
Yale New Haven Health

Digestive Health

Endoscopy Standard Operating Procedure

Airborne & Contact Precautions
(COVID-19, TB) Provision of Care

Original: 3-16-2020

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Purpose:

To provide systematic guidance for caring for those patients who require airborne isolation precautions for **COVID 19, TB, or other airborne illness**. Utilize this guidance in conjunction with YNHHS Airborne & Contact Precautions policies dated 3/1/2018.

Preparation:

All staff should review at a minimum the following information on the **COVID 19 Clinical Resources for Employees and Medical Staff Website**: <https://www.ynhhs.org/patient-care/covid-19/for-employees.aspx>

1. Reuse Extended Use N95
2. Link for video on proper use of PPE for Yale New Haven Health for COVID 19: <https://vimeo.com/397424618/5e69e27680>
3. COVID-19 Tool Kit

Inpatient Scheduling Location Prioritization:

1. *Option 1:* When possible, patient requiring airborne isolation precautions should have their procedure performed bedside in the **patient's ICU negative pressure room**.
2. *Option 2:* If the patient is not roomed in a negative pressure room, patient should complete the procedure in a negative pressure room in the endoscopy center. Every effort should be made to schedule procedure as the last case of the day for that specific procedure room to allow for terminal cleaning.
3. *Option 3:* Patient may be scheduled to have procedure in the OR. If the need is to schedule procedure in the OR, the **scheduling of the case needs to be escalated through the OR Charge Nurse and/or Anesthesia OR Floor Runner**.

Ambulatory Workflow for suspected/confirmed Covid Positive or without Covid testing:

1. Patients arriving to the endoscopy center are asked to wear a mask. If they do not arrive with a mask, a mask will be provided.
2. Patients suspected/confirmed Covid positive and patients without Covid testing should be immediately placed in a pre- or post- procedure room with door closed for registration, ID banding and pre-procedure assessment. Patients should not be allowed to dwell in common space areas for registration.
3. Patient will be Covid tested prior to procedure and remain in the room with door closed until results of testing has been obtained.
4. If Covid test is resulted negative, patient workflow should follow established workflow.

5. If Covid test is resulted positive, then determination will be made whether to continue with procedure or for rescheduling procedure greater than 2 weeks from Covid positive test date.
6. If patient with Covid positive test continues with same day procedure, the patient will wear a surgical mask during all room transfers and doors should remain closed. In non-procedure rooms, staff will wear surgical mask for PPE protection.
7. Post-procedure recovery will occur in a negative airflow room or if not available, a room with door closed.
8. When patient is deemed ready for discharge, patient should wear a mask and be discharged directly to waiting car reducing human contact and wait time in common areas.
9. All non-negative airflow rooms that have housed patients that are Covid positive or suspected positive should remain vacant with door closed for 60 minutes prior to room cleaning and set up for next procedure. If staff need to enter room prior to 60 minute turnover, a surgical mask should be worn.

Pre Procedure Process in Endoscopy Center:

1. Determine medical necessity of endoscopic procedure (patients on airborne precautions are transported to the endoscopy center only as medically necessary).
2. Patient should be instructed to wear a mask to the center. If not wearing mask on arrival, a surgical mask should be provided to the patient.
3. Endoscopy Charge RN designates the negative air pressure room to be utilized for endoscopic procedure.
4. Equipment to be utilized for procedure is designated by Proceduralist & Procedure RN. Equipment not needed for procedure is removed from room prior to patient arrival.
5. Patient is called for by Endoscopy Charge RN in collaboration with the Endoscopy Procedure RN once procedure room has been prepared and is ready for patient.
6. Patient (ICU and floor) transported directly to negative pressure rooms in the endoscopy center wearing a **surgical mask** (if not intubated).
7. For YNHH, please refer to ***Appendix B for air exchanges for each procedure room*** and the length of time the room needs to remain vacant for adequate air turnover.

Personal Protection Equipment:

1. Staff performing aerosol-generating procedures are to don a respirator (N95), eye protection, two sets of gloves, head covering, shoe coverings and impermeable gown regardless of patients' COVID-19 status for the procedure. Refer to **Appendix A: Use of N95 Respirators in Endoscopy Units Recommendations** for detailed information regarding personal protection equipment use and reuse.
2. ***One staff member should be designated to support donning and doffing for all staff entering/exiting COVID 19 procedure room.***
3. Place airborne precautions sign on procedure room door to alert staff of patients with Suspected or Confirmed COVID minimizing access to room.

Endoscopy Center Post-Procedure Process:

1. Patients will have pre-, procedural, and post-procedure care performed and completed in the endoscopy procedure room.
2. Transport all non-ventilated patients back to unit bed wearing a **surgical mask**.

Procedure Room Cleaning Process:

To be conducted per hospital policy. In summary, cleaning of rooms after procedure is as follows:

1. **Turnover Cleaning** should be performed after each procedure. Turnover cleaning includes:
 - a. High-touch objects and equipment cleaned using recommended hospital approved disinfectant. High-touch objects may include: anesthesia machines, carts, and equipment, IV poles and pumps, procedure tables/beds, patient monitors, nursing station, computer area and scope tower
 - b. Floors cleaned as needed
2. **Terminal Cleaning Daily**
 - a. Involves cleaning and disinfecting of all exposed surfaces using recommended hospital approved disinfectant, including wheels and casters, of all equipment
 - b. Cleaning and disinfecting the floor which includes moving equipment to ensure thorough cleaning

Bedside Endoscopy/Bronchoscopy Procedures:

1. Procedure carts have been designated for bedside procedures at both the YSC – Center for Advanced Endoscopy and SRC Endoscopy sites.
2. ***Endoscopy staff should remember to bring their daily designated N95 Respirators and eye protection/face shields with them in the brown paper storage bags to the patient room***
3. Carts are to be moved to the ICU negative pressure rooms by trained endoscopy/bronchoscopy procedure staff.
4. Only equipment that will be used during the procedure should be taken into the negative pressure room. Additional equipment that may be needed should be left outside the procedure room for easy access should it be needed during the procedure and to prevent contamination.
5. Staff performing aerosol-generating procedures are to ***don a respirator (N95), eye protection, two sets of gloves and impermeable gown*** regardless of patients' COVID-19 status for the procedure. Please reference ***“Appendix A: Use of N95 Respirators in Endoscopy Units”*** for further clarification regarding use and reuse of respirators (N95) masks
6. Upon completion of procedure, staff are to move the procedure cart to outside the negative pressure patient room. The cart is to be wiped down using a hospital approved cleaning solution wipe. Please ensure appropriate dry times are followed for the solution used to disinfect cart. Cart is considered clean and may be immediately used for next case.
7. ***Individual N95 Respirators and eye protection/face shields should be removed and stored for transport in the designated brown bags***

Motility Procedures:

1. Motility procedures are considered high risk aerosolizing procedures and require the same precautions as endoscopy procedures.
2. Patients undergoing motility studies should follow same process for testing as endoscopy procedures. Those with positive screen or testing should be delayed/rescheduled.
3. The procedure area should be cleaned and disinfected after every use per standard cleaning processes per infection prevention policies.
4. Standard operating procedure for prompt reprocessing/disposal of catheters should be followed.

5. PPE recommendations should be the same as endoscopy procedures. Refer to Appendix A: Use of N95 Respirators in Endoscopy Units”.

Appendix A:

USE OF N95 RESPIRATORS IN ENDOSCOPY UNITS

N95 respirators will be provided to all team members involved in ***intubation, bronchoscopy, and upper and lower endoscopy procedures.***

Given the rapidly increasing spread of COVID-19 and the limitations in supply, responsible stewardship of PPE, including N95 respirators, is an important component of our policy. A variety of steps will be taken to ensure appropriate stewardship.

A) Obtaining N95 respirators

- One N95 respirator will be provided to each team member each day. The N95 respirator will be used by this team member for the entire day of procedures. A brown paper bag will also be provided to facilitate re-use (see Section B). A log of N95 respirators and paper bag distribution will be maintained each day by a designated individual in each endoscopy unit.
- In order to minimize need for PPE and reduce risk of infection, only essential personnel will be in the procedure room.
 - o General GI endoscopy room: 1 CRNA, 1 gastroenterology attending, 1 RN
 - o Advanced endoscopy room: 1 CRNA, 1 advanced endoscopist, 1 RN, 1 assistant (fellow or GI Tech), 1 x-ray technician if needed
 - o Bronchoscopy room: 1 CRNA, 1 pulmonologist, 1 RN, 1 assistant (Fellow or GI Tech)
 - o 2 attending anesthesiologists will be required if 3 procedure rooms are active, while only 1 attending anesthesiologist will be required if 1-2 procedure rooms are active. The anesthesiology attending(s) will also receive an N95 respirator.
- Face shields also must be used over the N95 respirators. A single face shield will be provided for use for the entire day given limitations in supply.

B) Use and Re-use of N95 respirators

- Every effort will be made to consolidate procedures to minimize the total number of procedure rooms and procedure teams needed each day:
 - o 1 general GI endoscopy procedure room
 - o 1 advanced endoscopy procedure room
 - o 1 bronchoscopy room
- The same personnel will staff each procedure room for the entire day. Breaks will occur between and not during procedures. Other individuals should not be entering the procedure rooms during procedures to minimize potential for infection and use of PPE
- After each case, when personnel are ready to exit the procedure room, they will doff their face shield and N95 respirator, wipe down with hospital-approved disinfectant, and place in a paper bag. Anesthesia will maintain their mask and face shield during patient transfer to procedure area should patient require management of airway.
- The brown paper bag will be left in a designated cart placed outside of the procedure room
- Each individual will re-use the N95 respirator throughout the day
- When N95 respirators are used throughout a full day of procedures they will be placed in designated bins for reprocessing.

- When N95 respirators have been used sporadically or for only a partial day of procedures they should be stored in the brown paper bag for continued use on a subsequent day.
- Healthcare workers using N95 respirators, face shields, and protective goggles cannot use facial make-up because it prevents the ability to reprocess these items

Additional Resources

Link for video on proper use of PPE: <https://vimeo.com/397424618/5e69e27680>

Attached PDF regarding re-use of N95 respirators

Appendix B:

**YALE NEW HAVEN HEALTH SYSTEM
ENDOSCOPY PROCEDURE ROOMS & MINIMUM AIR EXCHANGES**

The following is a list of rooms endoscopies are performed in at Yale New Haven Health System.

Please refer to the tables below for the air exchanges for each room and the ***length of time the room needs to remain vacant for adequate air turnover prior to cleaning and room set up*** for next procedure/use.

Patients testing negative for COVID do not require air exchange turnover before utilizing procedure room for next patient.

Patients that are suspected positive, test positive or have not been tested should be assumed positive for Covid 19 and should abide by the following recommendations for room closure post procedure.

Yale New Haven Hospital	Room	Room Exchanges	Time room needs to be vacated post procedure
YSC – North Pavilion	4-415	12 exchanges or greater per hour	Minimum of 35 minutes (per Airborne Precautions/Airborne Infection Isolation Policy. Procedure room door needs to remain closed)
	4-416		
	4-418		
	4-419		
	4-421		
• Pre Procedure	4-316		
• PACU	4-303		
SRC - Celentano	C2013		
• Post Procedure	C2021		
SRC – OR (outfitted with negative pressure anti-room)	Verdi 2 – 4	15 exchanges per hour	Minimum 28 minutes
	Verdi 2 - 5		
	Verdi 2 - 6		
YSC – OR (outfitted with negative pressure anti-room)	SPOR 3	15 exchanges per hour	Minimum 28 minutes
	EPOR 3-6		

Bridgeport Hospital	Room	Room Exchanges	Time room needs to be vacated post procedure
Bronchoscopy Suite	Northwest 6, # NW 606	13	35 minutes
OR PACU	#7	-	-
Milford Campus –does not perform bronchoscopies, only endoscopic procedures.			
Operating Room	4	No negative pressure rooms	60 minutes

Greenwich Hospital	Room	Room Exchanges	Time room needs to be vacated post procedure
Bronchoscopy Room	1-302	12	35 minutes
GI Procedure Room	-	-	60 minutes
OR Procedure Room	1-9	-	35 minutes

Lawrence & Memorial Hospital	Room	Room Exchanges	Time room needs to be vacated post procedure
OR procedure room	3.047	15-20	45 minutes
Endoscopy Procedure rooms – positive pressure	<i>COVID Positive Patients should be done in the OR Negative procedure room</i>		

North Haven Endoscopy Center	Room	Room Exchanges	Time room needs to be vacated post procedure
Endoscopy Rooms	1-4	-	60 minutes
Motility Room	1	-	60 minutes

Northeast Medical Group	Room	Room Exchanges	Time room needs to be vacated post procedure
Endoscopy Procedure rooms – positive pressure	Multiple	-	60 minutes

Shoreline Joint Venture	Room	Room Exchanges	Time room needs to be vacated post procedure
Endoscopy Rooms – No negative pressure rooms, rooms are all neutral pressure	1-4	15	28 minutes

Westerly Hospital	Room	Room Exchanges	Time room needs to be vacated post procedure
Endoscopy Room	3	7.29	60 minutes