

SURGICAL PATIENTS AND COVID-19

N95 respirator with a surgical mask over it, but would wear the same PPE as the RN circulator if required to go into the OR. After this workflow was developed, it was sent to the OR staff members by e-mail. Then, we had a meeting to discuss it point by point and to answer any staff member questions. Any appropriate suggestions made by the staff members were incorporated into the workflow.



Figure 1. Negative pressure hood used in the OR. Photo courtesy of Holy Name Medical Center.

Steve Mosser, vice president of facilities, designed and built several creative and useful items for the hospital. For the anesthesia professionals, he constructed negative pressure hoods to be placed over the patient's head with embedded gloved slots for intubation and extubation (Figure 1); a manufacturer has since created something similar for purchase. Air from the room is sucked into the hood (i.e., negative pressure). The air then goes into a flexible duct attached to its side; the opposite end of the duct is placed up against the exhaust vent on the wall to suction the air out of the hood, filter it, and push it outside the building. The amount of negative pressure is controlled by turning a dial.

After intubating the patient, the anesthesia professional either secures the negative pressure hood in place for the duration of the procedure or removes the hood from over the patient's head and places it nearby (e.g., on the floor), but keeps it on for continual negative air pressure in the proximity of the patient. This decision is based on personal preference of the anesthesia professional, such as

wanting better access to the patient's airway. The negative pressure hoods allowed us to keep our ORs as positive pressure spaces. As I learned from an AORN webinar, changing the airflow from positive to negative in one OR can adversely affect the airflow in adjoining rooms. The hoods allowed us to provide the correct environment for the OR personnel without increasing the risk for surgical site infections for our patients. Another device created by Steve and his team was a transportation isopod ("bubble") used to move patients positive or under investigation for COVID-19 on stretchers or beds within the hospital, including to and from the OR, while keeping hospital personnel safe (Figure 2).

How did you develop and implement the solution?

I read everything on the AORN website about COVID-19 and participated in the AORN virtual town halls; I then incorporated the recommendations and information into our OR routine and workflows. I also developed a slide presentation on COVID-19 to provide information for the staff members to

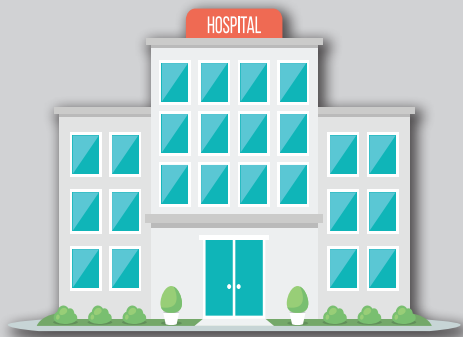
ease some of their apprehensions related to rumors and lack of knowledge. The workflow I developed was changed four times as problems came up, clarifications needed to be made, or knowledge of the virus and how to handle it changed.

Steve and his crew worked 14-hour days, seven days a week, to build necessary items for the hospital. People throughout the organization signed up to help his department; for example, some made phone calls to construction and plumbing stores to buy supplies and others drove to pick up the items from the store.

What challenges have you experienced?

Deviations from the plan were confusing and upsetting for staff members. For example, we had originally agreed that the negative pressure hood would be turned on and used only for intubation and extubation, but then the anesthesia professionals differed in their practices with the hood after intubation based on personal preference (i.e., keeping it on the patient versus near the patient's head for the

FACILITY PROFILE



Name: Holy Name Medical Center

Hospital Location: Teaneck, New Jersey

Capacity: 300 beds

Number of ORs: 10

Specialties: General; colorectal; gynecology; gynecologic oncology; urology; orthopedics; podiatry; vascular; thoracic; neurology; spine; ophthalmology; plastic surgery; ear, nose, and throat; and dental

duration of the procedure). The OR manager and I met with the OR team to clarify these changes and explain that everyone was still being kept safe with both approaches because all personnel were wearing proper PPE.

staff members are all familiar with this procedure, they were being asked to work away from their normal environment, which required familiarizing themselves with the new space, bringing over necessary OR supplies, and being prepared for emergencies by locating the department's code cart and fire extinguishers.



Figure 2. Transportation isopod used to move patients positive for COVID-19. Photo courtesy of Holy Name Medical Center.

Another challenge was when ventilator-dependent patients with COVID-19 were not able to be weaned off their ventilators and their endotracheal tubes needed to be changed to tracheostomy tubes. Because these patients were positive for COVID-19, the OR and endoscopy managers and perioperative director decided to use the Endoscopy Department's negative pressure room for this procedure that is typically performed in the OR. Although the OR

What outcomes did you experience?

After the OR staff members were given the information and protocols and felt they were supported, they were able to adjust to this new normal. As the educator, I received fewer and fewer phone calls with questions because the staff members stopped second-guessing themselves. They began to realize that they knew the answers to their questions, which bolstered their ability to confidently care for their patients.

What lessons have you learned?

First and foremost, it is important to try to keep staff members from getting caught up in a whirlwind of fear by providing them with realistic and concrete information, keeping them as safe as possible, and giving them processes and protocols to follow. It also is important to know when to argue a point and when to let it go. For example, a rumor got spread that I said everyone needs to wear two gowns. We talked about it as a group and that practice was abandoned by everyone, except one surgical technologist who insisted on continuing to wear two gowns. We did not make an issue out of it, because it gave her peace of mind.

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Letting everyone express their thoughts and feelings is always important, but in times of high stress, it is even more important. You need to connect with your staff members. If you bring up a tough subject with a large group, and everyone seems fine and no one asks questions, remember that many people do not feel comfortable asking questions for clarification in this setting. Instead, hang around after the group breaks up and those people who are uncomfortable will seek you out. If you spot worry on someone's face during your discussion, make a mental note and then seek out that person to follow up. You may not be able to fix everyone's concerns, but by connecting with them, you are reminding them that you are in this together.

People should not be afraid to work with others outside their facility in times of crisis. For example, I called nearby medical centers to learn what they were doing when caring for their surgical patients. One said they were going to make their ORs' air pressure neutral (not positive or negative) and assign a runner to each OR team. The other had not yet developed a plan for handling emergency surgeries, so I sent her a copy of my workflow plan. It also is important to

reach out to professional organizations to devise a plan to help you. The most important point is to be nimble when dealing with change by accepting that yesterday's decisions may be completely revised by tomorrow and that this will be a daily occurrence.

How do you see this evolving in the future?

In the immediate future, we are talking about accepting patients' COVID-19 test results; therefore, if a patient tests negative, OR personnel will no longer be required to wear additional PPE, such as booties over OR-dedicated shoes. All staff members, however, will continue wearing N95 respirators with surgical masks over them, regardless of patients' test results. Runners will still be assigned on call as a team member but will not be assigned to an OR unless the COVID-19 test result is positive.

If you have questions about these protocols, send an e-mail to Debra Dunn, MSN, MBA, RN, CNOR, at ddunn@holyname.org. If you have a project or solution that you would like to share in this series, send an e-mail to aornnews@aorn.org.