



UNIFIED COVID-19 ALGORITHMS

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Steering Committee

Dr. Marissa M. Alejandria
Dr. Romelei Camiling-Alfonso
Dr. Pauline F. Convocar
Dr. Antonio Miguel L. Dans
Dr. Anna Sofia Victoria S. Fajardo
Dr. Mario M. Panaligan
Dr. Aileen T. Riel-Espina
Dr. Maria Asuncion A. Silvestre

Contributors

Dr. Roselle S. Andres	Dr. Maria Margarita Ballon-Malabanan
Dr. Anne Joan D. Bandonill	Dr. Wendel Marcelo
Dr. Jubert Benedicto	Dr. Faith Joan Mesa-Gaerlan
Dr. Regina Berba	Dr. Katerina Nono-Abiertas
Dr. Donna Isabel S. Capili	Dr. Phil M. Pangilinan
Dr. Criselda Isabel C. Cenizal	Dr. Michal Emy Pasaporte-Hafalla
Dr. Rumalie A. Corvera	Dr. Rommel B. Punongbayan
Dr. Marilen Evangeline M. Cruz	Dr. Josephine S. Raymundo
Dr. Luningning P. Cubero	Dr. Neil P. Rodrigo
Dr. Karin Estepa-Garcia	Dr. Generoso Roberto
Dr. Lester Sam A. Geroy	Dr. Arthur Dessi E. Roman
Dr. Felix F. Labanda, Jr.	Dr. Evalyn A. Roxas
Dr. Margaret L. Leachon	Dr. Gerard Danielle K. Sio
Dr. April Llaneta	Dr. Arnold P. Tabun, Jr.
Dr. Leslie Ann Lucas	Dr. Ivan N. Villespin

Algorithm Constructors

Dr. Sitti Khadija U. Salabi	Dr. Enrico Ian L. Deliso
Dr. Johannes Paolo B. Cerrado	Dr. Fae Princess Princess Bermudez
Dr. Ronna Cheska V. De Leon-Yao	Clerk Lara Marielle L. Castillo
Dr. Justin Alan A. Yao	Clerk Patricia S. Sy
Dr. Philline Aurea Grace S. Salvador	Intern Alberto E. Antonio Jr.
Dr. Alexander Leandro B. Dela Fuente	Intern Sarah Reem D. Hesham
Dr. John Michael B. Hega	Mohamed Hagag

Developed By

Philippine Society of Microbiology and Infectious Diseases

Philippine College of Physicians

Asia Pacific Center for Evidence Based Healthcare

Philippine Society of Public Health Physicians

Philippine Society of General Internal Medicine

Philippine College of Emergency Medicine

Philippine Society of Hospice and Palliative Medicine

Philippine College of Occupational Medicine

Kalusugan ng Mag-Ina

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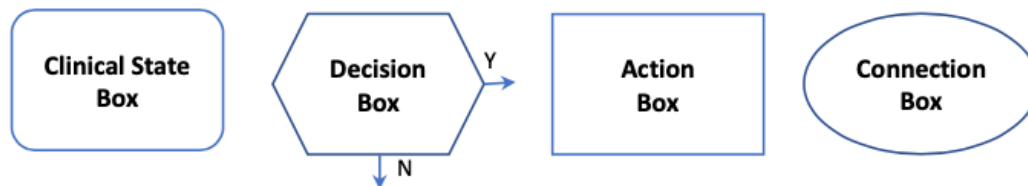
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INTRODUCTION TO ALGORITHM INTERPRETATION

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 a 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.

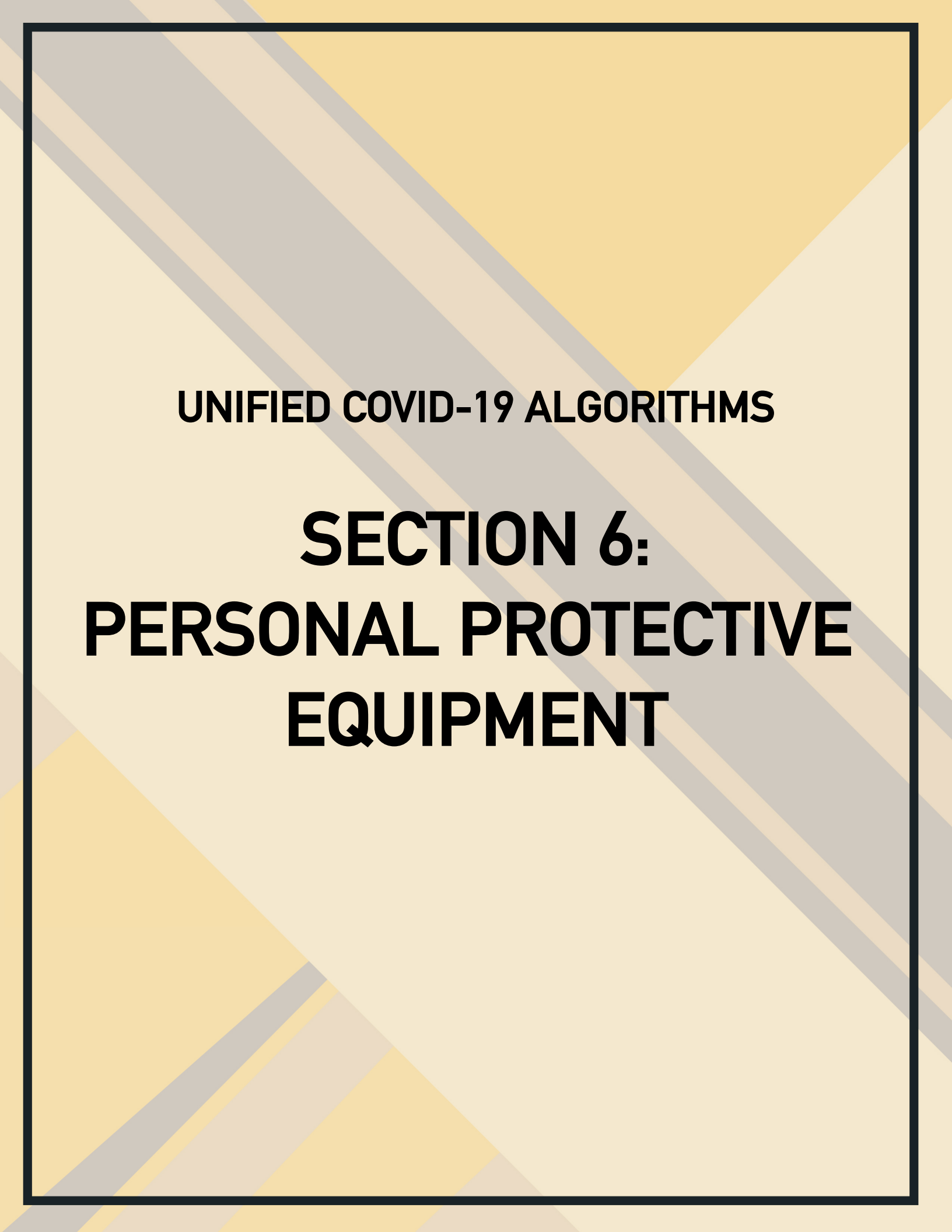
BACKGROUND

The Unified COVID-19 Algorithms is an ongoing collaboration between volunteer facilitators, technical specialists and algorithm constructors, contributors and reviewers from different medical organizations, as well as students from the UP College of Medicine and Ateneo School of Medicine and Public Health. This release reflects evidence and policy updates, as well as medical community consensus since the call of the Health Professionals' Alliance Against COVID-19 to re-strategize the country's response against COVID-19.

Each algorithm was reviewed by subject matter experts, stakeholders, as well as end-users. With the Philippine context in perspective, the algorithms provide clear guidelines for COVID-19 management from both the community and hospital levels. Algorithms also reinforce recommendations of the Department of Health with emphasis on evidence-based decision making, as well as patient-centeredness.

Work on the first version of the Unified Algorithms was started as early as March 2020 with a small team of three volunteer facilitators, four algorithm constructors, and five core medical societies convened by the Asia-Pacific Center for Evidence-Based Healthcare and hosted by the Philippine Society for Microbiology and Infectious Diseases. With support from PSMID, this expansion was carried out by the HPAAC Steering Committee through its network of volunteers. These algorithms are subject to change as evidence emerges and guidelines are updated. Recommendations on patient care are not absolute. Final decisions remain under the discretion of the healthcare provider.

As the unified algorithms are utilized, end-users are enjoined to provide feedback as to their experience with use of the algorithms in the field through: secretariat@psmid.org and hpaac.org.ph/contact or secretariat@hpaac.org.ph.



UNIFIED COVID-19 ALGORITHMS

**SECTION 1:
PATIENT NAVIGATION**

FIGURE 1A. TRIAGE OF PATIENTS DURING THE COVID-19 PANDEMIC

NOVEMBER 7, 2020

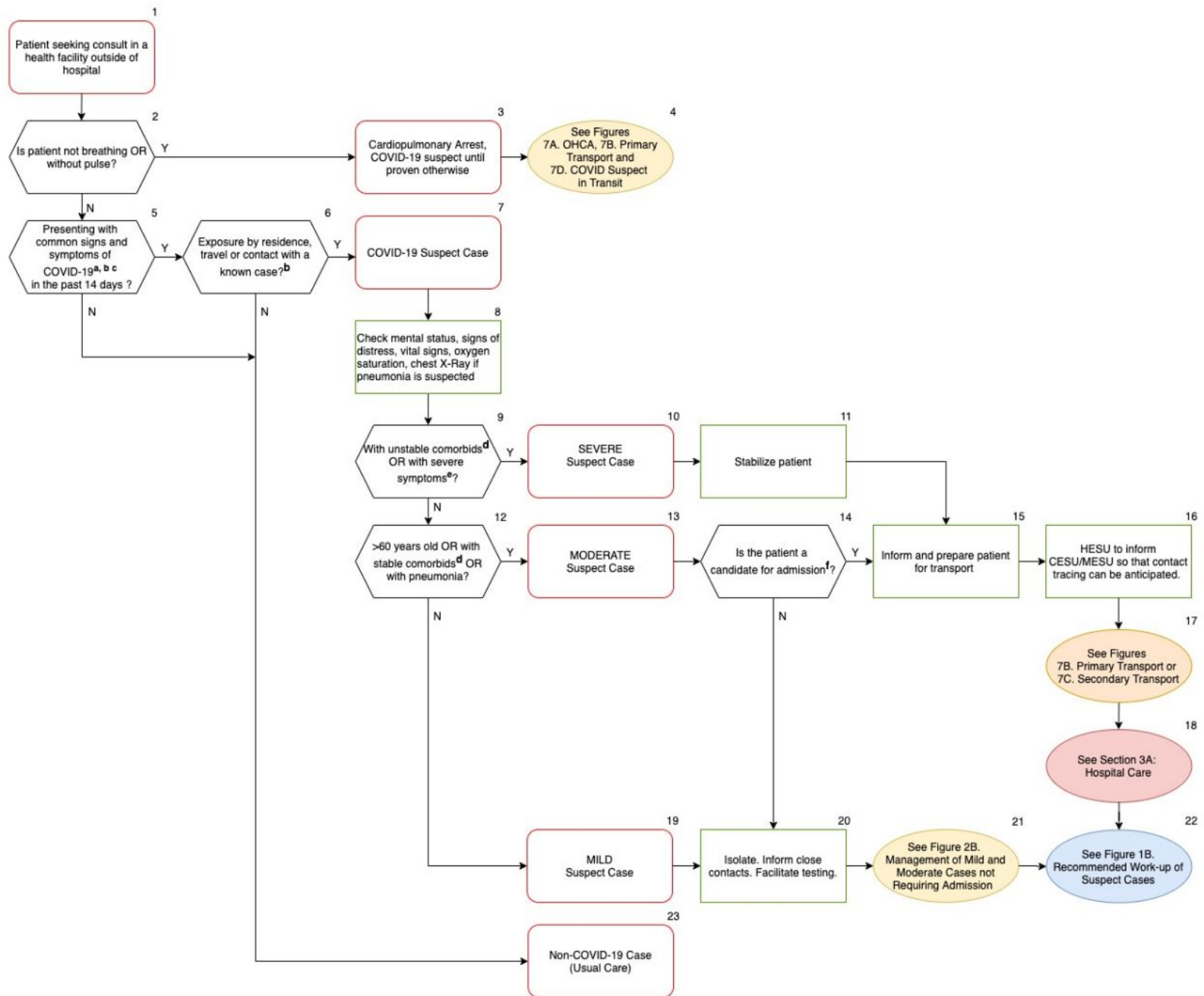


FIGURE 1A. TRIAGE OF PATIENTS DURING THE COVID-19 PANDEMIC

NOVEMBER 7, 2020

FOOTNOTE

^aClinical criteria of COVID-19 Suspect Case: (WHO Public health surveillance for COVID-19: interim guidance August 7, 2020):

1. Acute onset of fever and cough; OR
2. Acute onset of any 3 or more of common signs and symptoms of COVID-19
Common Signs and Symptoms: fever, cough, general weakness/fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status, anosmia, ageusia/dysgeusia

^bEpidemiological criteria of COVID-19 Suspect Case: (WHO Public health surveillance for COVID-19: interim guidance August 7, 2020):

1. Residing or working in an area with high risk of transmission of the virus, e.g. closed residential and camp-like settings, within 14 days prior to symptom onset; OR
2. Residing in or travel to an area with community transmission within 14 days prior to symptom onset; OR
3. Working in health setting, including within health facilities and within households, within 14 days prior to symptom onset.

^cSevere Acute Respiratory Illness (SARI): Acute respiratory infection with history of fever or measured fever of $\geq 38^{\circ}\text{C}$; and cough; with onset within the last 10 days; and who requires hospitalization.

^dComorbidities - Underlying health condition listed below:

- Chronic lung disease
- Chronic heart disease or Hypertension
- 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)

^eSevere Symptoms:

For adults and adolescents: any of the following:

- Altered mental state
- Severe respiratory distress
- $\text{SpO}_2 < 93\%$ at room air, $\text{RR} > 30/\text{min}$
- Systolic blood pressure of $< 90\text{mmHg}$
- Other signs of shock or complications

For children: cough or difficulty in breathing plus at least one of the following:

- Central cyanosis of $\text{SpO}_2 < 90\%$
- Severe respiratory distress (e.g. grunting, chest indrawing)
- Signs of pneumonia with a general danger sign: inability to breastfeed or drink, lethargy/unconsciousness or convulsions
- Other signs of pneumonia may be present: fast breathing (in breaths/minute) - < 2 months, ≥ 60 ; 2-11 months, ≥ 50 ; 1-5 year, ≥ 40

^fAdmission is recommended if reason for moderate classification is pneumonia or if there are other indications for admission and if the physician assessed the patient to be at high risk for severe disease.

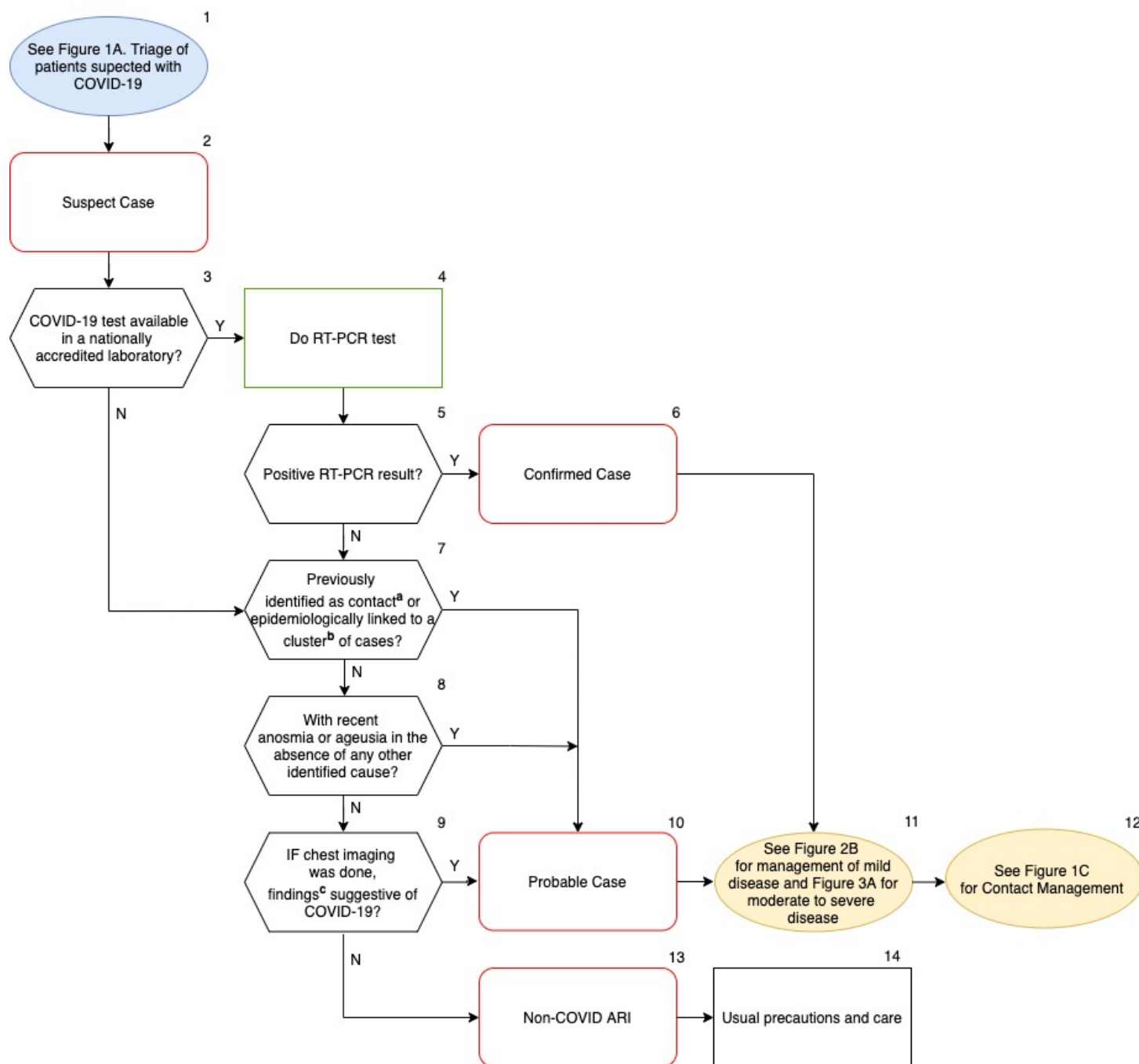
^gAdminister acute care for the patient while considering admission and service capability. Service capability as basis for admission can depend on multiple factors including: (1) best clinical judgement of the health provider (2) appropriateness of health care facility (3) geographical access to the next higher level facility (4) patient context.

^hContact: a person who has experienced any one of the following exposures to a probable/confirmed case during the 2 days before and the 14 days after the onset of said case:

1. Face-to-face contact within 1 meter and for at least 15 minutes
2. Direct physical contact;
3. Direct care without using recommended PPE; OR
4. Other situations as indicated by local risk assessments.

FIGURE 1B. RECOMMENDED WORK-UP OF SUSPECT CASES

NOVEMBER 7, 2020



FOOTNOTES

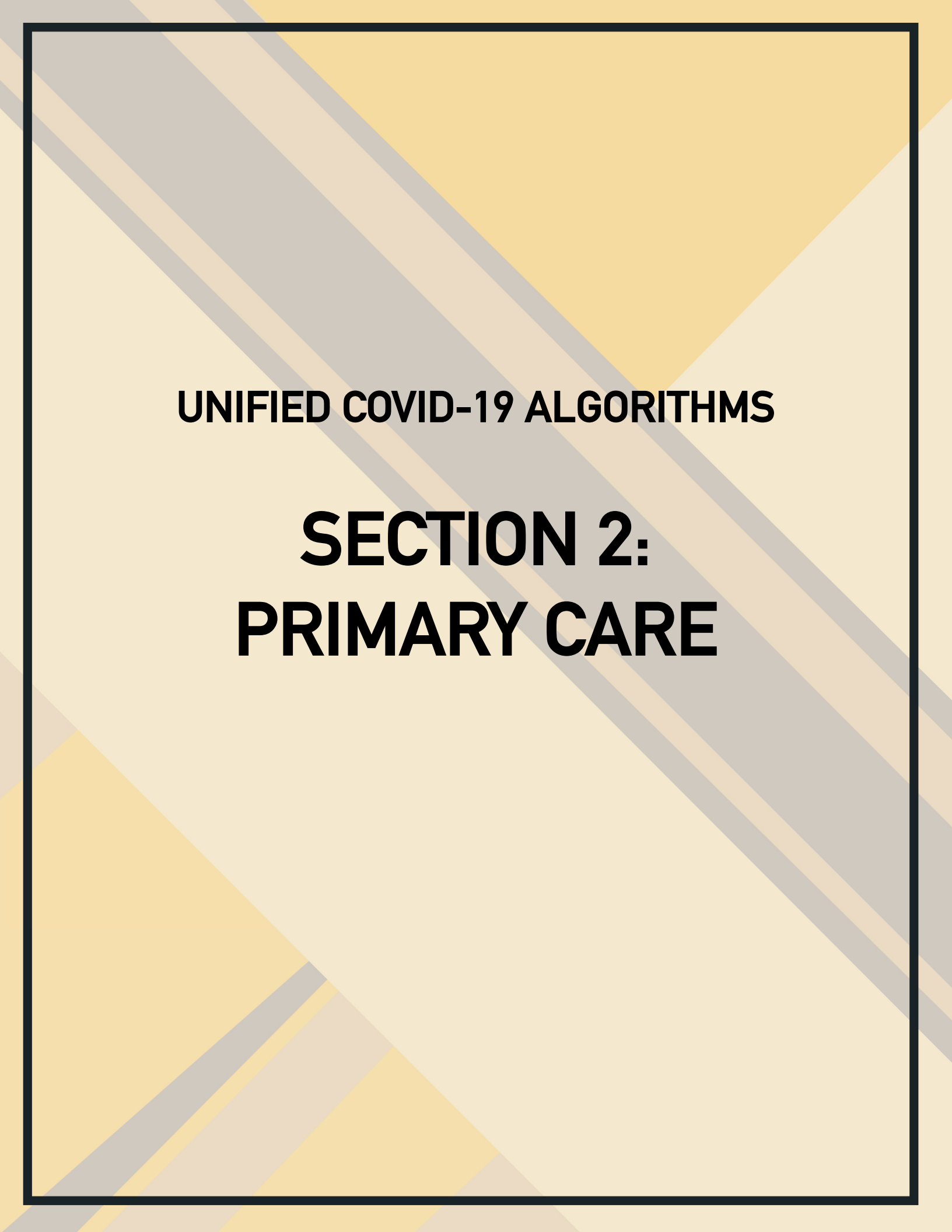
^a**Contact:** a person who has experienced any one of the following exposures to a probable/confirmed case during the 2 days before and the 14 days after the onset of said case:

1. Face-to-face contact within 1 metre and for at least 15 minutes
2. Direct physical contact;
3. Direct care without using recommended PPE; OR
4. Other situations as indicated by local risk assessments.

^bThe cluster should have at least one confirmed case.

^c**Typical chest imaging findings of COVID-19:**

1. Chest radiography - hazy opacities, often rounded in morphology, with peripheral and lower lung distribution;
2. Chest CT - multiple bilateral ground glass opacities, often rounded in morphology, with peripheral and lower lung distribution;
3. Lung ultrasound - thickened pleural lines, B lines, consolidative patterns with or without air bronchograms.

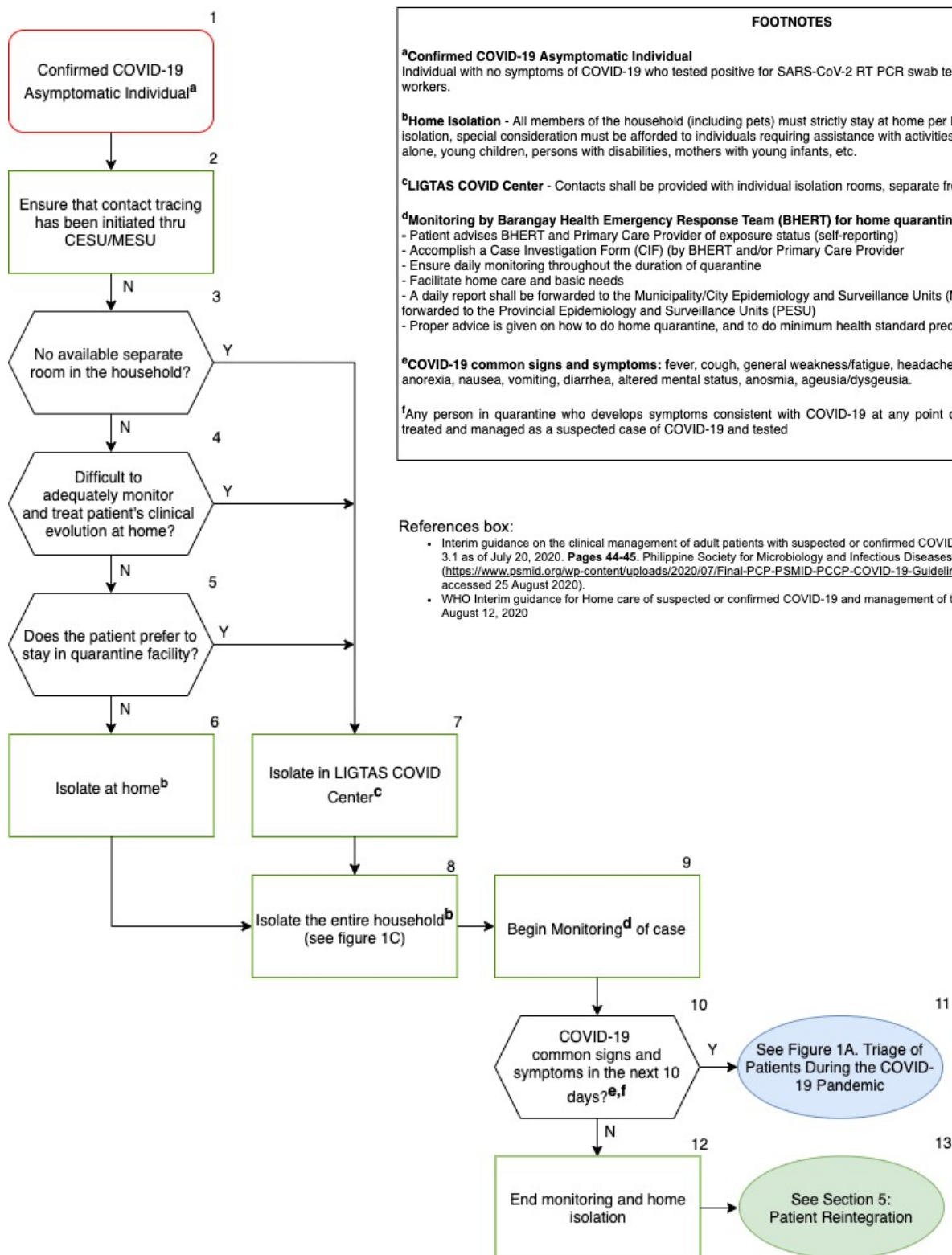


UNIFIED COVID-19 ALGORITHMS

**SECTION 2:
PRIMARY CARE**

FIGURE 2A. COMMUNITY-BASED MANAGEMENT OF ASYMPTOMATIC INDIVIDUALS WITH CONFIRMED COVID-19

NOVEMBER 7, 2020



FOOTNOTES

^aConfirmed COVID-19 Asymptomatic Individual

Individual with no symptoms of COVID-19 who tested positive for SARS-CoV-2 RT PCR swab test. Examples of these are healthcare workers.

^bHome Isolation - All members of the household (including pets) must strictly stay at home per LGU protocol. In community-based isolation, special consideration must be afforded to individuals requiring assistance with activities of daily living e.g. elderly living alone, young children, persons with disabilities, mothers with young infants, etc.

^cLIGTAS COVID Center - Contacts shall be provided with individual isolation rooms, separate from those who are symptomatic

^dMonitoring by Barangay Health Emergency Response Team (BHERT) for home quarantine:

- Patient advises BHERT and Primary Care Provider of exposure status (self-reporting)
- Accomplish a Case Investigation Form (CIF) (by BHERT and/or Primary Care Provider)
- Ensure daily monitoring throughout the duration of quarantine
- Facilitate home care and basic needs
- A daily report shall be forwarded to the Municipality/City Epidemiology and Surveillance Units (MESU/CESU) which in turn are forwarded to the Provincial Epidemiology and Surveillance Units (PESU)
- Proper advice is given on how to do home quarantine, and to do minimum health standard precautions to the exposed patient

^eCOVID-19 common signs and symptoms: fever, cough, general weakness/fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status, anosmia, ageusia/dysgeusia.

^fAny person in quarantine who develops symptoms consistent with COVID-19 at any point during the quarantine period should be treated and managed as a suspected case of COVID-19 and tested

References box:

- Interim guidance on the clinical management of adult patients with suspected or confirmed COVID-19 infection, Version 3.1 as of July 20, 2020. **Pages 44-45**. Philippine Society for Microbiology and Infectious Diseases. (<https://www.psmid.org/wp-content/uploads/2020/07/Final-PCP-PSMID-PCCP-COVID-19-Guidelines-20July2020b.pdf> accessed 25 August 2020).
- WHO Interim guidance for Home care of suspected or confirmed COVID-19 and management of their contacts Version August 12, 2020

FIGURE 2B. MANAGEMENT OF MILD AND MODERATE CASES

NOVEMBER 7, 2020

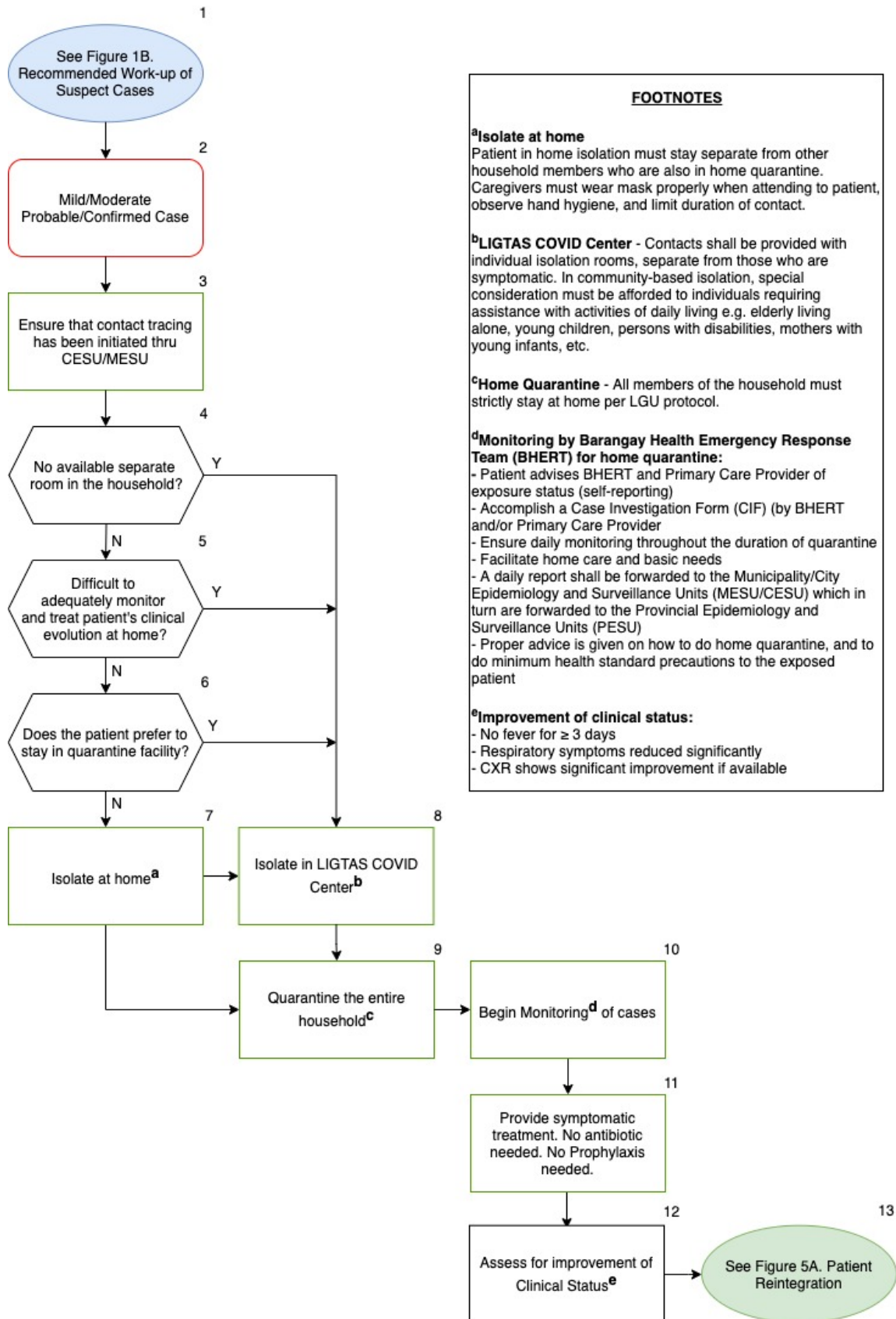
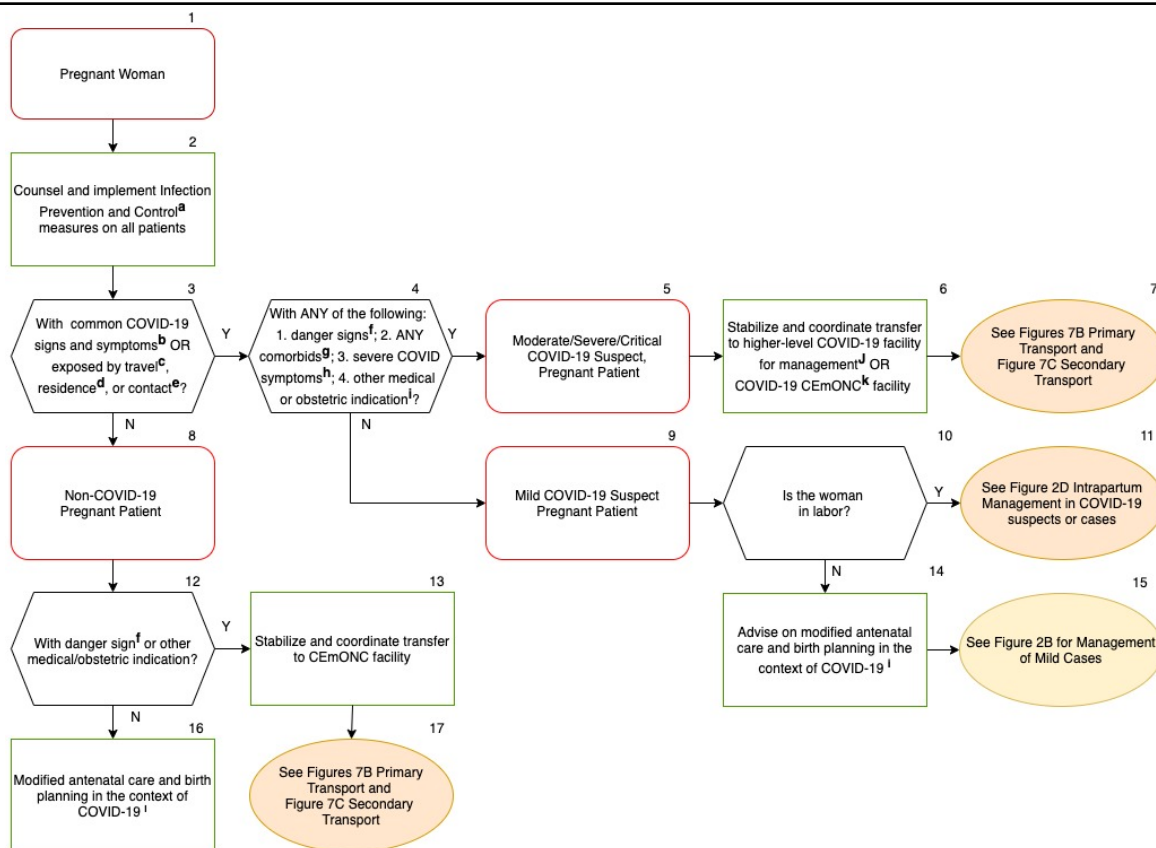


FIGURE 2C. MANAGEMENT OF PREGNANT WOMEN DURING THE COVID-19 PANDEMIC

NOVEMBER 7, 2020



FOOTNOTES

^aMaternal Infection Prevention and Control (IPC)

Prior to the use of this algorithm, it is expected that the mother is already aware of and following maternal IPC measures:

- A minimum of a face mask must be worn by or provided to the mother during delivery, postpartum, and during care of the baby
- Wash hands using soap and water before and after handling baby
- On nipple care, as long as IPC measures above are observed washing/cleaning the nipple before/after feeding is discouraged

^bCommon signs and symptoms of COVID-19

fever, cough, general weakness/fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status, anosmia, ageusia/dysgeusia

^cExposure by travel

Travel from a country/area where there is sustained community level transmission

^dExposure by residence

Lives in an LGU where there is sustained community level transmission

^eExposure by contact

1. Providing direct care to suspect, probable, or confirmed COVID-19 patients without using proper PPE (i.e. healthcare workers);
2. Face-to-face contact with a probable or confirmed case within 1 meter and for more than 15 minutes;
3. Direct physical contact with a probable or confirmed case; OR
4. Other situations as indicated by local risk assessments

^fObstetric danger signs (DOH MNCHN MOP, 2011)

1. Swelling of legs, hands, and/or face
2. Severe headache, dizziness, blurring of vision
3. Convulsion
4. Vaginal bleeding, pale skin
5. Fever and Chills
6. Absence or decrease in baby's movement inside the womb,
7. Severe abdominal pain
8. Vaginal bleeding, foul smelling/watery vaginal discharge
9. Painful urination
10. Too weak to get out of bed

^gComorbidities - Underlying health condition listed below:

- Chronic lung disease
- Chronic heart disease or Hypertension
- 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)

^hSevere COVID symptoms:

- Altered mental state
- Shortness of breath
- SpO₂ < 94%
- Respiratory rate > 30/min
- Systolic blood pressure of < 90mmHg
- Other signs of shock or complications

ⁱExamples of High-risk features

- Preterm labor
- Vaginal bleeding
- Pre-eclampsia/eclampsia
- Preterm pre-labor rupture of membranes (pPROM)
- malpresentations
- Young primigravida
- Elderly primigravida
- Multifetal pregnancy

^jTransporting a Patient

- Stabilize patient prior to transport: Give oxygen; Target pulse oximetry 92-95% at room air
- Require all transport personnel to wear appropriate PPE, to be removed once patient has been transferred
- Stabilize patient using corresponding interventions as per BEMONC guidelines

^kCEmONC

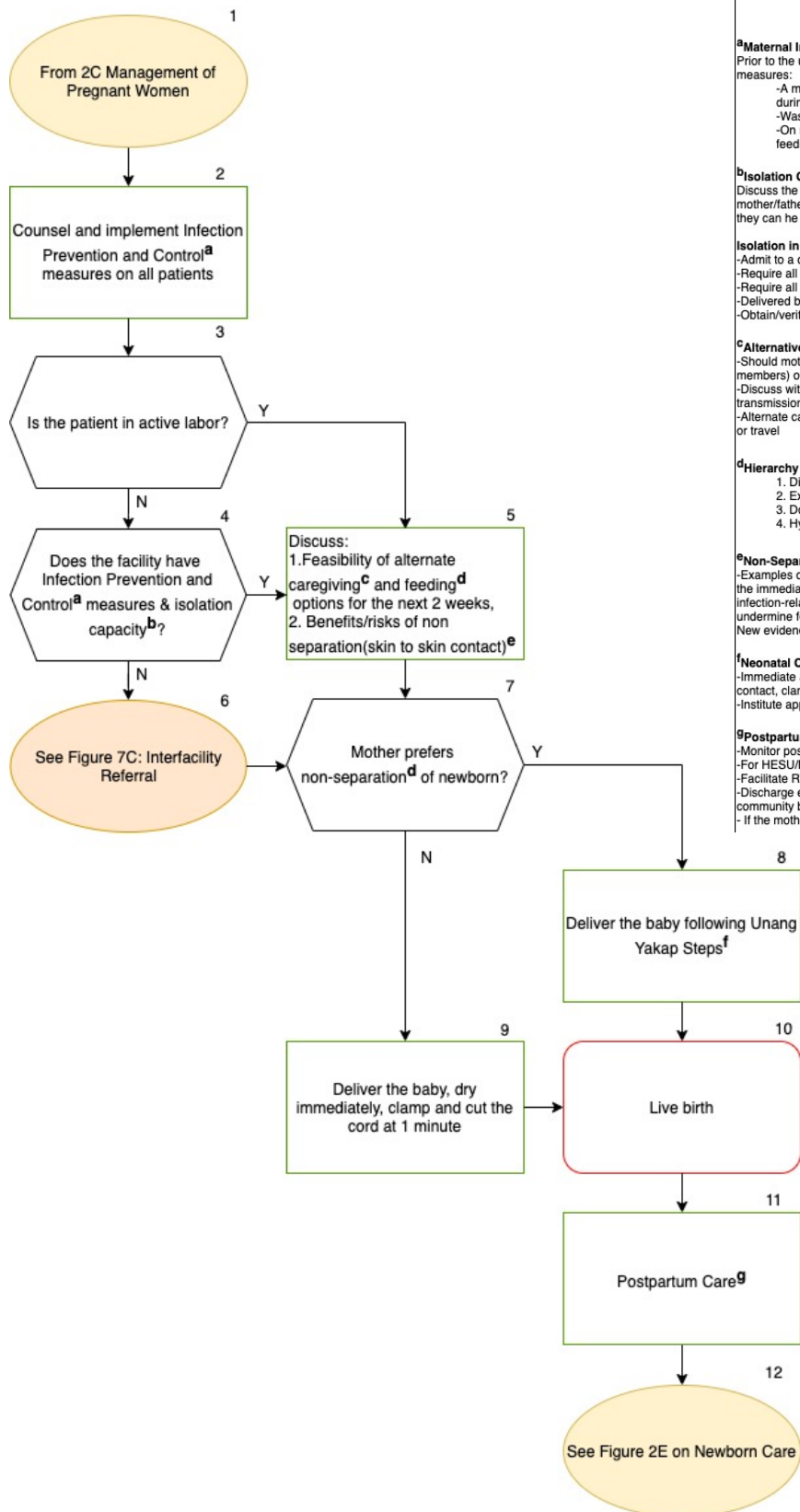
- Comprehensive Emergency Obstetrics and Newborn Care

^lAntenatal Care

- Consider modifications to standard protocols for antenatal visits and procedures, depending on levels of community quarantine including use of telehealth, reducing the number of clinic visits. (DOH DM 2020-0319)
- Phone consultations recommended to minimize exposure risk
- Antenatal care under the current situation remains the same as standard of care, provided that physical distancing and IPC measures are still followed for in-person meetings
- Emphasis on obstetric danger signs must be made during all consults, including the need to escalate care from remote healthcare to the need to transfer to health care facilities
- Antenatal discussions should include formulation of updated birth preparedness and complication readiness plans that include when, where and how to seek appropriate care

FIGURE 2D. MANAGEMENT OF COVID-19 SUSPECTS OR CASES IN LABOR

NOVEMBER 7, 2020



FOOTNOTES

^aMaternal Infection Prevention and Control (IPC)

Prior to the use of this algorithm, it is expected that the mother is already aware of and following maternal IPC measures:

- A minimum of a face mask must be worn by or provided to the mother during delivery, postpartum, and during care of the baby
- Wash hands using soap and water before and after handling baby
- On nipple care, as long as IPC measures above are observed washing/cleaning the nipple before/after feeding is discouraged

^bIsolation Capacity

Discuss the available options for isolating the mother-newborn dyads, whether together or separated, with the mother/father. Are enough isolation rooms available? Is there a dedicated unit for separated newborns where they can be maintained >1m apart?

Isolation in Imminent Delivery

- Admit to a designated isolation area
- Require all personnel in attendance to wear the appropriate PPE
- Require all transport personnel to wear the appropriate PPE to be removed once patient has been transferred
- Delivered by NSD
- Obtain/verify if the naso-opharyngeal swab specimens were collected

^cAlternative Caregivers

-Should mother prefer separation, alternate caregivers include all possible contacts (e.g. health workers, family members) of the baby during the time of separation from the mother
-Discuss with the family who the available alternate caregiver(s) will be, what their COVID status are, what the transmission risks are, how much PPEs are needed, and how available are these PPEs
-Alternate caregivers must also undergo assessment regarding symptoms, contact, and exposure via residence or travel

^dHierarchy of feeding options

1. Direct breastfeeding with IPC
2. Expressed breastmilk with IPC
3. Donor breastmilk, preferably pasteurized
4. Hygienically and properly prepared breastmilk substitutes, only after all above have been exhausted

^eNon-Separation

-Examples of benefits of non-separation Non-separation keeps babies warm, prevents exposure to diseases in the immediate environment, and helps establish breastfeeding. Delays in breastfeeding increases risk for infection-related deaths among newborns, and result in breastfeeding difficulties. Breastfeeding problems can undermine food security of a household with limited resources, as funds are funneled to prioritize infant formula. New evidence suggests that COVID-19 antibodies are found in the breastmilk of infected mothers.

^fNeonatal Care

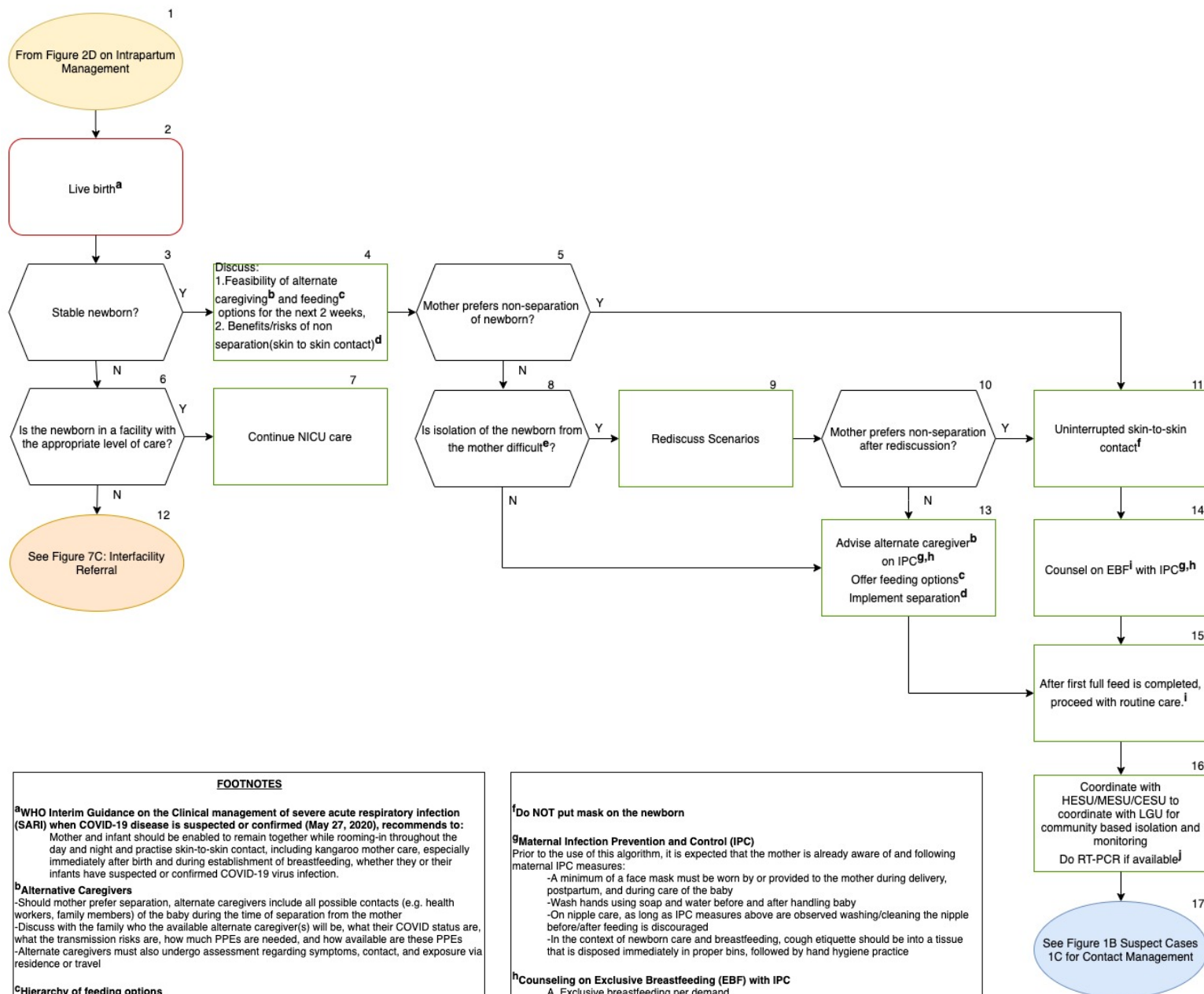
- Immediate and thorough drying of the newborn, early skin-to-skin contact, clamp/cut cord between 1-3 mins after delivery
- Institute appropriate neonatal resuscitation measures as necessary

^gPostpartum Care

- Monitor postpartum patient in the same isolation area by the same delivery team
- For HESU/MESU/CESU to coordinate with LGU for contact tracing
- Facilitate RT-PCR Testing (See Figure 1C, 2E)
- Discharge early once stable, if mild case coordinate with HESU/MESU/CESU to coordinate with LGU for community based isolation and monitoring
- If the mother prefers non separation, the mother and the baby should always stay together

FIGURE 2E. CARE OF THE NEWBORN WHOSE MOTHER IS A PROBABLE/CONFIRMED COVID-19 WITH MILD OR NO SYMPTOMS

NOVEMBER 7, 2020



FOOTNOTES

^aWHO Interim Guidance on the Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected or confirmed (May 27, 2020), recommends to:

Mother and infant should be enabled to remain together while rooming-in throughout the day and night and practise skin-to-skin contact, including kangaroo mother care, especially immediately after birth and during establishment of breastfeeding, whether they or their infants have suspected or confirmed COVID-19 virus infection.

^bAlternative Caregivers

-Should mother prefer separation, alternate caregivers include all possible contacts (e.g. health workers, family members) of the baby during the time of separation from the mother
-Discuss with the family who the available alternate caregiver(s) will be, what their COVID status are, what the transmission risks are, how much PPEs are needed, and how available are these PPEs
-Alternate caregivers must also undergo assessment regarding symptoms, contact, and exposure via residence or travel

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-Examples of benefits of non-separation Non-separation keeps babies warm, prevents exposure to diseases in the immediate environment, and helps establish breastfeeding. Delays in breastfeeding increases risk for infection-related deaths among newborns, and result in breastfeeding difficulties. Breastfeeding problems can undermine food security of a household with limited resources, as funds are funneled to prioritize infant formula. New evidence suggests that COVID-19 antibodies are found in the breastmilk of infected mothers.

^eIsolation feasibility

Discuss the available options for isolating the mother-newborn dyads, whether together or separated, with the mother/father. Are enough isolation rooms available? Is there a dedicated unit for separated newborns where they can be maintained >1m apart? Upon discharge is isolation of the mother-newborn dyad feasible at home?

^fDo NOT put mask on the newborn

^gMaternal Infection Prevention and Control (IPC)

Prior to the use of this algorithm, it is expected that the mother is already aware of and following maternal IPC measures:

- A minimum of a face mask must be worn by or provided to the mother during delivery, postpartum, and during care of the baby
- Wash hands using soap and water before and after handling baby
- On nipple care, as long as IPC measures above are observed washing/cleaning the nipple before/after feeding is discouraged
- In the context of newborn care and breastfeeding, cough etiquette should be into a tissue that is disposed immediately in proper bins, followed by hand hygiene practice

^hCounseling on Exclusive Breastfeeding (EBF) with IPC

- A. Exclusive breastfeeding per demand
- B. Positioning and attachment
- C. Cough/sneeze into tissue and dispose (not into elbow)
- D. Proper way of wearing a mask when near her baby
- E. Washing hands before and after contact with the baby
- F. How to clean/disinfect contaminated surfaces

Mother should be able to see the baby in an infant crib that is at least one (1) meter or three (3) feet away from mother's bed, exercising full precautions.

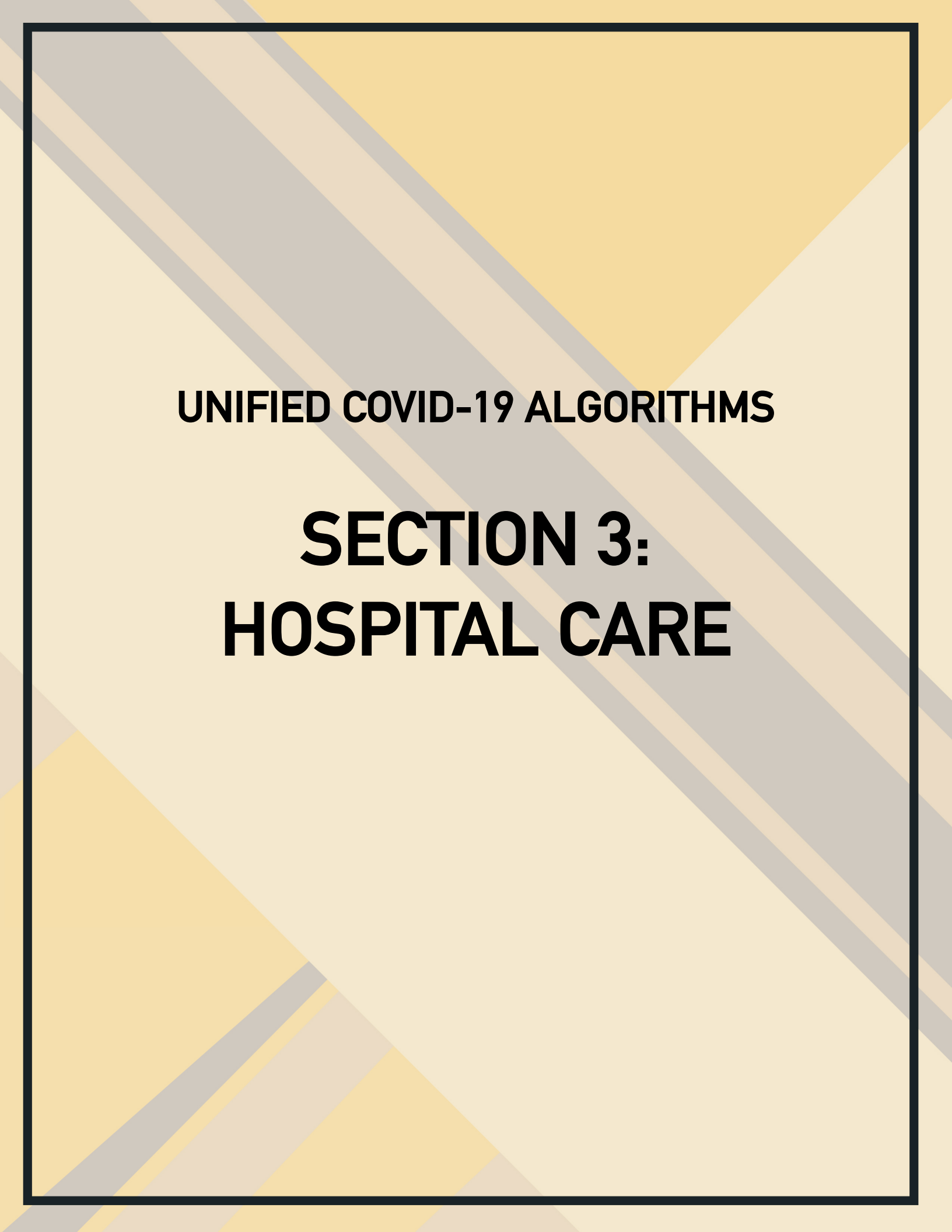
ⁱRoutine Care

- Eye care, thorough physical exam, vitamin K injection, birth doses of hepatitis B and BCG vaccines; newborn and hearing screens, if available.
- Counsel mother and partner on family planning

^jTesting

- RT-PCR testing may be done at DOH accredited testing centers once newborn is stable

^kIf the mother prefers non separation, the mother and the baby should always stay together even when in quarantine or isolation

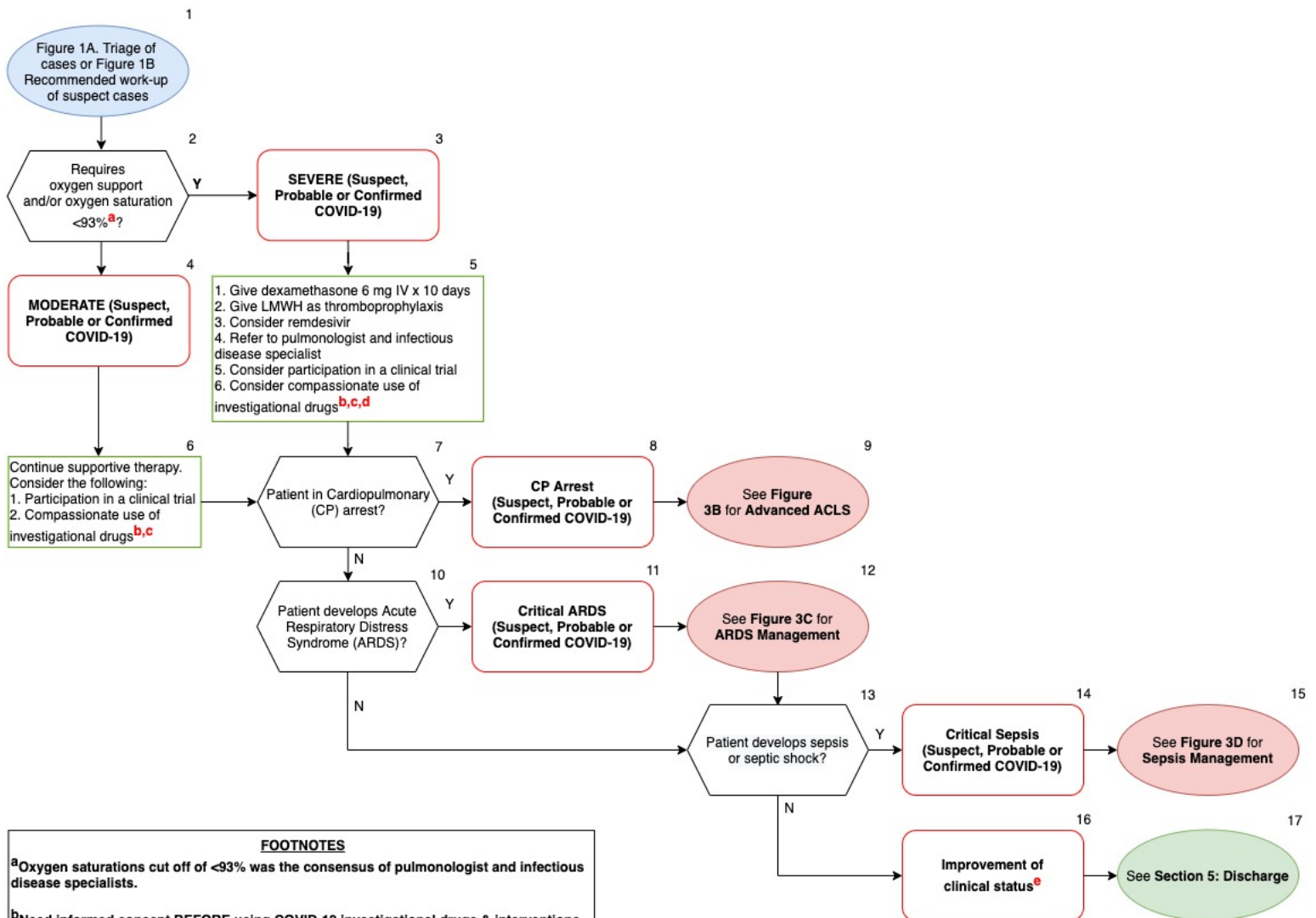


UNIFIED COVID-19 ALGORITHMS

**SECTION 3:
HOSPITAL CARE**

FIGURE 3A. MANAGEMENT OF MODERATE TO SEVERE SUSPECT, PROBABLE, OR CONFIRMED COVID-19

NOVEMBER 7, 2020



FOOTNOTES

^aOxygen saturations cut off of <93% was the consensus of pulmonologist and infectious disease specialists.

^bNeed informed consent BEFORE using COVID-19 investigational drugs & interventions in trials or compassionate use.

^cInvestigational Drugs For Moderate COVID-19

- Favipiravir - Remdesivir - Convalescent plasma

^dInvestigational Drugs For Severe and Critical COVID-19

- Remdesivir 200 mg IV loading dose then 100 mg IV OD, infused over 30 mins for 5-10 days
- Convalescent plasma - Immunomodulator (Tocilizumab)

^eImprovement of clinical status

- No fever or use of antipyretic for at least 3 days
- Respiratory symptoms reduced significantly
- CXR (if available) shows significant improvement

FIGURE 3B. ADVANCED CARDIAC LIFE SUPPORT FOR CASES OF COVID-19

NOVEMBER 7, 2020

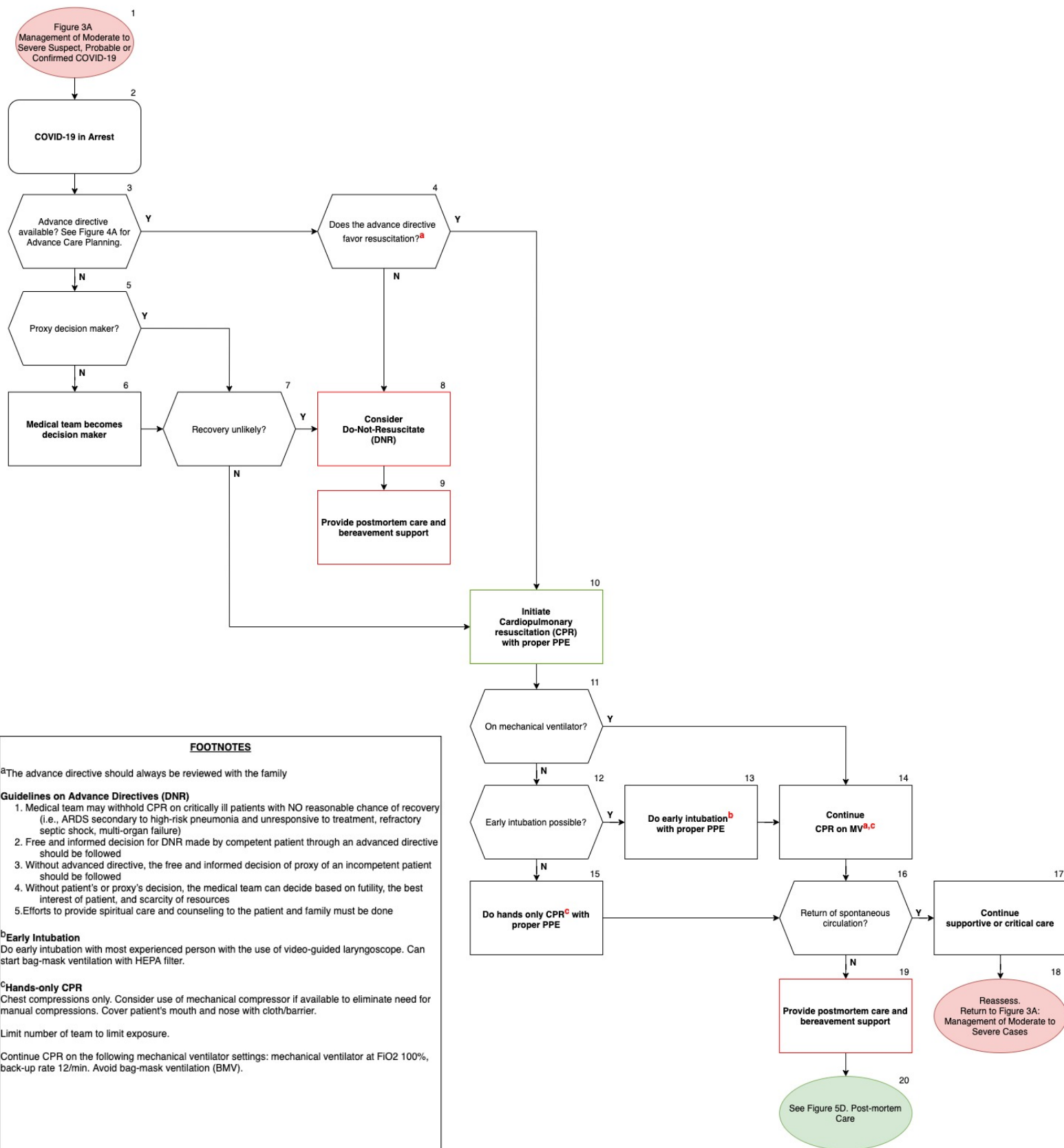
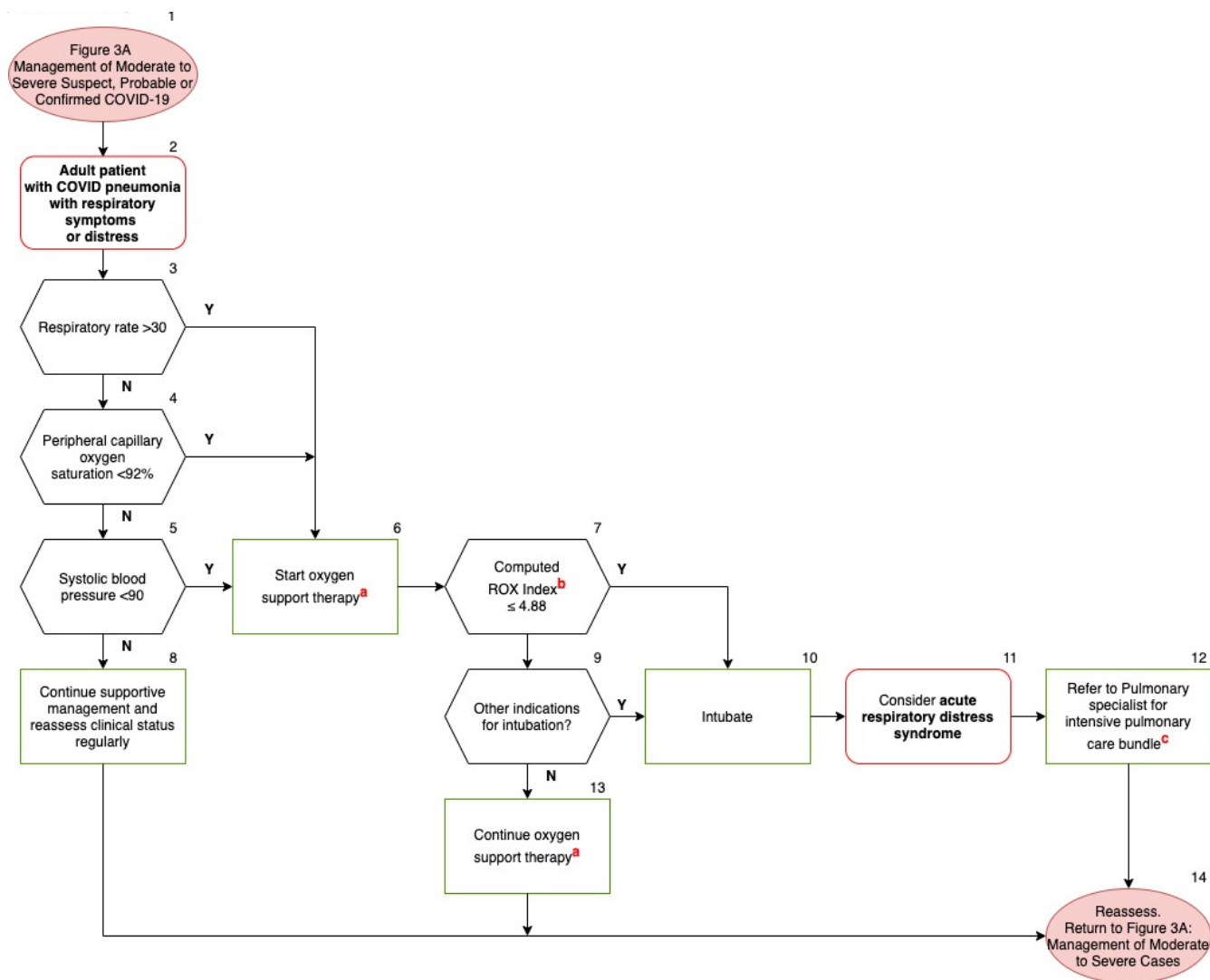


FIGURE 3C. RECOGNITION AND MANAGEMENT OF COVID-19 ACUTE RESPIRATORY DISTRESS SYNDROME (CARDS)

NOVEMBER 7, 2020



FOOTNOTES

^aOxygen support therapy

- Oxygen support via face mask or non-rebreather mask with hepa filter
- May use high flow nasal cannula at 40-60 L/min overlapped with a face mask and non-invasive positive pressure ventilation in a single negative pressure room
- Maintain $O_2St >92\%$

^bROX Index

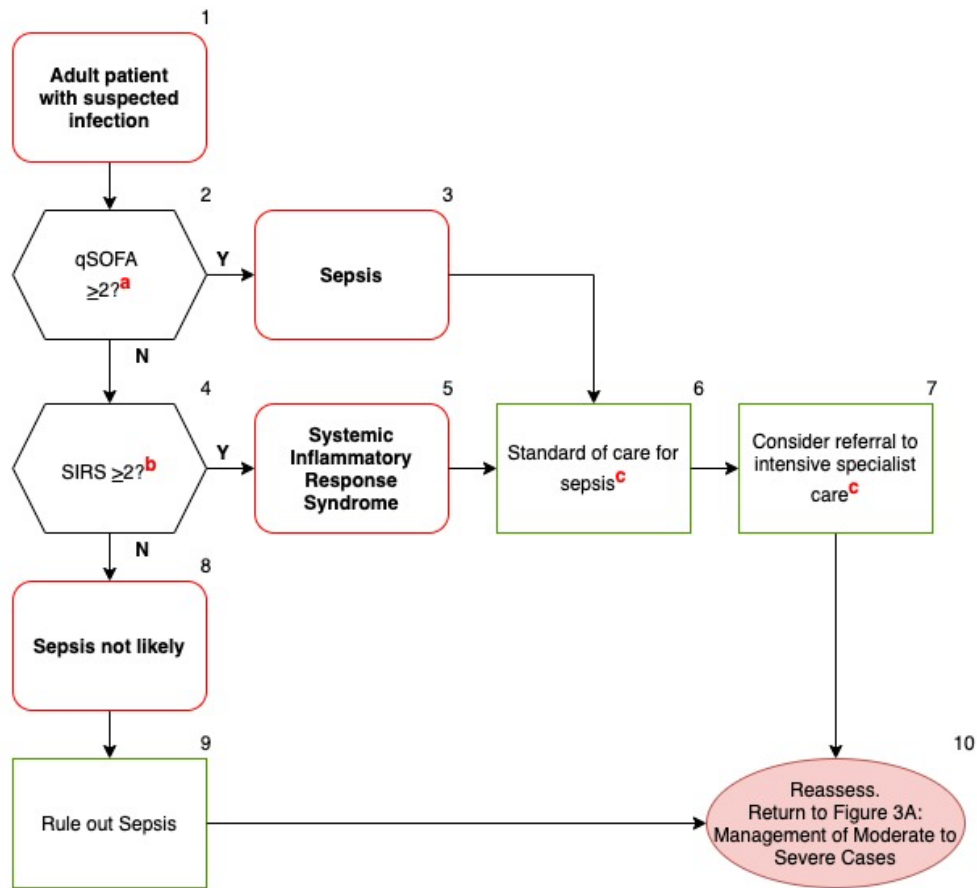
- $(SpO_2/FiO_2)/RR$
- Perform intubation if the ROX index are less than these values at the hours of checking
 - o 2 hours - < 2.8
 - o 6 hours - < 3.47
 - o 12 hours - < 3.85

^cIntensive pulmonary care bundle

- Airborne precautions should be followed
 - o Bag-mask ventilation is not recommended, unless with hepa filter. Place patient on 6L oxygen support via nasal cannula for pre-oxygenation.
 - o Avoid disconnecting patient from the ventilator
 - o Nebulization is not recommended. Use metered dose inhalers.
 - o Use in-line catheters for suctioning.
 - o Endotracheal intubation should be performed by a trained provider using the proper PPE. One-time intubation only using rapid sequence intubation is ideal. Use video laryngoscope if available.
- ICU admission
- Conservative fluid management
- Give empiric antimicrobials, guided by the guidelines on Community-Acquired Pneumonia.
- Consider neuromuscular blockade in intubated patient with moderate-severe ARDS.
- Give anticoagulation therapy.
- Give dexamethasone 6 mg/day for 10 days
- Refer to pulmonologist or intensivist
- Initiate recruitment maneuvers and lung protection strategies
 - o Tidal volume 6-8mL/kg of predicted body weight
 - o Plateau pressure $<30mmHg$
 - o Use lower PEEP $<10mmHg$
 - o Consider prone positioning for >12 hours in institutions with proper training for maneuver
 - o Consider extracorporeal life support
- Consider investigational drugs: remdesivir, immunomodulators (tocilizumab), hemoperfusion, convalescent plasma

FIGURE 3D. RECOGNITION AND MANAGEMENT OF SEPSIS

NOVEMBER 7, 2020



FOOTNOTES

^aqSOFA Variables

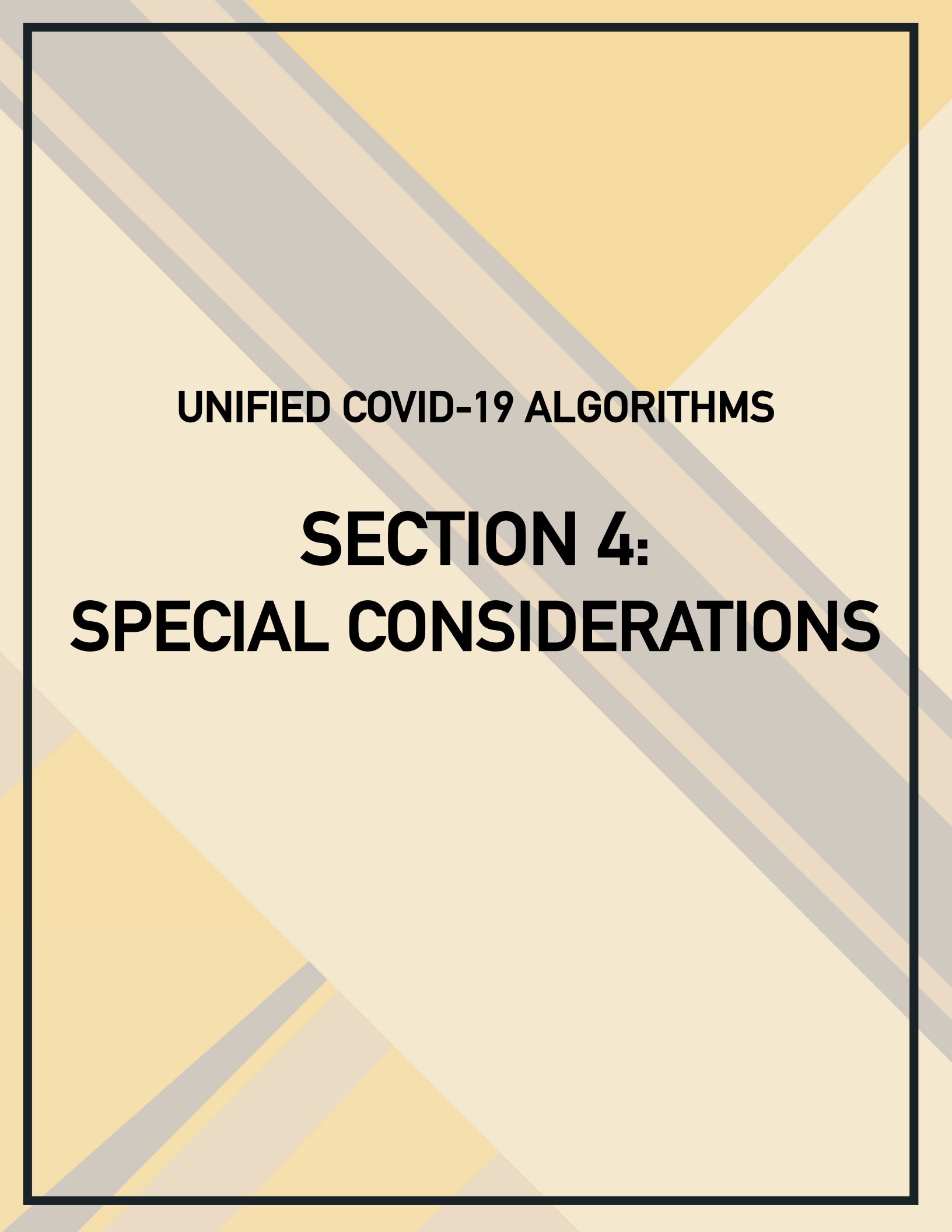
- Respiratory rate >22 breaths/min
- Altered mentation
- Systolic blood pressure ≤100mmHg

^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 pCO₂ <32mmHg
4. WBC count >12,000 or <4,000 cells/mm³, or >20% immature (band) forms

^cStandard of care for sepsis: (Intensive Care for Severe Sepsis and Septic Shock)

- Admit patient to the ICU.
- Give antimicrobials within 1 hour of initial patient assessment. Follow current Guidelines for Diagnosis and Treatment of CAP in Adults.
- Blood cultures ideally should be collected prior to antimicrobial treatment, but should not delay administration of antimicrobials.
- Early effective fluid resuscitation needed
 - Administer at least 30 mL/kg of isotonic crystalloid in adults in the first 3 hours.
 - Monitor for volume overload during resuscitation.
- Apply vasopressors when shock persists in the face of norepinephrine, vasopressin, or dobutamine (if with signs of poor perfusion and cardiac dysfunction).
- Maintain initial BP target as MAP > or = to 65 mmHg.
- Insert central venous catheters. If not available, vasopressors may be given through peripheral IV access with the use of a large vein.

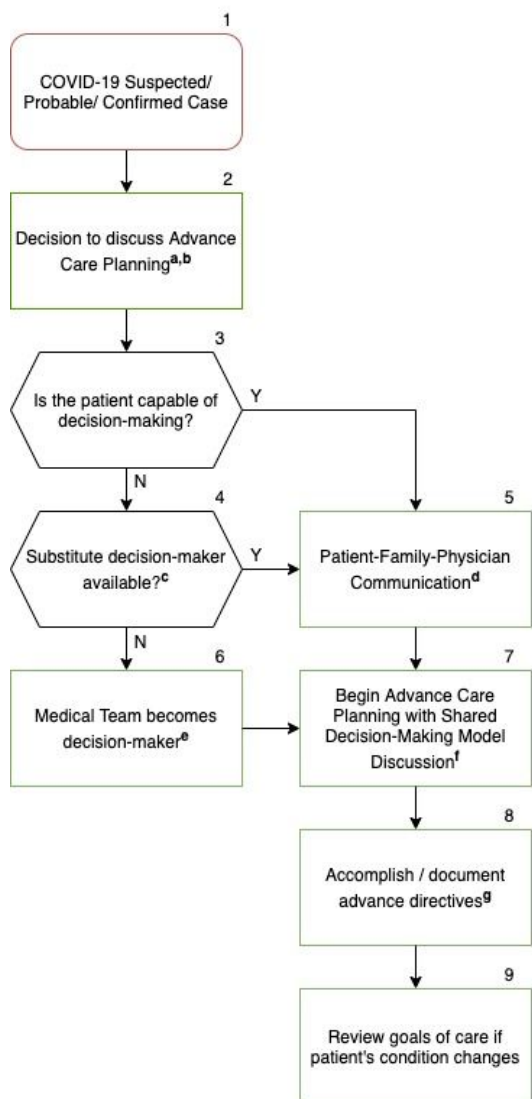


UNIFIED COVID-19 ALGORITHMS

**SECTION 4:
SPECIAL CONSIDERATIONS**

FIGURE 4A. ADVANCE CARE PLANNING

NOVEMBER 7, 2020



Footnotes

^aTiming of ACP Discussion

In a pandemic situation, advanced care planning at the onset of serious acute illness will be beneficial and should be given priority. Proper timing of ACP discussion is important, should be sensitive and will depend on several factors including patient's clinical status and prognosis, patient/family preferences and values, and HCW team/facility capabilities among others. Too early discussion may cause distress and demoralization, while too late may delay patient/family preparation for acute medical crisis, and cause incongruences in patient care.

^bAdvance Care Planning

Advanced Care Planning is making decisions about the healthcare a patient would want to receive if one is facing a medical crisis. This may take time so do not force arriving at a decision abruptly.

Advanced Care planning includes :

1. Assessing the patient's / decision-maker's mental capacity to make informed decisions. Look for signs of losing the capacity to understand information, to retain information, to use and weigh information, and to communicate information.
2. Giving the patient / decision-maker information on the types of life-sustaining treatments that are available.
3. Helping the patient / decision-maker decide what types of treatment he/she would or would not want should the patient be diagnosed with a life-limiting illness.
4. Encouraging the patient / decision-maker to share one's personal values with loved ones.
5. Completing Advance Directives to put into writing what types of treatment the patient / decision-maker would or would not want – and who to speak to – should the patient be unable to speak for himself/herself.
6. To ensure that the document reflects the current wishes of the patient, initiate a review of the advance planning decisions if there is a change in the patient's perception of their quality of life; For patients that lack capacity, critical care teams should enquire about the presence of any ACP or advanced statements to better understand the beliefs of the individual; and in a pandemic situation, advanced care planning at the onset of serious acute illness will be beneficial and should be given priority.

^cSubstitute Decision-maker

Appointed according to the following hierarchy:

1. Power of Attorney
2. Spouse (living together in a married or common-law relationship)
3. Parent or child
4. Siblings
5. Other relatives

^dPatient-Family-Physician Communication

The guide includes the following reminders:

1. Ensure Comfort
2. Assess Emotional Temperature
3. Listen to Patient Concerns
4. Reassure
5. Assess Need for Information
6. Deliver Information with Empathy
7. Explore Emotions and Provide Support

^eMedical Team becomes decision-maker

In the premise there is no appointed/surrogate decision-maker, medical team makes a "best interest" decision following consultation with family members and any written statements. This is an attempt to make the same decision the patient would in these circumstances should they have had capacity.

^fShared decision making model

Key component process of patient-centered health care in which clinicians, patients and their families work together to make decisions and select tests, treatments and care plans based on clinical evidence that balances risks and expected outcomes with patient preferences and values.

^gAdvanced Directive definition

An advance directive consists of a person's oral and written instructions about his or her future medical care, in the event he or she becomes unable to communicate, becomes incompetent to make health care decisions or is in a persistent vegetative state. This may vary in different institutions, ensure completeness and attach to patient's records

FIGURE 4B. END-OF-LIFE SYMPTOM MANAGEMENT OF IRREVERSIBLE RESPIRATORY FAILURE IN COVID-19 PATIENTS

NOVEMBER 7, 2020



Footnotes

^aPrerequisite before using this algorithm
Patient/substitute decision-maker are not amenable to life-sustaining interventions and/or medical team see no reasonable chance of recovery. Discussed de-escalation of care. Ensure psychosocial support and provide spiritual care (may call spiritual care provider/Chaplain) to patient and the family. ^hMay refer patient to palliative care team if available.

^bOpioid options for dyspnea

1. Morphine Sulfate 2-4 mg IV/IM/SC every 30 mins. Monitor every 15 mins.
2. Morphine 5-10mg tab every 4 hours P.O.N.G.T
3. Fentanyl IV continuous drip 12.5mcg/hour
4. Oxycodone IV 10-20mg every 4-6 hours
5. Oxycodone P.O.N.G.T short-acting 10-20mg every 4-6 hours

^ddo opioid precaution monitoring for opioid-naïve patients
^edo dose adjustment for opioid-tolerant patients

^cRespiratory Distress relieved

1. Respiratory Rate <20cpm
2. Severity score using the Visual Analog Scale (VAS) ≤ 5 out of 10

^dOpioid Infusion Principles:

1. If initial dose of IV opioid is ineffective after 2 doses at least 15 minutes apart, double the dose
2. Typically need 6-8 hours of controlled symptoms to calculate a continuous opioid infusion
3. If starting a continuous infusion, do not change more often than every 6 hours. Adjust infusion dose based on the 24 hour sum of PRNs

^eMedications for Agitation/ Delirium

1. Haloperidol 2.5mg IM/SC every 4 hours PRN
2. Midazolam 2mg IV every 4 hours, PRN
3. Midazolam 7.5-15mg PO every 4-6 hours, PRN
4. Diazepam 5mg IV
5. Rectal Diazepam 10mg
6. Diazepam 5mg P.O.N.G.T
7. Levomepromazine 12.5-25 mg SC
8. Clonazepam 1-2.5mg SL every 6 hours
9. Olanzapine 5-10mg SC every 8-12 hours
10. Chlorpromazine 12-25mg IV/IM

^fPalliative Sedation
Palliative sedation is a measure of last resort used at the end of life to relieve severe and refractory symptoms. It is performed by the administration of sedative medications in monitored settings and is aimed at inducing a state of decreased awareness or absent awareness (unconsciousness). The intent of palliative sedation is to relieve the burden of otherwise intolerable suffering for terminally ill patients and to do so in such a manner so as to preserve the moral sensibilities of the patient, the medical professionals involved in their care, and concerned family and friends.
Titrate sedatives accordingly every 2 hours to determine effectiveness of palliative sedation until the desired level of comfort is acceptable to the family and the medical team caring for the patient. (May use palliative sedation scoring systems i.e. RASS, Ramsay Sedation scale)
Midazolam infusion
Start Midazolam drip, 30 mg in 30mL PNSS to run at 2cc (2mg)/hour, titrate by increments of 1mg/mL every hour until agitation is adequately controlled and maintain at that dose
Alternative to Midazolam for palliative sedation: Rectal Diazepam 10mg every hourly or Clonazepam 1-2mg sublingual q6 hourly.

^gOther Symptoms

1. Anxiety: Diazepam 2mg IV/IM/SC, Diazepam 5mg P.O.N.G.T every 8 hours; Midazolam 2mg IV q4 or Midazolam 7.5-15mg PO q4-6 hours
2. Cough: Butamirate citrate 56 mg P.O.N.G.T q8-12hours / Levodropropizine 30mg P.O.N.G.T qhourly / Morphine 2.5mg IV/SC, PRN / Morphine Controlled Release 10-20 mg q12 hours / Oxycodone 5-10 mg q12 hours
3. Increased Oral Secretions: Hyoscine-N-Butylbromide 20mg IV q6-8 hours / Hyoscine-N-Butylbromide 10-20mg P.O.N.G.T q6-8hours

^hActively Dying
The hours or days preceding imminent death during which time the patient's physiologic functions wane.

The patient may exhibit signs and symptoms of near-death.

1. Long pauses in breathing; patient's breathing patterns may also be very irregular
2. Blood pressure drops significantly (continuous steady decline of >20mmHg)
3. Patient's skin changes color (mottling) and their extremities may feel cold to the touch
4. Patient is in a coma, or semi-coma, or cannot be awoken
5. Urinary and bowel incontinence and/or decrease in urine; urine may also be discolored
6. Hallucinations, delirium, and agitation
7. Build-up of fluid in the lungs, which may cause unusual gurgling sounds

ⁱComfort Measures
Refers to medical treatment of a dying person where the natural dying process is permitted to occur while ensuring maximum comfort. It includes attention to the psychological and spiritual needs of the patient and support for both the dying patient and the patient's family. Comfort Measures is commonly referred to as "comfort care" by the general public.

^jBereavement Support - After the patient's death, a member of the health care team should contact the family caregiver(s) to offer condolences and answer questions of the family.

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**SECTION 5:
PATIENT REINTEGRATION**

FIGURE 5A. DISCHARGE OF PATIENTS WITH PROBABLE OR CONFIRMED COVID-19, CRITERIA FOR DISCONTINUATION OF TRANSMISSION PRECAUTIONS

NOVEMBER 7, 2020

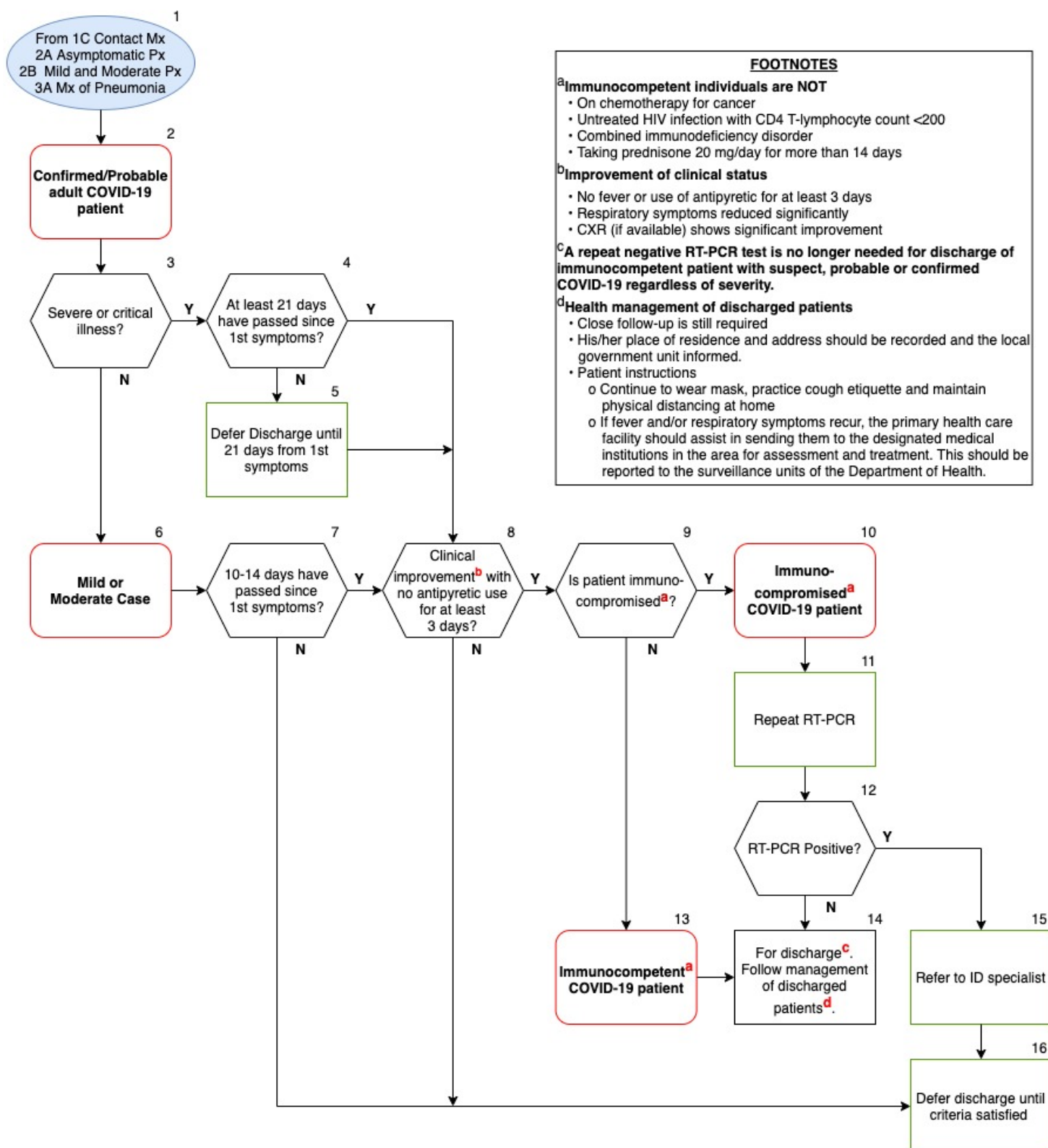
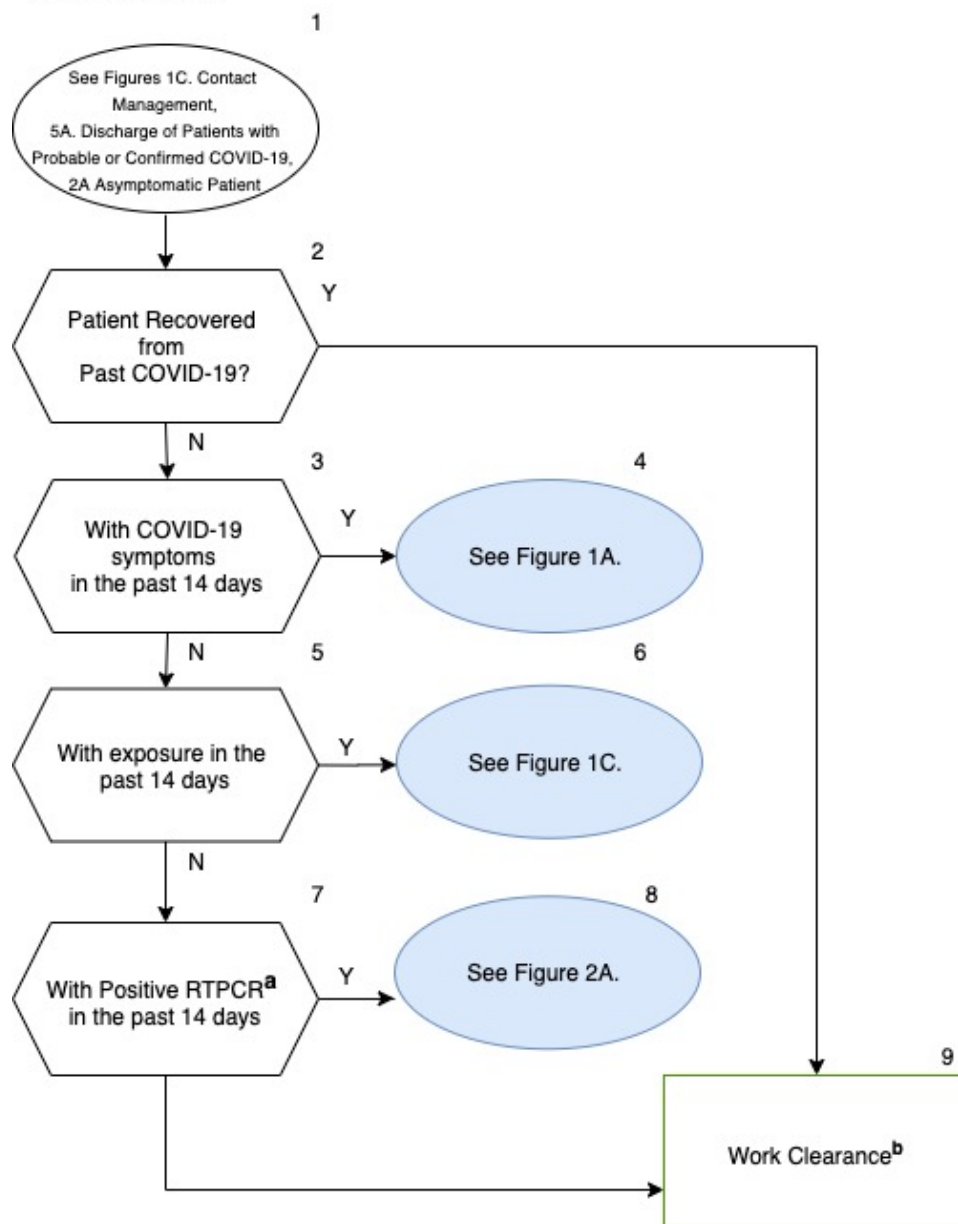


FIGURE 5B. CLEARING NON-HEALTH CARE WORKERS FOR RETURN TO WORK

NOVEMBER 7, 2020



FOOTNOTES

^aRTPCR tests are NOT recommended for work clearance
Rapid antibody tests are not recommended for work clearance.
Rapid antigen tests are currently not recommended for work clearance.

^bRefer to workplace guidelines

1. DOLE-DTI Joint Memorandum Circular 20-04-A (August 15, 2020)
2. DOH Workplace Handbook as of September 30, 2020

FIGURE 5C. RECOMMENDATIONS FOR ASYMPTOMATIC AND SYMPTOMATIC HEALTH CARE WORKERS WITH CONFIRMED COVID-19 RETURNING TO WORK

NOVEMBER 7, 2020

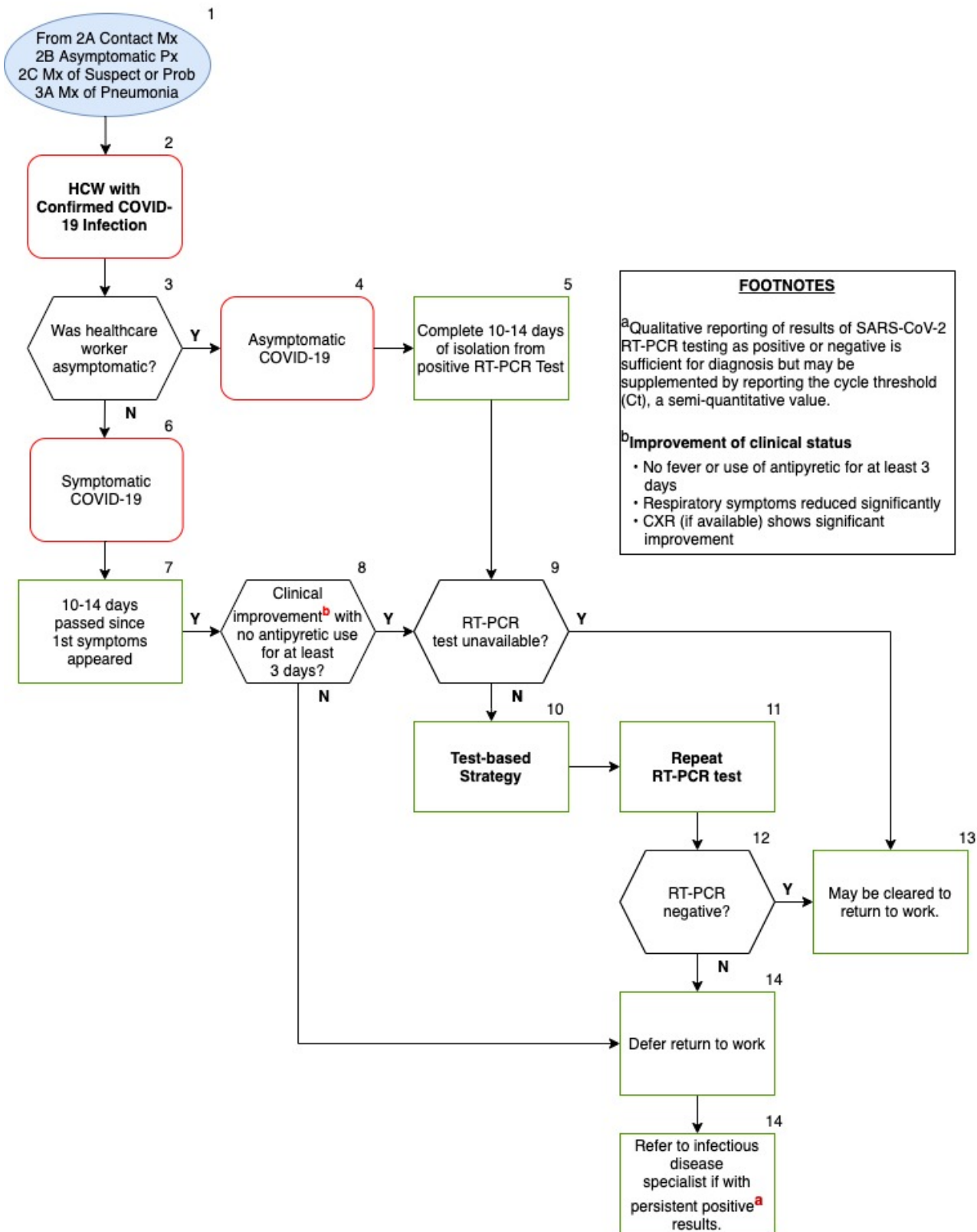


FIGURE 5D. POST MORTEM CARE

Burial

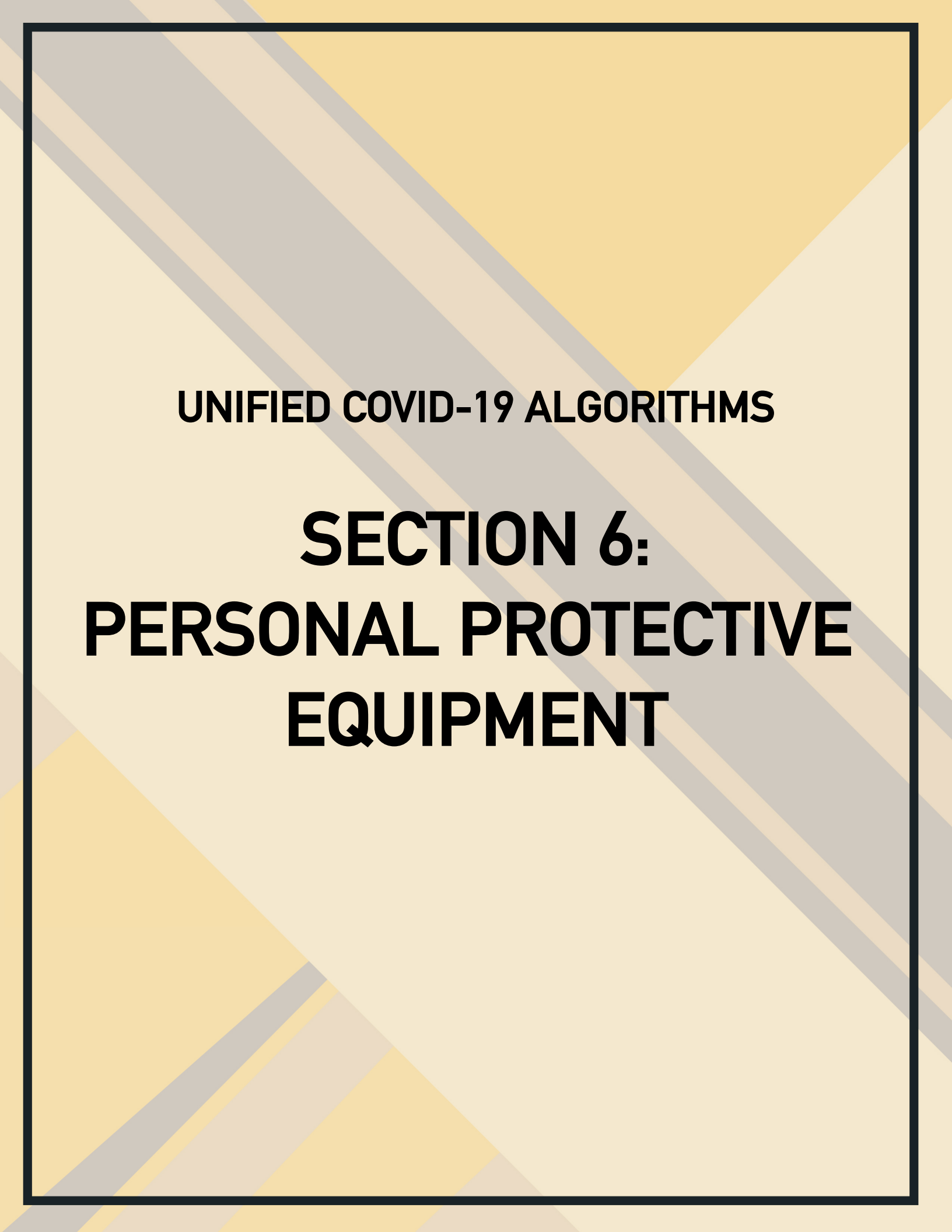
1. Burial, preferably cremation, shall be done within 12 hours after death
2. However, burial of the dead body shall, to the most possible extent, be in accordance with the person's religion or customs

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.



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**SECTION 6:
PERSONAL PROTECTIVE
EQUIPMENT**

FIGURE 6A. RECOMMENDED PPE FOR HEALTHCARE WORKERS IN HOSPITAL FACILITIES AND EMERGENCY MEDICAL SERVICES

NOVEMBER 7, 2020



FIGURE 6B. RECOMMENDED PPE FOR HEALTHCARE WORKERS IN OUTPATIENT FACILITIES IN AREAS WITH SUSTAINED COMMUNITY TRANSMISSION

NOVEMBER 7, 2020

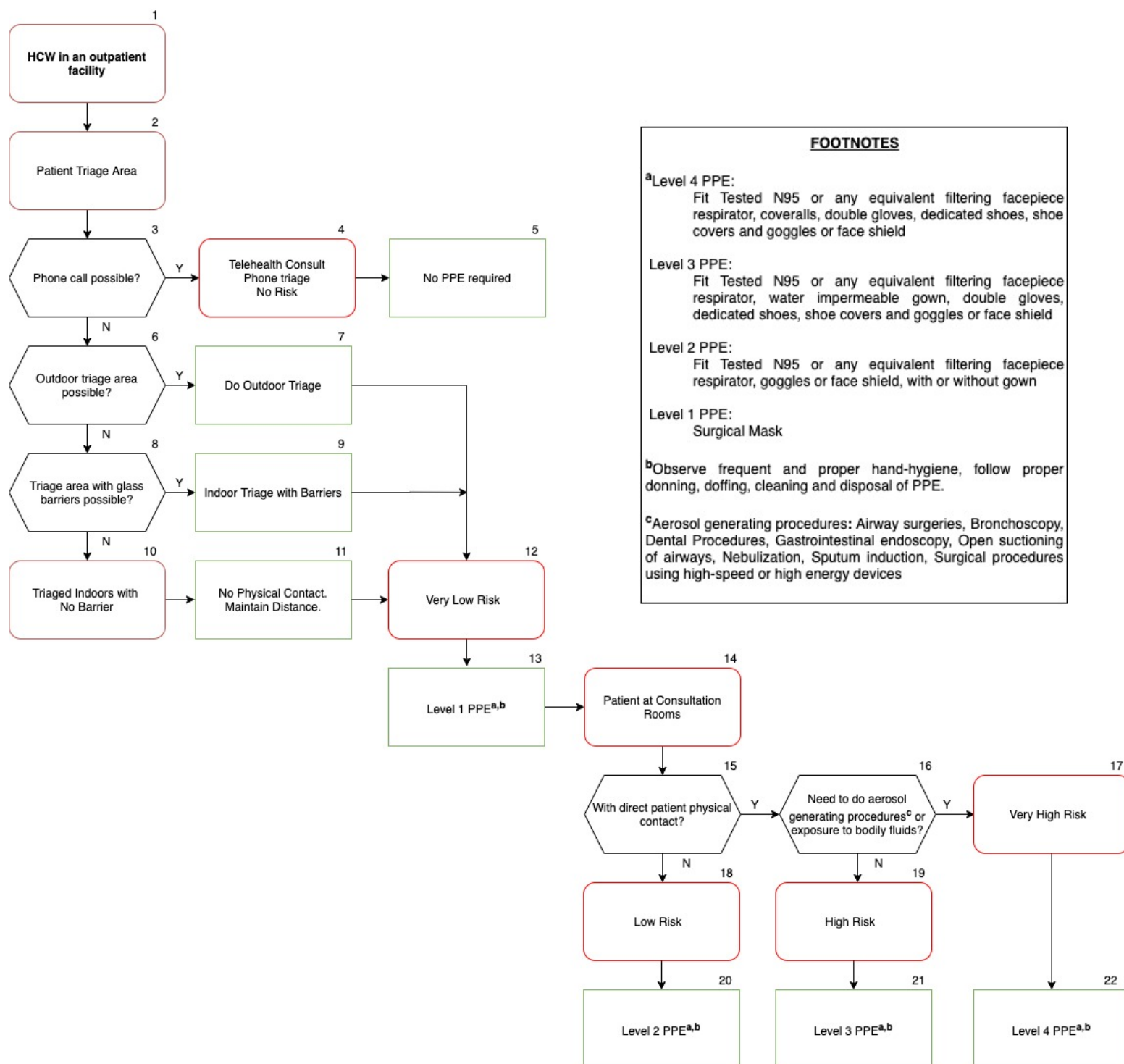
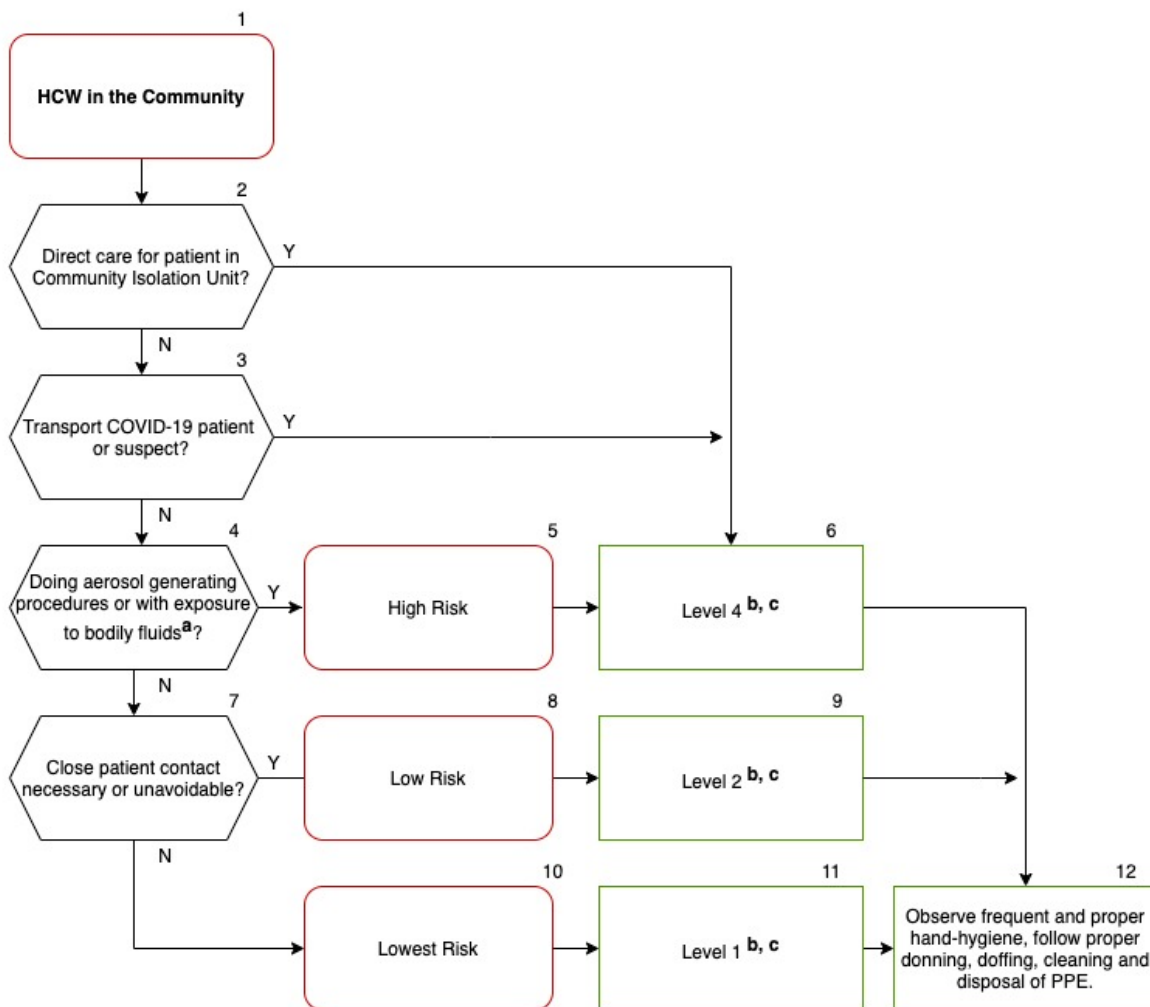


FIGURE 6C. RECOMMENDED PPE FOR HEALTHCARE WORKERS IN THE COMMUNITY

NOVEMBER 7, 2020



FOOTNOTES

^a Aerosol generating procedures (not limited to the following):

Airway surgeries, Autopsies, Bronchoscopy, Cardiopulmonary resuscitation, Dental Procedures, Endotracheal intubation and extubation, Evacuation of pneumoperitoneum during laparoscopic procedures, Gastrointestinal endoscopy, High frequency oscillatory ventilation, Non-invasive ventilation, Open suctioning of airways, Manual Ventilation, Nebulization, Sputum induction, Surgical procedures using high-speed or high energy devices, Tracheotomy/tracheostomy

^b Level 4 PPE:

Fit Tested N95 or any equivalent filtering facepiece respirator, coveralls, double gloves, dedicated shoes, shoe covers and goggles or face shield

Level 3 PPE:

Fit Tested N95 or any equivalent filtering facepiece respirator, water impermeable gown, double gloves, dedicated shoes, shoe covers and goggles or face shield

Level 2 PPE:

Fit Tested N95 or any equivalent filtering facepiece respirator, goggles or face shield, with or without gown

Level 1 PPE:

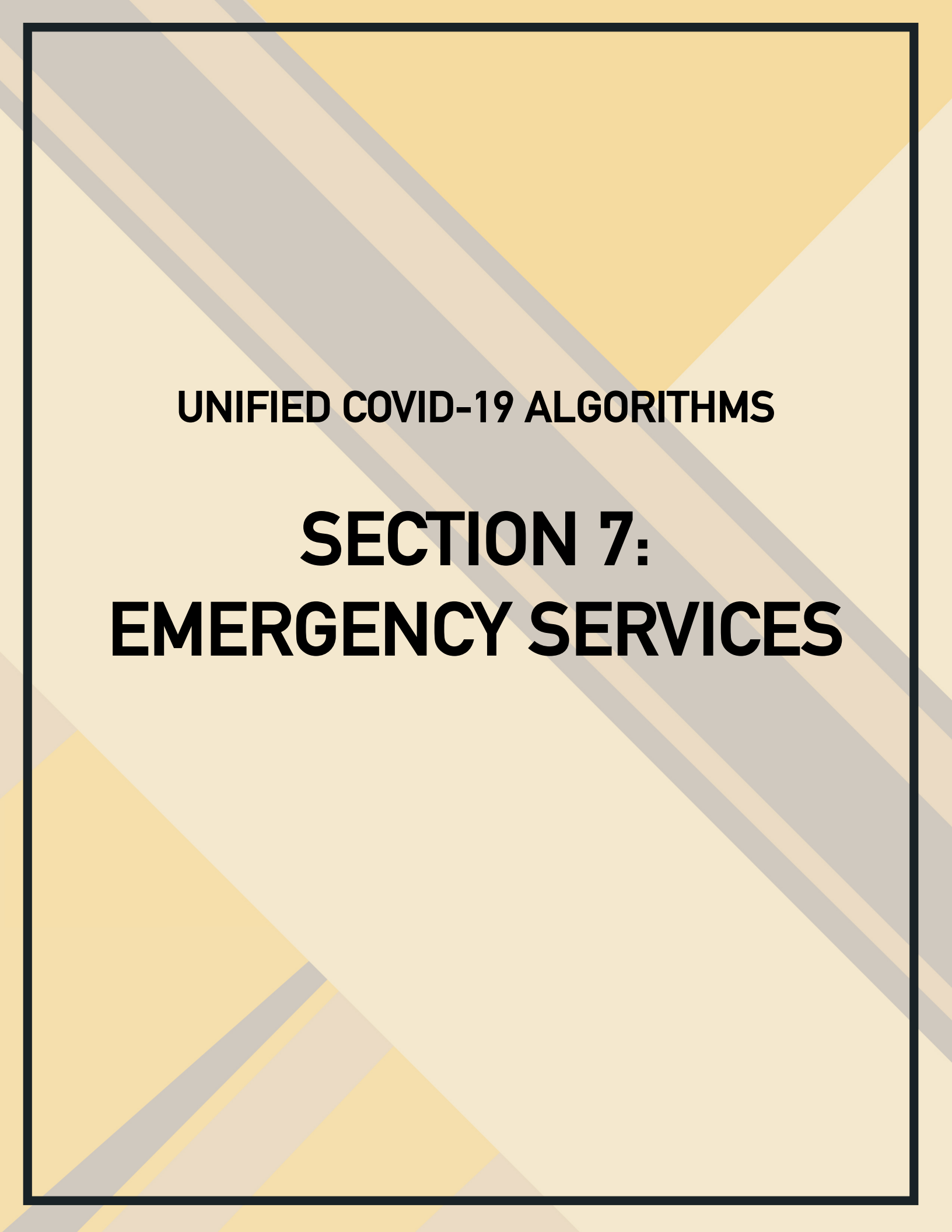
Surgical Mask

^c Respirators with exhalation valves should not be used in situations requiring a sterile area. May cover exhalation valve with a face mask taking precautions to maintain respirator fit if resources are limited or with no alternatives.

FIGURE 6D. PPE FOR BHERTS AND CONTACT TRACERS ASSISTING IN PUBLIC HEALTH INVESTIGATIONS

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UNIFIED COVID-19 ALGORITHMS

**SECTION 7:
EMERGENCY SERVICES**

FIGURE 7A. MANAGEMENT OF OUT OF HOSPITAL CARDIAC ARREST (OHCA) DURING PANDEMICS (COVID-19)

NOVEMBER 7, 2020

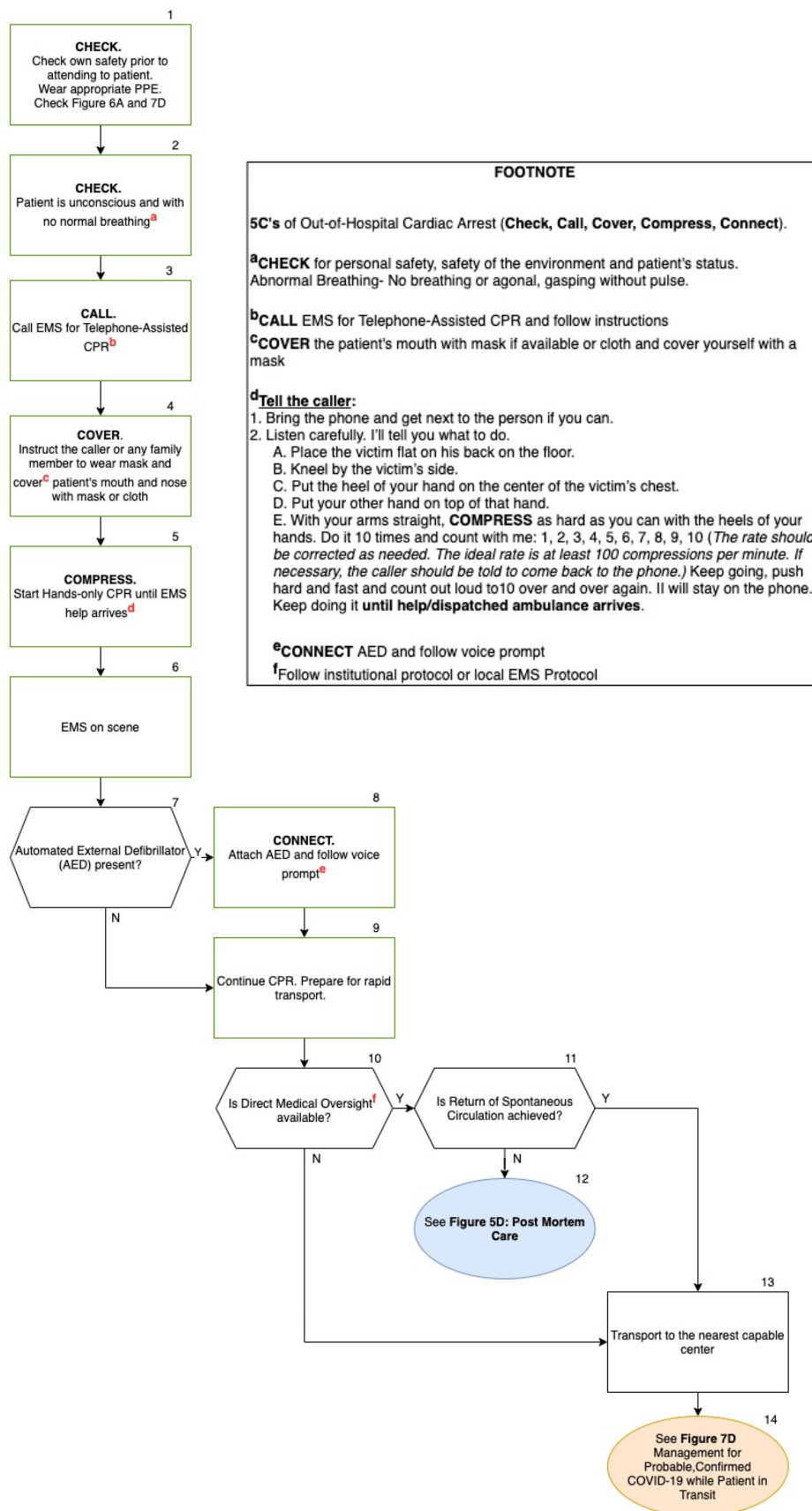
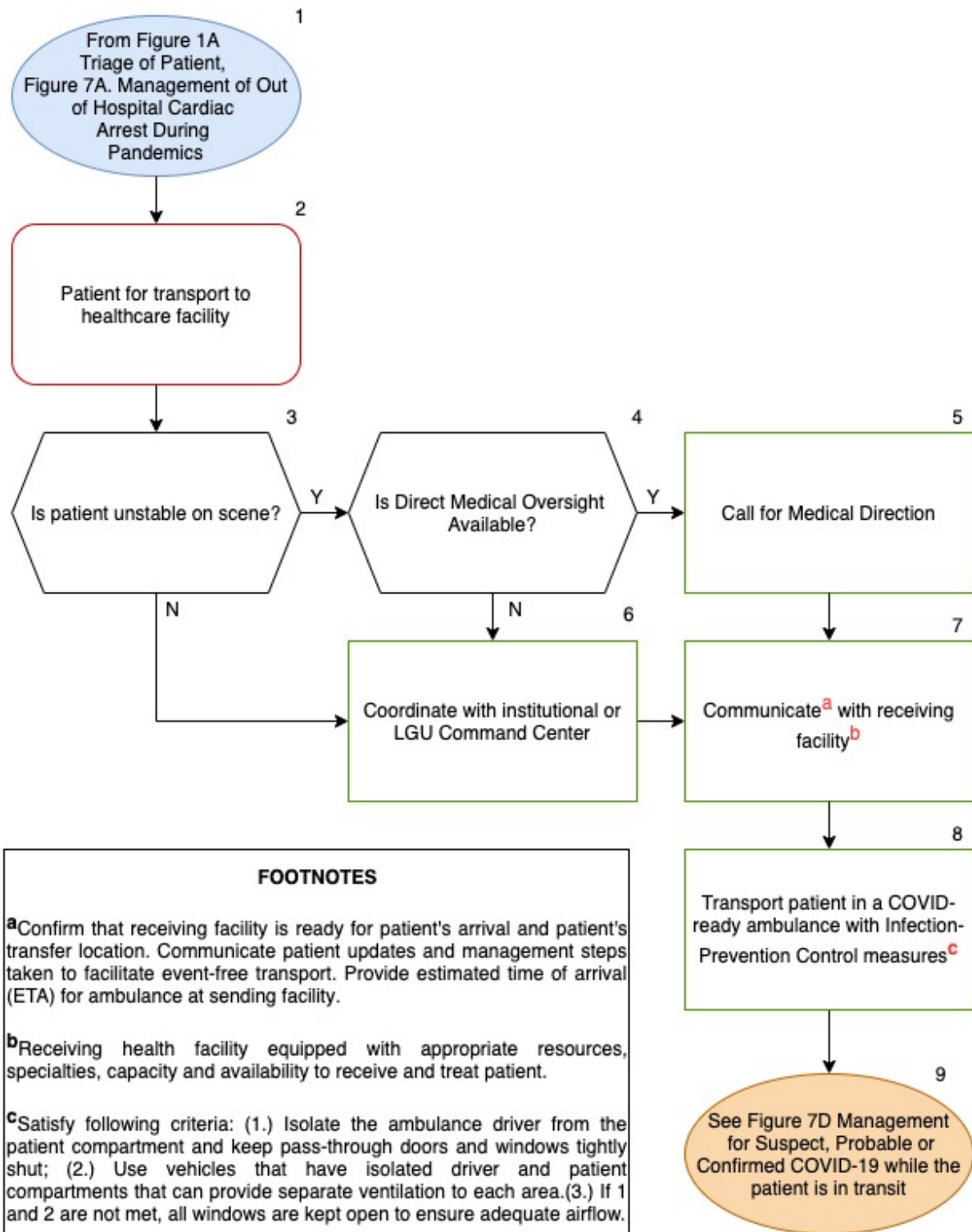


FIGURE 7B. PRIMARY TRANSPORT* (PRE-HOSPITAL)

NOVEMBER 7, 2020



FOOTNOTES

^aConfirm that receiving facility is ready for patient's arrival and patient's transfer location. Communicate patient updates and management steps taken to facilitate event-free transport. Provide estimated time of arrival (ETA) for ambulance at sending facility.

^bReceiving health facility equipped with appropriate resources, specialties, capacity and availability to receive and treat patient.

^cSatisfy following criteria: (1.) Isolate the ambulance driver from the patient compartment and keep pass-through doors and windows tightly shut; (2.) Use vehicles that have isolated driver and patient compartments that can provide separate ventilation to each area.(3.) If 1 and 2 are not met, all windows are kept open to ensure adequate airflow.

***Primary transportation:** Transfer of a patient from the site of an emergency (e.g., public place, residence or workplace) to a healthcare facility.

FIGURE 7C. INTER-FACILITY TRANSPORT* (SECONDARY)

NOVEMBER 7, 2020

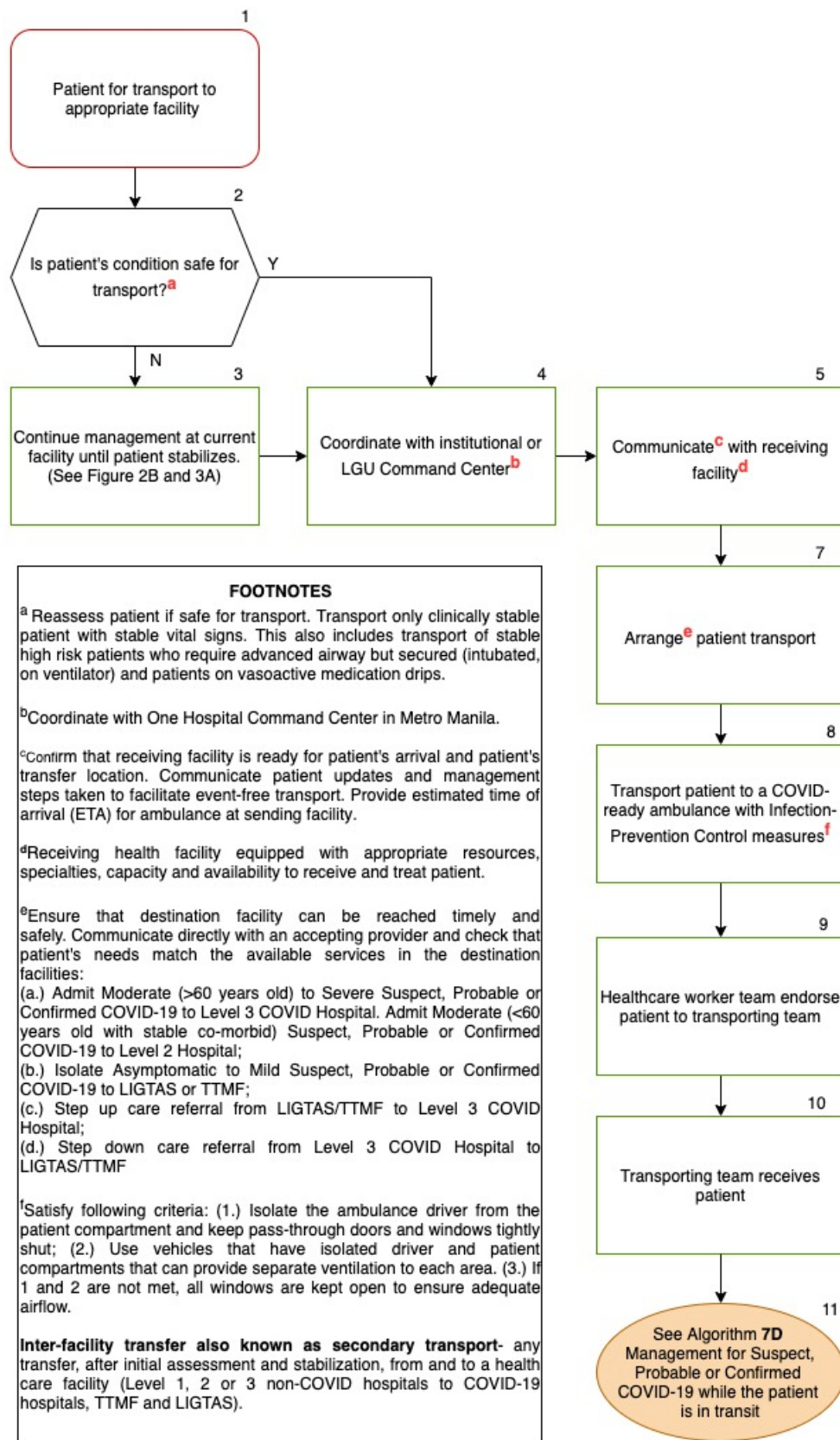


FIGURE 7D. MANAGEMENT FOR SUSPECT, PROBABLE, OR CONFIRMED COVID-19 PATIENT IN TRANSIT^a

NOVEMBER 7, 2020

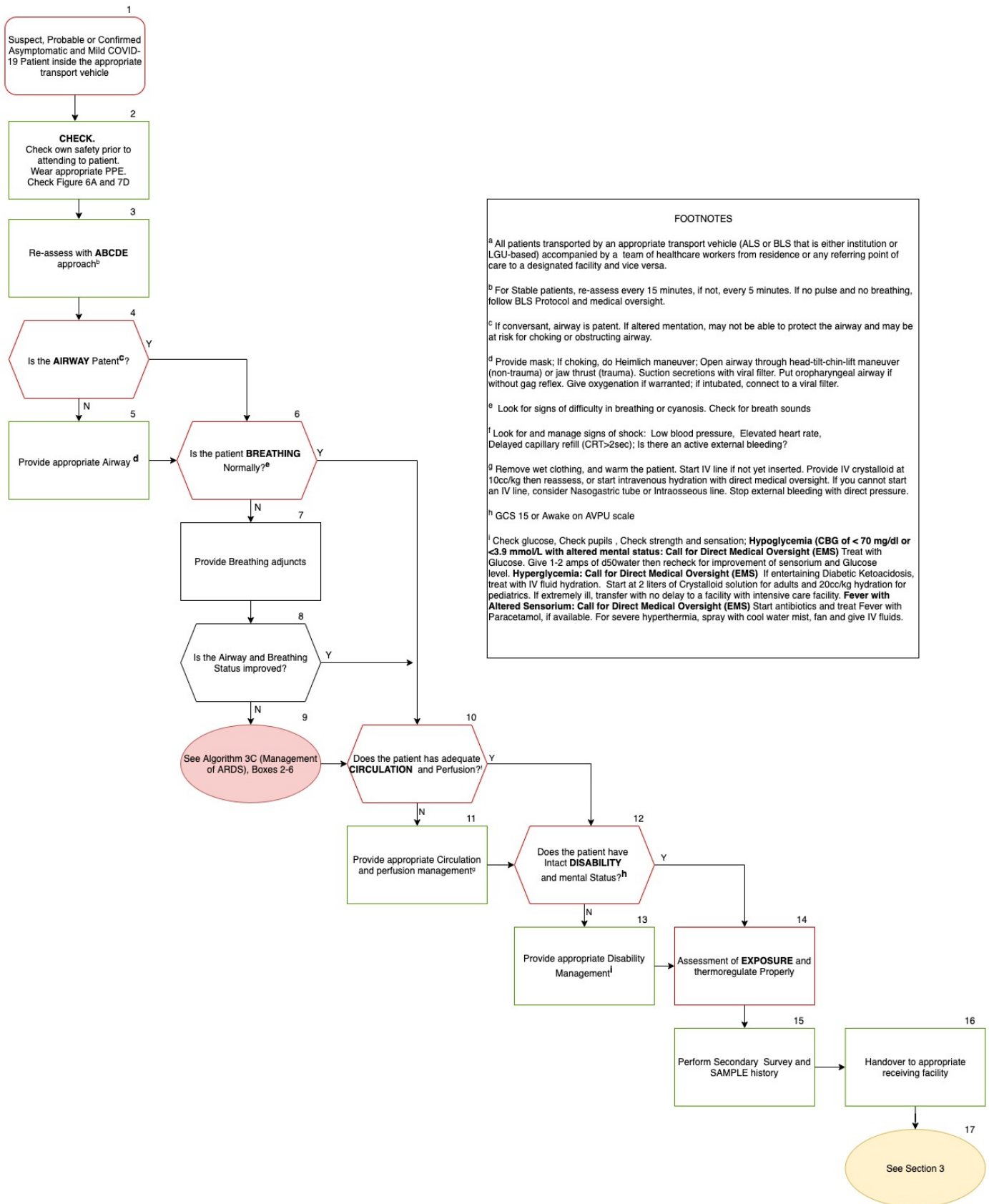
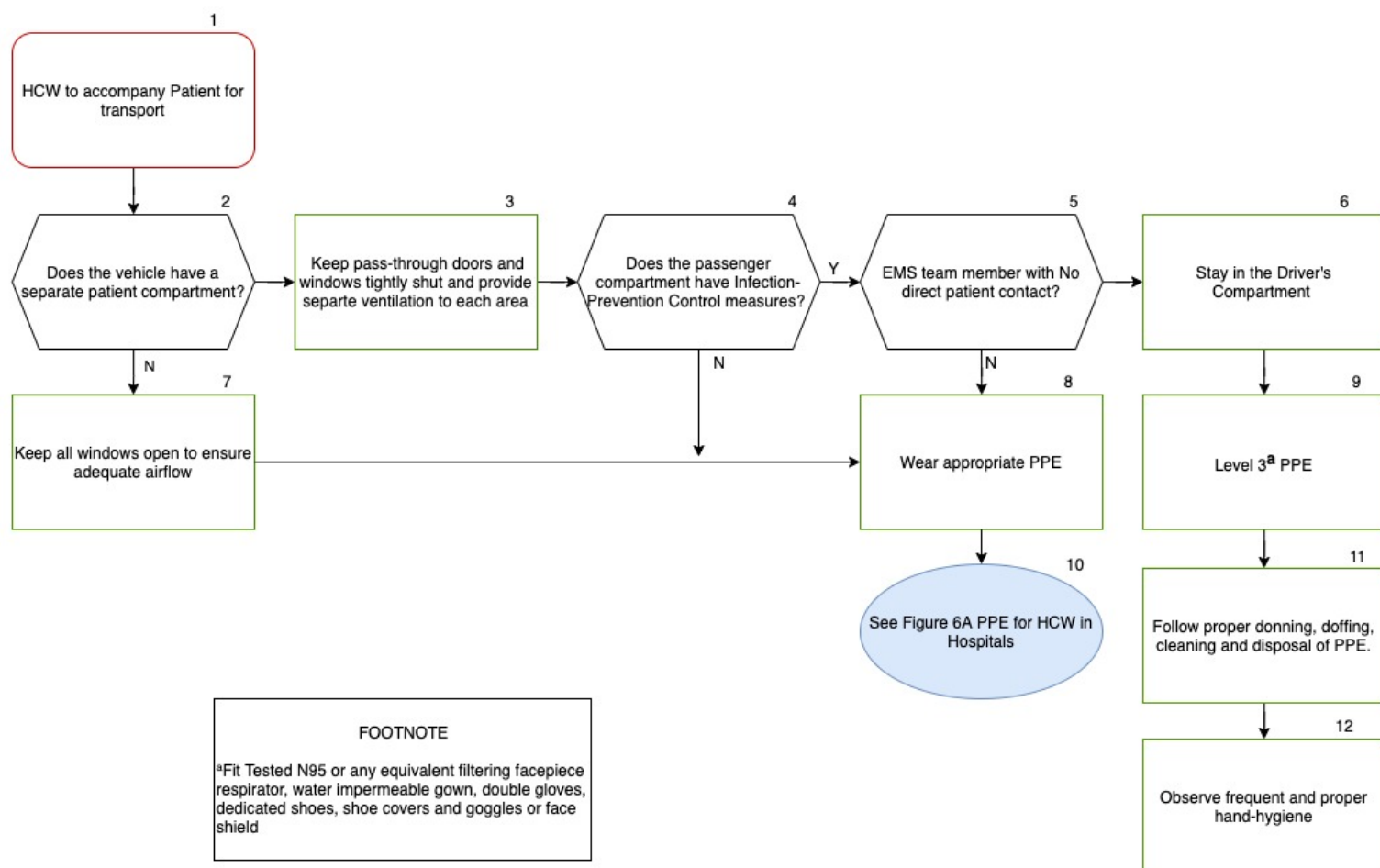


FIGURE 7E. INFECTION PREVENTION AND CONTROL FOR AMBULANCE EMS TEAM

NOVEMBER 7, 2020



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