. We also use HEPA filters in our PAP fitting room, clean thoroughly between patients, and schedule patients at least 2 hours apart. For easier disinfecting between patients we have severely limited the amount of

furniture and equipment in this room as well. Others have recommended routinely alternating rooms and/or quarantining PAP rooms for up to 48 hours. The CDC recommended practice FAQ's for terminal cleaning are available [here](#).

Reusable HSAT equipment requires careful cleaning upon return. Patients should be instructed to bag (paper bag preferred) the unit prior to returning it. Upon return, the unit should remain bagged in a dirty utility room until a technologist wearing PPE can clean and disinfect the unit. [The AASM recommends](#) cleaned and sanitizing HSAT units according to CDC disinfection standards and manufacture recommendations. They also recommend removing reusable devices from service for at least 72 hours as an extra precaution during this public health emergency. Unless we can use relatively assured sterilization measures such as UV-C light to isolate and clean this equipment, I expect this recommendation will continue for the foreseeable future and may lead to more sleep centers using disposable HSAT equipment. UV-C light is used safely in hospital rooms, operating rooms, and ambulances and is safe for disinfecting equipment. The equipment must, however, be cleaned using standard cleaning measures prior to using UV-C light for sterilization.

### Operational Issues

- How can we convince patients to come into the sleep center?
- Is anyone using telemedicine only?
- Will insurance companies provide PPE modifier due to the higher cost for running the practice? Is AAST going to follow up with AASM so insurance companies provide a modifier code due to higher cost for managing sleep patients due to added cost related to PPE requirements?
- Are there guidelines for using the CCSH credentials?
- Do you charge for CCSH set up calls/trouble shooting? If so how?
- How do you do auto titration at home in these situations?
- Can RPSGTs do DME equipment setup?
- Are the education charges less for telehealth or the same as in-person patient education?
- I appreciate hearing what everyone is doing but is there a thought to put together a formal recommendation on what centers should do?

To wrap up here we will discuss some of the issues related to bringing our patients back to the sleep center from the patient perspective, and opportunities for technologists that the pandemic may have brought about.

As technologists, we are inherently educators. We need to use our education skills in a new way to convince our patients that it is safe to return to our sleep centers. As part of your plan to re-open, you must consider what your patients will be concerned about. They will want to know that your facility is clean and safe, and that you are practicing CDC recommendations for infection control and social distancing. Some important steps may be to remove all brochures

and magazines from any public areas, use signs, floor decals and seating decals to reinforce social distancing practices, and provide hand sanitizer at the door and throughout the public areas. More importantly, inform your patients of the steps you have taken to keep them safe. If you are staggering appointment times, using online or phone questionnaires to minimize contact, providing masks for patients, using disposable equipment for all patients, or other ways to improve safety you must tell your patients what you are doing. Make certain that all of your staff are comfortable informing patients of all the steps you have taken to assure their safety. Patients want to know what we are doing – it will help, trust me.

Telemedicine has exploded, as I am sure most of you know. Our physicians exclusively used telemedicine for patient follow-up visits for several months. We were fortunate to already have this capability in place. Patients embraced it, and recently even some new patient visits were conducted using telemedicine. Now, as we transition back to face to face patient visits, let's think about how we as technologists might utilize telemedicine. We currently use phone calls to check on our PAP patients who seem to need some assistance with adherence to therapy or troubleshooting equipment. I predict that we will soon be using telemedicine to educate our patients prior to HSAT testing, and perhaps mailing them their equipment, or doing mask fittings using this technology. Both major manufacturers have recently released new mask fitting technology that will assist us to do this. We can already remotely download compliance data; why not follow up with patients using telemedicine? We could possibly even assist with DME setup for patients whose equipment has been drop shipped. As educators, providing this service remotely does not impact licensure laws that require respiratory therapists to set up DME equipment. We can also provide this service in sleep centers under the auspices of our medical directors in most states.

As RPSGTs and CCSH credential holders, who is better placed to provide these services, freeing up physician time and assisting patients to be adherent to therapy that improves their health and wellbeing. The question always comes down to payment. How do we get paid for these services? Perhaps one outcome of the explosion in telemedicine will translate to payment for educational services delivered by technologists. We can hope and continue to advocate for that, or we can do it as a service for our physicians and patients and hope that payment follows at some point. Some sleep centers with physicians in attendance are successfully receiving payment for these services provided by technologists. Whether or not this will translate to payment for telemedicine services remains to be seen.

The CCSH is an advanced certification awarded by the BRPT for experienced RPSGTs and other healthcare educators with advanced knowledge of sleep and sleep disorders. There is some thought that this certification may assist us to move along toward payment for services at some point in time. The CCSH designation is only to be used by those who have earned the certification and are listed as certified on the BRPT registry.

As a technologist membership organization, we strive to provide the latest information we can gather to educate our members and our community. Our role is not to set standards, but to



educate on the standards put in place by the regulatory bodies such as the CDC and the accrediting bodies such as the AASM and the ACHC. We appreciate all of the questions that were submitted and have done our best to provide guidance on where to find answers to those questions. We hope you will avail yourselves of the resources on our [COVID-19 Resources](#) page which we have been gathering and updating throughout this pandemic, and that you will join us for our follow-up webinar where we will provide some of the data we gathered from this group.