



UNIFIED COVID-19 ALGORITHMS

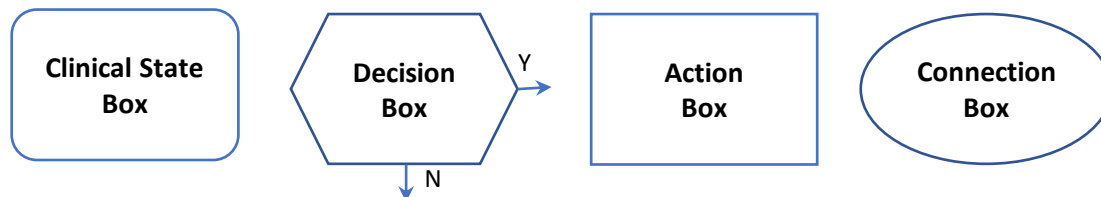
Section 2 GUIDELINES FOR HOSPITAL CARE

TABLE OF CONTENTS

Introduction to Algorithm Interpretation	page 1
Management for Probable or Confirmed COVID-19 Pneumonia (FIGURE 2A)	page 2
Recognition and Management of Sepsis (FIGURE 2B)	page 3
Recognition and Management of ARDS (FIGURE 2C)	page 4
Advanced Adult Cardiac Life Support for Cases of COVID-19 (FIGURE 2D)	page 5
Post-Mortem Care	page 6
References	page 7

INTRODUCTION

The clinical algorithm (flow chart) is a text format that is specially suited for representing a sequence of clinical decisions which are intended to improve and standardize decisions in delivery of medical care. For the purpose of clarity, a typical clinical algorithm is depicted with basic symbols that represent clinical steps in decision-making:



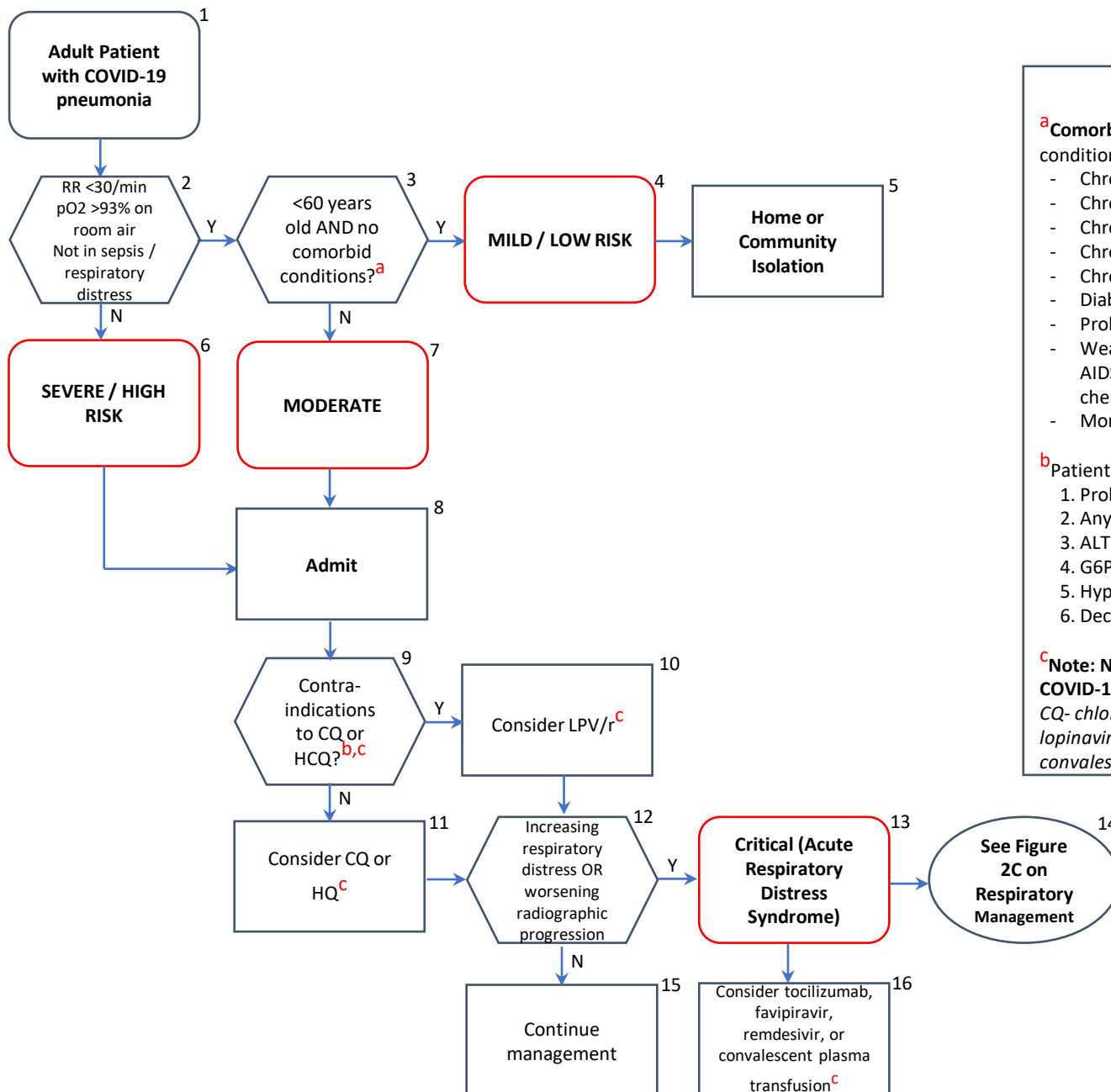
1. The rectangle with rounded edges depicts the current clinical state of an individual patient;
2. The hexagon is decision box which contains a question answerable by yes or no; one arrow going to the right signifies “yes”, and one arrow going downwards signifies “no”;
3. The rectangle with sharp edges depicts the action to be done; and
4. The oval depicts connection to another algorithm in a different page.

Note that the following algorithms are adapted from multiple guidelines as released by the World Health Organization, Department of Health, and other societies. This document was also reviewed by different experts with the end-goal of having a summarized and comprehensive compilation of guidelines that will aid in management of COVID-19 patients by healthcare workers from both the community and hospital levels.

Lastly, while these patient-centered algorithms intend to summarize and simplify recommendations, these may be subject to change as evidence emerges and guidelines are updated. Any recommendations on patient care are not absolute. Final decisions remain under the discretion of the healthcare provider.

FIGURE 2A. MANAGEMENT FOR PROBABLE OR CONFIRMED COVID-19 PNEUMONIA

Version 06 April 2020 (original)



FOOTNOTES

^a **Comorbids** – adults with an underlying health condition listed below:

- Chronic lung disease
- Chronic heart disease
- Chronic kidney disease
- Chronic liver disease
- Chronic neurological conditions
- Diabetes
- Problems with the spleen
- Weakened immune system such as HIV or AIDS, or medicines such as steroid tablets or chemotherapy
- Morbid obesity (BMI > 40)

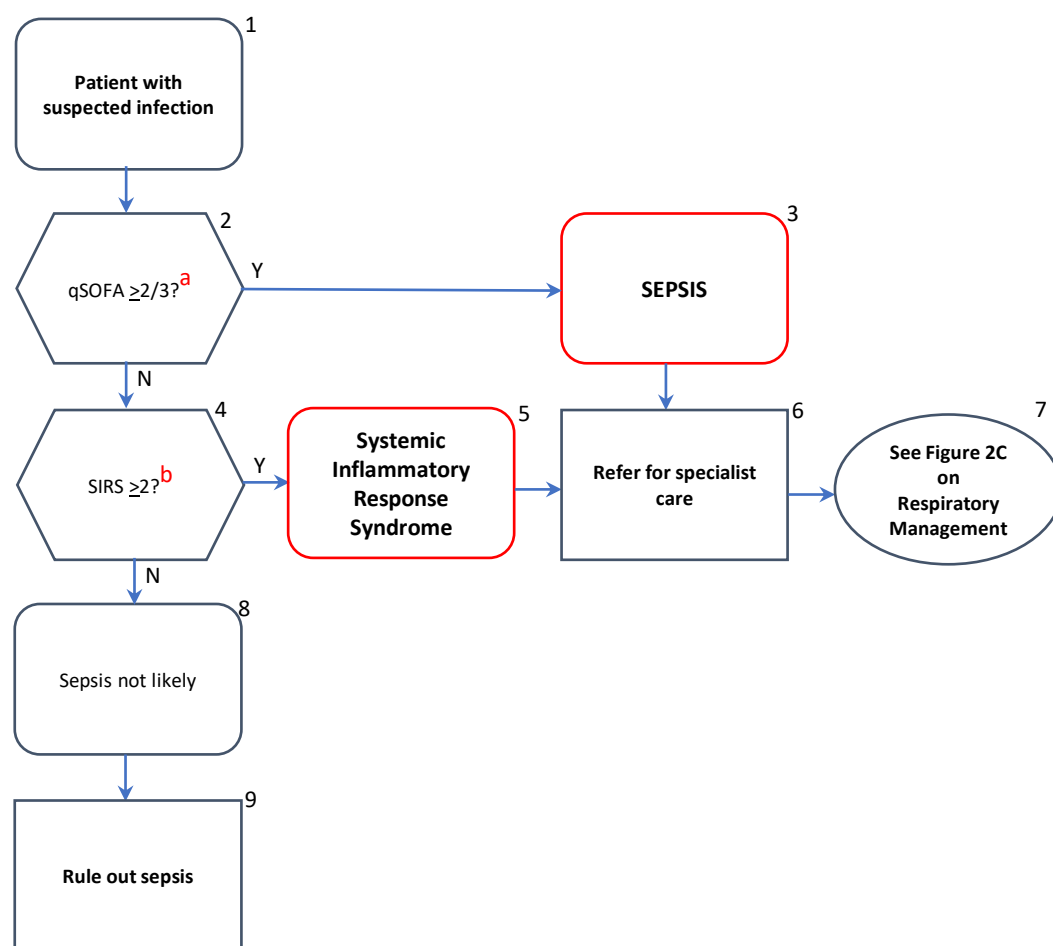
^b Patient NOT eligible if with any of the ff:

1. Prolonged QTc>500,
2. Any arrhythmia,
3. ALT or AST>5x elevated,
4. G6PD deficiency,
5. Hypersensitivity to CQ or HCQ,
6. Decompensated heart failure

^c **Note: Need informed consent BEFORE using COVID-19 investigational drugs:**
 CQ- chloroquine; HCQ- hydroxychloroquine; LPV/r- lopinavir/ritonavir; favipiravir; remdesivir; convalescent plasma transfusion

FIGURE 2B. RECOGNITION AND MANAGEMENT OF SEPSIS

Version 06 April 2020 (original)



FOOTNOTES

^aqSOFA Variables

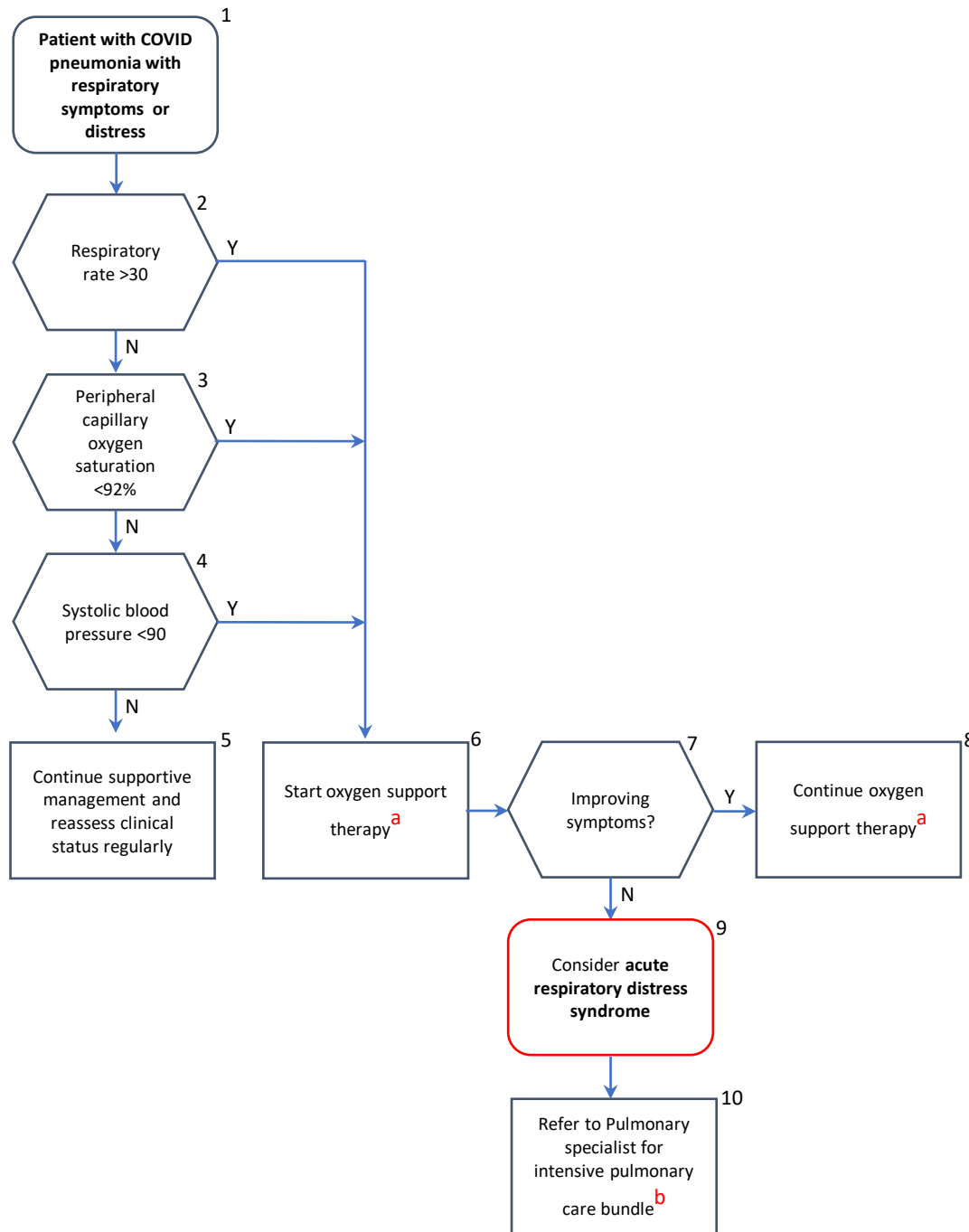
- Respiratory rate >22 breaths/min
- Altered mentation
- Systolic blood pressure ≤100mmHg

^bSystemic Inflammatory Response Syndrome (SIRS) Criteria

1. Temperature >38°C or <36 °C
2. Heart rate >90 beats/min
3. Respiratory rate >20 breaths/min, or paCO₂ <32mmHg
4. WBC count >12,000 or <4,000 cells/mm³, or >20% immature (band) forms

FIGURE 2C. RECOGNITION AND MANAGEMENT OF ARDS

Version 06 April 2020 (original)



FOOTNOTES

^a Oxygen support therapy

- Oxygen support via face mask or non-rebreather mask
- Start at 5L/min
- Maintain O₂St >90

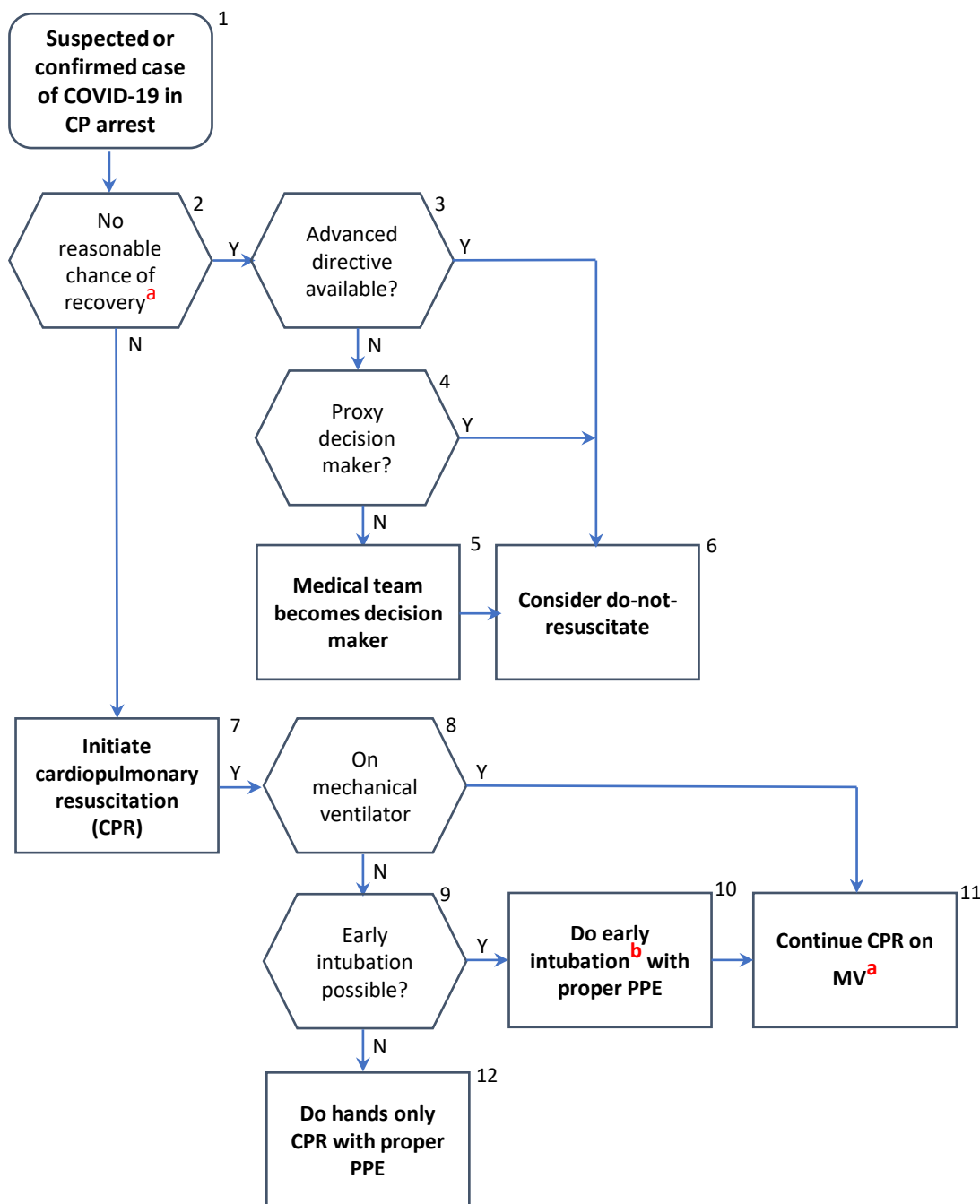
^b Intensive pulmonary care bundle

- Early intubation performed by a trained provider with the use of appropriate PPE and airborne precaution.
- ICU admission
- Refer to pulmonologist or intensivist
- Initiate recruitment maneuvers and lung protection strategies
 - o Tidal volume 6mL/kg of predicted body weight
 - o Plateau pressure <30mmHg
 - o High PEEP guided by ARDSNET trial

Consider prone positioning for >12 hours in institutions with proper training for maneuver

FIGURE 2D. ADVANCED ADULT CARDIAC LIFE SUPPORT FOR CASES OF COVID-19

Version 06 April 2020 (original)



FOOTNOTES

^aGuidelines on Advance Directives (DNR)

1. Medical team may withhold CPR on critically ill patients with NO reasonable chance of recovery (i.e., ARDS secondary to high-risk pneumonia and unresponsive to treatment, refractory septic shock, multi-organ failure)
2. Free and informed decision for DNR made by competent patient through an advanced directive should be followed
3. Without advanced directive, the free and informed decision of proxy of an incompetent patient should be followed
4. Without patient's or proxy's decision, the medical team can decide based on futility, the best interest of patient, and scarcity of resources
5. Efforts to provide spiritual care and counseling to the patient and family must be done

Continue CPR on the following mechanical ventilator settings: mechanical ventilator at FiO2 100%, back-up rate 12/min. Avoid bag-mask ventilation.

^bEarly Intubation

Do early intubation with most experienced person with the use of video-guided laryngoscope.

2E. POST-MORTEM CARE

Version 06 April 2020 (original)

Burial

1. Burial, preferably cremation, shall be done within 12 hours after death
2. However, burial of the dead body shall, to the most possible extent, be in accordance with the person's religion or customs

Removal of the Body and Transport to Cemetery

1. Transfer the body to the mortuary as soon as possible after death
2. Wrap the body with cloth and place in the airtight cadaver bag that is leak-proof and shall be zipped or closed tightly with tapes and bandage strips
3. Decontaminate surface of the bag with hypochlorite solution or any hospital approved disinfectant
4. Ensure that the body is fully sealed in an impermeable airtight cadaver bag before being removed from the isolation room or area, and before transfer to the mortuary, to avoid leakage of body fluid
5. When properly packed in the airtight cadaver bag, the body can be safely removed for storage in the mortuary, sent to the crematorium or placed in a coffin for burial
6. At no instance shall unzipping the cadaver bag of the body and removal of the body be permitted
7. The funeral establishment shall provide the transport of the cadaver to the burial site/crematorium. The vehicle shall be disinfected afterwards

Environmental Control

1. Make sure that supply of disposable gloves, protective equipment, alcohol-based hand rub and disinfectant such as household bleach is readily available
2. After use, the disposable items such as gloves and protective clothing should be disposed of in a plastic bag
3. All surfaces which may be contaminated should be wiped with "1 in 49 diluted household bleach" (mixing 1 part of bleach with 49 parts of water), leave it for 15-30 minutes, and then rinse with water. Metal surfaces could be wiped with 70% alcohol
4. Surfaces visibly contaminated with blood and body fluids should be wiped with "1 in 4 diluted household bleach" (mixing 1 part of bleach with 4 parts of water), leave it for 10 minutes, and then rinse with water.

REFERENCES

De los Reyes, MA, et al. (2020). *Clinical Practice Guidelines for Sepsis and Septic Shock in the Philippines 2020 Full Manuscript*. Philippine Society for Microbiology and Infectious Disease

Department of Health. (2020). *Reiteration of the Guidelines on the Disposal and Shipment of the Remains of Confirmed Cases of 2019 Novel Coronavirus Acute Respiratory Disease (2019-nCoV ARD)*. Department Circular No 2020-0047

Philippine Obstetrical and Gynecological Society (Foundation) Inc., et al. (2020). *Algorithm on Management of Pregnant PUI/Confirmed COVID-19 Patient*

Philippine Society for Microbiology and Infectious Disease. (2020). *Interim Guidelines on the Clinical Management of Adult Patients with Suspected or Confirmed COVID-19 Infection 2.0*

Philippine Society of Public Health Physicians. (2020). *Recommendation on Community-Based Management of COVID-19 (v3)*

World Health Organization. (2020). *Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19)*