

# YNHHS Pulmonary Function Lab (PFT) Pandemic Reopening Guidelines- Phase III (Updated- 1/7/2022)

## Goals:

1. Provide operational guidance to YNHHS system inpatient and outpatient pediatric and adult PFT laboratories to conduct PFTs safely during all phases of the COVID-19 pandemic based on system, national, and international guidelines.
2. Minimize conduct of PFT tests that are aerosolizing procedures (almost all PFTs are aerosolizing procedures).
3. Using a phased approach (Phase I, II, III and IV), mitigate risk of exposure to patients and staff to the SARS-CoV-2 virus by adjusting for local prevalence of the virus, limitations in testing, staffing, equipment, and space, and provider determined acuity of each patient's need for testing.
4. Provide updated guidance to PFT labs as needed given the fluidity of the COVID-19 pandemic. Each delivery network will operationalize guidelines adjusting to differences in staffing, space, and patient acuity, and disease prevalence.

**Prioritization, Screening and Scheduling during Phase III;** should include patients with high acuity need for testing as determined by the healthcare provider and need for healthcare utilization. Each PFT laboratory will need to customize guidance.

## **COVID-19 Screening for PFT:**

Patients scheduled for procedures in the Pulmonary Function Lab that require breathing maneuvers (ex. deep breathing, forceful exhalation) should undergo screening for high risk exposures, fever, and symptoms (i.e., cough, dyspnea, myalgias, anosmia, dysgeusia) suggestive of SARS-CoV-2.

- All potential Outpatients should present with a **Negative SARS-CoV-2 PCR/RNA test** within **72** hours of scheduled procedure.
  - A Negative or Not Detected COVID-19 test result must be visible in the EMR for the PFT to be done.
  - For Inpatients, a Negative SARS-CoV-2 test must have been done during the current inpatient admission and the patient should not have any new symptoms suggestive of SARS-CoV-2.
  - A Home Antigen testing is not considered an adequate test for pre-procedure screening.
- Patients that are scheduled for tests that do not require breathing maneuvers (normal tidal breathing for testing or no breathing maneuvers) **DO NOT** need a SARS-CoV-2 test prior to their Pulmonary Function Procedure.
  - Procedures that do not require a SARS-CoV-2 test are Shunt Study, Altitude Study, Exercise Oximetry, Six Minute Walk testing and Arterial Blood Gas Sampling.
- All patients should be instructed to wear masks at all times in the laboratory.
- All patients will be screened for symptoms and fever upon check-in.
  - *Patients that are SARS-CoV-2 negative or SARS-CoV-2 unknown with new symptoms upon arrival*, should be sent home and directed to quarantine until diagnostic testing can be performed. (Either ordered by their physician or by calling the SARS-CoV-2 hotline 203-688-1700)
- For patients with a recent Positive PCR test (with the Positive result date being Day 0), Discontinuing Isolation Criteria for removing isolation is based on duration of illness and resolution of symptoms in most patients. Patient may schedule and perform a Pulmonary Function Test under the following conditions:
  - 10 days after the Positive PCR result for most patients. Plus, at least 24 hours of clinical improvement and without fever off anti-pyretics.
  - 20 days after the Positive PCR result for those patients with **severe disease** (requiring an admission to step down or ICU due to severity of COVID-19 disease) or with a **selected high risk immunocompromised condition or therapies**. Plus, at least 24 hours of clinical improvement and without fever off anti-pyretics.
    - High Risk Immunocompromised Conditions: Receiving  $\geq 20$  mg prednisone (or equivalent) for  $\geq 14$  days, HIV with CD4 count  $< 200$ , Transplant recipient, Leukemia or Lymphoma, Aplastic Anemia, Receiving Chemotherapy or Immunotherapy, or recipient of CAR-T cell therapy.
  - Retesting or testing for admission and pre-procedure clearance **testing should not be performed within 90 days** of a positive test.

## **PFTs conducted during Phase IV:**

- Testing volume, capacity and staffing will be based on each PFT laboratory's operational capacity.
  - Each delivery network will schedule accordingly to their operational needs based on resource, physical area, and demand requirement based on provider needs.
  - All Delivery networks will determine and implement best-practice, diagnostic, and clinical delivery in accordance to ATS, Infection Prevention, organizational and system wide approved practice established by PFT-Subgroups.

**Table 1: PFT Tests permitted during COVID19 Phase IV**

Permitted testing	SARS-CoV-2 test or vaccination record required	Technician PPE
Spirometry (Bronchodilators permitted*)	YES	Respirator and Eye Protection
Lung Volumes (He, N2 and Pleth)	YES	Respirator and Eye Protection
Diffusion	YES	Respirator and Eye Protection
FeNO	YES	Respirator and Eye Protection
MIPs/MEPs	YES	Respirator and Eye Protection
MVV	YES	Respirator and Eye Protection
Impulse Oscillometry	YES	Respirator and Eye Protection
CPET	YES	Respirator and Eye Protection
Step Testing	YES	Respirator and Eye Protection
Bronchial Challenge	YES	Respirator and Eye Protection
Sputum Induction with Nebulizer	YES	Respirator and Eye Protection
Shunt Study	NO	Surgical Mask and Eye Protection
Altitude Study	NO	Surgical Mask and Eye Protection
Exercise Oximetry	NO	Surgical Mask and Eye Protection
Six Minute Walk	NO	Surgical Mask and Eye Protection
Arterial Blood Gas Sampling	NO	Surgical Mask and Eye Protection

\* Nebulized medication administration permitted as approved by Infection Prevention and Pharmacy within the individual delivery networks.

- Bronchodilators may be delivered via Metered Dose Inhalers.
- Bronchodilators and other nebulized medications may be delivered via Small Volume Nebulizers with filtered exhalation.
- Unfiltered testing (CPET and Step testing) permitted in this Phase of prevalence with strong clinical indications.
- Bronchial provocation permitted with filtered exhalation and adequate room ventilation in this phase of prevalence in the absence of other conclusive testing.

### Recommended Phase III Infection Control and Personal Protective Equipment (PPE) requirements

- Patients will be required to wear a surgical mask as much as possible during testing.
- Staff will be required to wear a respirator and eye protection for the procedures listed above to avoid exposure to aerosols. Staff will be required to wear surgical masks while in the clinical space and when performing procedures that do not involve breathing maneuvers (tidal breathing.)
- In all circumstances, patients and staff will be washing their hands before and after testing.
- Single patient use/disposable patient interfaces encouraged.
- Non-disposable equipment should be disinfected according to the manufacturer’s instructions.
- In-line 99% bacterial/viral filters will be used between the patient and testing equipment when recommended by manufacturer. (Filters are unable to be used for CPET and Step Testing.)
- For testing without filters, patient breathing is to be oriented away from staff and other open spaces.
- The room must be disinfected in-between patients using hospital-approved wipes or cleaners.
- Procedure room ventilation to be evaluated by Facilities and Infection Prevention within the individual delivery networks to determine if HEPA filtration and/or UV disinfection units are recommended.
- Sufficient time should be allotted between patients to allow for room disinfection; the exact amount of time will vary depending upon the manufacturer determined drying time of the wipes or cleaners.

References:

Wilson K, Kaminsky D, Michaud G et al. **Restoring Pulmonary and Sleep Services as the COVID-19 Pandemic Lessens.** American Thoracic Society. May 2020.

McGowan A, SylvesterK, Burgos F et al. **Recommendation from ERS Group 9.1 (Respiratory function technologists /Scientists) Lung function testing during COVID-19 pandemic and beyond.** European Respiratory Society. May 2020.

CDC. **Quarantine and Isolation Updated Jan. 2, 2022.** <https://www.cdc.gov/coronavirus/2019-ncov/you-health/quarantine-isolation.html>. January 2022.