



Unified COVID-19 Algorithms

Philippine COVID-19 Living Clinical Practice Guidelines

Version 5
10 Oct 2023

INTRODUCTION

The Unified COVID-19 Algorithms reflect evidence updates from the Philippine COVID-19 Living Clinical Practice Guidelines. Subsumed under the CPG initiative, the project is funded by the Department of Health (DOH) AHEAD Program through the Philippine Council for Health Research and Development (PCHRD) and the Disease Prevention and Control Bureau (DPCB).

Work on the first release of the Unified COVID-19 Algorithms started as early as March 2020 with representatives from the Philippine Society of Microbiology and Infectious Diseases (PSMID), Philippine College of Physicians (PCP), Philippine Society of General Internal Medicine (PSGIM), and the Philippine Society of Public Health Physicians (PSPHP). The Philippine College of Occupational Medicine (PCOM) and the Philippine College of Emergency Medicine (PCEM) were also among the first medical societies to join in unifying guidance for colleagues at the frontlines. This collaboration led to the formation of the Healthcare Professionals Alliance Against COVID-19 (HPAAC).

With continued support from PSMID, expansion was carried out by the HPAAC Steering Committee through its network of volunteers and the leadership of various medical professional societies. Facilitation of previous versions was done by technical specialists from the Asia-Pacific Center for Evidence-Based Healthcare (APCEBH), Alliance for Improving Health Outcomes (AIHO), and Kalusugan ng Mag-Ina (KMI).

The current algorithms were reviewed by subject matter experts, representatives from various medical organizations, stakeholders, and end-users. With the Philippine context in perspective, the algorithms aim to provide clear guidance for COVID-19 management from both the community and hospital levels. The development process was framed on evidence-based, patient-centered, and equity-driven principles.

Major changes in the current version include the following:

- Revisions were made in the context of the lifting of COVID-19 public health emergency status.
- Asymptomatic and close contact algorithms were heavily revised due to considerable changes in the recommendations on testing, quarantine, and isolation.
- Testing flow across various severities were simplified and streamlined.
- Recommendations on new medications for moderate COVID-19 were added.
- New recommendations on critical COVID-19 were added (e.g., pulmonary bundle).
- The duration of isolation was revised based on the latest DOH guidelines, accounting for illness severity, vaccination status, and immunocompromised status.
- A new section on multisystem inflammatory syndrome in children (MIS-C) was added.
- The table on non-pharmacologic interventions was updated.

These algorithms are subject to change as new evidence emerges and existing 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**.

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The following organizations and their representatives contributed to the content, review, and update of various sections:

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Philippine Obstetrical and Gynecological Society
Philippine Society of Newborn Medicine
Philippine Hospital Infection Control Society
Asia Pacific Center for Evidence-Based Healthcare
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DISCLAIMER

The Unified COVID-19 Algorithms are based primarily on the latest Philippine COVID-19 Living Clinical Practice Guidelines as well as other relevant guidelines and circulars. As such, the recommendations will be constantly updated, and new recommendations will be added as the evidence evolves. The recommendations are based on the best evidence available in scientific literature at the time of its formulation. The unified algorithms and the living recommendations are not comprehensive guides to all practice questions and management options on COVID-19. The algorithms and guidelines are not meant to restrict the practitioner in using sound clinical judgement and sharing the decision with the patient, and from considering other management options according to the patient's particular needs and preferences. The said algorithms and guidelines can also serve to inform policy, but they are not meant to serve as basis for approving or denying financial coverage or insurance claims merely because of nonconformance with recommendations. Neither are the recommendations intended to be considered as legal rules for dictating certain modes of action to the exclusion of others.

NAVIGATION TABLE FOR COVID-19

[See Instructions](#)

COVID-19 Classification Based on Philippine COVID-19 Living CPG	Triage and Testing	Management	Discharge and Reintegration
Asymptomatic Patients and Close Contacts	Figure A1	Figure A2	Figure A3
Mild COVID-19 (suspected ² or confirmed) Symptoms present but no pneumonia, no desaturation, no risk factors	Figure B1	Figure B2	Figure B3
Moderate COVID-19 (suspected ² or confirmed) Without pneumonia, no desaturation, but with risk factors ³ , OR With pneumonia ⁴ but no signs of respiratory distress, no desaturation	Figure C1	Figure C2	Figure C3
Severe COVID-19 (suspected ² or confirmed) With pneumonia AND signs of respiratory distress ⁵ or desaturation	Figure D1	Figure D2	Figure D3
Critical COVID-19 (suspected ² or confirmed) With pneumonia AND signs of end-organ failure or shock or thrombosis ⁶	Figure E1	Figure E2	Figure E3

Other Algorithms

Emergency Department and Transport	Figure F1-5
Pregnancy (H1), Women About to Give Birth (H2), and Newborn (H3)	Figure G1 Figure G2 Figure G3
Multisystem Inflammatory Syndrome in Children (MIS-C)	Figure H1-2
Use of Personal Protective Equipment for Healthcare Workers	Figure J1-5
Non-Pharmacologic Interventions	Figure K
Advance Care Planning	Figure L
End-of-Life Care	Figure M
Post-Mortem Care	Figure N

FOOTNOTES

¹ **Close contact** – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days

- face-to-face contact ≤1 meter and ≥15 minutes
- direct physical contact
- direct care without the use of recommended PPE
- other situations as determined by local health authorities based on local risk assessments

² **COVID-19 suspect** – anyone who fulfills criteria A **OR** criteria B **OR** criteria C

1. **Criteria A** - person who meets either clinical or epidemiological criteria:

- Clinical criteria:
 - acute onset of fever and cough (influenza-like illness), or
 - acute onset of any three (3) or more of the following signs or symptoms: fever, cough, general weakness or fatigue, headache, myalgia, sore throat, coryza, dyspnea, nausea or diarrhea or anorexia
- Epidemiological criteria:
 - contact of a probable or confirmed case, or linked to a COVID-19 cluster

2. **Criteria B** - patient with suspect, probable, or confirmed severe acute respiratory illness (SARI) defined as acute respiratory infection with history of fever or measured fever of ≥38 °C, and cough, with onset within the last ten (10) days, and requires hospitalization

3. **Criteria C** - person:

- with neither clinical signs or symptoms nor meeting epidemiological criteria, and
- with a positive professional use or self-test SARS-CoV-2 rapid antigen test

³ **Risk factors:** age >60 years **OR** any comorbid conditions: chronic lung disease, chronic heart disease, hypertension, chronic kidney disease, chronic liver disease, chronic neurological conditions, diabetes, problems with the spleen, weakened immune system (HIV or AIDs, or medicines such as steroids or chemotherapy), morbid obesity (BMI >40)

⁴ **Signs of pneumonia:** evidence of lower respiratory disease during clinical assessment (e.g., cough, fever, plus crackles) and/or imaging (CXR, ultrasound, CT scan)

⁵ **Signs of respiratory distress:** difficulty of breathing **OR** respiratory rate ≥30 breaths/min **OR** peripheral oxygen saturation (SpO2) <94% at room air

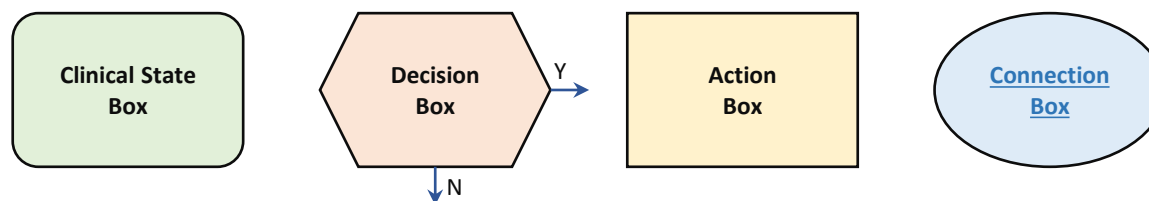
⁶ **Critical disease:** impending respiratory failure requiring high-flow oxygen, non-invasive, or invasive ventilation, acute respiratory distress syndrome, sepsis or shock, deteriorating sensorium, multi-organ failure, thrombosis

INSTRUCTIONS

HOW TO READ THE ALGORITHMS

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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.
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.

Implications of the Strength of Recommendation to Patients, Clinicians, and Policy Makers

	Strong Recommendation	Weak Recommendation
Patients	Most individuals in this situation would want the recommended course of action and only a small proportion would not.	Most individuals in this situation would want the suggested course of action but many would not.
Clinicians	Most individuals should receive the recommended course of action. Adherence to this recommendation according to the guideline could be used as a certainty criterion or performance indicator.	Recognize that different choices will be appropriate for different patients. Clinicians must help each patient arrive at a management decision consistent with her or his values and preferences.
Policy Makers	The recommendation can be adapted as policy in most situations including for the use as performance indicators.	Policy making will require substantial debates and involvement of many stakeholders. Policies are also more likely to vary between regions.

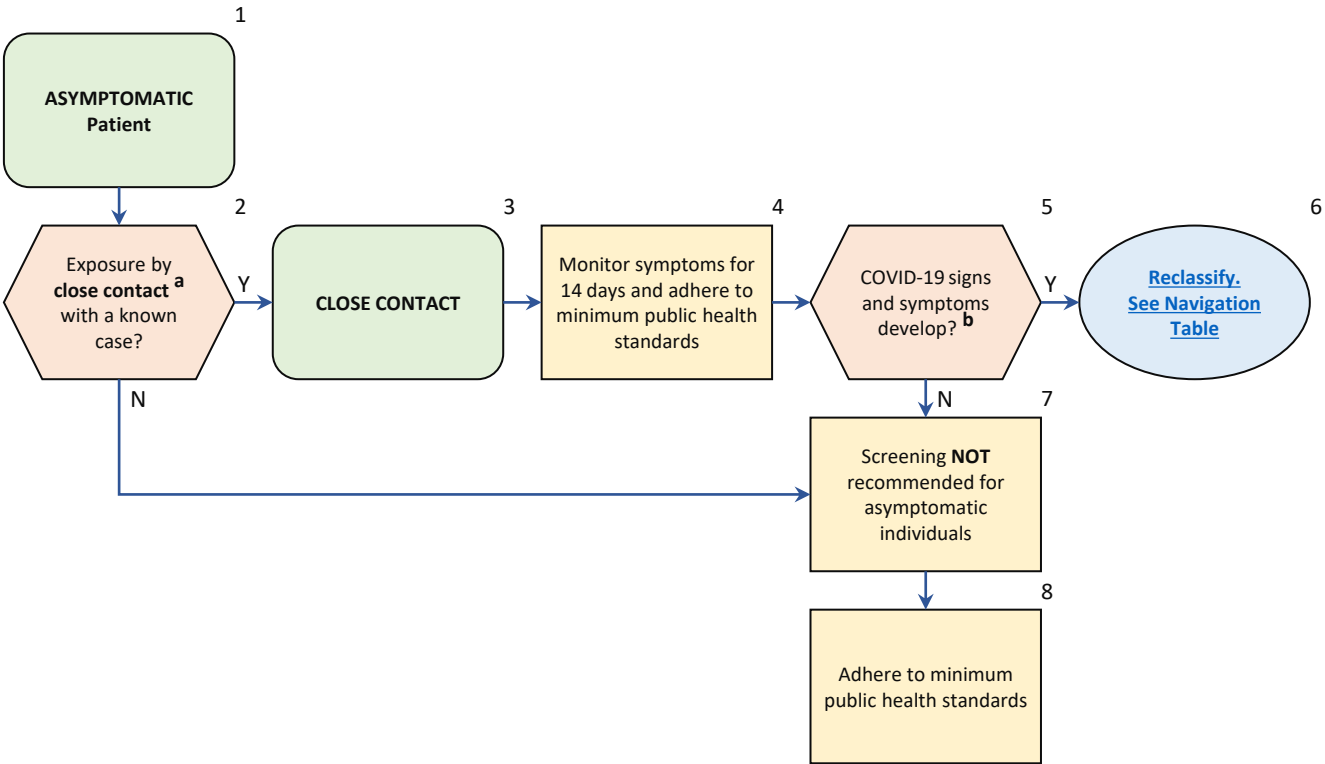
PART A

ASYMPTOMATIC PATIENTS AND CLOSE CONTACTS

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Figure A1 – Asymptomatic COVID-19 (Triage and Evaluation)

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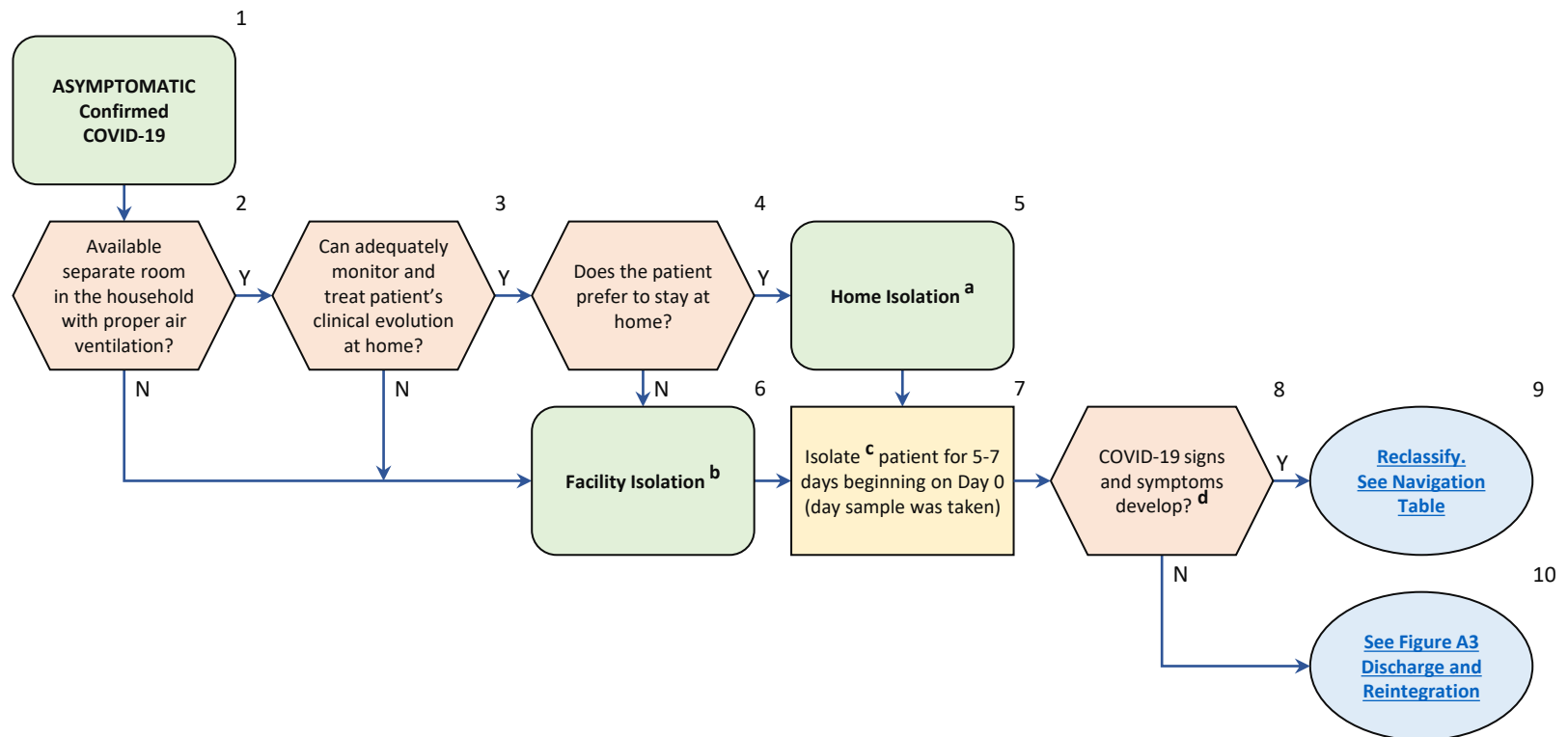


FOOTNOTES

- ^a **Close contact** – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days
- face-to-face contact ≤1 meter and ≥15 minutes
 - direct physical contact
 - direct care without the use of recommended PPE
 - other situations as determined by local health authorities based on local risk assessments
- ^b **COVID-19 signs and symptoms** – acute onset of fever and cough **OR** acute onset of any three or more of the following signs or symptoms: fever, cough, general weakness or fatigue, headache, myalgia, sore throat, coryza, dyspnea, nausea or diarrhea or anorexia

Figure A2 – Asymptomatic COVID-19 (Management)

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FOOTNOTES

a Home isolation – Patients in home isolation must stay separate from other household members. Caregivers must wear mask properly, observe hand hygiene, and limit duration of contact when attending to the patient. If there is no separate CR for the patient, disinfect touched surfaces and ventilate the room (e.g., exhaust, open doors and windows) after every use.

b Facility isolation – Patients shall be provided with individual isolation rooms, separate from those who are symptomatic. Special consideration must be afforded to individuals requiring assistance with activities of daily living (e.g., elderly living alone, children, persons with disabilities, mothers with infants, etc.).

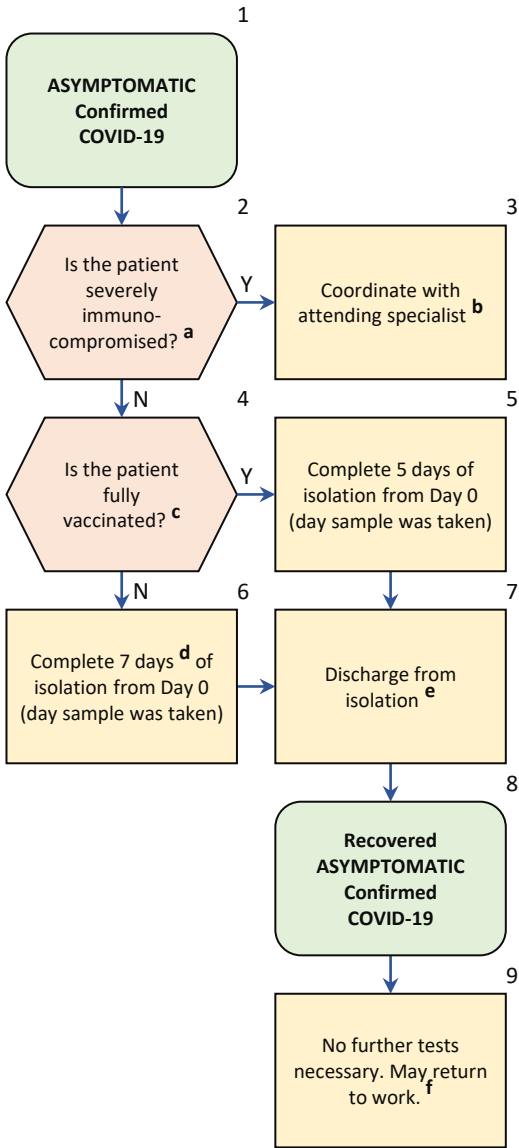
c Initiate isolation monitoring

- Accomplish Case Investigation Form (CIF) by Barangay Health Emergency Response Team (BHERT) or primary care provider.
- Ensure daily monitoring throughout the duration of isolation.
- Monitor patient via telemedicine whenever feasible.
- Facilitate home care and social safety nets as needed.
- Isolation duration depends on vaccination status. See **Figure A3**.

d COVID-19 signs and symptoms – acute onset of fever and cough OR acute onset of any three or more of the following signs or symptoms: fever, cough, general weakness or fatigue, headache, myalgia, sore throat, coryza, dyspnea, nausea or diarrhea or anorexia

Figure A3 – Asymptomatic COVID-19 (Discharge and Reintegration)

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FOOTNOTES

- a Severely immunocompromised individuals** – include the following patients:
- Receiving active chemotherapy for cancer
 - Within one year out from receiving a hematopoietic stem cell or solid organ transplant
 - With untreated HIV infection with CD4 T lymphocyte count <200
 - With primary immunodeficiency disorder
 - Taking immunosuppressive medications (e.g., drugs to suppress rejection of transplanted organs or to treat rheumatologic conditions such as mycophenolate and rituximab)
 - Taking more than 20 mg/day of prednisone for more than 14 days
- b** Isolation period of immunocompromised patients may need to be extended.
- c Fully vaccinated individual** – refers to a person who has:
- Received the second dose in a 2-dose series ≥2 weeks ago, OR
 - Received a single-dose vaccine ≥2 weeks ago, AND
 - The vaccines administered are included in any of the following:
 - Emergency Use Authorization (EUA) List or Compassionate Special Permit (CSP) issued by the Philippine Food and Drug Administration, OR
 - Emergency Use Listing of the World Health Organization
 - Booster dose is not required for immunocompetent individuals to be classified as fully vaccinated.
- Vaccination status** of patients should be assessed, and necessary assistance should be provided as needed. Refer to the Philippine COVID-19 Living CPG and DOH Advisories on latest vaccination guidelines.
- d** Rapid antigen test may be done at Day 5 of isolation to determine infectiousness. Patient may be discharged earlier from isolation if RAgt is already negative.
- e** A repeat negative RT-PCR test is no longer needed for discharge of immunocompetent patient with suspect, probable, or confirmed COVID-19 regardless of severity.
- f** Refer to **workplace guidelines**.
- DOLE Labor Advisory No. 2023-23 (September 20, 2023)
 - DOH Department Circular No. 2023-0324 (July 23, 2023)

PART B

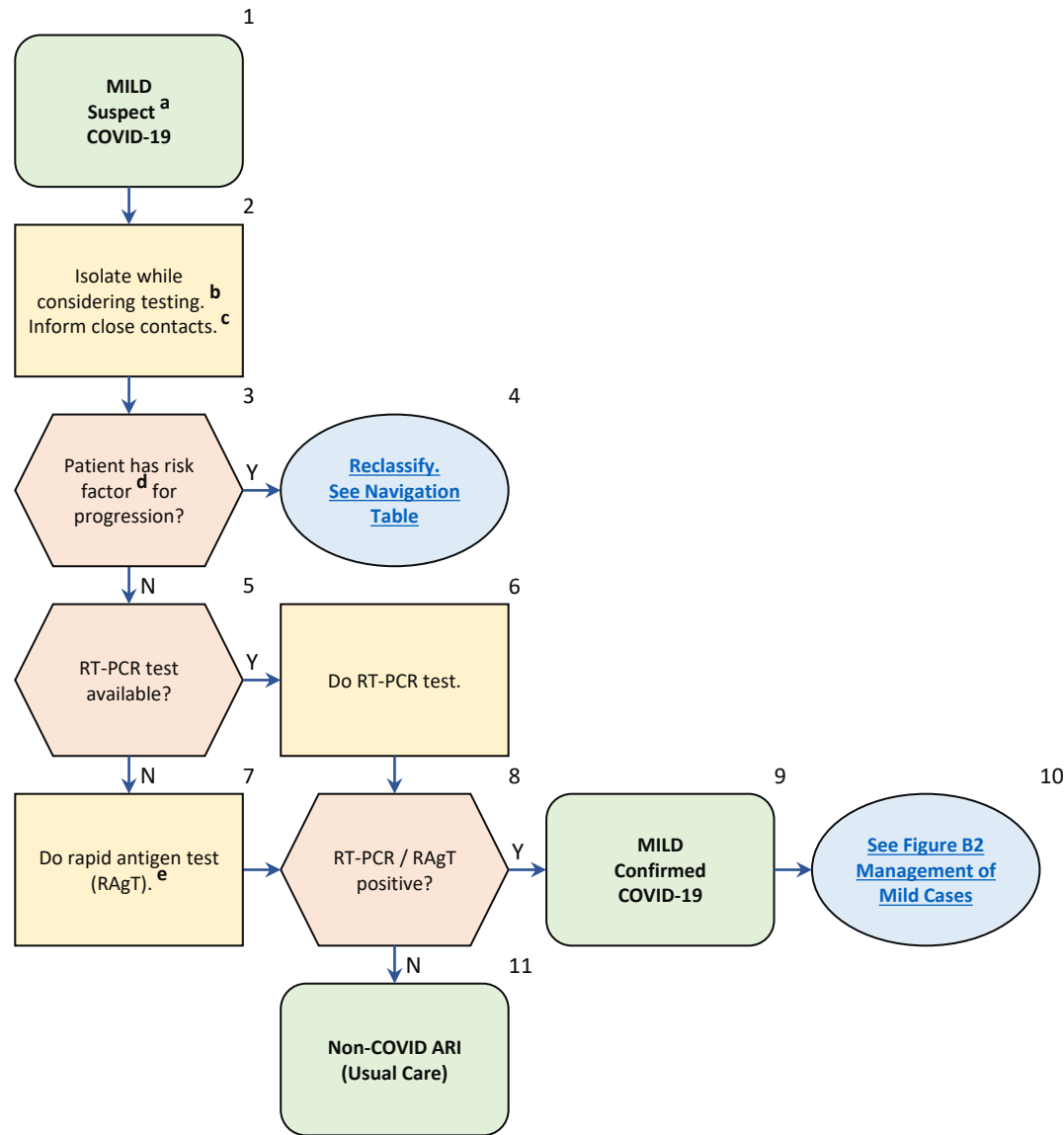
MILD COVID-19

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Figure B1 – Mild COVID-19 (Triage and Evaluation)

Symptoms present, with no pneumonia, no desaturation, no risk factors

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FOOTNOTES

^a Suspect case

1. A person who meets either clinical or epidemiological criteria:
 - a. Clinical criteria:
 - i. acute onset of fever and cough (influenza-like illness), or
 - ii. acute onset of any three (3) or more of the following signs or symptoms: fever, cough, general weakness or fatigue, headache, myalgia, sore throat, coryza, dyspnea, nausea or diarrhea or anorexia
 - b. Epidemiological criteria:
 - i. contact of a probable or confirmed case, or linked to a COVID-19 cluster
2. A patient with suspect, probable, or confirmed severe acute respiratory illness (SARI) defined as acute respiratory infection with history of fever or measured fever of $\geq 38^{\circ}\text{C}$, and cough, with onset within the last ten (10) days, and requires hospitalization
3. A person:
 - i. with neither clinical signs or symptoms nor meeting epidemiological criteria, and
 - ii. with a positive professional use or self-test SARS-CoV-2 rapid antigen test

^b During surges, **prioritize** testing to groups A1 to A3

- A1 – healthcare workers
- A2 – senior citizens
- A3 – persons with comorbidities, including those at high risk for severe disease

^c Close contact – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days

- face-to-face contact ≤ 1 meter and ≥ 15 minutes
- direct physical contact
- direct care without the use of recommended PPE
- other situations as determined by local health authorities based on local risk assessments

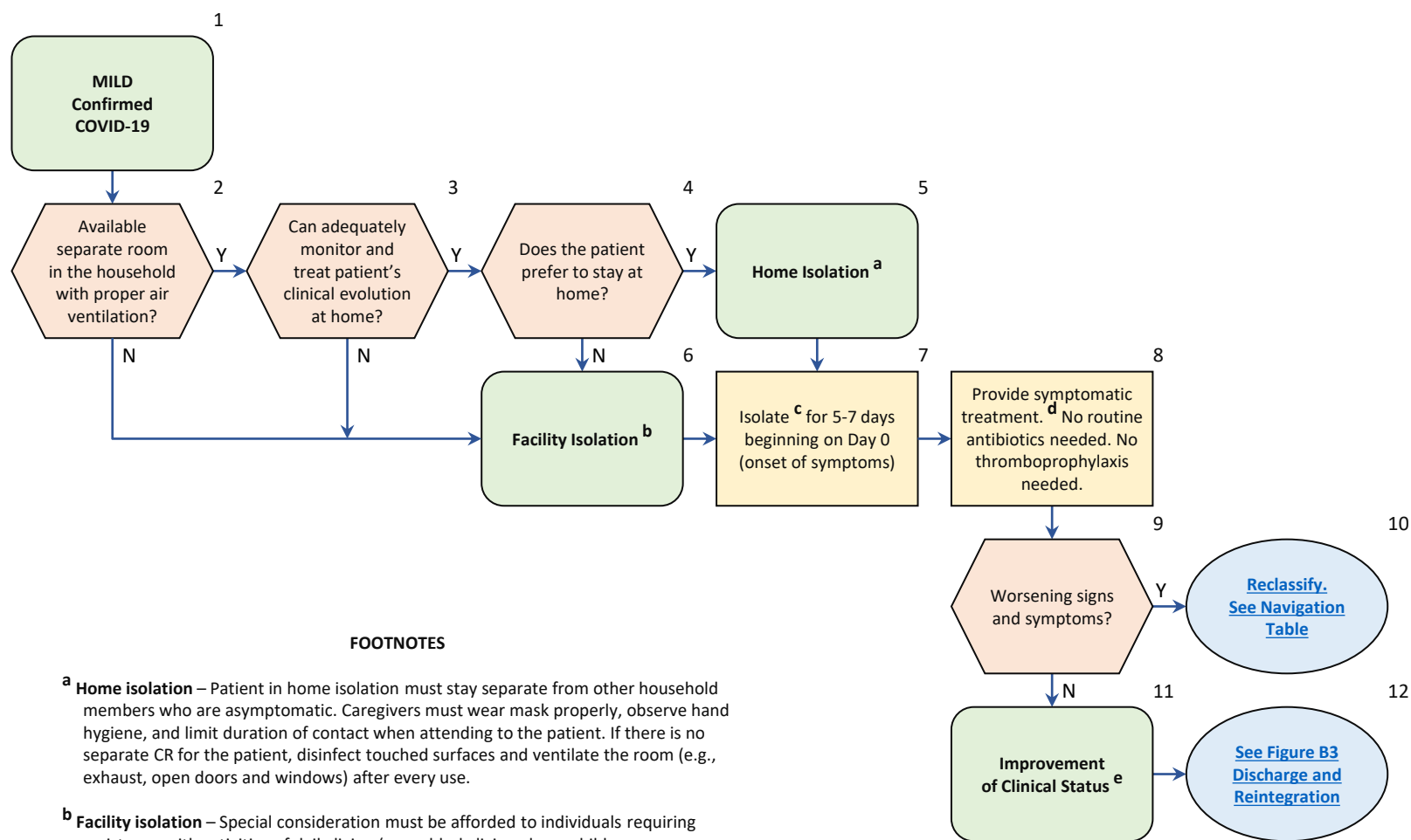
^d Risk factors: age >60 years **OR** any comorbid conditions listed: chronic lung disease, chronic heart disease, hypertension, chronic kidney disease, chronic liver disease, chronic neurological conditions, diabetes, problems with the spleen, weakened immune system such as HIV or AIDs, or medicine such as steroid tablets or chemotherapy, morbid obesity (BMI >40)

^e Rapid antigen tests – recommended as an alternative to RT-PCR if all the following conditions are met:

- Individuals are symptomatic and in the early phase of illness (≤ 7 days from onset of symptoms)
- Self-administered or laboratory-based tests are acceptable if with sensitivity of $\geq 80\%$ AND specificity of $\geq 97\%$
- For self-administered tests, the following additional conditions should be met
 - Ease of collecting samples is ensured
 - Ease of interpretation is ensured
 - Test kits have passed flex studies
- Use of saliva as specimen for rapid antigen test is not recommended

Figure B2 – Mild COVID-19 (Management)
Symptoms present, with no pneumonia, no desaturation, no risk factors

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FOOTNOTES

^a Home isolation – Patient in home isolation must stay separate from other household members who are asymptomatic. Caregivers must wear mask properly, observe hand hygiene, and limit duration of contact when attending to the patient. If there is no separate CR for the patient, disinfect touched surfaces and ventilate the room (e.g., exhaust, open doors and windows) after every use.

^b Facility isolation – Special consideration must be afforded to individuals requiring assistance with activities of daily living (e.g., elderly living alone, children, persons with disabilities, mothers with infants, etc.).

^c Initiate isolation monitoring

- Accomplish Case Investigation Form (CIF) by Barangay Health Emergency Response Team (BHERT) or primary care provider.
- Ensure daily monitoring throughout the duration of isolation.
- Monitor patient via telemedicine whenever feasible.
- Facilitate home care and social safety nets as needed.
- Isolation duration depends on vaccination status. See **Figure A3**.

^d The **Philippine COVID-19 Living CPG** strongly recommends **AGAINST** the use of the following for treatment of COVID-19: azithromycin, colchicine, convalescent plasma, favipiravir, hydroxychloroquine, ibuprofen, interferon, ivermectin, lopinavir-ritonavir, IV N-acetylcysteine, oseltamivir, steam inhalation, and antiseptic mouthwash.

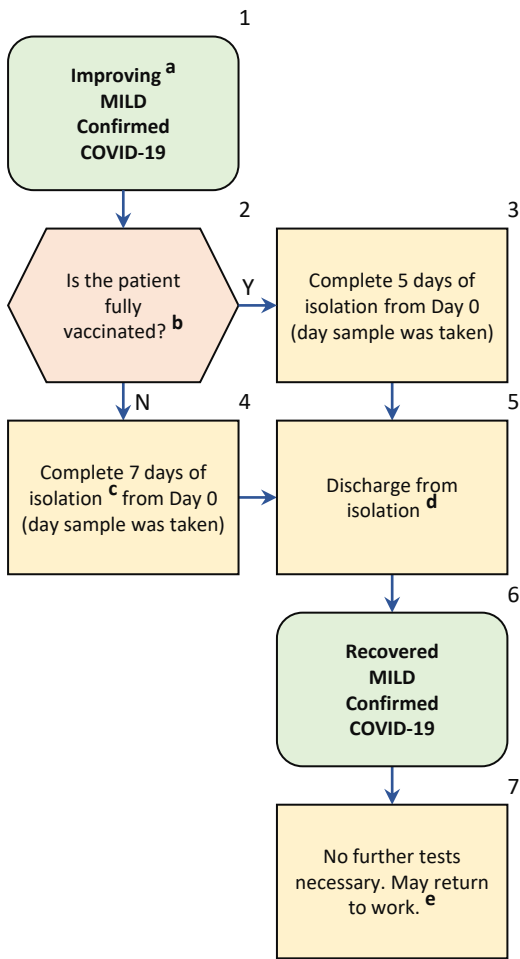
See <https://www.psmid.org/philippine-covid-19-living-recommendations/> for details on treatment recommendations.

^e Improvement of clinical status

- Afebrile for at least 72 hours without use of antipyretics
- Substantial improvement in respiratory or other symptoms
- CXR shows significant improvement if available

Figure B3 – Mild COVID-19 (Discharge and Reintegration)
Symptoms present, with no pneumonia, no desaturation, no risk factors

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FOOTNOTES

- ^a Improvement of clinical status**
- Afebrile for at least 72 hours without use of antipyretics
 - Substantial improvement in respiratory or other symptoms
 - CXR shows significant improvement if available
- ^b Fully vaccinated individual** – refers to a person who has:
- Received the second dose in a 2-dose series ≥ 2 weeks ago, OR
 - Received a single-dose vaccine ≥ 2 weeks ago, AND
 - The vaccines administered are included in any of the following:
 - Emergency Use Authorization (EUA) List or Compassionate Special Permit (CSP) issued by the Philippine Food and Drug Administration, OR
 - Emergency Use Listing of the World Health Organization
 - Booster dose is not required for immunocompetent individuals to be classified as fully vaccinated.
- Vaccination status** of patients should be assessed, and necessary assistance should be provided as needed. Refer to the Philippine COVID-19 Living CPG and DOH Advisories on latest vaccination guidelines.
- ^c** Rapid antigen test may be done at Day 5 of isolation to determine infectiousness. Patient may be discharged earlier from isolation if RAgt is already negative.
- ^d** A repeat negative RT-PCR test is no longer needed for discharge of immunocompetent patient with suspect, probable, or confirmed COVID-19 regardless of severity.
- ^e Refer to workplace guidelines**
- DOLE Labor Advisory No. 2023-23 (September 20, 2023)
 - DOH Department Circular No. 2023-0324 (July 23, 2023)

PART C

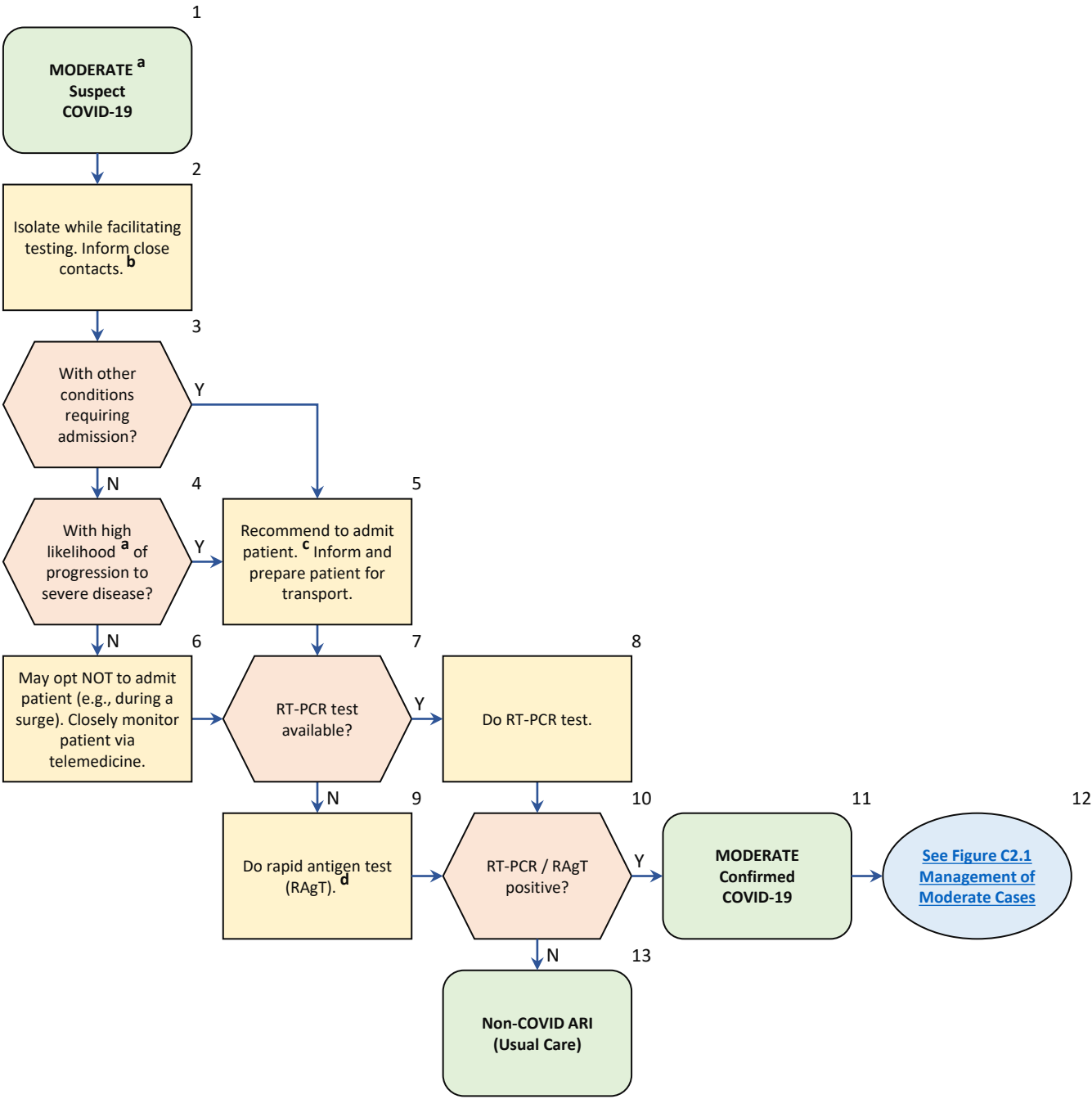
MODERATE COVID-19

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Figure C1 – Moderate COVID-19 (Triage and Evaluation)

Without pneumonia, no desaturation, but with risk factors, OR
With pneumonia, but no signs of respiratory distress, no desaturation

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FOOTNOTES

^a **Risk factors:** age >60 years **OR** any comorbid conditions listed: chronic lung disease, chronic heart disease, hypertension, chronic kidney disease, chronic liver disease, chronic neurological conditions, diabetes, problems with the spleen, weakened immune system such as HIV or AIDs, or medicine such as steroid tablets or chemotherapy, morbid obesity (BMI >40)

^b **Close contact** – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days

- face-to-face contact ≤1 meter and ≥15 minutes
- direct physical contact
- direct care without the use of recommended PPE
- other situations as determined by local health authorities based on local risk assessments

^c **Administer acute care** for the patient while considering admission and service capability. Service capability as basis for admission can depend on multiple factors including:

- best clinical judgment of the health provider
- appropriateness of healthcare facility
- geographical access to the next higher-level facility
- patient context

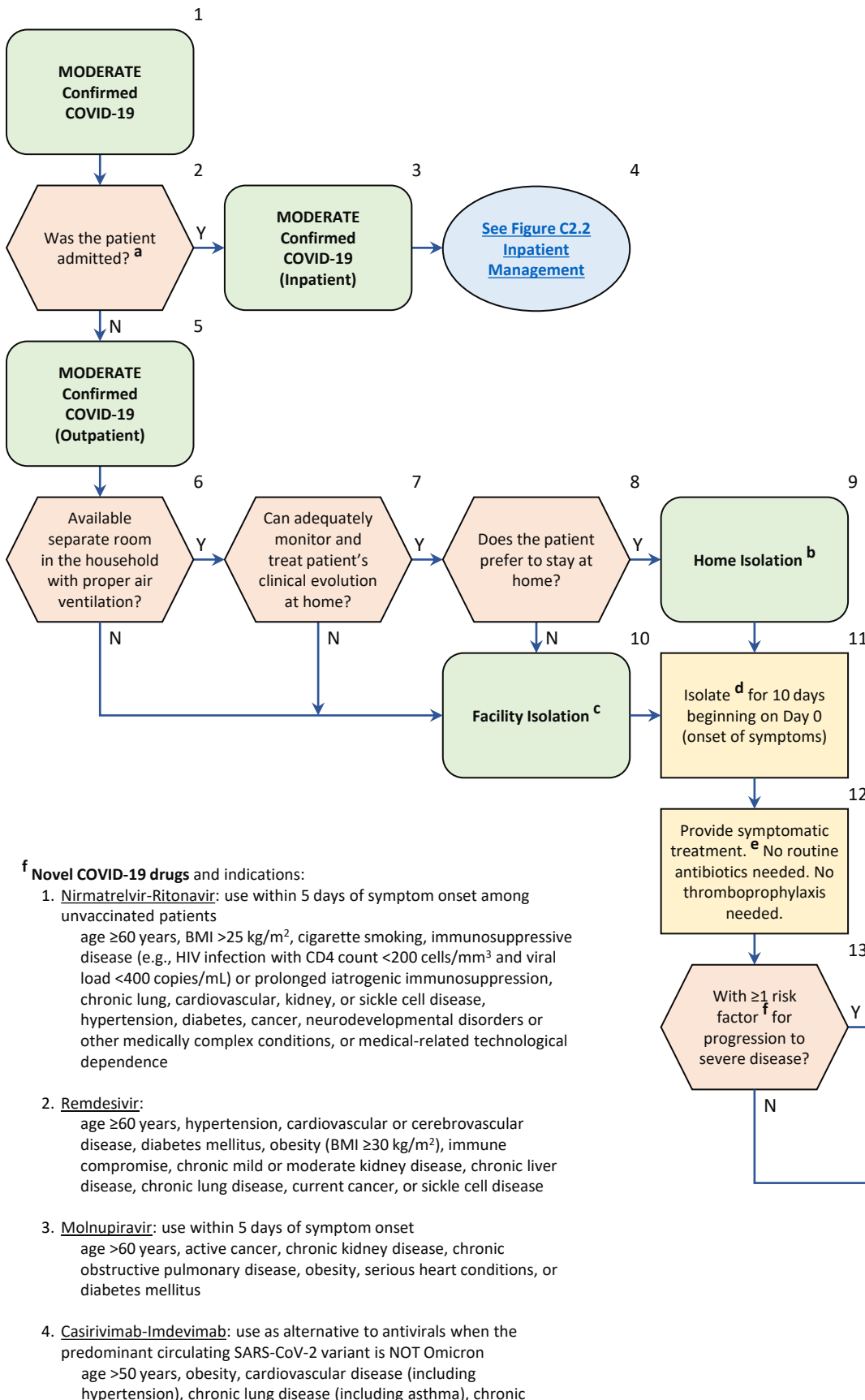
^d **Rapid antigen tests** – recommended as an alternative to RT-PCR if the following conditions are met:

- Individuals are symptomatic and in the early phase of illness (≤7 days from onset of symptoms)
- Self-administered or laboratory-based tests are acceptable if with sensitivity of ≥80% AND specificity of ≥97%
- For self administered tests, the following additional conditions should be met
 - Ease of collecting samples is ensured
 - Ease of interpretation is ensured
 - Test kits have passed flex studies
- Use of saliva as specimen for rapid antigen test is not recommended

Figure C2.1 – Moderate COVID-19 (Outpatient Management)

Without pneumonia, no desaturation, but with risk factors, OR
With pneumonia, but no signs of respiratory distress, no desaturation

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FOOTNOTES

a Administer acute care for the patient while considering admission and service capability. Service capability as basis for admission depends on multiple factors including:

- best clinical judgment of the health provider
- appropriateness of healthcare facility
- geographical access to the next higher-level facility
- patient context

b Home isolation – Patient in home isolation must stay separate from other household members who are asymptomatic. Caregivers must wear mask properly, observe hand hygiene, and limit duration of contact when attending to the patient. If there is no separate CR for the patient, disinfect touched surfaces and ventilate the room (e.g., exhaust, open doors and windows) after every use.

c Facility isolation – Special consideration must be afforded to individuals requiring assistance with activities of daily living (e.g., elderly living alone, children, persons, with disabilities, mothers with infants, etc.).

d Initiate isolation monitoring

- Accomplish Case Investigation Form (CIF) by Barangay Health Emergency Response Team (BHRT) or primary care provider.
- Ensure daily monitoring throughout the duration of isolation.
- Monitor patient via telemedicine whenever feasible.
- Facilitate home care and social safety nets as needed.

e The **Philippine COVID-19 Living CPG strongly recommends AGAINST** the use of the following for treatment of COVID-19: azithromycin, colchicine, convalescent plasma, favipiravir, hydroxychloroquine, ibuprofen, interferon, ivermectin, lopinavir-ritonavir, IV N-acetylcysteine, oseltamivir, steam inhalation, and antiseptic mouthwash.

See <https://www.psmid.org/philippine-covid-19-living-recommendations/> for details on treatment recommendations.

f Novel COVID-19 drugs and indications:

1. **Nirmatrelvir-Ritonavir:** use within 5 days of symptom onset among unvaccinated patients
age ≥60 years, BMI >25 kg/m², cigarette smoking, immunosuppressive disease (e.g., HIV infection with CD4 count <200 cells/mm³ and viral load <400 copies/mL) or prolonged iatrogenic immunosuppression, chronic lung, cardiovascular, kidney, or sickle cell disease, hypertension, diabetes, cancer, neurodevelopmental disorders or other medically complex conditions, or medical-related technological dependence
2. **Remdesivir:**
age ≥60 years, hypertension, cardiovascular or cerebrovascular disease, diabetes mellitus, obesity (BMI ≥30 kg/m²), immune compromise, chronic mild or moderate kidney disease, chronic liver disease, chronic lung disease, current cancer, or sickle cell disease
3. **Molnupiravir:** use within 5 days of symptom onset
age >60 years, active cancer, chronic kidney disease, chronic obstructive pulmonary disease, obesity, serious heart conditions, or diabetes mellitus
4. **Casirivimab-Imdevimab:** use as alternative to antivirals when the predominant circulating SARS-CoV-2 variant is NOT Omicron
age >50 years, obesity, cardiovascular disease (including hypertension), chronic lung disease (including asthma), chronic metabolic disease (including diabetes), chronic kidney disease (including receipt of dialysis), chronic liver disease, and immunocompromised conditions
5. **Tixagevimab-Cilgavimab:** use among unvaccinated patients
age ≥65 years, BMI ≥35 kg/m², cardiovascular disease (including hypertension), chronic lung disease (including asthma), chronic metabolic disease (including diabetes), chronic kidney disease (including receipt of dialysis), chronic liver disease, and immunocompromised conditions

g Improvement of clinical status

- Afebrile for at least 72 hours without use of antipyretics
- Substantial improvement in respiratory or other symptoms
- CXR shows significant improvement if available

Figure C2.2 – Moderate COVID-19 (Inpatient Management)

Without pneumonia, no desaturation, but with risk factors, OR
With pneumonia, but no signs of respiratory distress, no desaturation

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FOOTNOTES

^a See **Figure L** for **advance care planning**.

- Properly timed
- Sensitive
- Tailored to clinical status and prognosis, patient / family preferences and values, HCW team / facility capabilities

^b The **Philippine COVID-19 Living CPG** strongly recommends **AGAINST** the use of the following for treatment of COVID-19: azithromycin, colchicine, convalescent plasma, favipiravir, hydroxychloroquine, ibuprofen, interferon, ivermectin, lopinavir-ritonavir, IV N-acetylcysteine, oseltamivir, steam inhalation, and antiseptic mouthwash.

See <https://www.psmid.org/philippine-covid-19-living-recommendations/> for details on treatment recommendations

^c **Novel COVID-19 drugs** and indications:

1. **Nirmatrelvir-Ritonavir**: use within 5 days of symptom onset among unvaccinated patients
 - age ≥60 years, BMI >25 kg/m², cigarette smoking, immunosuppressive disease (e.g., HIV infection with CD4 count <200 cells/mm³ and viral load <400 copies/mL) or prolonged iatrogenic immunosuppression, chronic lung, cardiovascular, kidney, or sickle cell disease, hypertension, diabetes, cancer, neurodevelopmental disorders or other medically complex conditions, or medical-related technological dependence
2. **Remdesivir**:
 - age ≥60 years, hypertension, cardiovascular or cerebrovascular disease, diabetes mellitus, obesity (BMI ≥30 kg/m²), immune compromise, chronic mild or moderate kidney disease, chronic liver disease, chronic lung disease, current cancer, or sickle cell disease
3. **Molnupiravir**: use within 5 days of symptom onset
 - age >60 years, active cancer, chronic kidney disease, chronic obstructive pulmonary disease, obesity, serious heart conditions, or diabetes mellitus
4. **Casirivimab-Imdevimab**: use as alternative to antivirals when the predominant circulating SARS-CoV-2 variant is NOT Omicron
 - age >50 years, obesity, cardiovascular disease (including hypertension), chronic lung disease (including asthma), chronic metabolic disease (including diabetes), chronic kidney disease (including receipt of dialysis), chronic liver disease, and immunocompromised conditions
5. **Tixagevimab-Cilgavimab**: use among unvaccinated patients
 - age ≥65 years, BMI ≥35 kg/m², cardiovascular disease (including hypertension), chronic lung disease (including asthma), chronic metabolic disease (including diabetes), chronic kidney disease (including receipt of dialysis), chronic liver disease, and immunocompromised conditions

^d **Improvement of clinical status**

- Afebrile for at least 72 hours without use of antipyretics
- Substantial improvement in respiratory or other symptoms
- CXR shows significant improvement if available

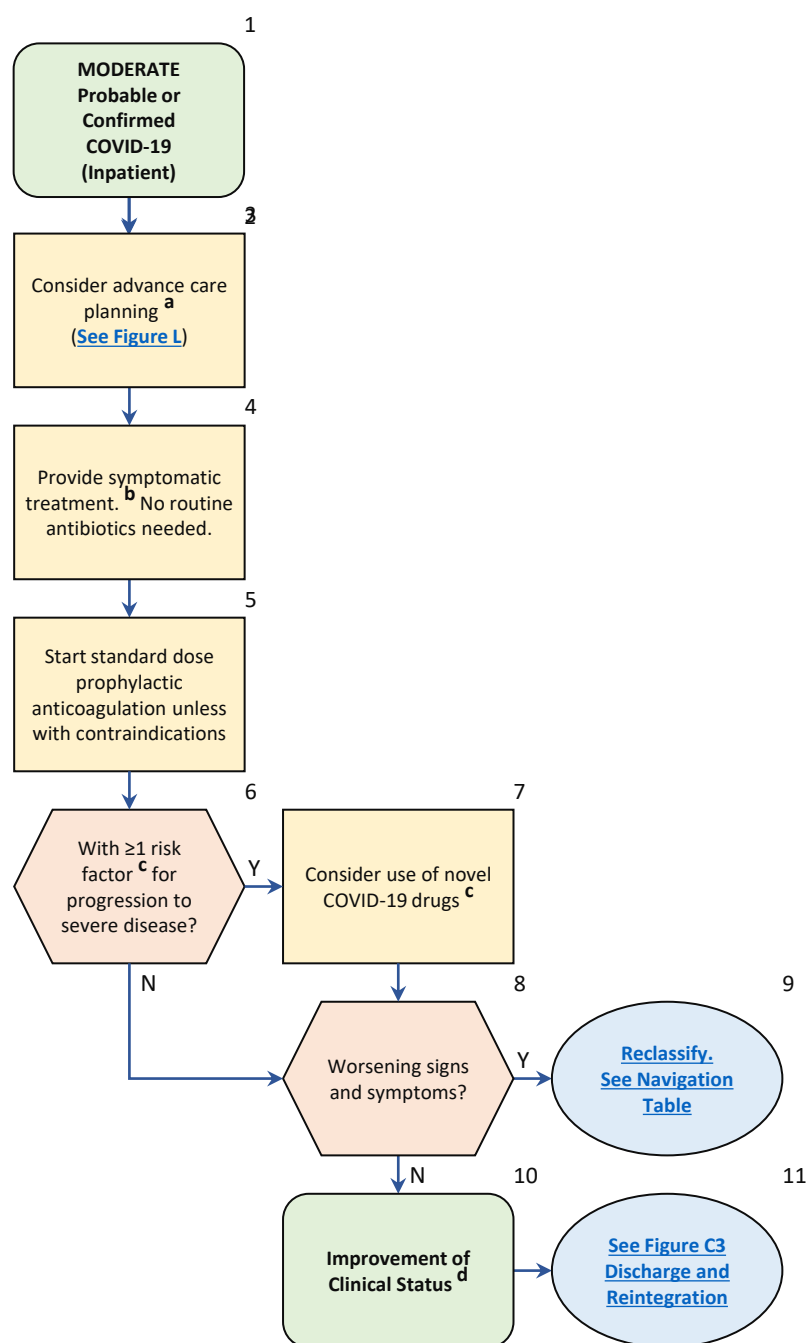
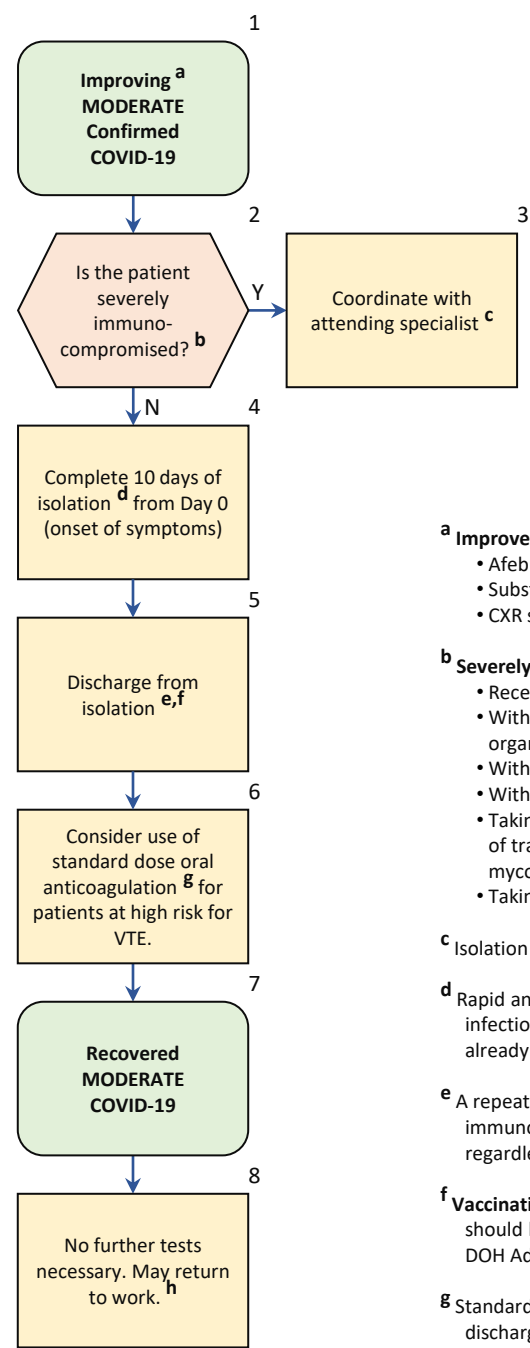


Figure C3 – Moderate COVID-19 (Discharge and Reintegration)
 Without pneumonia, no desaturation, but with risk factors, OR
 With pneumonia, but no signs of respiratory distress, no desaturation

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FOOTNOTES

- a Improvement of clinical status**
- Afebrile for at least 72 hours without use of antipyretics
 - Substantial improvement in respiratory or other symptoms
 - CXR shows significant improvement if available
- b Severely immunocompromised individuals** – include the following patients:
- Receiving active chemotherapy for cancer
 - Within one year out from receiving a hematopoietic stem cell or solid organ transplant
 - With untreated HIV infection with CD4 T lymphocyte count <200
 - With primary immunodeficiency disorder
 - Taking immunosuppressive medications (e.g., drugs to suppress rejection of transplanted organs or to treat rheumatologic conditions such as mycophenolate and rituximab)
 - Taking more than 20 mg/day of prednisone for more than 14 days
- c** Isolation period of immunocompromised patients may need to be extended.
- d** Rapid antigen test may be done at Day 5 of isolation to determine infectiousness. Patient may be discharged earlier from isolation if RAgt is already negative
- e** A repeat negative RT-PCR test is no longer needed for discharge of immunocompetent patient with suspect, probable, or confirmed COVID-19 regardless of severity.
- f Vaccination status** of patients should be assessed, and necessary assistance should be provided as needed. Refer to Philippine COVID-19 Living CPG and DOH Advisories on latest vaccination guidelines.
- g** Standard dose oral anticoagulation may be considered at or near hospital discharge. Re-evaluate 2 weeks after discharge.
- h** Refer to **workplace guidelines**.
- DOLE Labor Advisory No. 2023-23 (September 20, 2023)
 - DOH Department Circular No. 2023-0324 (July 23, 2023)

PART D

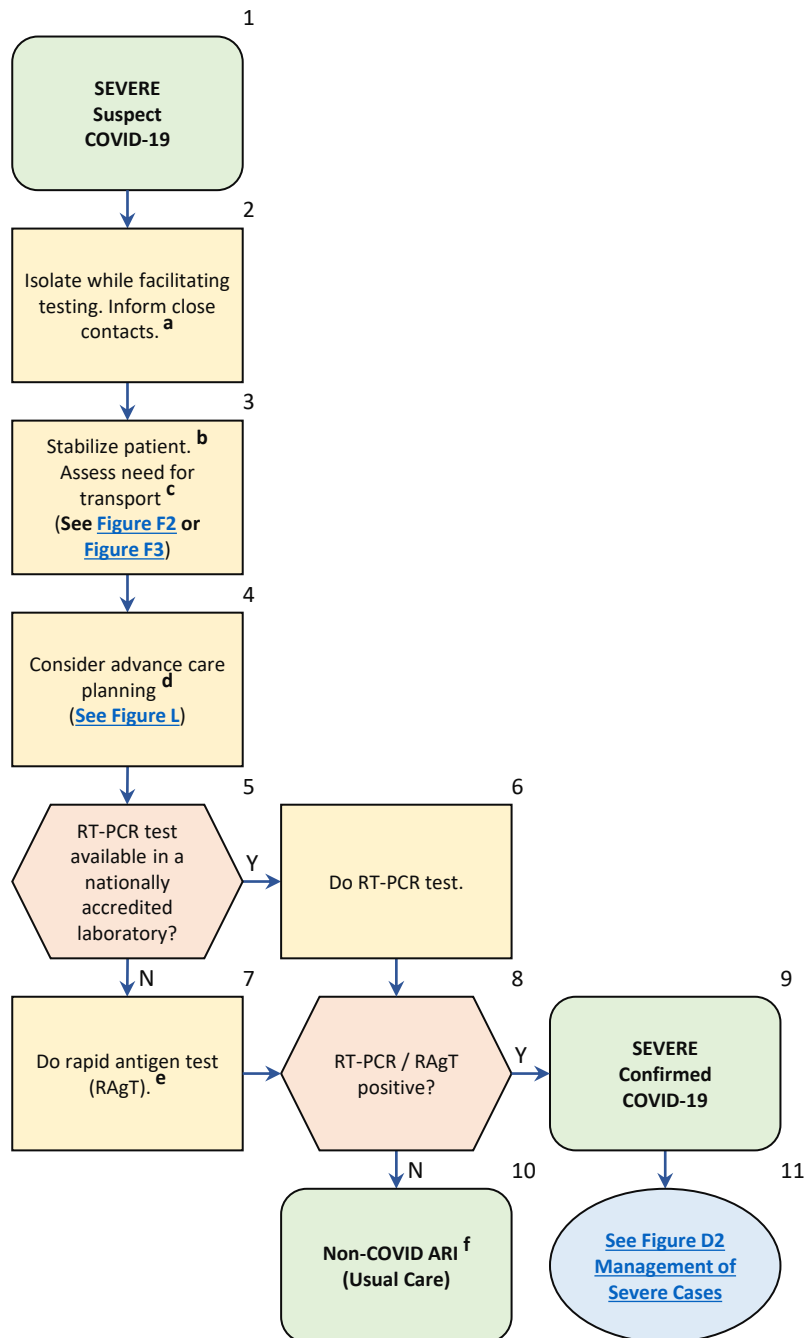
SEVERE COVID-19

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Figure D1 – Severe COVID-19 (Triage and Evaluation)

With pneumonia AND signs of respiratory distress or desaturation

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FOOTNOTES

^a **Close contact** – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days

- face-to-face contact ≤ 1 meter and ≥ 15 minutes
- direct physical contact
- direct care without the use of recommended PPE
- other situations as determined by local health authorities based on local risk assessments

^b **Administer acute care** for the patient while considering admission and service capability. Service capability as basis for admission depends on multiple factors including:

- best clinical judgment of the health provider
- appropriateness of healthcare facility
- geographical access to the next higher-level facility
- patient context

^c See **Figure G2** for transport from home or site of emergency to a healthcare facility (primary transport) or **Figure G3** for transport between healthcare facilities (secondary or inter-facility transport).

^d See **Figure L** for **advance care planning**.

- Properly timed
- Sensitive
- Tailored to clinical status and prognosis, patient / family preferences and values, HCW team / facility capabilities

^e **Rapid antigen tests** – recommended as an alternative to RT-PCR if the following conditions are met:

- Individuals are symptomatic and in the early phase of illness (≤ 7 days from onset of symptoms)
- Self-administered or laboratory-based tests are acceptable if with sensitivity of $\geq 80\%$ AND specificity of $\geq 97\%$
- For self administered tests, the following additional conditions should be met
 - Ease of collecting samples is ensured
 - Ease of interpretation is ensured
 - Test kits have passed flex studies
- Use of saliva as specimen for rapid antigen test is not recommended

^f Consider testing for other etiologies of acute respiratory infection (ARI).

Figure D2 – Severe COVID-19 (Management)
With pneumonia AND signs of respiratory distress or desaturation

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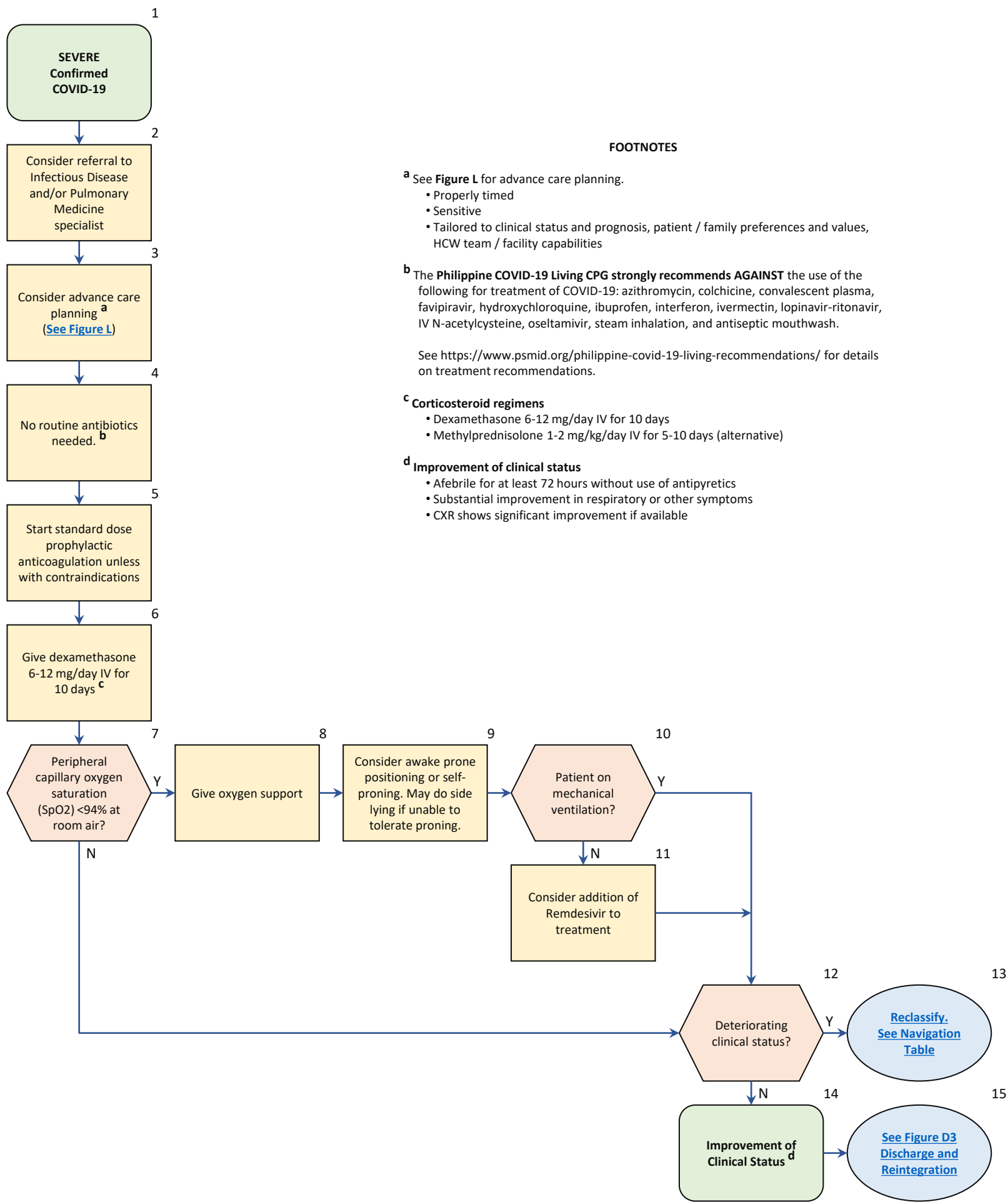
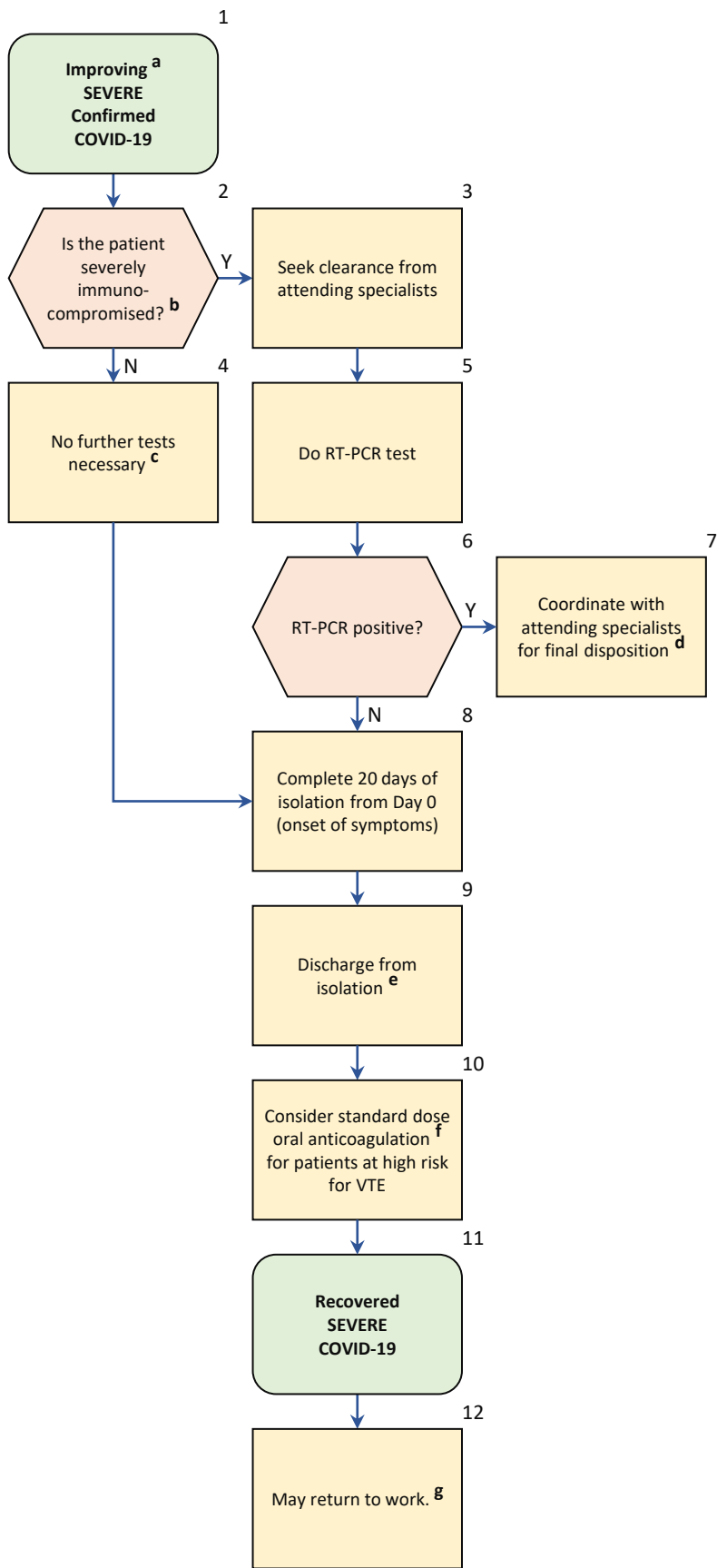


Figure D3 – Severe COVID-19 (Discharge and Reintegration)
With pneumonia AND signs of respiratory distress or desaturation

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FOOTNOTES

- ^a Improvement of clinical status**
- Afebrile for at least 72 hours without use of antipyretics
 - Substantial improvement in respiratory or other symptoms
 - CXR shows significant improvement if available
- ^b Severely immunocompromised individuals** – include the following patients:
- Receiving active chemotherapy for cancer
 - Within one year out from receiving a hematopoietic stem cell or solid organ transplant
 - With untreated HIV infection with CD4 T lymphocyte count <200
 - With primary immunodeficiency disorder
 - Taking immunosuppressive medications (e.g., drugs to suppress rejection of transplanted organs or to treat rheumatologic conditions such as mycophenolate and rituximab)
 - Taking more than 20 mg/day of prednisone for more than 14 days
- ^c** A repeat negative RT-PCR test is no longer needed for discharge of immunocompetent patient with suspect, probable, or confirmed COVID-19 regardless of severity.
- ^d** Recommended isolation period for immunocompromised patients is at least 20 days but may be extended in some cases.
- ^e Vaccination status** of patients should be assessed, and necessary assistance should be provided as needed. Refer to Philippine COVID-19 Living CPG and DOH Advisories on latest vaccination guidelines.
- ^f** Standard dose oral anticoagulation may be considered at or near hospital discharge. Re-evaluate 2 weeks after discharge.
- ^g** Refer to **workplace guidelines**.
- DOLE Labor Advisory No. 2023-23 (September 20, 2023)
 - DOH Department Circular No. 2023-0324 (July 23, 2023)

PART E

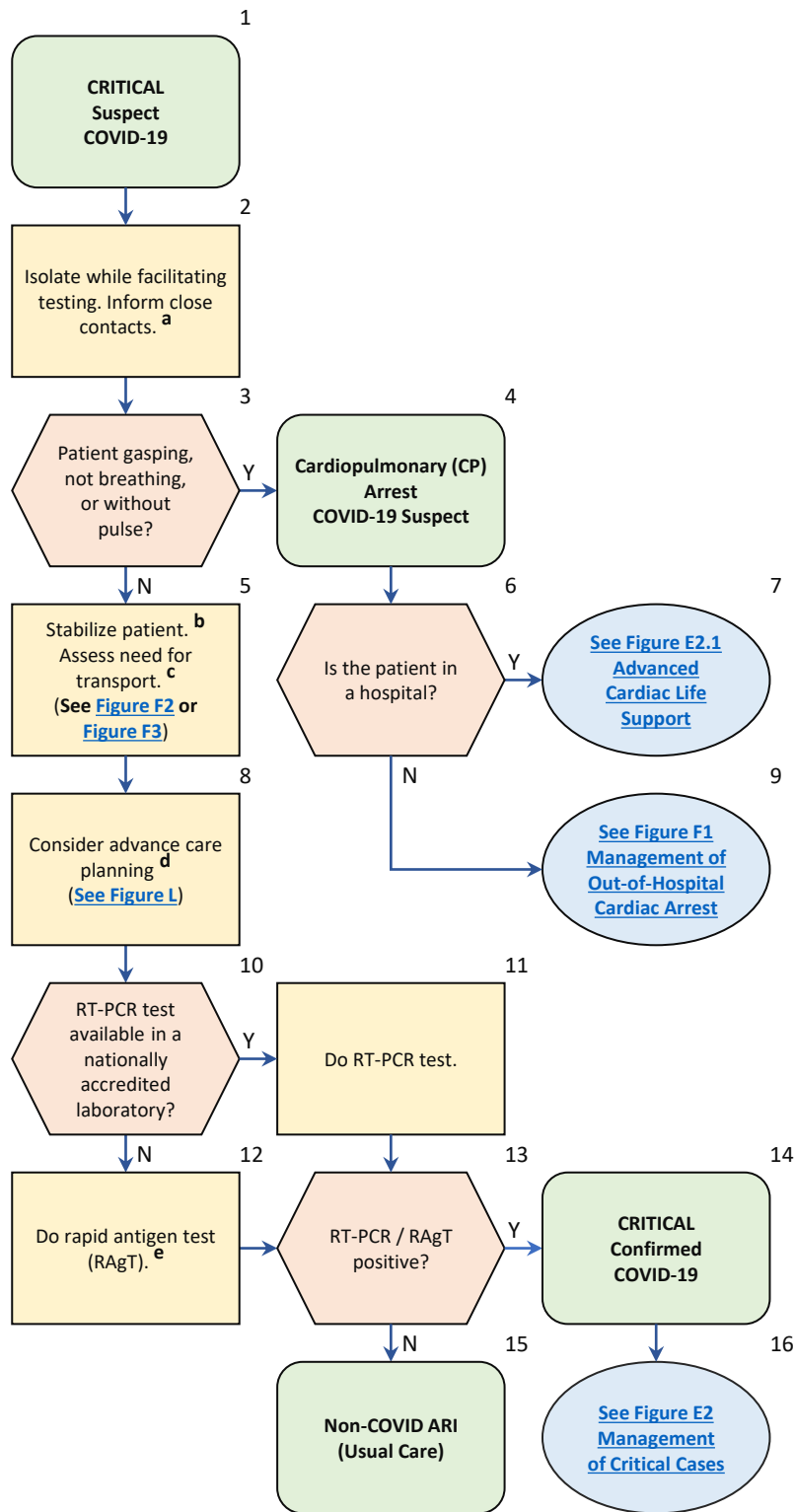
CRITICAL COVID-19

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Figure E1 – Critical COVID-19 (Triage and Evaluation)

With pneumonia AND signs of end-organ failure or shock or thrombosis

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FOOTNOTES

- ^a **Close contact** – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days
- face-to-face contact ≤ 1 meter and ≥ 15 minutes
 - direct physical contact
 - direct care without the use of recommended PPE
 - other situations as determined by local health authorities based on local risk assessments
- ^b **Administer acute care** for the patient while considering admission and service capability. Service capability as basis for admission depends on multiple factors including:
- best clinical judgment of the health provider
 - appropriateness of healthcare facility
 - geographical access to the next higher-level facility
 - patient context
- ^c See **Figure G2** for transport from home or site of emergency to a healthcare facility (primary transport) or **Figure G3** for transport between healthcare facilities (secondary or inter-facility transport).
- ^d See **Figure L** for **advance care planning**.
- Properly timed
 - Sensitive
 - Tailored to clinical status and prognosis, patient / family preferences and values, HCW team / facility capabilities
- ^e **Rapid antigen tests** – recommended as an alternative to RT-PCR if the following conditions are met:
- Individuals are symptomatic and in the early phase of illness (≤ 7 days from onset of symptoms)
 - Self-administered or laboratory-based tests are acceptable if with sensitivity of $\geq 80\%$ AND specificity of $\geq 97\%$
 - For self administered tests, the following additional conditions should be met
 - Ease of collecting samples is ensured
 - Ease of interpretation is ensured
 - Test kits have passed flex studies
 - Use of saliva as specimen for rapid antigen test is not recommended

Figure E2 – Critical COVID-19 (Management)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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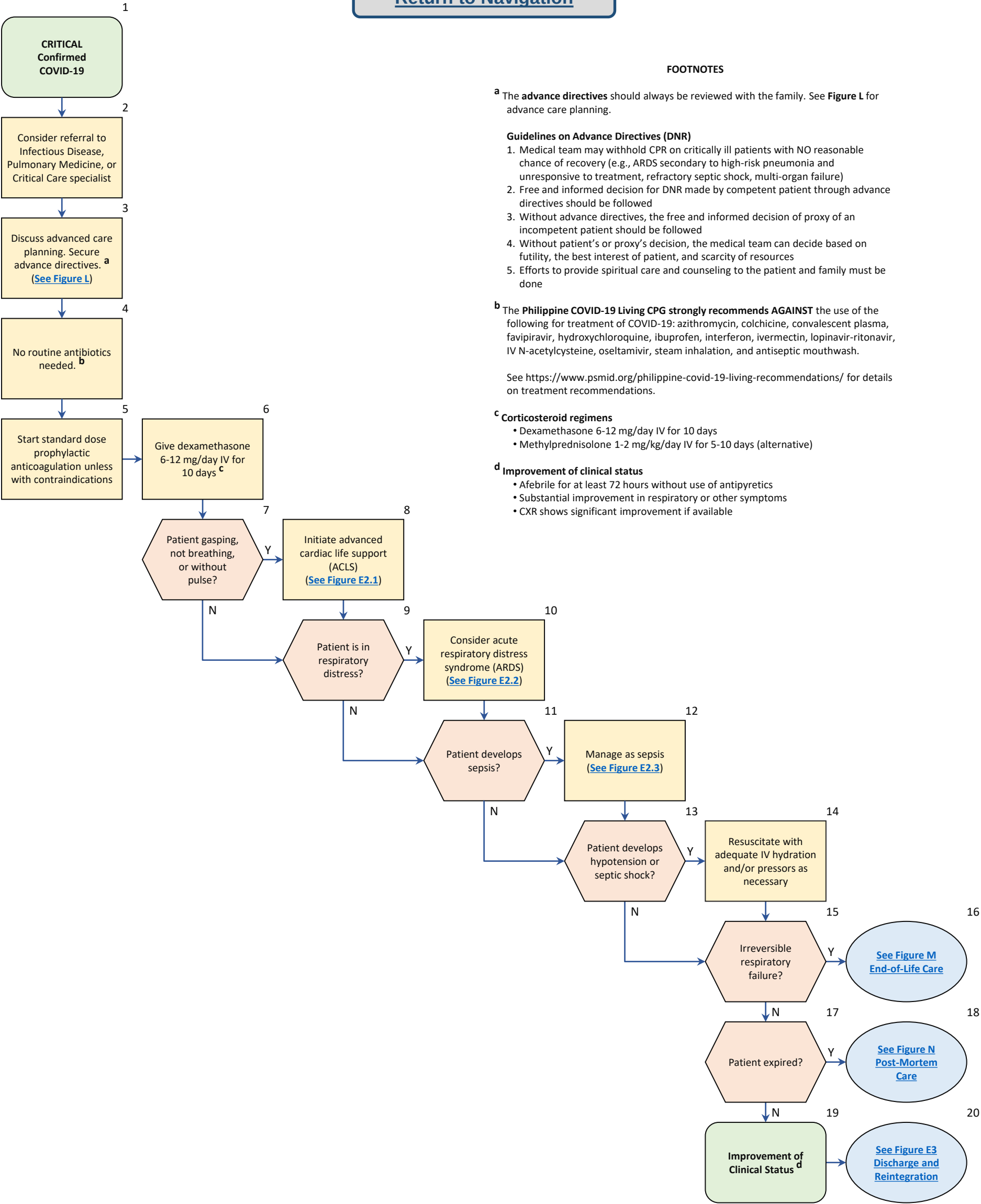


Figure E2.1 – Critical COVID-19 (Advanced Cardiac Life Support or ACLS)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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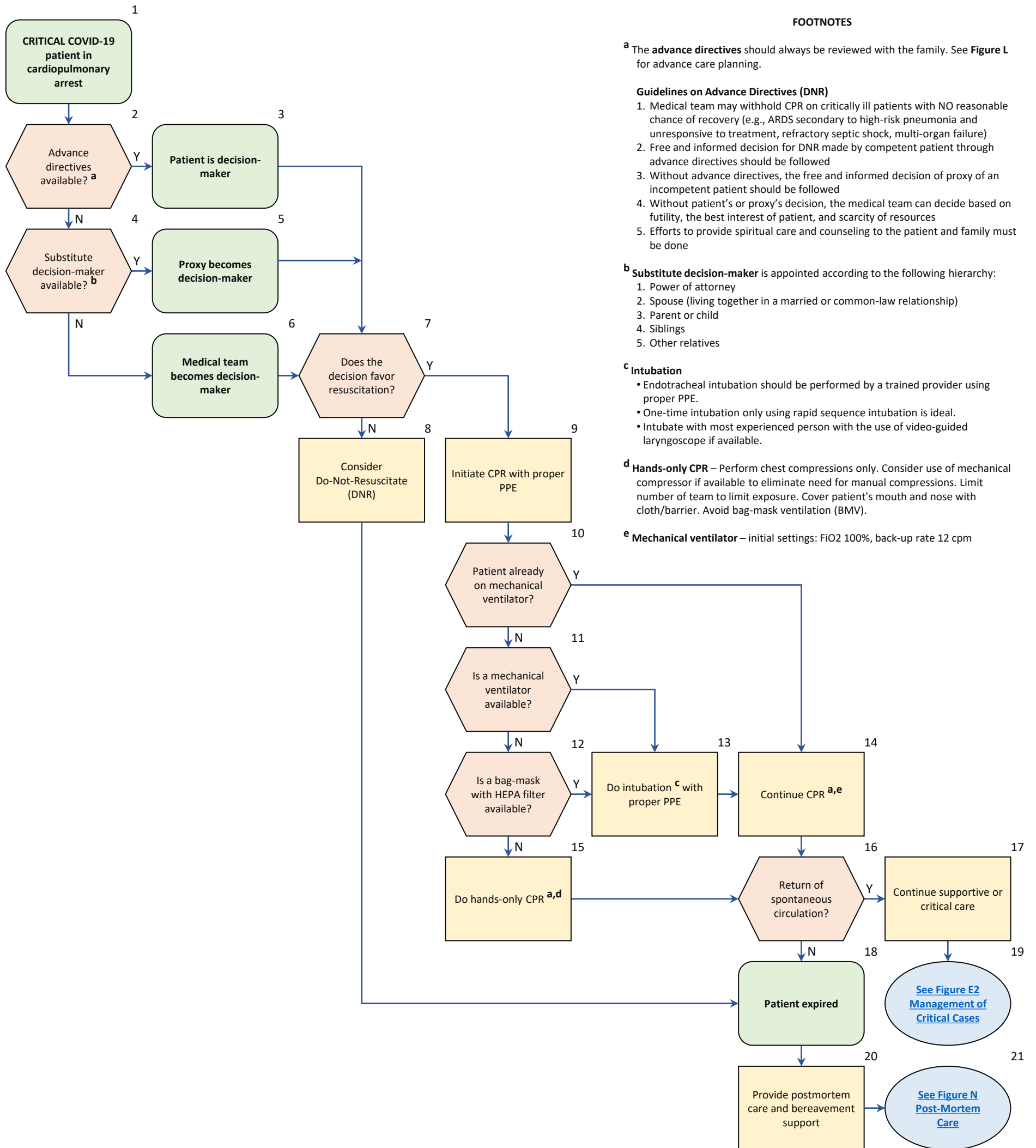


Figure E2.2 – Critical COVID-19 (Management of Acute Respiratory Distress Syndrome or ARDS)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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FOOTNOTES

- ^a Oxygen support therapy** – delivered via face mask or non-rebreather mask with HEPA filter. May use high flow nasal cannula at 40-60 lpm overlapped with a surgical face mask or non-invasive positive pressure ventilation in a single negative pressure room. Maintain SpO₂ ≥94%.
- ^b ROX Index** (SpO₂/FiO₂)/RR - Perform intubation if the ROX index is less than target values at specific hours after starting high-flow nasal canula.
- 2 hours: <2.85
 - 6 hours: <3.47
 - 12 hours: <3.85
 - >12 hours: <4.88
- ^c Intubation**
- Place patient on 6 lpm oxygen support via nasal cannula for pre-oxygenation.
 - May start bag-mask ventilation if with HEPA filter.
 - Endotracheal intubation should be performed by a trained provider using proper PPE.
 - One-time intubation only using rapid sequence intubation is ideal.
 - Intubate with most experienced person with the use of video-guided laryngoscope if available.
- ^d Intensive pulmonary care bundle**
1. Airborne precautions should be followed
 - Bag-mask ventilation is not recommended unless with HEPA filter.
 - Nebulization is not recommended. Use metered dose inhalers.
 - Avoid disconnecting patient from the ventilator.
 - Use in-line catheters for suctioning.
 2. Admit to intensive care unit (ICU)
 3. Refer to Pulmonary Medicine or Critical Care specialist
 4. Consider conservative fluid management
 5. Consider light sedation in intubated patients who are anxious or agitated.
 6. Consider neuromuscular blockade in intubated patients with moderate-severe ARDS.
 7. Give empiric antibiotics, guided by the guidelines on community-acquired pneumonia, only if with suspicion of secondary bacterial co-infection.
 8. Give standard dose prophylactic anticoagulation
 9. Give dexamethasone 6-12 mg/day IV for 10 days
 10. Initiate recruitment maneuvers and lung protective ventilation strategies
 - Tidal volume 4-6 mL/kg of ideal body weight
 - Individualize PEEP or employ PEEP strategy based on respiratory mechanics
 - Maintain plateau pressure <30 cmH₂O
 - Maintain driving pressure <15 cmH₂O
 - Consider prone positioning for >12 hours in institutions with proper training for the maneuver
 10. Consider extracorporeal membrane oxygenation for patients with severe ARDS refractory to optimal mechanical ventilation, after careful consideration of cost, resources, and expertise available.

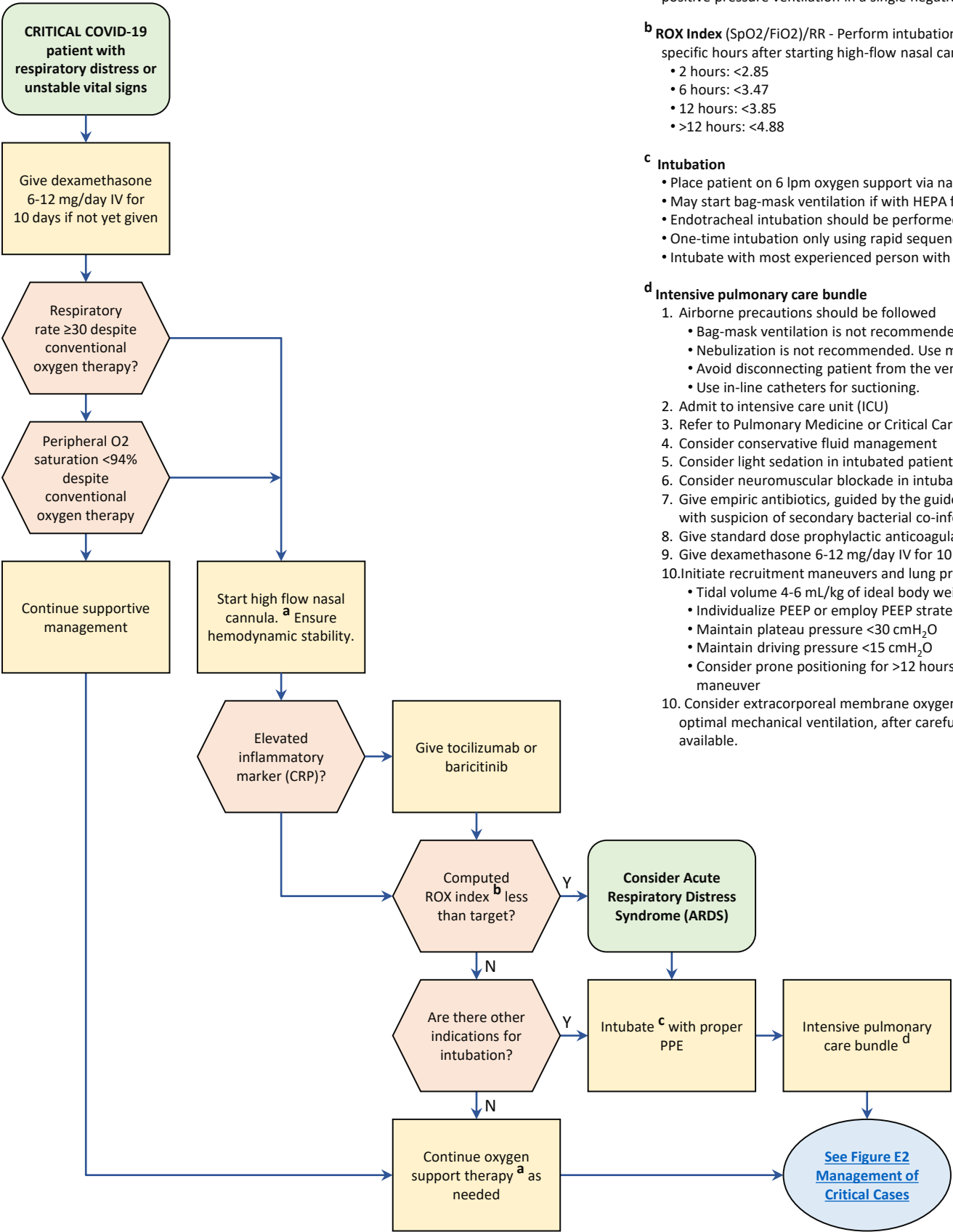
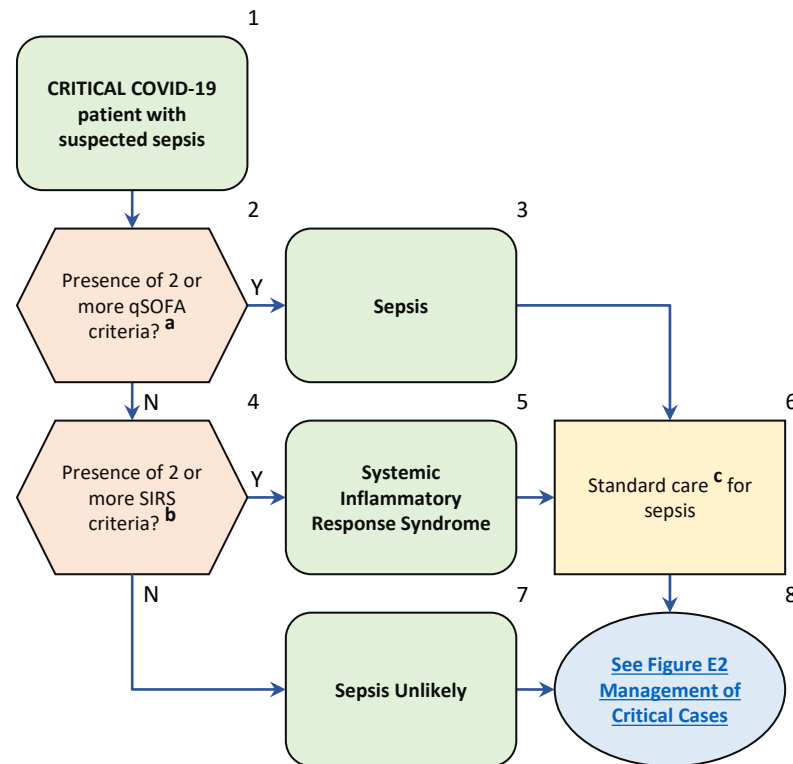


Figure E2.3 – Critical COVID-19 (Management of Sepsis)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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FOOTNOTES

a Quick Sequential Organ Failure Assessment (qSOFA) criteria

- Altered mentation (GCS <15)
- Respiratory rate ≥22 breaths/min
- Systolic blood pressure ≤100 mmHg

b Systemic Inflammatory Response Syndrome (SIRS) criteria

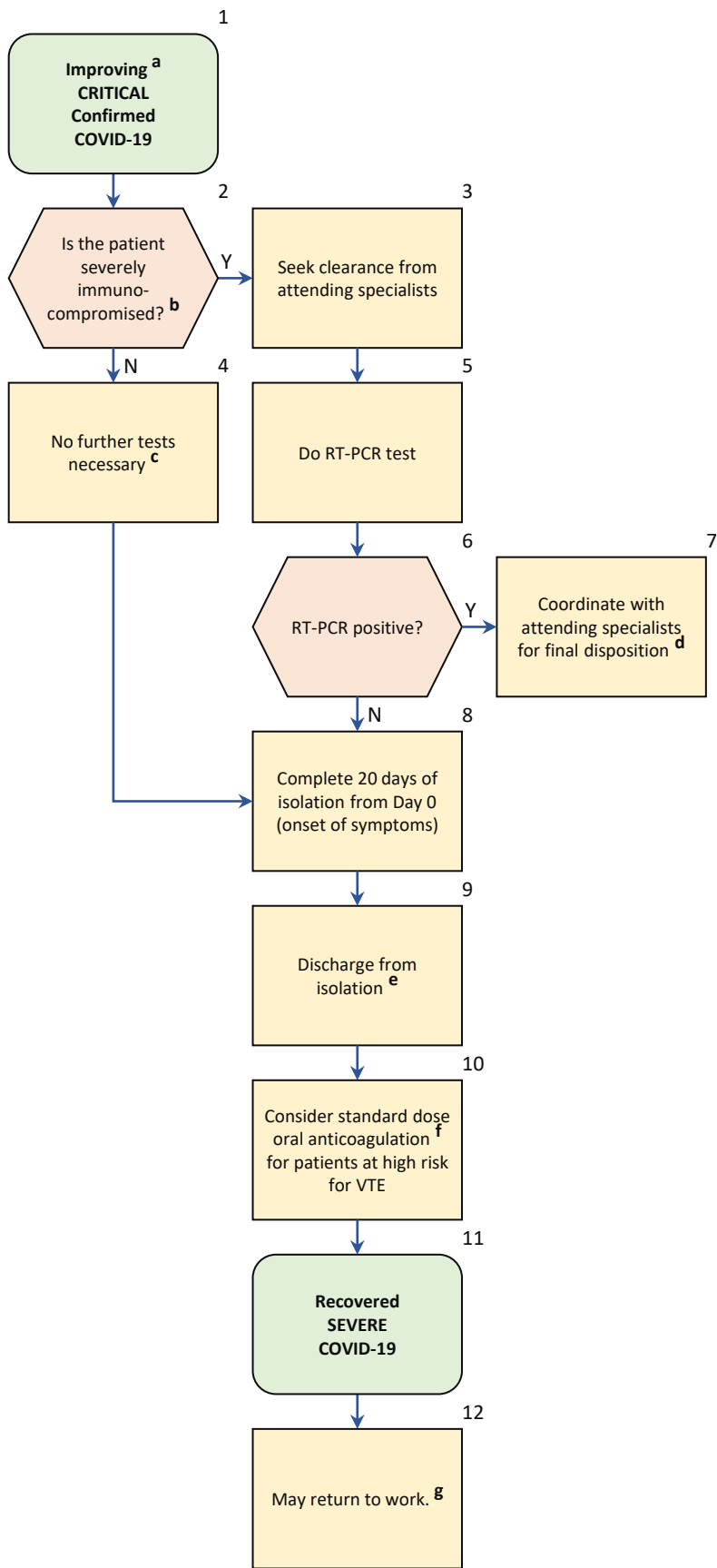
- Temperature >38 °C or <36 °C
- Heart rate >90 beats/min
- Respiratory rate >20 breaths/min or paCO_2 <32 mmHg
- WBC count >12,000 cells/mm³, <4,000 cells/mm³, or >10% immature (band) forms

c Standard of care for sepsis (intensive care for severe sepsis and septic shock)

1. Admit patient to the intensive care unit.
2. Give antimicrobials within 1 hour of initial patient assessment. Follow current guidelines for diagnosis and treatment of community-acquired pneumonia in adults.
3. Blood cultures ideally should be collected prior to antimicrobial treatment but should not delay administration of antimicrobials.
4. For patients with sepsis-induced hypoperfusion or septic shock, administer at least 30 mL/kg of isotonic crystalloid fluid intravenously in adults in the first 3 hours. Monitor for volume overload during resuscitation.
5. Apply vasopressors when shock persists in the form of norepinephrine, vasopressin, or dobutamine (if with signs of poor perfusion and cardiac dysfunction).
6. Maintain initial BP target as MAP ≥ 65 mmHg.
7. Insert central venous catheters. If not available, vasopressors may be given through peripheral IV access with the use of a large vein.

Figure E3 – Critical COVID-19 (Discharge and Reintegration)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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FOOTNOTES

- ^a Improvement of clinical status**
- Afebrile for at least 72 hours without use of antipyretics
 - Substantial improvement in respiratory or other symptoms
 - CXR shows significant improvement if available
- ^b Severely immunocompromised individuals** – include the following patients:
- Receiving active chemotherapy for cancer
 - Within one year out from receiving a hematopoietic stem cell or solid organ transplant
 - With untreated HIV infection with CD4 T lymphocyte count <200
 - With primary immunodeficiency disorder
 - Taking immunosuppressive medications (e.g., drugs to suppress rejection of transplanted organs or to treat rheumatologic conditions such as mycophenolate and rituximab)
 - Taking more than 20 mg/day of prednisone for more than 14 days
- ^c** A repeat negative RT-PCR test is no longer needed for discharge of immunocompetent patient with suspect, probable, or confirmed COVID-19 regardless of severity.
- ^d** Recommended isolation period for immunocompromised patients is at least 21 days but may be extended in some cases.
- ^e Vaccination status** of patients should be assessed, and necessary assistance should be provided as needed. Refer to Philippine COVID-19 Living CPG and DOH Advisories on latest vaccination guidelines.
- ^f** Standard dose oral anticoagulation may be considered at or near hospital discharge. Re-evaluate 2 weeks after discharge.
- ^g** Refer to **workplace guidelines**.
- DOLE Labor Advisory No. 2023-23 (September 20, 2023)
 - DOH Department Circular No. 2023-0324 (July 23, 2023)

PART F

EMERGENCY DEPARTMENT

AND TRANSPORT

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Figure F1 – Management of Out-of-Hospital Cardiac Arrest (OHCA) in Adults

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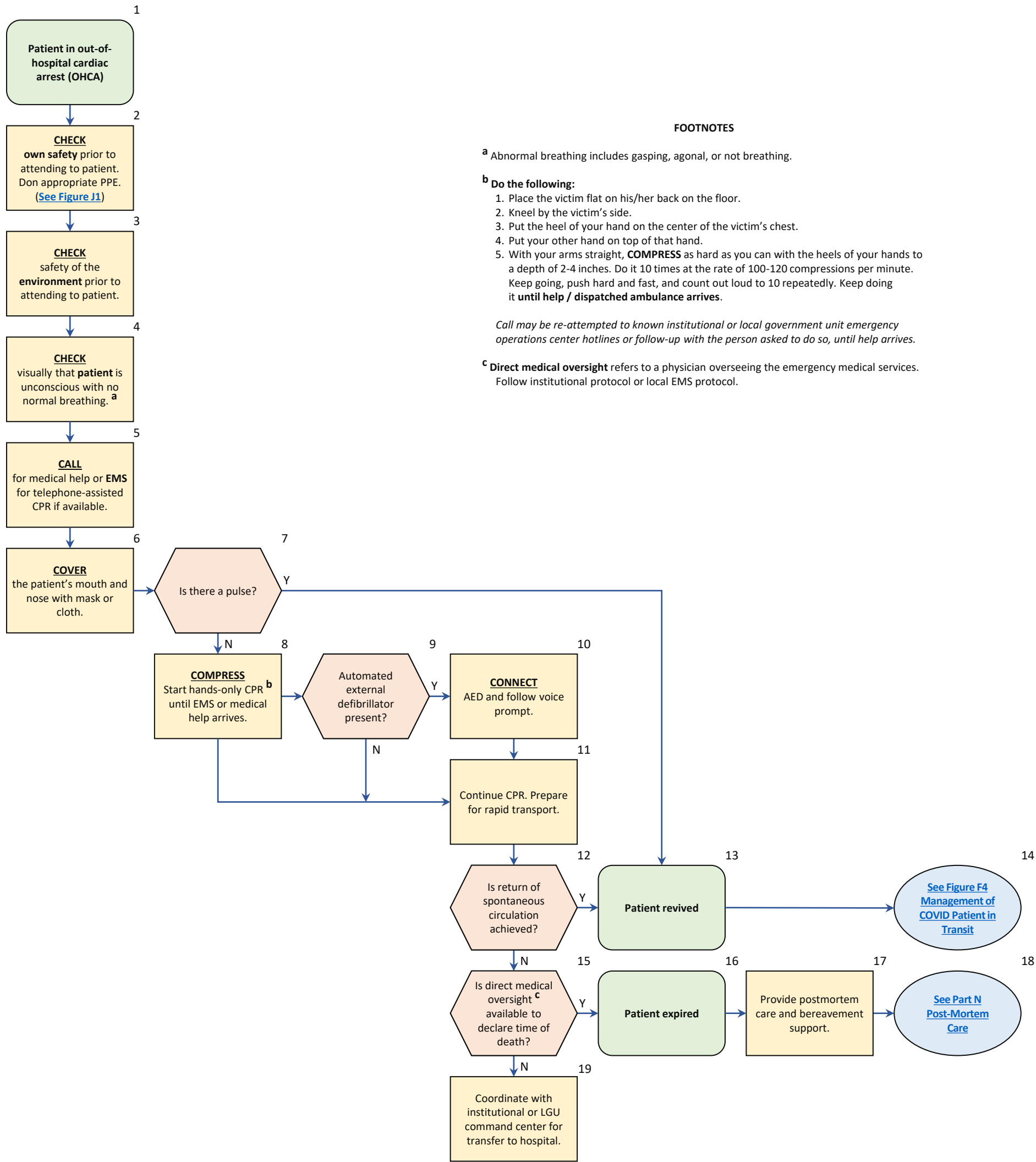
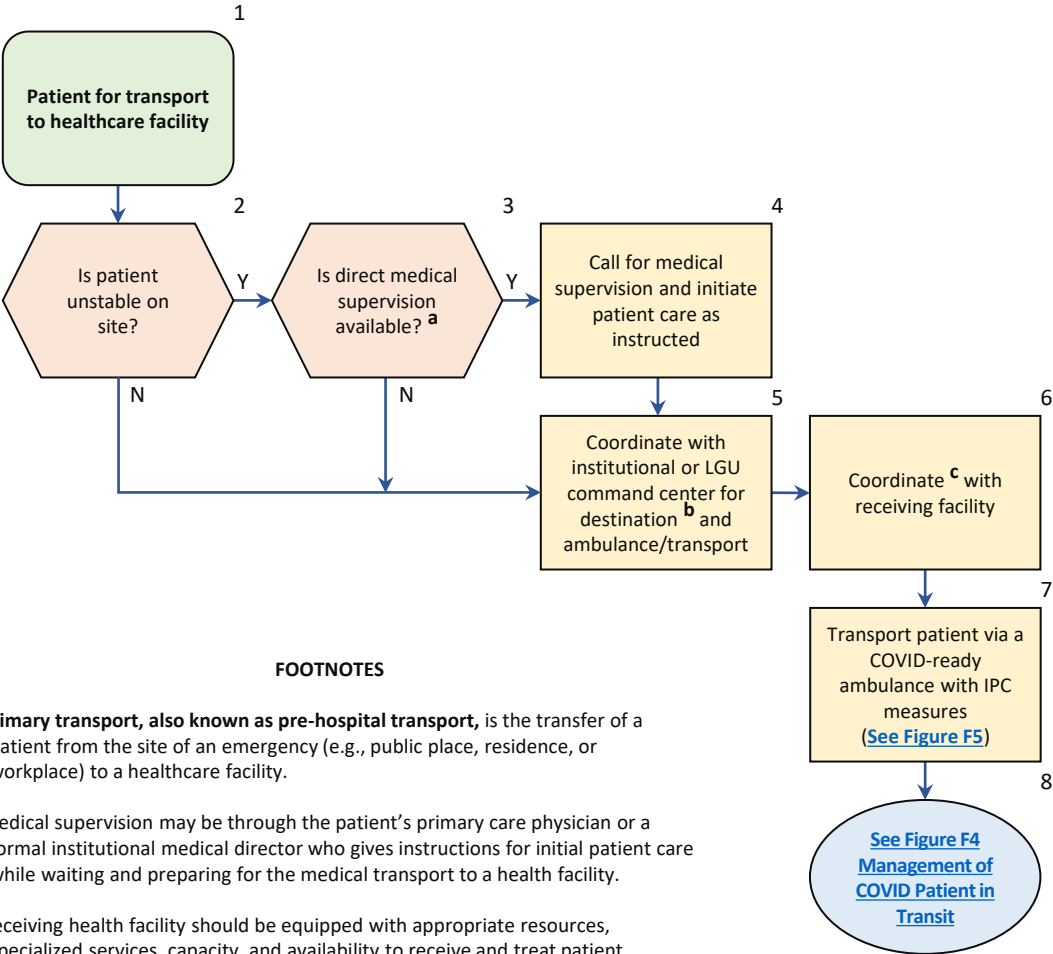


Figure F2 – Primary Transport to a Healthcare Facility*

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FOOTNOTES

- * **Primary transport, also known as pre-hospital transport,** is the transfer of a patient from the site of an emergency (e.g., public place, residence, or workplace) to a healthcare facility.
- ^a Medical supervision may be through the patient’s primary care physician or a formal institutional medical director who gives instructions for initial patient care while waiting and preparing for the medical transport to a health facility.
- ^b Receiving health facility should be equipped with appropriate resources, specialized services, capacity, and availability to receive and treat patient.
- ^c Confirm 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.

Figure F3 – Secondary Transport (Inter-Facility Transport)*

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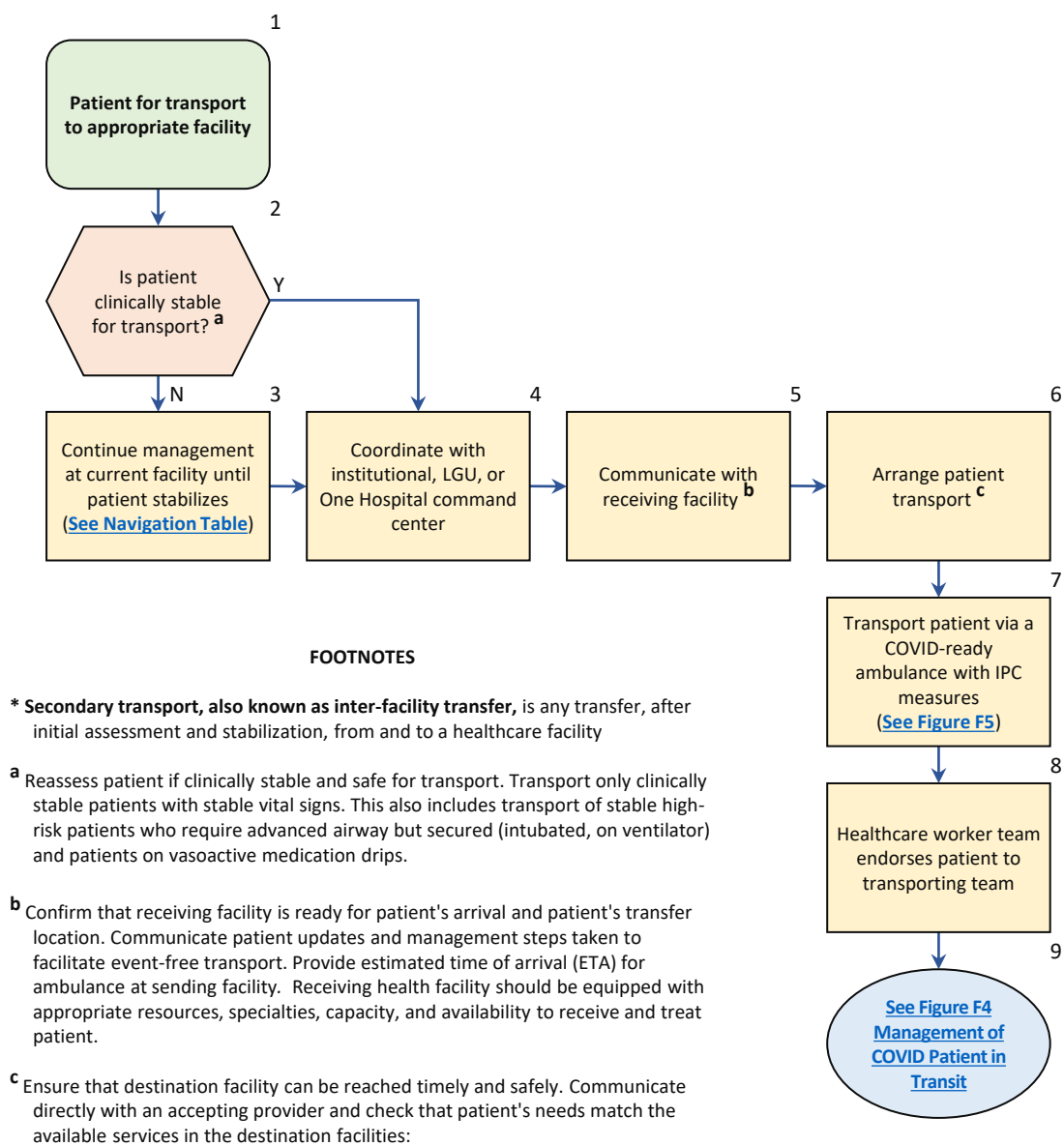


Figure F4 – Management of COVID-19 Patient in Transit

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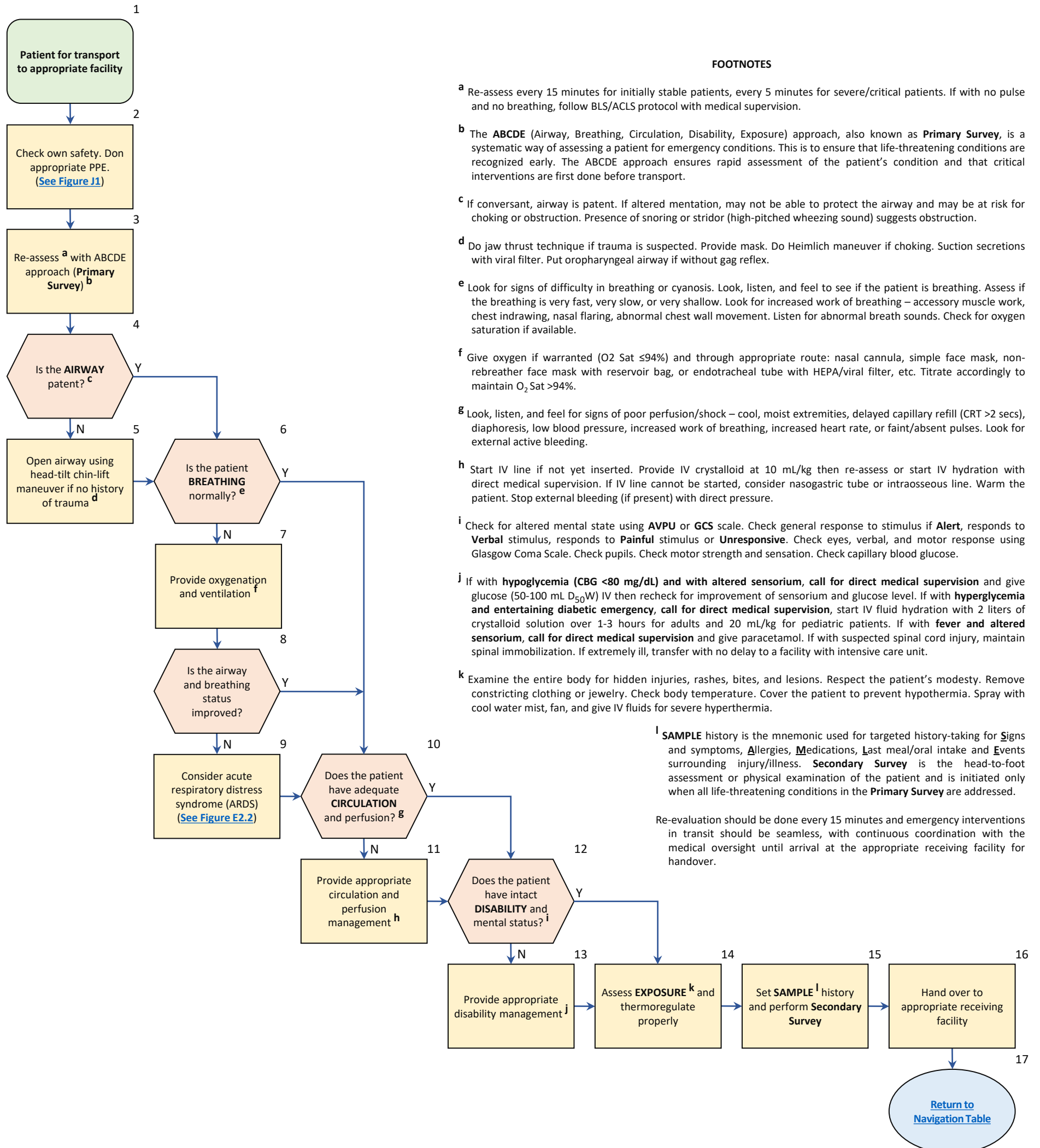
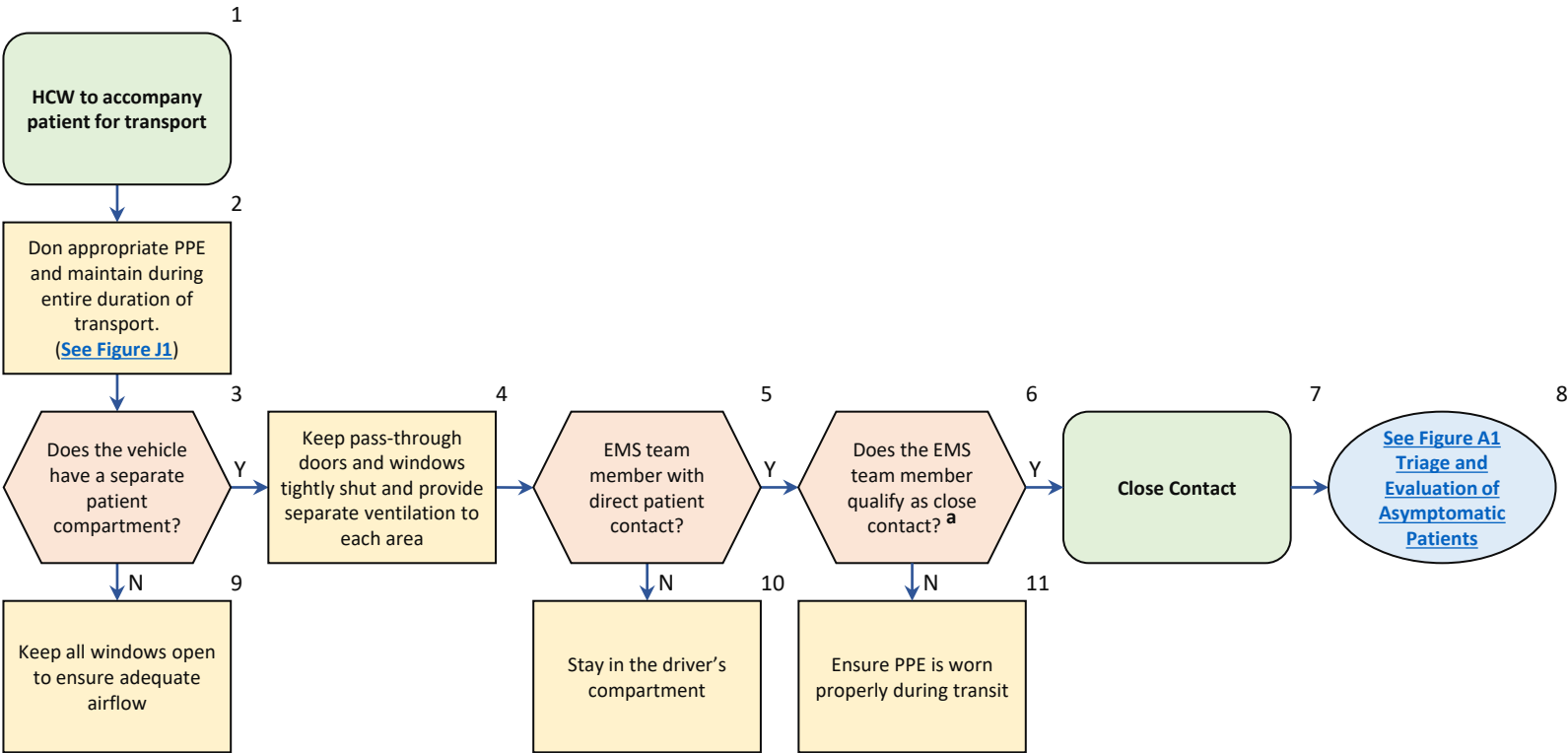


Figure F5 – Infection Prevention and Control (IPC) for Ambulance EMS Team

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FOOTNOTES

^a **Close contact** – a person who has had any one of the following exposures to a probable or confirmed case in the past 14 days

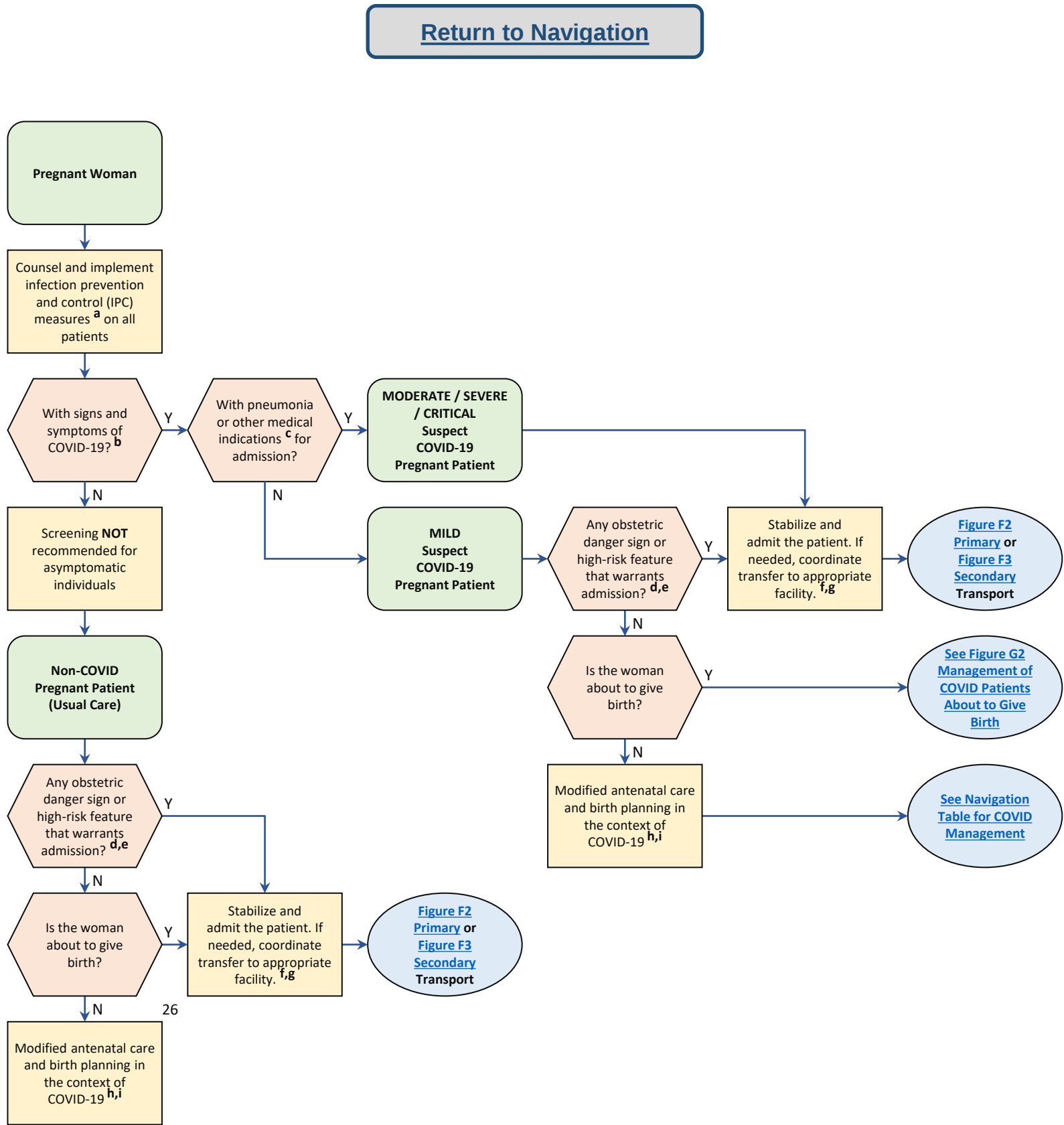
- face-to-face contact ≤1 meter and ≥15 minutes
- direct physical contact
- direct care without the use of recommended PPE
- other situations as determined by local health authorities based on local risk assessments

PART G

PREGNANCY, LABOR, AND NEWBORN CARE

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Figure G1 – Management of Pregnant Women During the COVID-19 Pandemic



a-i footnotes on next page

Figure G1 – Management of Pregnant Women During the COVID-19 Pandemic

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FOOTNOTES

^a Maternal 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
- 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
- Do NOT put mask on the newborn

^b COVID-19 signs and symptoms – acute onset of fever and cough **OR** acute onset of any three or more of the following signs or symptoms: fever, cough, general weakness or fatigue, headache, myalgia, sore throat, coryza, dyspnea, nausea or diarrhea or anorexia

^c Comorbid conditions – chronic lung disease, chronic heart disease, hypertension, chronic kidney disease, chronic liver disease, chronic neurological conditions, diabetes, problems with the spleen, weakened immune system such as HIV or AIDs, or medicine such as steroid tablets or chemotherapy, morbid obesity (BMI >40)

^d Obstetric danger signs (DOH MNCHN MOP, 2011)

1. swelling of legs, hand, and/or face
2. severe headache, dizziness, blurring of vision
3. convulsion
4. vaginal bleeding, pale skin
5. fever and chills
6. absence of or decrease in baby's movement inside the womb
7. severe abdominal pain
8. foul-smelling / watery vaginal discharge
9. painful urination
10. too weak to get out of bed

^e Examples of high-risk features

- preterm labor
- vaginal bleeding
- preeclampsia/eclampsia
- preterm pre-labor rupture of membranes (pPROM)
- malpresentations
- young primigravid
- elderly primigravid
- multifetal pregnancy

^f Administer acute care for the patient while considering admission and service capability.

Service capability as basis for admission can depend on multiple factors including:

- best clinical judgment of the health provider
- appropriateness of healthcare facility
- geographical access to the next higher-level facility
- patient context

^g Stabilize the pregnant patient according to the medical and obstetric indication, as indicated by the Basic and Comprehensive Emergency Obstetrics and Newborn Care (BEmONC/CEmONC) guidelines, as applicable. Target pulse oximetry 94% at room air.

^h Antenatal 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 healthcare facilities
- Antenatal discussions should include feeding options, formulation of updated birth preparedness, and complication readiness plans that include when, where and how to seek appropriate care

ⁱ Vaccination

COVID-19 vaccination status of patients should be assessed, and necessary assistance should be provided as needed. Refer to Philippine COVID-19 Living Recommendations and DOH Advisories on latest guidelines.

Figure G2 – Management of COVID-19 Patients About to Give Birth

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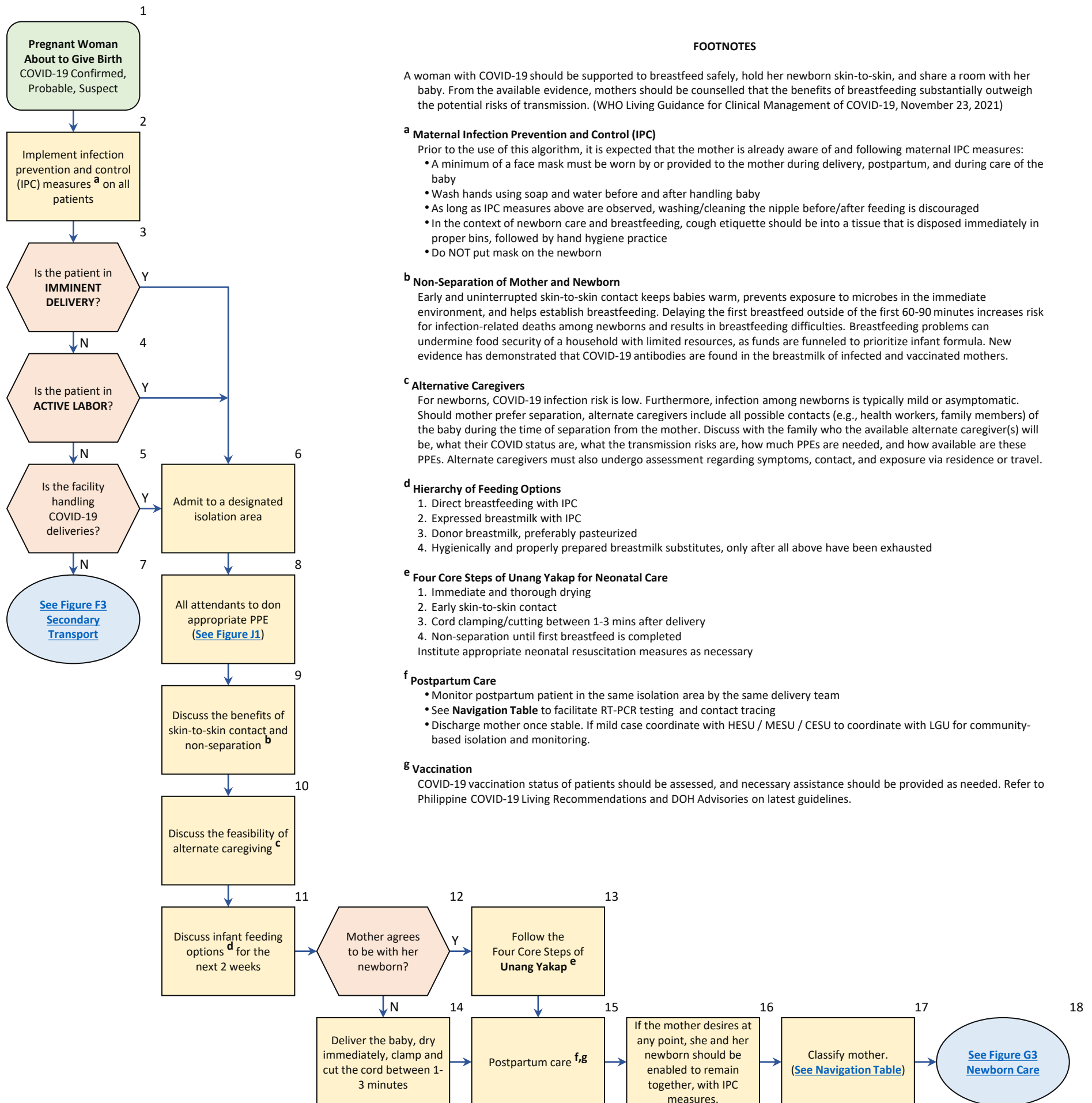
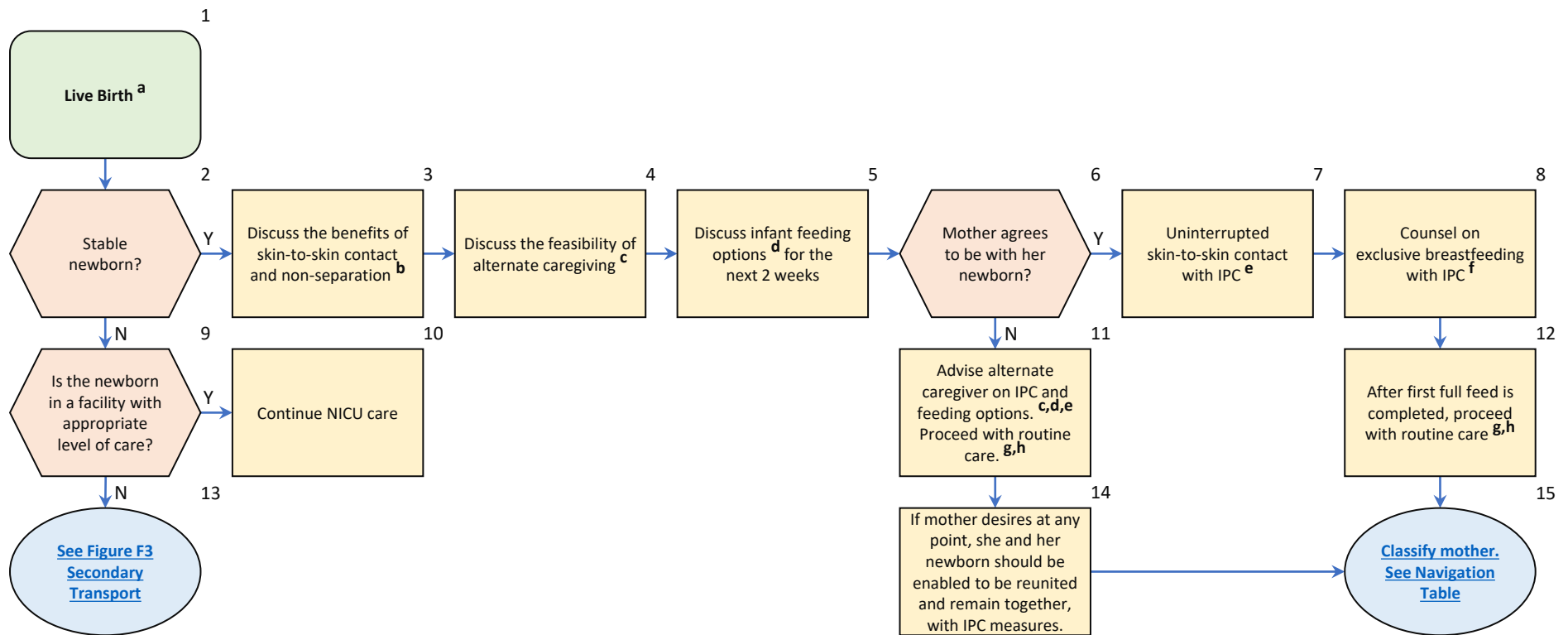


Figure G3 – Care of the Newborn Whose Mother is a COVID-19 Case

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FOOTNOTES

A woman with COVID-19 should be supported to breastfeed safely, hold her newborn skin-to-skin, and share a room with her baby. From the available evidence, mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks of transmission. WHO recognizes that the recommendation for an infected mother to be in close contact with her baby may appear to contradict other IPC measures that include isolation of persons infected with COVID-19 virus. However, the balance of risks is significantly different for infants than for adults. In infants, the risk of COVID-19 infection is low, the infection is typically mild or asymptomatic, and the consequences of not breastfeeding or separation of mother and child can be significant. (WHO Living Guidance for Clinical Management of COVID-19, November 23, 2021).

^a Mothers should not be separated from their infants unless the mother is too sick to care for her baby. If the mother is unable to care for the infant, another competent family caregiver should be identified. Mother and infant should be enabled to remain together while rooming-in throughout the day and night and practice 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. (WHO Interim Guidance on COVID-19 Clinical Management, January 25, 2021)

^b **Non-Separation of Mother and Newborn**
Early and uninterrupted skin-to-skin contact keeps babies warm, prevents exposure to microbes in the immediate environment, and helps establish breastfeeding. Delaying the first breastfeed outside of the first 60-90 minutes increases risk for infection-related deaths among newborns and results 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 has demonstrated that COVID-19 antibodies are found in the breastmilk of infected and vaccinated mothers.

^c **Alternative Caregivers**
For newborns, COVID-19 infection risk is low. Furthermore, infection among newborns is typically mild or asymptomatic. 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.

^d **Hierarchy 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

^e **Maternal 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
• 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
• Do NOT put mask on the newborn

^f **Counseling on Exclusive Breastfeeding (EBF) with IPC**
1. Exclusive breastfeeding per demand
2. Positioning and attachment
3. Coughing/sneezing into tissue (not into elbow) and disposing
4. Proper way of wearing a mask when near her baby
5. Washing hands before and after contact with the baby
6. Cleaning/disinfecting contaminated surfaces (e.g., cellphone)
7. 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 fall precautions
8. EBF should not be stopped either before or after receiving any of the COVID-19 vaccines

^g **Routine 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

^h **Testing**
RT-PCR testing of the newborn may be done at DOH accredited testing centers at 24 hours of life and ideally, repeat at 48 hours.

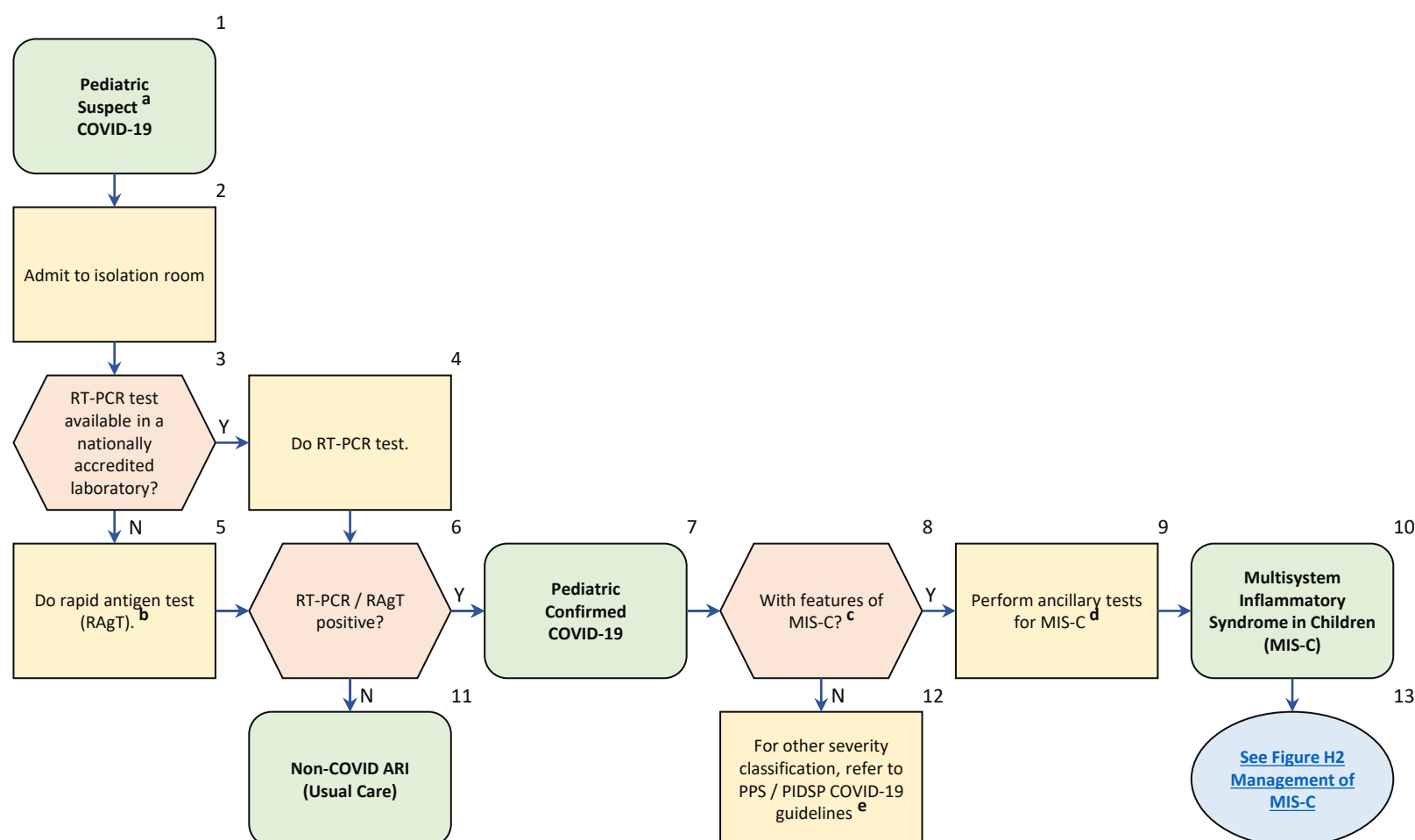
PART H

MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C)

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Figure H1 – Evaluation of Multisystem Inflammatory Syndrome in Children (MIS-C)

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FOOTNOTES

a Suspect case

1. Has any one of the following symptoms: fever, cough, sore throat, dyspnea, coryza, general weakness, anorexia, nausea or vomiting, diarrhea, myalgia, headache, altered mental status
AND
2. Meets any one of the following:
 - a. Exposure evaluation
 - i. Residing in or travel to areas with community transmission or local communities under quarantine within the last 14 days
 - ii. Close contact with sick individuals (proven or highly suspected of COVID-19)
 - b. Clinical evaluation
 - i. There is rapid progression of symptoms
 - ii. Worsening symptoms despite compliance to standard treatment and no etiology determined
 - c. Laboratory evaluation
 - i. Laboratory examination and imaging studies may aid in assessing severity of symptoms and need for further management

b Rapid antigen tests – recommended as an alternative to RT-PCR if the following conditions are met:

- Individuals are symptomatic and in the early phase of illness (≤7 days from onset of symptoms)
- Self-administered or laboratory-based tests are acceptable if with sensitivity of ≥80% AND specificity of ≥97%
- For self administered tests, the following additional conditions should be met
 - Ease of collecting samples is ensured
 - Ease of interpretation is ensured
 - Test kits have passed flex studies
- Use of saliva as specimen for rapid antigen test is not recommended

c Multisystem inflammatory syndrome in children (MIS-C)

1. Children and adolescents 0-19 years of age with fever >3 days, AND
2. Two of the following:
 - a. Rash or bilateral non-purulent conjunctivitis or mucocutaneous inflammation signs (oral, hands, or feet)
 - b. Hypotension or shock
 - c. Features of myocardial dysfunction, pericarditis, valvulitis, or coronary abnormalities (including echo findings or elevated troponin/NT-proBNP)
 - d. Evidence of coagulopathy (by PT, PTT, elevated D-dimers), acute gastrointestinal problems (diarrhea, vomiting, or abdominal pain), AND
3. Elevated markers of inflammation (ESR, CRP, or procalcitonin), AND
4. No other obvious microbial cause of inflammation (bacterial sepsis, staphylococcal or streptococcal shock syndromes), AND
5. Evidence of COVID-19 (RT-PCR, antigen test, or serology positive), or likely contact with patients with COVID-19

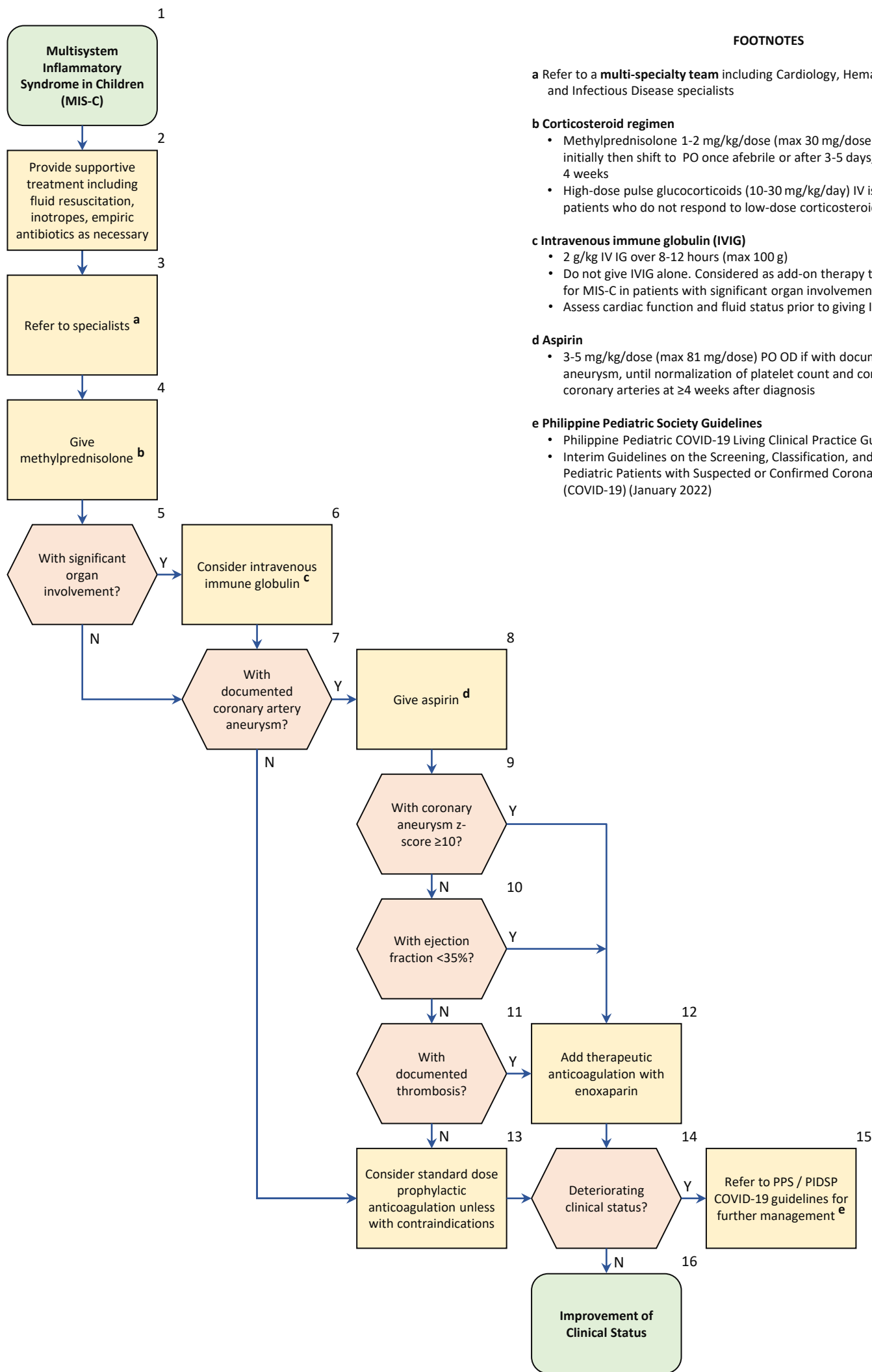
d Ancillary laboratory tests for MIS-C

- CBC
- CRP, ESR, procalcitonin
- Liver and renal function tests, LDH, electrolytes
- PT, PTT, D-dimer, fibrinogen
- Ferritin, IL-6
- NT-proBNP, troponin, CKMB
- Chest x-ray
- ECG, 2D echo

e Philippine Pediatric Society Guidelines

- Philippine Pediatric COVID-19 Living Clinical Practice Guidelines (March 2022)
- Interim Guidelines on the Screening, Classification, and Management of Pediatric Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) (January 2022)

Figure H2 – Management of Multisystem Inflammatory Syndrome in Children (MIS-C)



PART J

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

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Figure J1 – Recommended PPE for Healthcare Workers

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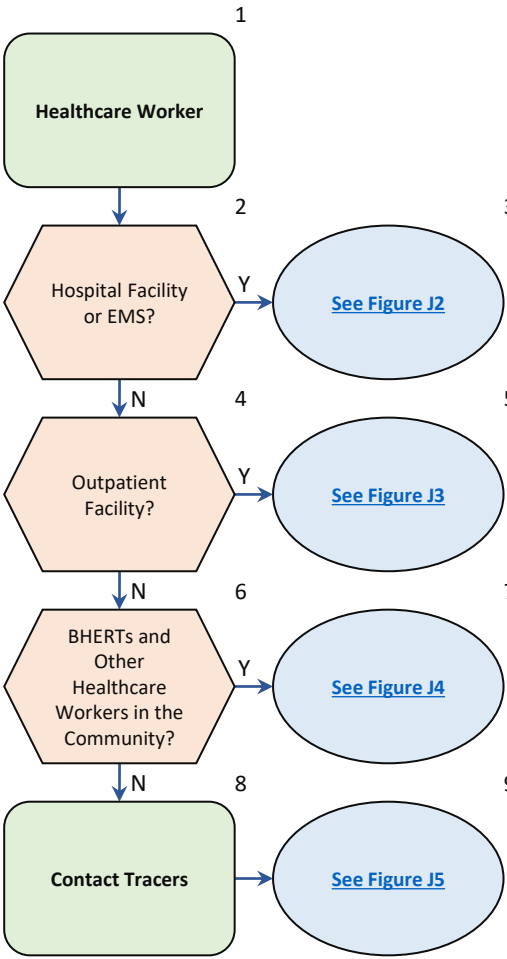
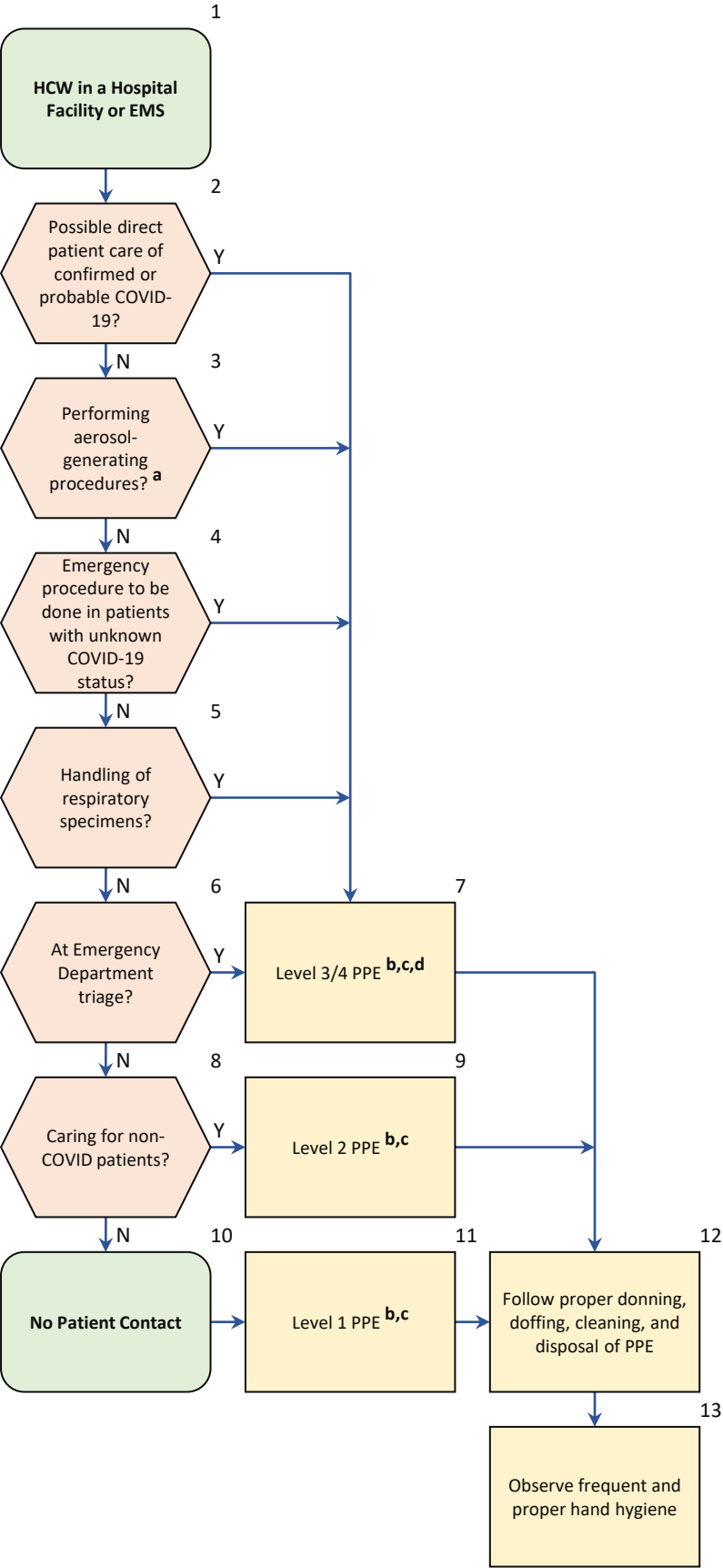


Figure J2 – Recommended PPE for Healthcare Workers in Hospital Facilities and Emergency Medical Services

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FOOTNOTES

- a** Aerosol-generating procedures (not limited to the following):
- Airway surgeries (e.g., ENT, thoracic, transsphenoidal surgeries)
 - Autopsies
 - Bronchoscopy (unless carried out through a closed-circuit ventilation system)
 - Cardiopulmonary resuscitation
 - Dental procedures
 - Endotracheal intubation and extubation
 - Evacuation of pneumoperitoneum during laparoscopic procedures
 - Gastrointestinal endoscopy
 - High frequency oscillatory ventilation, non-invasive ventilation (e.g., BiPAP, CPAP, HFNC)
 - Nebulization, sputum induction
 - Open suctioning of airways, manual ventilation
 - Surgical procedures using high-speed/high-energy devices (e.g., high-speed cutters and drills, powered instrumentation, suction microdebrider, tracheotomy, tracheostomy)

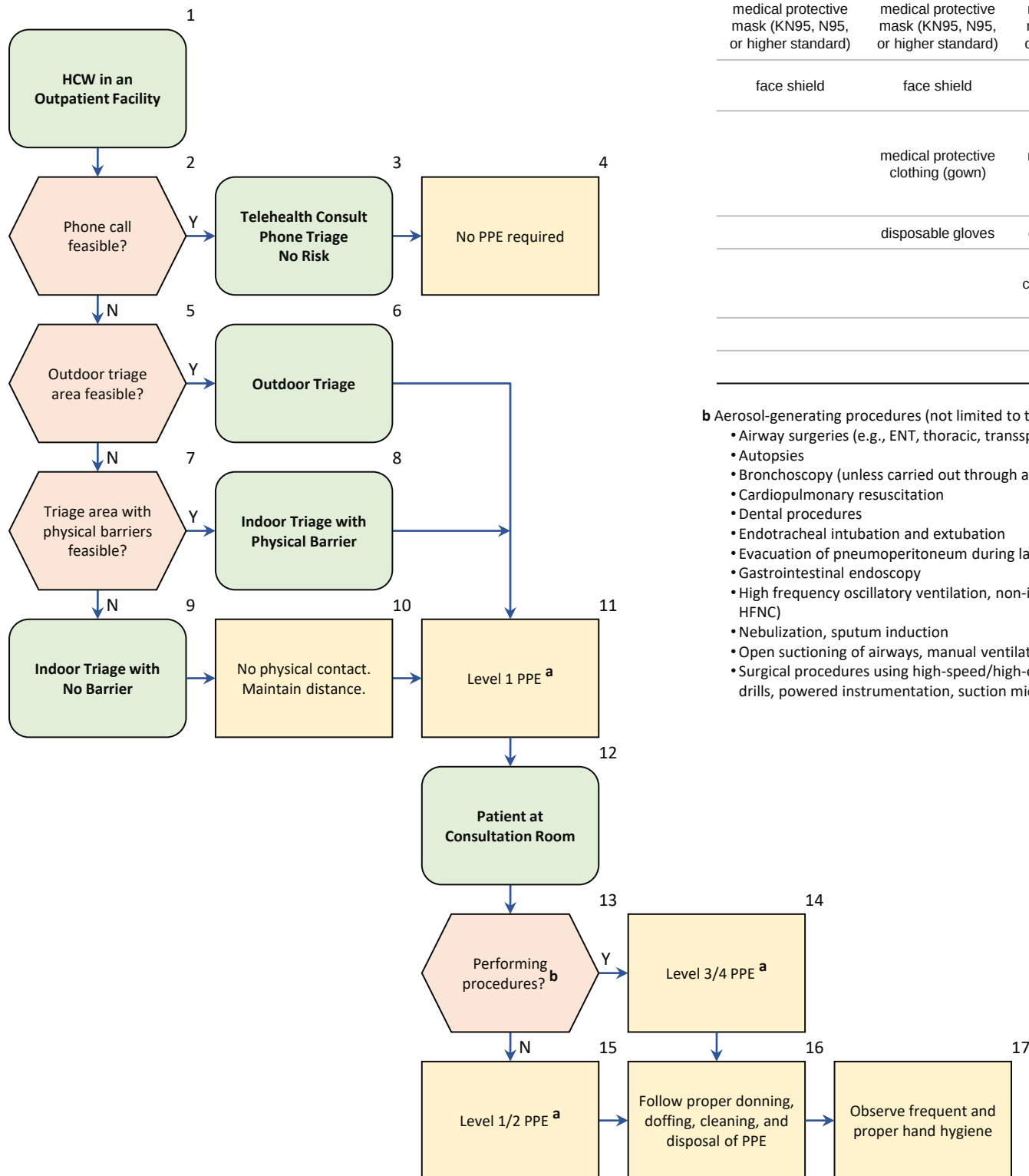
b Levels of PPE:

Level 1	Level 2	Level 3	Level 4
medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)
face shield	face shield	face shield or goggles	face shield or goggles
	medical protective clothing (gown)	medical protective clothing (gown)	medical protective clothing (fluid-repellant sealed well-fitting gown or coveralls)
	disposable gloves	disposable gloves	double gloves
		disposable shoe covers or dedicated closed footwear	disposable shoe covers or dedicated closed footwear
		disposable hat	scrub hat
			apron

- 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.
- d** Use of protective physical barrier enclosures (e.g., aerosol box) for prevention of COVID-19 among healthcare workers who perform aerosol-generating medical procedures is not recommended

Figure J3 – Recommended PPE for Healthcare Workers in Outpatient Facilities in Areas with Sustained Community Transmission

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FOOTNOTES

a Levels of PPE:

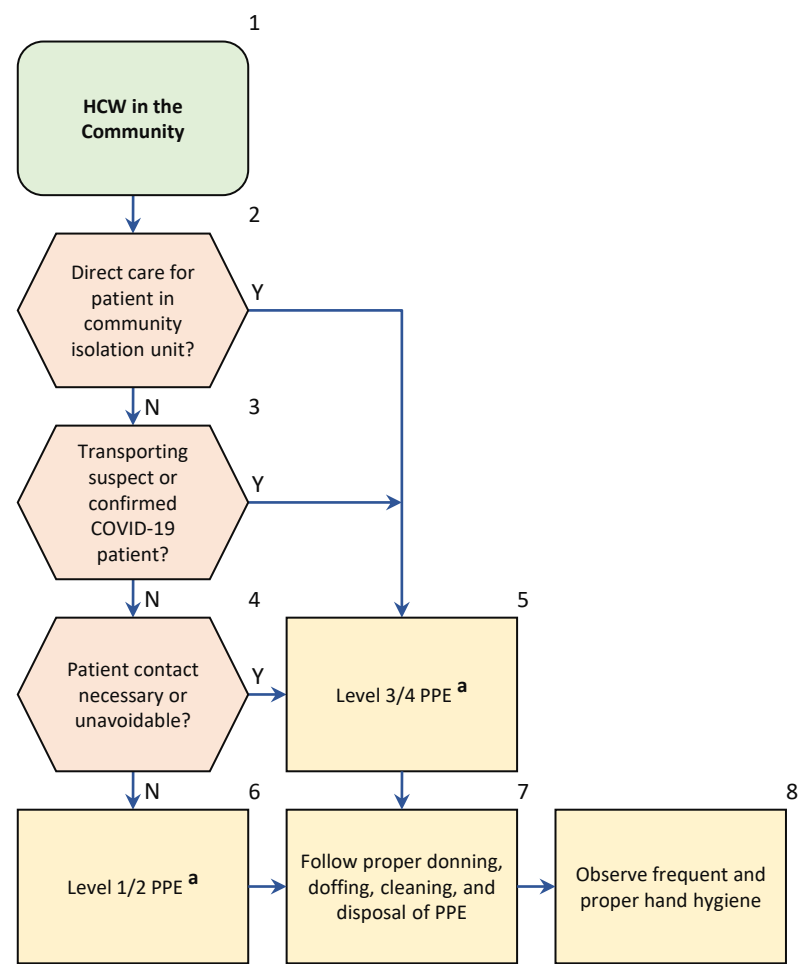
Level 1	Level 2	Level 3	Level 4
medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)
face shield	face shield	face shield or goggles	face shield or goggles
	medical protective clothing (gown)	medical protective clothing (gown)	medical protective clothing (fluid-repellant sealed well-fitting gown or coveralls)
	disposable gloves	disposable gloves	double gloves
		disposable shoe covers or dedicated closed footwear	disposable shoe covers or dedicated closed footwear
		disposable hat	scrub hat
			apron

b Aerosol-generating procedures (not limited to the following):

- Airway surgeries (e.g., ENT, thoracic, transsphenoidal surgeries)
- Autopsies
- Bronchoscopy (unless carried out through a closed-circuit ventilation system)
- Cardiopulmonary resuscitation
- Dental procedures
- Endotracheal intubation and extubation
- Evacuation of pneumoperitoneum during laparoscopic procedures
- Gastrointestinal endoscopy
- High frequency oscillatory ventilation, non-invasive ventilation (e.g., BiPAP, CPAP, HFNC)
- Nebulization, sputum induction
- Open suctioning of airways, manual ventilation
- Surgical procedures using high-speed/high-energy devices (e.g., high-speed cutters and drills, powered instrumentation, suction microdebrider, tracheotomy, tracheostomy)

Figure J4 – Recommended PPE for Healthcare Workers in the Community

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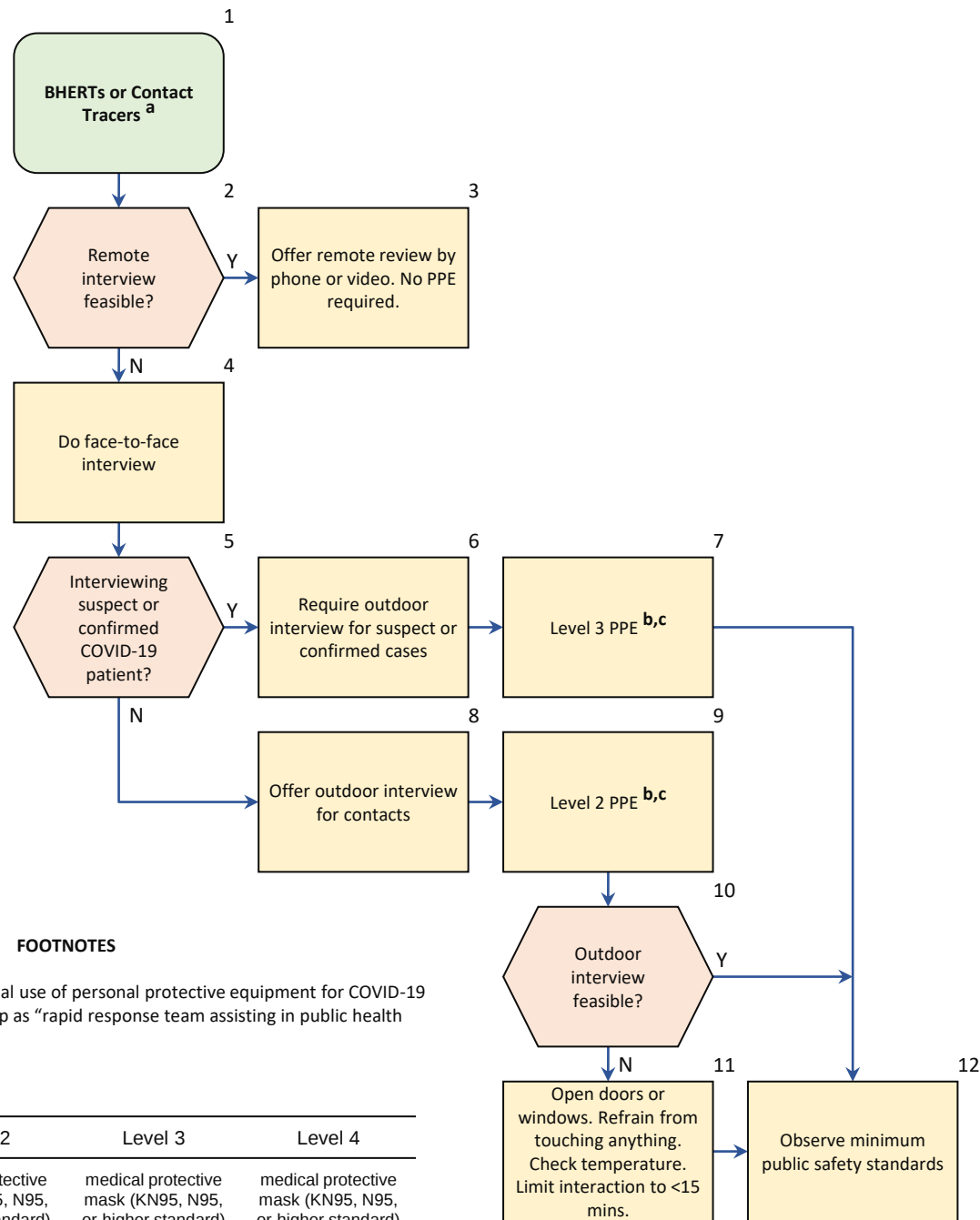
FOOTNOTES

^a Levels of PPE:

Level 1	Level 2	Level 3	Level 4
medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)
face shield	face shield	face shield or goggles	face shield or goggles
	medical protective clothing (gown)	medical protective clothing (gown)	medical protective clothing (fluid-repellant sealed well-fitting gown or coveralls)
	disposable gloves	disposable gloves	double gloves
		disposable shoe covers or dedicated closed footwear	disposable shoe covers or dedicated closed footwear
		disposable hat	scrub hat
			apron

Figure J5 – Recommended PPE for Contact Tracers
Assisting in Public Health Investigations

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FOOTNOTES

a WHO interim guidance on the rational use of personal protective equipment for COVID-19 (February 27, 2020) refers to this group as “rapid response team assisting in public health investigations.”

b Levels of PPE:

Level 1	Level 2	Level 3	Level 4
medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)
face shield	face shield	face shield or goggles	face shield or goggles
	medical protective clothing (gown)	medical protective clothing (gown)	medical protective clothing (fluid-repellant sealed well-fitting gown or coveralls)
	disposable gloves	disposable gloves	double gloves
		disposable shoe covers or dedicated closed footwear	disposable shoe covers or dedicated closed footwear
		disposable hat	scrub hat
			apron

c Follow proper donning, doffing, cleaning, and disposal of PPE. Observe frequent and proper hand hygiene.

PART K

NON-PHARMACOLOGIC

INTERVENTIONS

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Figure K – Non-Pharmacologic Interventions for Prevention and Control of COVID-19 *

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Recommendation For Use	
Strong	Weak
• Cloth or medical masks in the community • Disinfection of high touch surfaces • Use of face shield on top of face masks in the community (but this should not be required)	• HEPA filters • Protective physical barriers when physical distancing is difficult (e.g., offices, reception desk) • CO2 monitors in enclosed spaces

Recommendation Against Use	
Strong	Weak
• Foot baths • Ionizing air purifier in public spaces • UV lamps outside of the clinical setting • Misting tents or disinfection chambers • Autoclave and alcohol to disinfect N95 masks	

Insufficient Evidence For or Against Use	
• Copper masks	

* Based on the Philippine COVID-19 Living Recommendations as of May 22, 2023

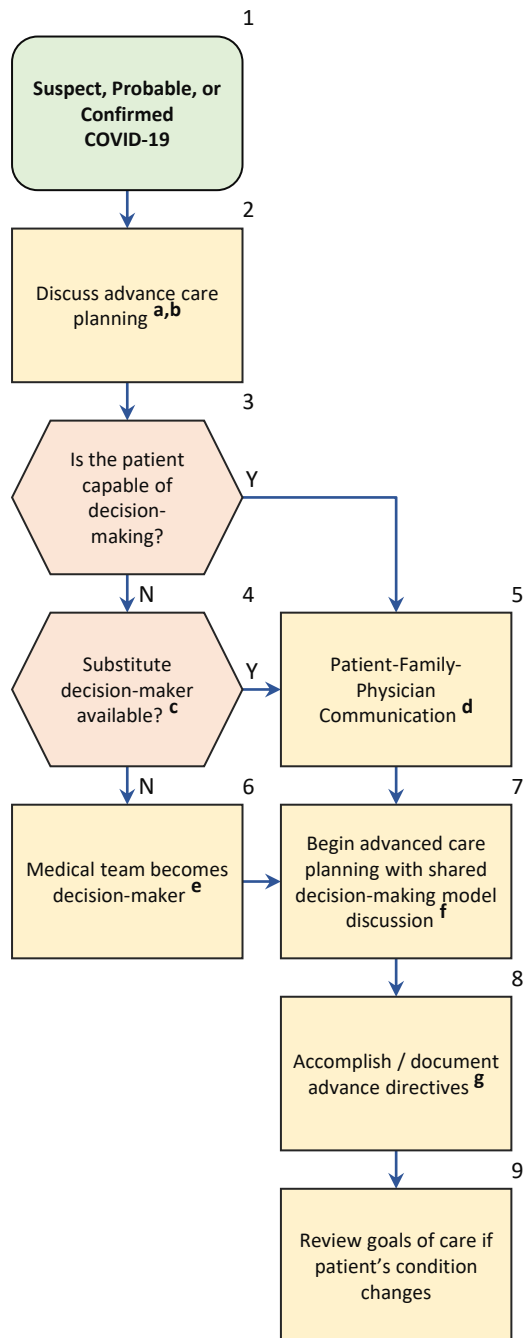
PART L

ADVANCE CARE PLANNING

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Figure L – Advance Care Planning

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FOOTNOTES

- ^a Timing of Advanced care planning discussion** – 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 Healthcare Worker team/facility capabilities among others. While too early discussion may cause distress and demoralization, when done late, may cause delay in patient/family preparation for acute medical crisis and cause incongruences in patient care.
- ^b Advance 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 s/he 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 care planning decisions if there is a change in the patient's perception of their quality of life. If lacking capacity, critical care teams should enquire about the presence of any ACP or advanced statements to better understand the beliefs of the individual. In a pandemic situation, advanced care planning at the onset of serious acute illness will be beneficial and should be given priority.
- ^c Substitute decision-maker** (also known as Surrogate decision-maker) is 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
- ^d Patient-family-physician communication** – the guide includes the following reminders:
1. Ensure comfort
 2. Listen to patient concerns
 3. Assess emotions
 4. Reassure and express support
 5. Assess need for information
 6. Deliver information with empathy
 7. Re-explore emotions and provide support
- ^e Medical team becomes decision-maker** – in the premise there is no appointed/surrogate decision-maker, the 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.
- ^f Shared decision-making model** – key component process of patient-centered healthcare 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
- ^g Advanced 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 healthcare decisions, or is in a persistent vegetative state. The document can also be accomplished by the substitute decision maker/ surrogate decision maker.

PART M

END-OF-LIFE CARE

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Figure M – End-of-Life Care for COVID-19 Patients

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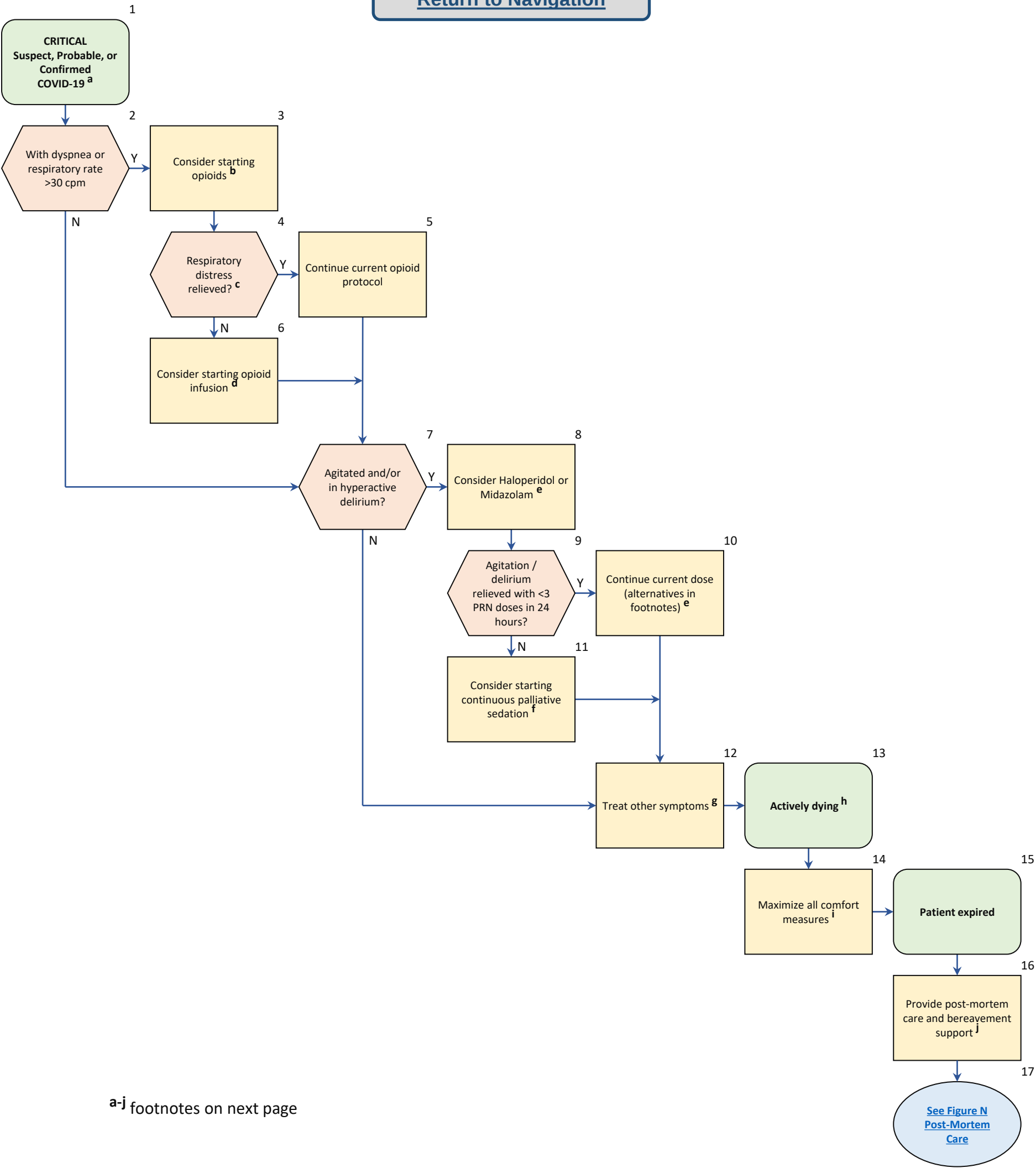


Figure M – End-of-Life Care for COVID-19 Patients

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FOOTNOTES

^a Prerequisite before using this algorithm

1. Patient / substitute decision-maker are not amenable to life-sustaining interventions and/or medical team see no reasonable chance of recovery
2. Discuss de-escalation of care. Ensure psychosocial support and provide spiritual care (may call spiritual care provider / chaplain) to patient and the family. May refer patient to palliative care team if available.

^b Opioid options for dyspnea

1. Morphine sulfate 2-4 mg IV/IM/SC every 30 minutes. Monitor.
 2. Morphine 5-10 mg PO/NGT every 4 hours. Monitor.
 3. Fentanyl IV continuous drip 12.5 mcg/hour. Monitor.
 4. Oxycodone 1-2 mg IV every 15 minutes. Monitor.
 5. Oxycodone 5-10 mg PO/NGT short-acting every 4-6 hours. Monitor
- * Do opioid precaution monitoring for opioid-naïve patients
* Do dose adjustment for opioid-tolerant patients

^c Respiratory distress relieved

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

^d Opioid 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.

^e Medications for agitation/delirium

1. Haloperidol 1.5-5 mg IV/SC every 4 hours PRN
2. Midazolam 2.5-5 mg IV/SC every 4-6 hours PRN
3. Midazolam 7.5-15 mg PO/NGT every 4-6 hours PRN
4. Diazepam 5 mg IV every 4-6 hours PRN
5. Diazepam 5 mg PO/NGT every 4-6 hours PRN
6. Rectal Diazepam 10 mg per suppository every 4-6 hours PRN

^f Palliative 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 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 system (i.e., RASS, Ramsay sedation scale).

Midazolam infusion

Start midazolam drip 20 mg in 30 mL PNSS to run at 2 mL (2 mg) / hour, titrate by increments of 1 mg/mL every hour until agitation is adequately controlled and maintain at that dose.

Alternative to midazolam for palliative sedation: diazepam 10 mg per rectum every hour or Rectal Diazepam 10 mg every hour -

^g Other symptoms

1. Anxiety:
 - Diazepam 2 mg IV/IM/SC
 - Diazepam 5 mg PO/NGT every 8 hours
 - Midazolam 2 mg IV every 4 hours
 - Midazolam 7.5-15 mg PO every 4-6 hours
2. Cough:
 - Butamirate citrate 50 mg PO/NGT every 8-12 hours
 - Levodropropizine 30 mg PO/NGT every 8 hours
 - Morphine 2.5 mg IV/SC PRN
3. Increased airway secretions:
 - Hyoscine-N-butylbromide 20 mg IV every 6-8 hours
 - Hyoscine-N-butylbromide 10-20 mg PO/NGT every 6-8 hours

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

ⁱ Comfort 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.

^j Bereavement support

After the patient's death, a member of the healthcare team should contact the family / caregiver(s) to offer condolences and answer questions of the family. Remember to follow-up with the bereaved family and offer additional bereavement or grief support as necessary.

PART N

POST-MORTEM CARE

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Figure N – Post-Mortem Care

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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), left for 15-30 minutes, and then rinsed 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), left for 10 minutes, and then rinsed with water.

End