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**INTERIM GUIDELINES FOR ADULT &** 

PEDIATRIC PULMONARY FUNCTION

**TEST DURING COVID-19 PANDEMIC** 

Reviewed by:

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## I. OBJECTIVES

This policy for Adult and Pediatric Pulmonary Function Test shall serve as the interim guidelines for Healthcare Professionals performing lung function testing to ensure the safe and accurate performance of these procedures during the Novel Corona Virus Pandemic.

**TEST DURING COVID-19 PANDEMIC** 

## II. DESCRIPTION

The novel coronavirus initially caused a national outbreak of severe pneumonia in China, and rapidly spread around the world as a pandemic. The COVID-19, also known as SARS-CoV-2, 2019-nCoV, or novel coronavirus, has a range of diameters between 0.08- 0.12 um. It is currently understood that its transmission is highly likely to be by droplet and airborne routes. Pulmonary function tests (*PFTs*) often generate aerosols in the form of droplets due to patients coughing and testing often requires generation of high minute ventilation and flow rates. PFTs therefore pose a considerable risk for the spread of infection to individuals and surrounding surfaces within and around the test areas even in asymptomatic patients.

# III. REQUIREMENTS

- a. Negative pressure at PFT testing area
- b. PFT Machine and accessories including disposable filtered mouthpiece and nose clip
- c. Personal Protective Equipment (PPE)

FFP2 (N95) or FFP3 masks

Eve protection (face shield, safety goggles)

Disposable gloves

Coverall/ isolation gown

Alcohol/ Hand sanitizer for hand rubbing/ hand hygiene

Disinfectant for the PFT area

- d. Thermal scanner
- e. Valid Negative RT-PCR result (swab test)

## IV. PATIENT CARE

During high prevalence of the virus in the community, referring clinicians must carefully consider the safety of staff, cross-contamination of equipment and therefore restrict referrals to patients requiring <u>urgent/ essential</u> tests only for immediate diagnostics of current illness.

A. Aside from the previously established contraindications, PFT is NOT recommended in the following;

Patients with symptoms of COVID-19 or flu- like symptoms

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- Confirmed COVID- 19 patients must not be tested for a minimum of 3 months post infection as per Center for Disease Control (CDC)
- 3. Routine testing during the critical phase of this crisis.

## V. PROCEDURE

- A. What tests to perform
  - 1. Spirometry (see guidelines)
  - Diffusion Capacity for carbon monoxide (DLCO) via Single Breath technique (<u>see</u> <u>guidelines</u>)
- B. Tests that are not currently being recommended during COVID-19 outbreak:
  - 1. Lung volumes
  - 2. Cardio-Pulmonary Exercise Test (CPET)
  - 3. Bronchoprovocation Test
  - 4. Tidal Breathing Analysis (TBA)

# C. Organizational

- Patient referrals shall be screened and essential tests shall be prioritized. Only four (4) patients shall be scheduled everyday for PFT. This include three (3) out-patient and one (1) in- patient. Scheduling shall be done through telephone appointment to avoid congestion/ over- crowding at Pulmonary Laboratory reception area.
- 2. Patients shall be triaged carefully for COVID-19 status.
- Waiting areas shall be organized, patients shall wear masks and sit a minimum of 2
  meters from the next patient or as guided by local policy. Patients shall be limited to
  one accompanying person.
- 4. Testing rooms and staff offices shall be organized.
- Testing schedules shall include extra time for post-test cleaning/ decontamination procedures of surfaces of the test equipment and environment.
- 6. Test should always be carried out with a high specification disposable in-line bacterial and viral filter in place (filters with minimum proven efficiency for high expiratory flow of 600 to 700 L/min).

## VI. CLEANING AND DISINFECTION

 Room shall remain vacant for at least 15 minutes to ventilate the room and for personal protective equipment (PPE) donning and doffing after each patient. Staff shall not move outside the procedure area without removing the PPE.



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- 2. Airborne isolation signage will remain on the door until the appropriate time has passed.
- 3. After the end of 15 minutes, all horizontal surfaces shall be thoroughly wiped (e.g. countertop, chair, equipment, etc.) with the recommended disinfectant.
- 4. Hand hygiene protocols for patient and staff, before and after procedures, shall be strictly followed.

## VII. REFERENCES

Philippine College of Chest Physicians - Council on Diagnostics and Therapeutics.

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Recommendation for the resumption of urgent and elective outpatient lung function testing during the COVID-19 Pandemic. June 6, 2020.

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