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### **PURPOSE:**

To reduce the risk of transmission of the virus that causes COVID-19 or other infectious disease from the pediatric patient.

### **OBJECTIVE:**


To standardize protocols in management of pediatric patients with emerging and reemerging infectious diseases from the triage to the designated isolation room or station.

### **RESPONSIBLE PERSON:**

All Nurses and Medical Doctors


### **GENERAL CONSIDERATIONS:**

1. The clinical spectrum of COVID -19 has not yet been fully defined. Until specific treatment is determined, a more meticulous supportive care is warranted in managing these patients.
2. Due to the small cases among children, the data on disease severity and pathogenesis of COVID-19 infection in children are limited and new signs and symptoms may emerge in the future. Clinical manifestations of COVID-19 infection among pediatric patients may present variably and less severe than in

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adults but there are reports of children with COVID-19 infection requiring intensive care.

- a. Consider referring to Pediatric Infectious Disease Specialist to classify non-COVID from COVID suspect and probable.
3. For OPD consults from the tent area and OPD complex:
  - a. Isolate the pediatric from adult patients by observing social distancing of at least 1-2 meters (3-6 feet) apart.
  - b. Use engineering controls like physical barrier between patients.
4. A dedicated healthcare worker should be in full Personal Protective Equipment (cap, N95 mask, goggles, face shield, full impermeable gown, gloves, and shoe covers) when handling the patient. Proper donning and doffing of PPEs and infection control measures should be observed at all times.
5. One caregiver is allowed to accompany the patient at the tent/OPD complex and must be fully informed on the risk of possible transmission of the infection. The caregiver should properly wear a surgical mask and observe proper hygiene at all times.
6. Require all patients to wear a mask that covers the mouth and nose except for children  $\leq 2$  years of age.
7. Specimen collection must be performed by a knowledgeable medical worker. Ensure that assistance is available as the child may be uncooperative during the procedure. Collect a nasopharyngeal swab (NPS) and / or an oropharyngeal swab (OPS), and if possible, a lower respiratory tract specimen. Samples must be sent to the Research Institute for Tropical Medicine (RITM) or to a designated laboratory


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through the proper channels. Case investigation forms (CIF) must be accurately filled out for proper documentation.

8. The WHO recommends standard, contact, and droplet precautions with eye and face protection, with addition of airborne precautions as needed during aerosol-generating procedures.

#### **DEFINITION OF TERMS:**


1. **COVID Suspect**—Any symptomatic child with history of travel or close contact within the last 14 days.
2. **COVID Probable**—Any COVID suspect case pending test results, or those whose results are either inconclusive or conducted by an unofficial laboratory.
3. **COVID Confirmed**—Any child with positive for SARS-CoV-2 on nucleic acid detection test such as RT-PCR regardless of symptoms.
4. **Travel History**—Any history of recent travel within the last 14 days to areas with localized transmission or local communities under enhanced quarantine.
5. **Close Contact Exposure**—A person who is involved in any of the following from 2 days before and up to 14 days after the onset of symptoms in the patient:
  - a. Having face to face contact with the COVID-19 patient within 1 meter and for > 15 minutes;
  - b. Providing direct care for patients with COVID-19 disease without using proper PPE;

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- c. Staying in the same close environment as the COVID-19 patient (including sharing a workplace, classroom or household or being at the same gathering) for any amount of time;
- d. Travelling in close proximity with (that is, within 1 meter apart from) a COVID-19 patient in any kind of conveyance; and
- e. Other situations, as indicated by local risk assessments (WHO Interim Guidance, March 2020)

#### 6. Severe/Critical Symptoms




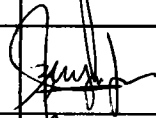
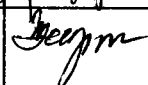
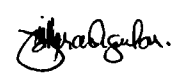

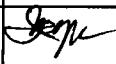

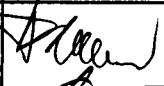
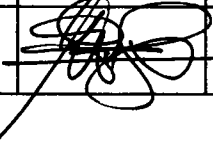
- a. Any child with cough or difficulty of breathing PLUS at least ONE of the following:
  - i. Central cyanosis or  $SpO_2 < 90\%$
  - ii. Severe respiratory distress (eg. grunting, very severe chest indrawing)
  - iii. Signs of pneumonia with a general danger sign: inability to breast feed or drink, lethargy/movement only when stimulated, unconsciousness or convulsions
  - iv. Other signs: chest indrawing, fast breathing (in breaths/min):
    - 1. <2 months:  $RR \geq 60$  bpm
    - 2. 2-11 months:  $RR \geq 50$  bpm
    - 3. 1-5 years:  $RR \geq 40$  bpm
- b. Any child with suspected or proven infection and  $\geq$  SIRS criteria, of which one must be abnormal temperature or white blood cell count (Sepsis)


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- c. Any child presenting with septic shock, defined as hypotension (SBP <5<sup>th</sup> centile or > 2 SD below normal for age) or at least 2 of the following:
- Altered mental state
  - Tachycardia (HR >160 bpm in infants or HR >150 bpm in children) or bradycardia (HR < 90 bpm in infants or HR < 70 bpm in children)
  - Prolonged capillary refill (>2 seconds) or warm vasodilation with bounding pulses
  - Tachypnea
  - Mottled skin or petechial or purpuric rash
  - Increased lactate
  - Oliguria
  - Hyperthermia or hypothermia

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### **EQUIPMENT NEEDED:**

1. Personal Protective Equipment (PPE)
2. Intubation set and Inotropics (discussed in details in the procedure)


### **PROCEDURE:**

1. Intubation
  - a. Intubation must be done only when full PPE is donned and must be done by the most skilled personnel.
  - b. Sedate/ paralyze patient then attempt rapid sequence intubation (RSI)
  - c. Avoid bag valve mask ventilation after intubation.
  - d. If pre-oxygenation is needed, do so using tightly fitting face mask with reservoir.
  - e. Avoid nebulization of intubated patients.
  - f. Intubation must be done with 2 attempts only.
    - i. If successful, patient must be immediately hooked to the mechanical ventilator.
    - ii. If unsuccessful, abandon further attempts, apprise parents/responsible folk and give best supportive care.
  - g. Materials needed
    - Videolaryngoscope
    - Macintosh Direct Laryngoscope/Intubation set (Pediatric blade sizes)
    - Endotracheal tube (cuffed and uncuffed)
    - Stylet, Bougie

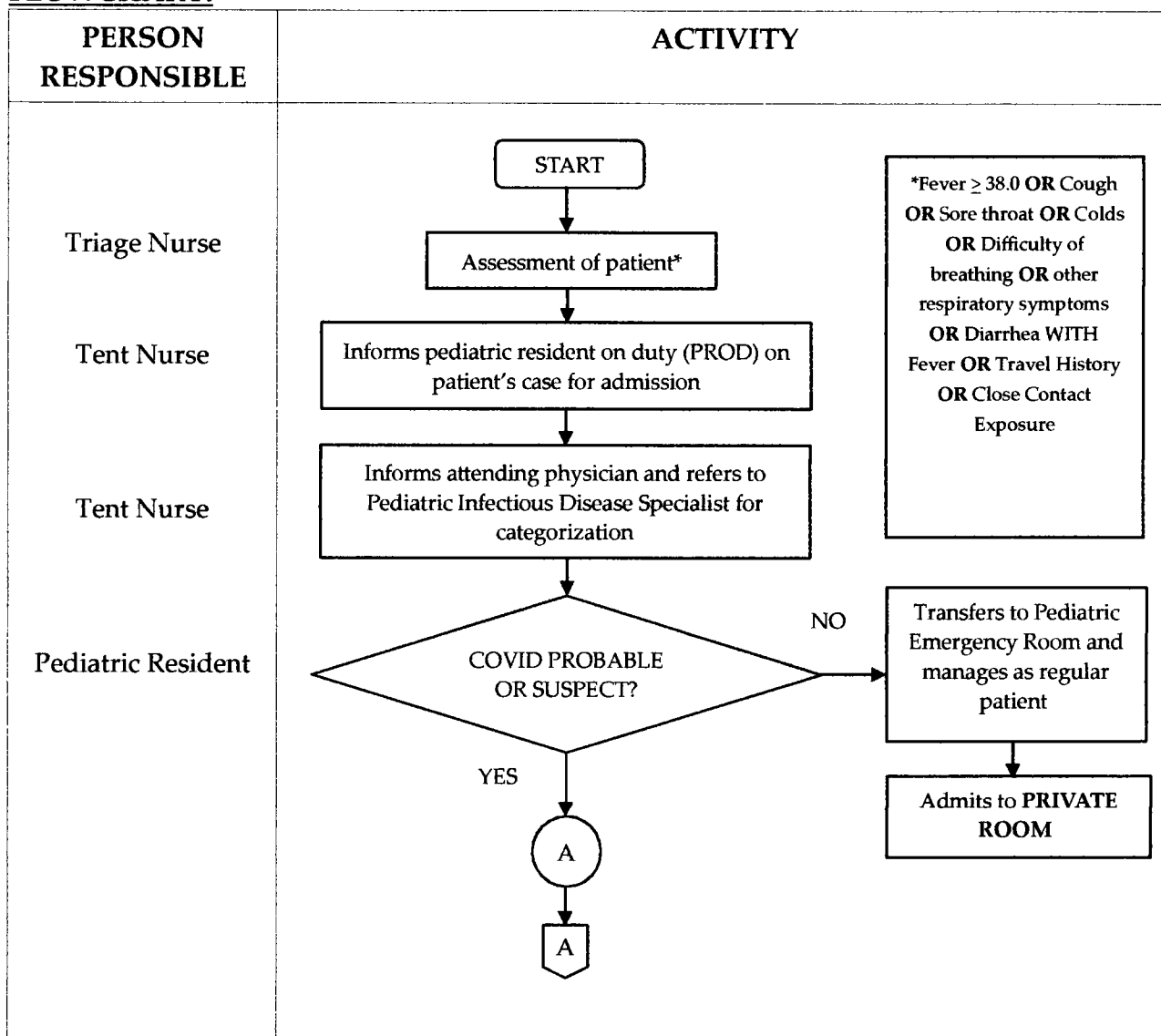
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- Oxygen mask delivery systems: nasal prong, face mask, mask with rebreather
- Syringes
- Plaster
- Lubricant
- Capnography device/ETCO2 Monitor
- NGT/OGT
- Pediatric Optichamber
- N88 mask or surgical mask (for patient's use)
- Suction apparatus
- Oxygen supply
- Mechanical ventilator
- Medications: Epinephrine 1:1000, Propofol 3mg/kg, Rocuronium 0.6mg/kg, Midazolam 0.15 mg/kg, Lidocaine, Ketamine, Fentanyl, Methylprednisolone, Hydrocortisone, Metered Dose Inhalers: Salbutamol 100mcg/actuation, Salmeterol + Fluticasone (25/250mcg and 25/125mcg), Formoterol + Budesonide (4.5/80 mcg and 4.5/160mcg), Formoterol + Fluticasone (5/50mcg)

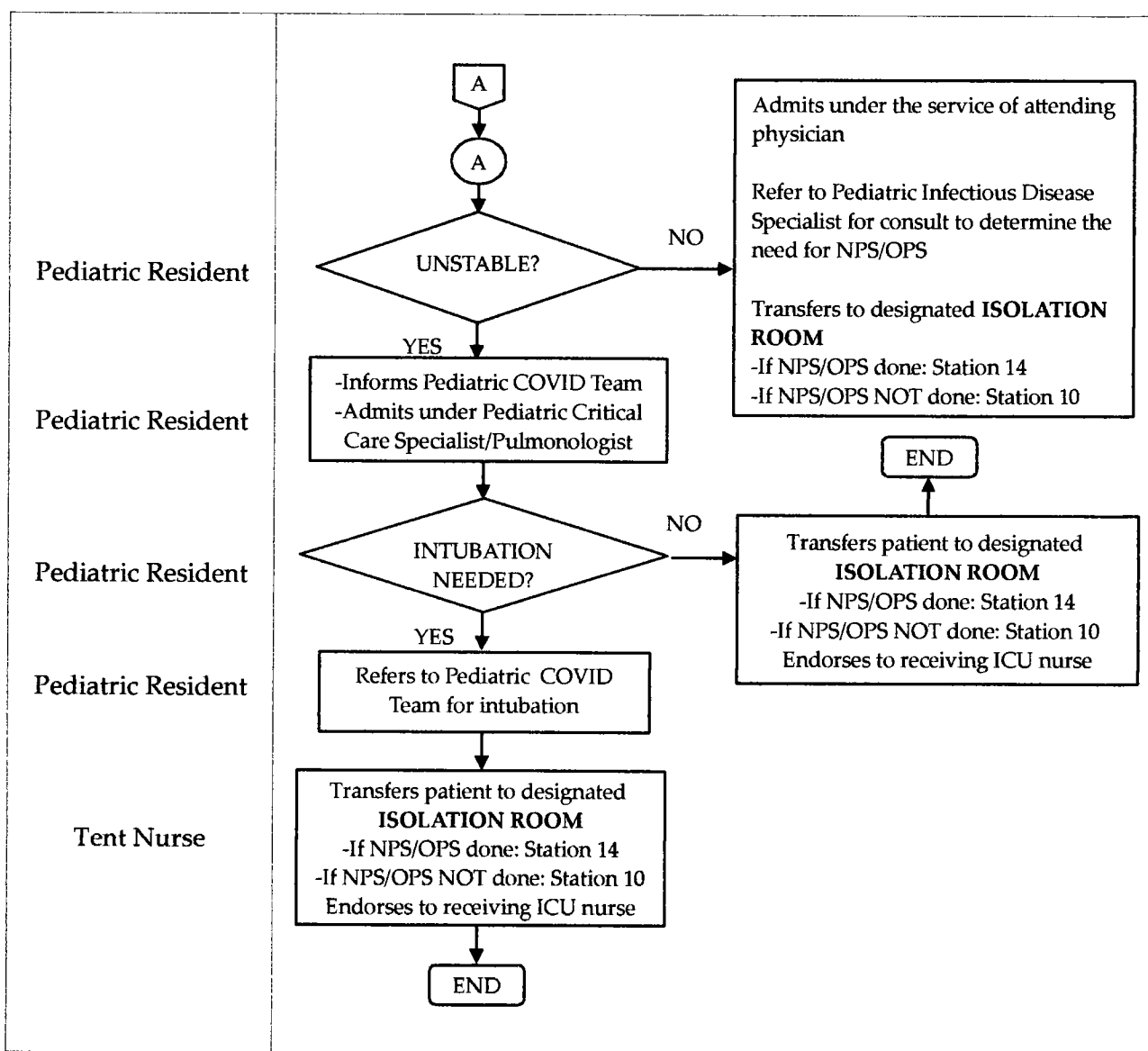



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### FLOWCHART:



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### **REFERENCE:**

Pediatric Infectious Disease Society of the Philippines. (2020, March). Interim Guidelines on the Screening, Assessment and Clinical Management of Pediatric Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19).