

Unified COVID-19 Algorithms

version 4

INTRODUCTION

The Unified COVID-19 Algorithms reflect evidence updates from the Philippine COVID-19 Living Recommendations. Version 4 is now subsumed under the Philippine COVID-19 Living Recommendations initiative in order to streamline the alignment of evidence with decision-making tools. Under this, it is funded by the Department of Health (DOH) AHEAD Program through the DOST-Philippine Council for Health Research and Development (PCHRD) and the DOH-Disease Prevention and Control Bureau (DPCB).

Version 4 is built on the effort of volunteers from different medical organizations, subject matter experts, stakeholders, as well as end-users. Facilitation 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-Iina (KMI). With the Philippine context in perspective, the algorithms 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.

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 us in unifying guidance for colleagues at the frontlines. This collaboration incubated 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. Major changes in the latest version include the following:

- All algorithms were streamlined for better clarity and operational feasibility, with equity lens in mind.
- The definitions of COVID-19 severities were updated based on the latest Living CPG.
- A section discussing the implications of the strength of recommendation was added.
- The duration of isolation was revised based on the latest DOH guidelines (DOH DM 2022-0013) accounting for illness severity and vaccination status.
- For severely immunocompromised patients, the need to coordinate specialist care was emphasized.
- Guidance on testing prioritization was added especially in scenarios where resources are limited (e.g., during a surge).
- Recommendations on the use of novel COVID-19 drugs in non-hospitalized settings were added.
- Recommendations on non-pharmacologic interventions for the prevention and control of COVID-19 were added.
- Personal protective equipment (PPE) levels and components were updated based on the latest Living CPG, with consideration of airborne transmission.

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**.

DISCLAIMER

The Unified COVID-19 Algorithms are based primarily on the latest Philippine COVID-19 Living Recommendations 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 (January 3, 2022)	Triage and Testing	Management	Discharge and Reintegration
Asymptomatic Individuals	Figure A1	Figure A2	Figure A3
COVID-19 Contacts - Close contacts ¹ of confirmed, probable, or suspected cases	Figure B1	Figure B2	Figure B3
Mild COVID-19 (suspected² or confirmed) - Symptoms present, with no pneumonia, no desaturation, no risk factors	Figure C1	Figure C2	Figure C3
Moderate COVID-19 (suspected² or confirmed) - Symptoms present, with no pneumonia, no desaturation, but with risk factors ³ , OR - With pneumonia ⁴ but no signs of respiratory distress, no desaturation	Figure D1	Figure D2	Figure D3
Severe COVID-19 (suspected² or confirmed) - With pneumonia AND signs of respiratory distress ⁵ or desaturation	Figure E1	Figure E2	Figure E3
Critical COVID-19 (suspected² or confirmed) - With pneumonia AND signs of end-organ failure or shock or thrombosis ⁶	Figure F1	Figure F2	Figure F3
Other Algorithms			
Emergency Department and Transport	Figure G1-5		
Pregnancy (H1), Women About to Give Birth (H2), and Newborn (H3)	Figure H1	Figure H2	Figure H3
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

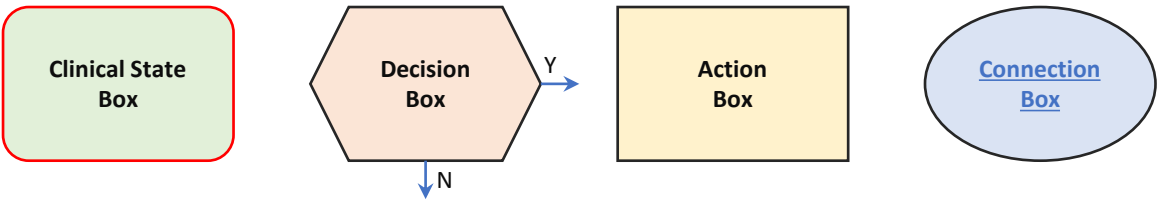
- ¹ **Close contact** – fulfilled two or more of the following exposures to a probable or confirmed case in the past 14 days: poorly ventilated indoor area, distance <1 meter, unprotected / no PPE, exposure >15 mins. Example: living with or caring for a COVID-19 patient
- ² **COVID-19 suspect** – anyone who fulfills criteria A **OR** criteria B
1. **Criteria A** – refers to a person who meets the clinical and epidemiological criteria
 - a. Clinical criteria:
 - i. acute onset of fever and cough, or
 - ii. acute onset of any three (3) or more of the following signs or symptoms: fever, cough, general weakness, fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status
 - b. Epidemiological criteria:
 - i. residing or working in an area with a high risk of transmission of virus (closed residential settings, humanitarian settings such as camp and camp-like settings for displaced persons) anytime within the fourteen (14) days prior to symptom onset, or
 - ii. residing or travel to an area with community transmission anytime within the fourteen (14) days prior to symptom onset, or
 - iii. working in any health care setting, including within health facilities or within the community, anytime within the fourteen (14) days prior to symptom onset
 2. **Criteria B** – refers to a patient with 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 **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 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.

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

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

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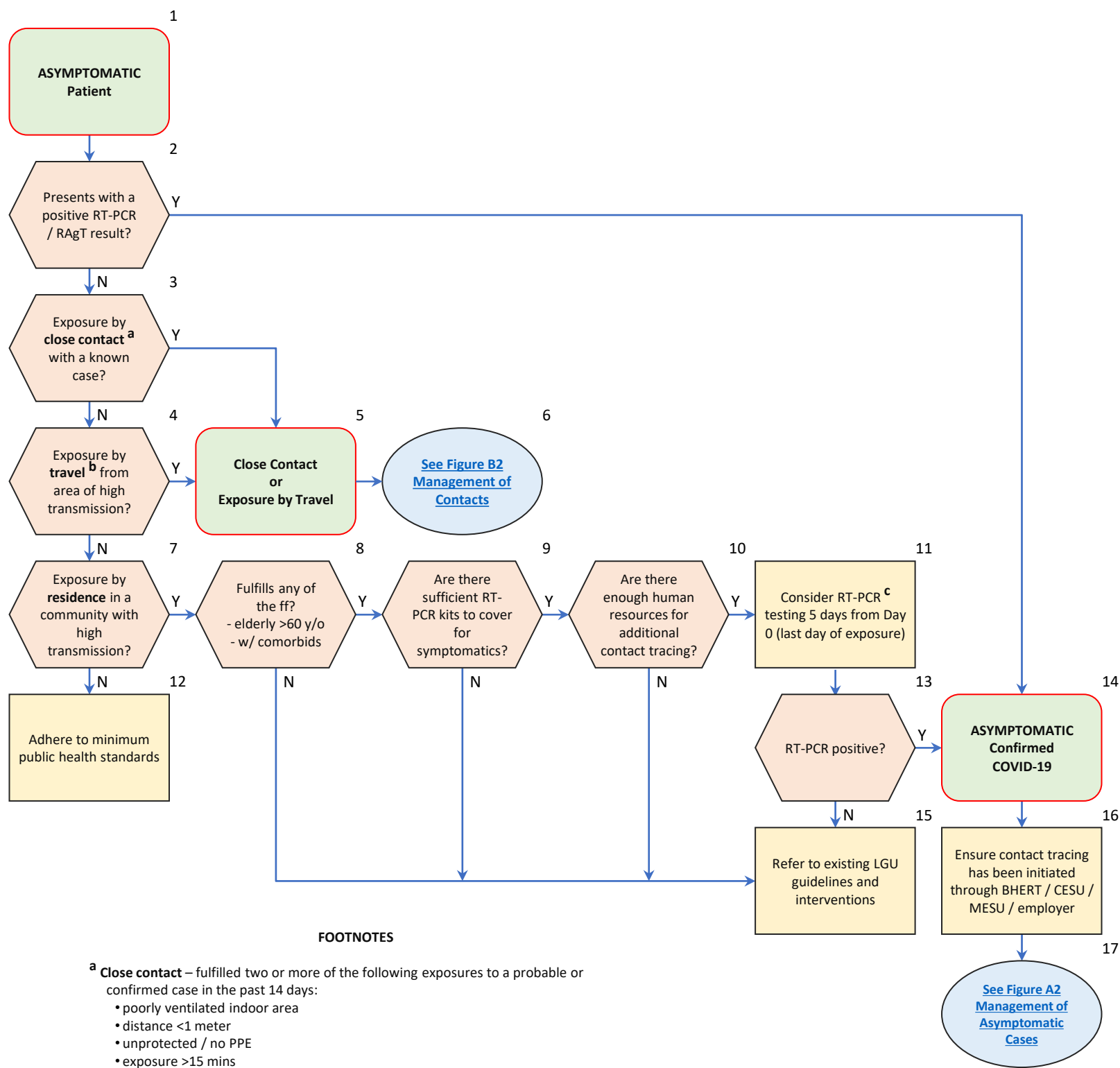
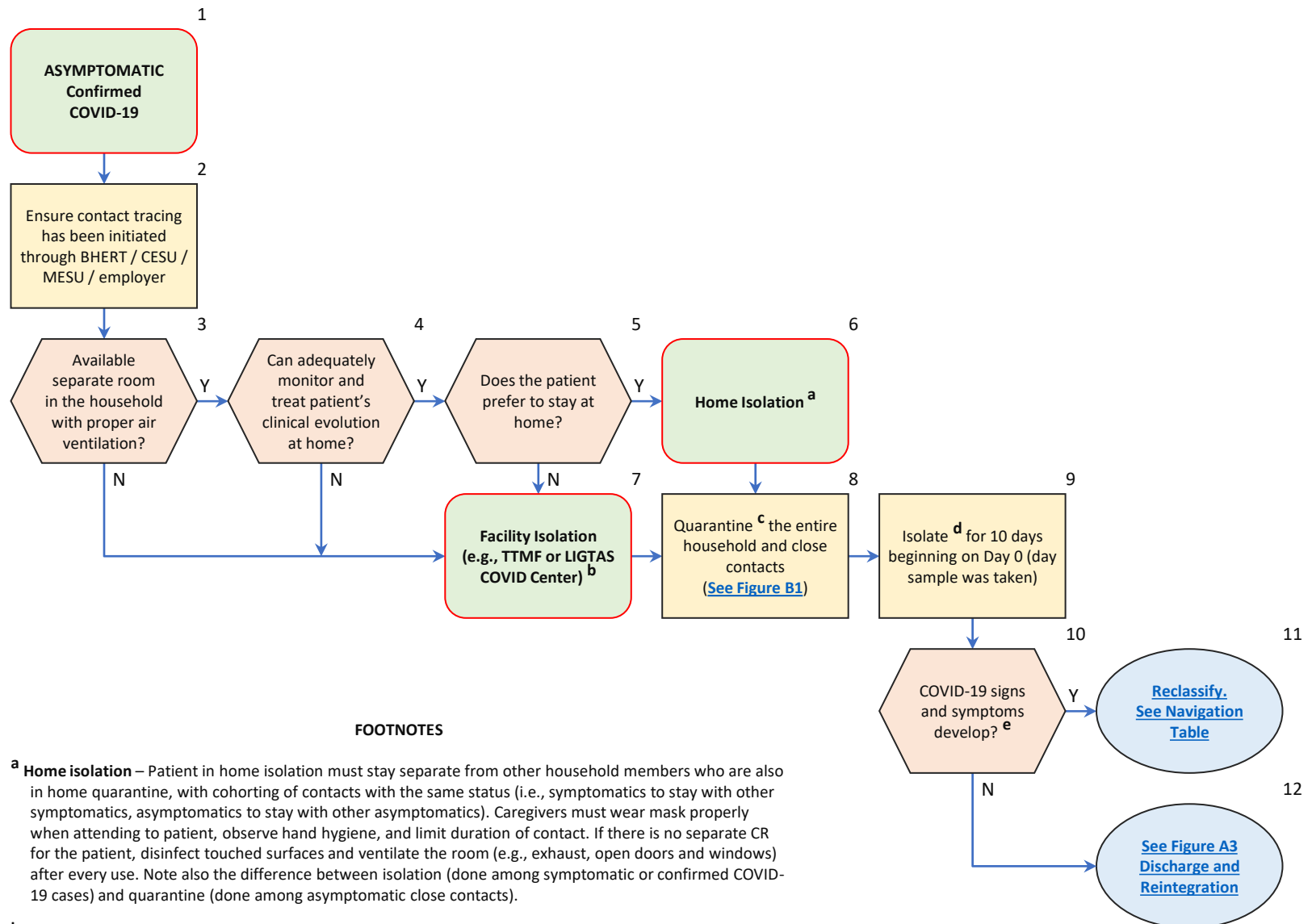


Figure A2 – Asymptomatic COVID-19 (Management)

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FOOTNOTES

a Home isolation – Patient in home isolation must stay separate from other household members who are also in home quarantine, with cohorting of contacts with the same status (i.e., symptomatics to stay with other symptomatics, asymptomatics to stay with other asymptomatics). Caregivers must wear mask properly when attending to patient, observe hand hygiene, and limit duration of contact. 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. Note also the difference between isolation (done among symptomatic or confirmed COVID-19 cases) and quarantine (done among asymptomatic close contacts).

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, young children, persons with disabilities, mothers with young infants, etc).

c Home quarantine – All members of the household must strictly stay at home per LGU protocol.

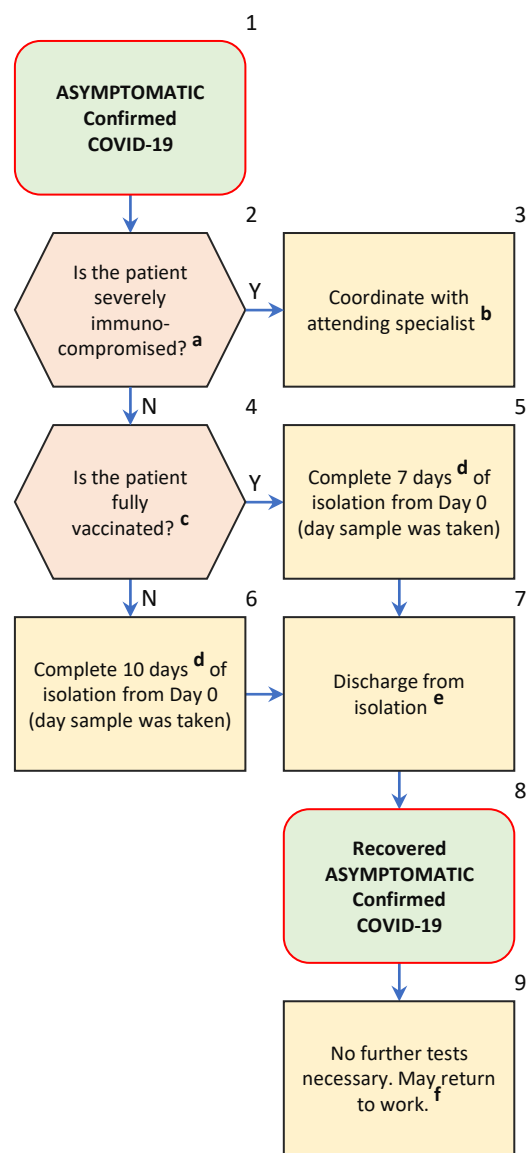
d Initiate isolation monitoring by Barangay Health Emergency Response Team (BHERT).

- Accomplish a Case Investigation Form (CIF) by BHERT and/or primary care provider.
- Ensure daily monitoring throughout the duration of isolation and household quarantine. Monitor patient via telemedicine whenever feasible.
- Facilitate home care and social safety nets as needed.

e COVID-19 signs and symptoms – fever, cough, general weakness, fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status, anosmia, ageusia / dysgeusia

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 to the individual 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 Philippine COVID-19 Living Recommendations and DOH Advisories on latest vaccination guidelines.
- ^d Based on DOH Department Memorandum 2022-0013 (January 14, 2022).
- ^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-DTI Joint Memorandum Circular 20-04-A (August 15, 2020)
 - DOH Workplace Handbook (September 30, 2020)

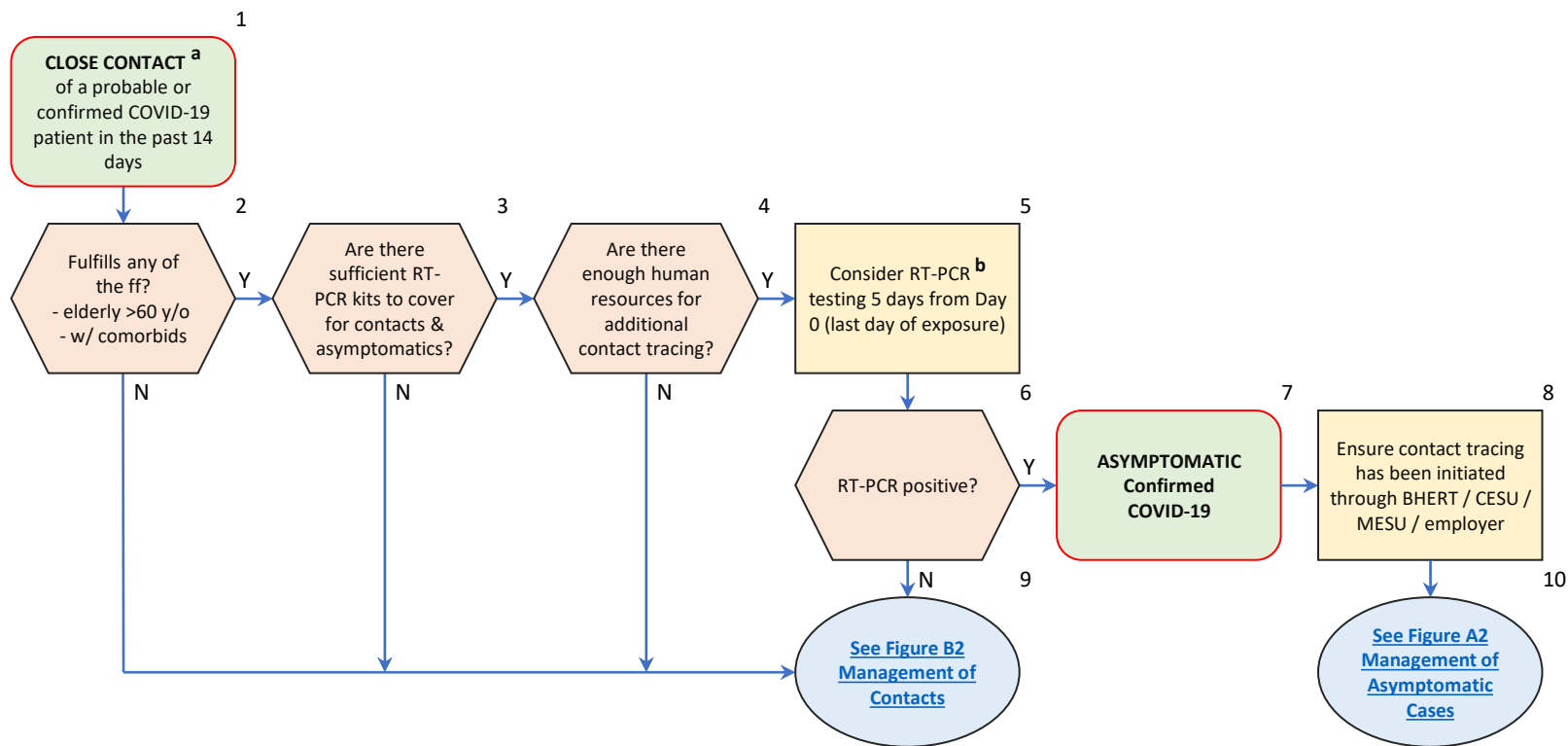
PART B

CONTACTS

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Figure B1 – Contacts (Triage and Evaluation)

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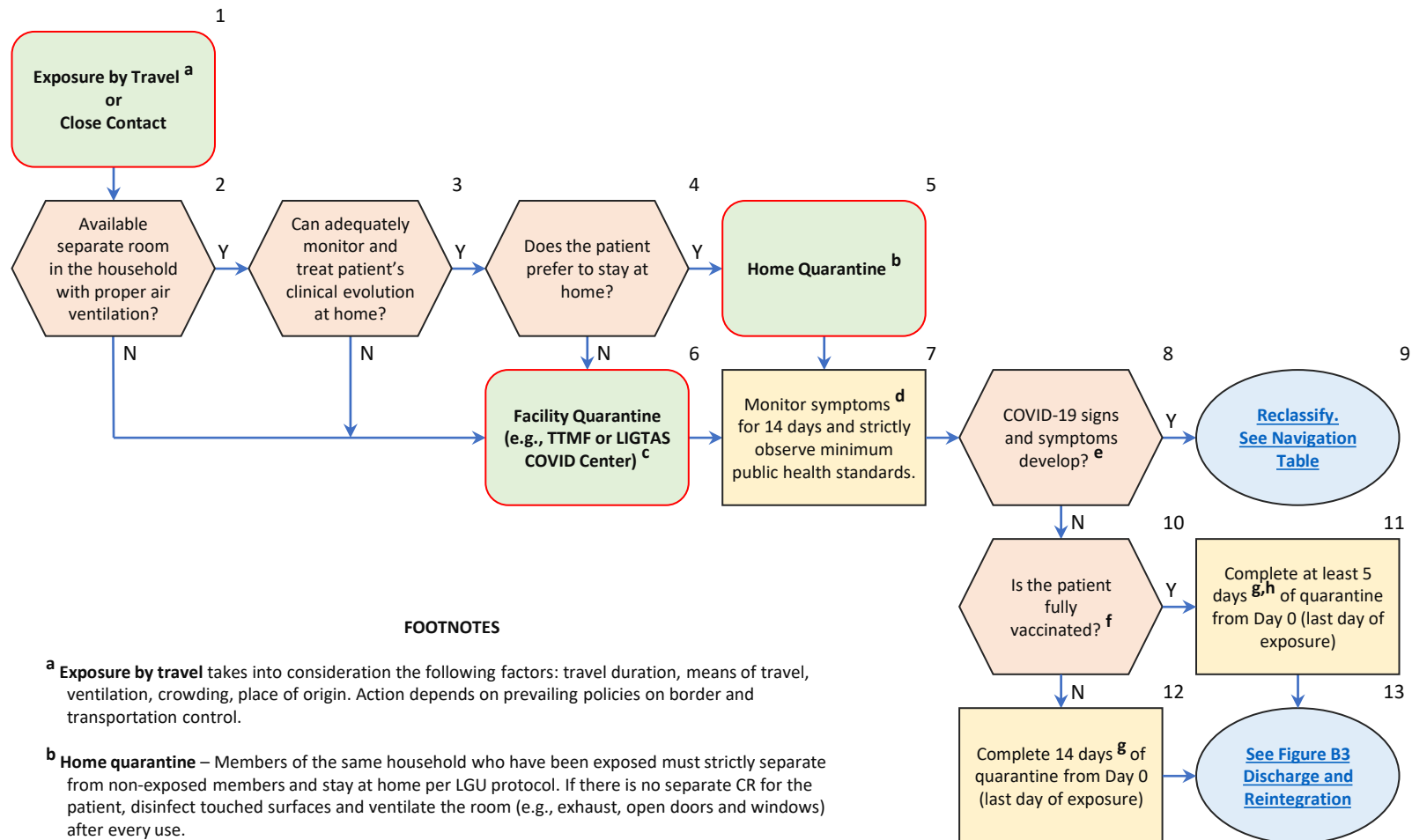


FOOTNOTES

- ^a **Close contact** – fulfilled two or more of the following exposures to a probable or confirmed case in the past 14 days:
- poorly ventilated indoor area
 - distance <1 meter
 - unprotected / no PPE
 - exposure >15 mins
- ^b **Rapid antigen tests** are not recommended for screening (asymptomatic individuals).

Figure B2 – Contacts (Management)

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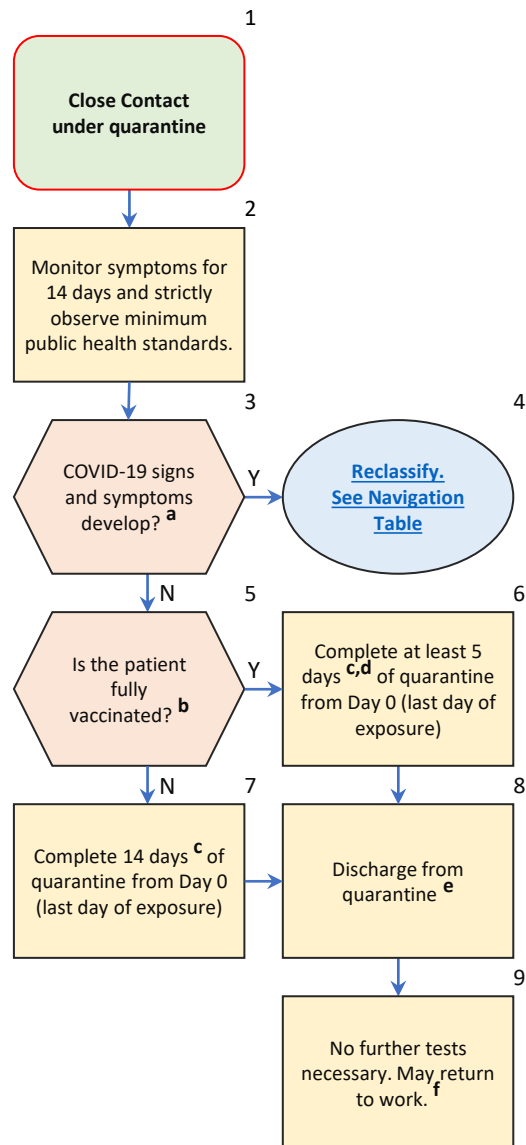


FOOTNOTES

- ^a **Exposure by travel** takes into consideration the following factors: travel duration, means of travel, ventilation, crowding, place of origin. Action depends on prevailing policies on border and transportation control.
- ^b **Home quarantine** – Members of the same household who have been exposed must strictly separate from non-exposed members and stay at home per LGU protocol. 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 quarantine** – Contacts shall be provided with individual quarantine 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, young children, persons with disabilities, mothers with young infants, etc).
- ^d **Initiate quarantine monitoring by Barangay Health Emergency Response Team (BHERT).**
- Accomplish a Case Investigation Form (CIF) by BHERT and/or primary care provider.
 - Ensure daily monitoring throughout the duration of quarantine. Monitor patient via telemedicine whenever feasible.
 - Facilitate home care and social safety nets as needed.
- ^e **COVID-19 signs and symptoms** – fever, cough, general weakness, fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status, anosmia, ageusia / dysgeusia
- ^f **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 to the individual 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.
- ^g Based on DOH Department Memorandum 2022-0013 (January 14, 2022).
- ^h All asymptomatic close contacts should continue symptom monitoring for 14 days and strictly observe minimum public health standards (wearing well-fitted masks, physical distancing, etc).

Figure B3 – Contacts (Discharge and Reintegration)

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FOOTNOTES

a COVID-19 signs and symptoms – fever, cough, general weakness, fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status, anosmia, ageusia / dysgeusia

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 to the individual 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 Philippine COVID-19 Living Recommendations and DOH Advisories on latest vaccination guidelines.

c Based on DOH Department Memorandum 2022-0013 (January 14, 2022).

d All asymptomatic close contacts should continue symptom monitoring for 14 days and strictly observe minimum public health standards (wearing well-fitted masks, physical distancing, etc).

e RT-PCR tests, rapid antibody tests, and rapid antigen tests are NOT recommended for work clearance.

f Refer to **workplace guidelines**.

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

PART C

MILD COVID-19

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Figure C1 – 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. Refers to a person who meets the clinical and epidemiological criteria

a. Clinical criteria:

- acute onset of fever and cough, or
- acute onset of any three (3) or more of the following signs or symptoms: fever, cough, general weakness, fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia, nausea, vomiting, diarrhea, altered mental status

b. Epidemiological criteria:

- residing or working in an area with a high risk of transmission of virus (closed residential settings, humanitarian settings such as camp and camp-like settings for displaced persons) anytime within the fourteen (14) days prior to symptom onset, or
- residing or travel to an area with community transmission anytime within the fourteen (14) days prior to symptom onset, or
- working in any health care setting, including within health facilities or within the community, anytime within the fourteen (14) days prior to symptom onset

2. Refers to a patient with 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

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

- A1 – workers in frontline health services
- A2 – senior citizens
- A3 – persons with comorbidities

^c **Close contact** – fulfilled two or more of the following exposures to a probable or confirmed case in the past 14 days:

- poorly ventilated indoor area
- distance <1 meter
- unprotected / no PPE
- exposure >15 mins

^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 the following conditions are met:

- Individuals are 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 $\geq 97\%$
- Use of saliva as specimen for rapid antigen test is not recommended

^f **Cluster** – group of symptomatic individuals linked by time, geographic location and common exposures, containing at least one RT-PCR confirmed case OR at least two epidemiologically linked, symptomatic persons with positive rapid antigen test

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

1. chest radiograph – hazy opacities, often rounded in morphology, with peripheral and lower lung distribution
2. chest CT scan – 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

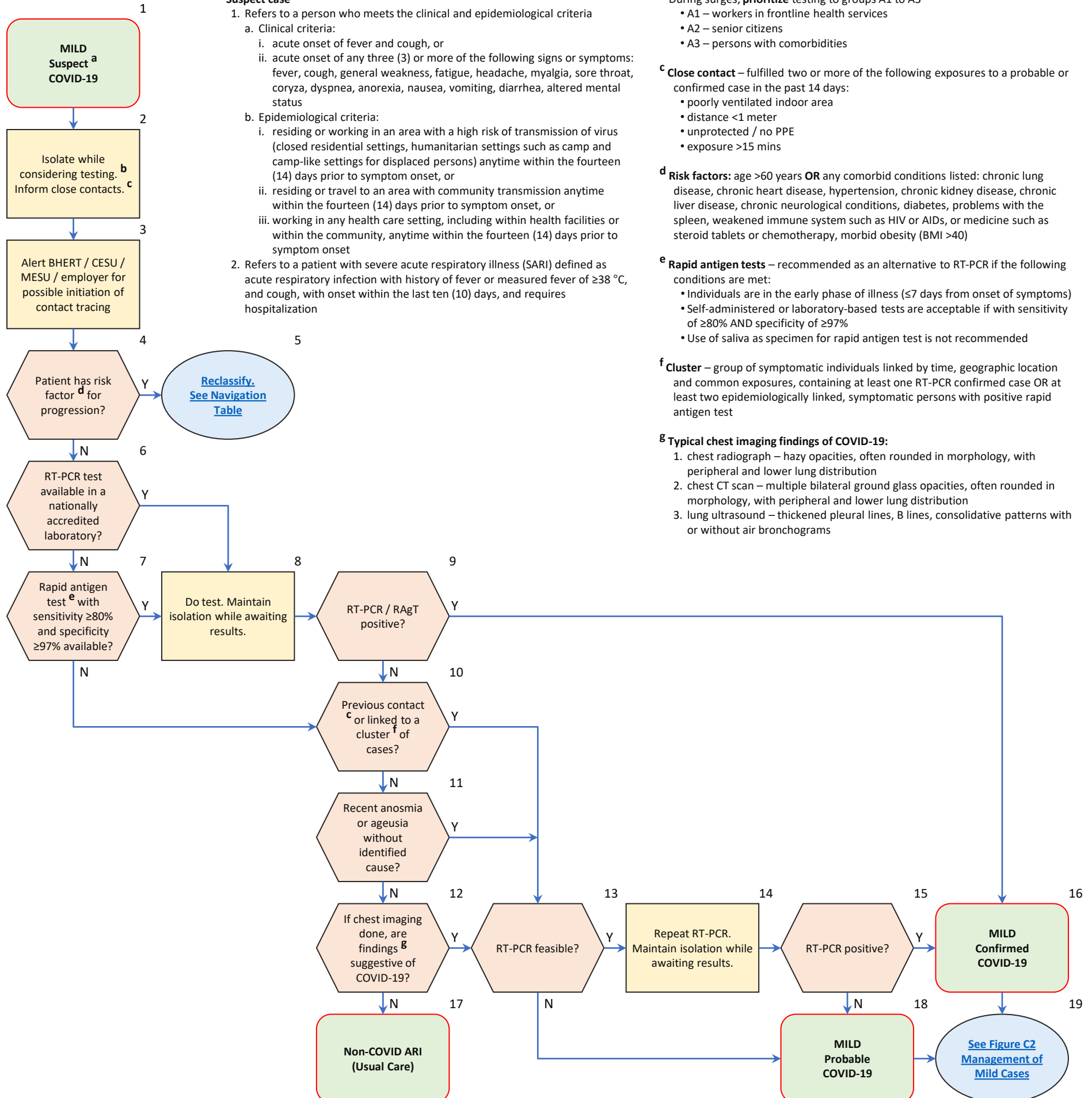


Figure C2 – Mild COVID-19 (Management)
Symptoms present, with no pneumonia, no desaturation, no risk factors

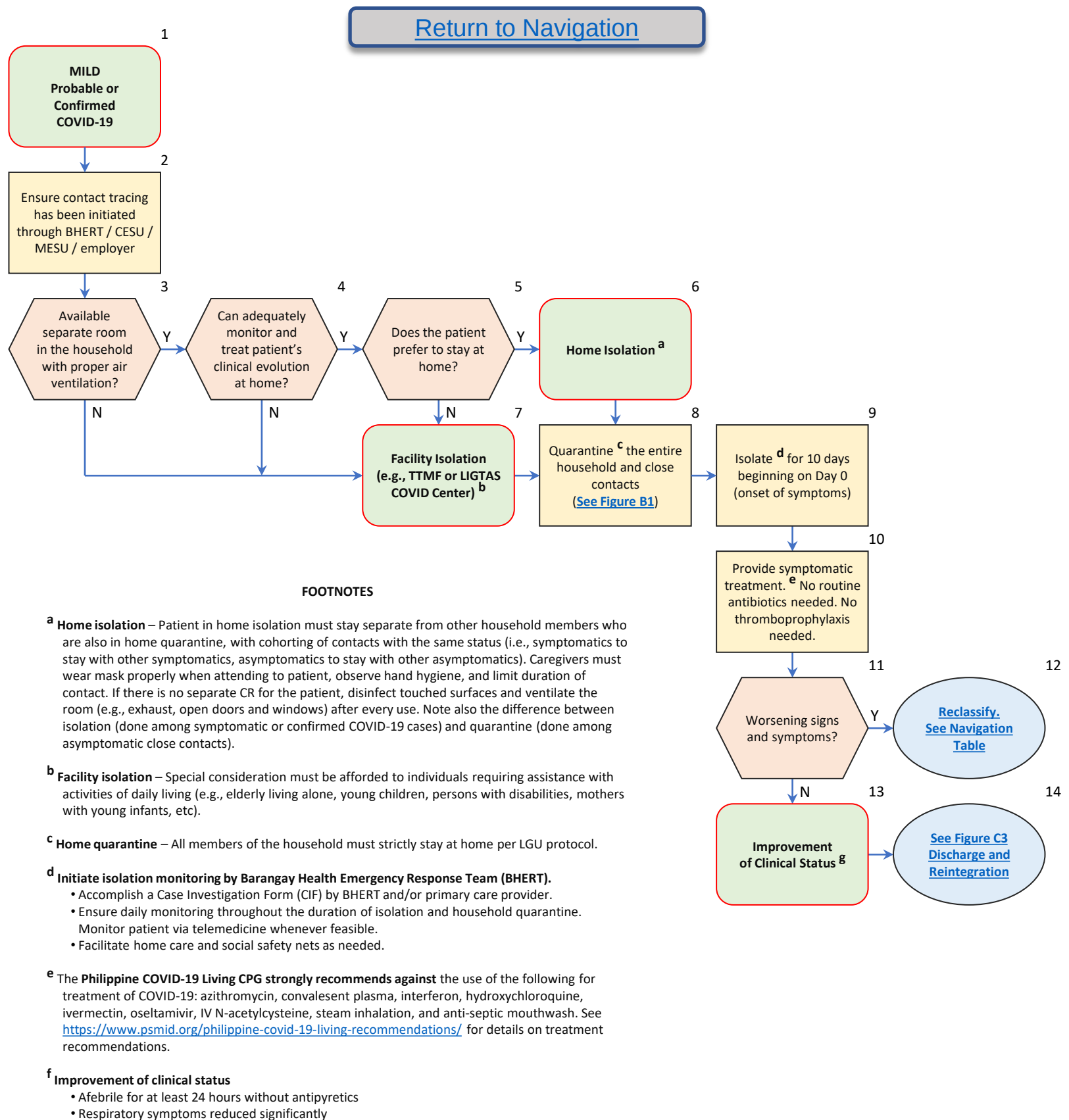
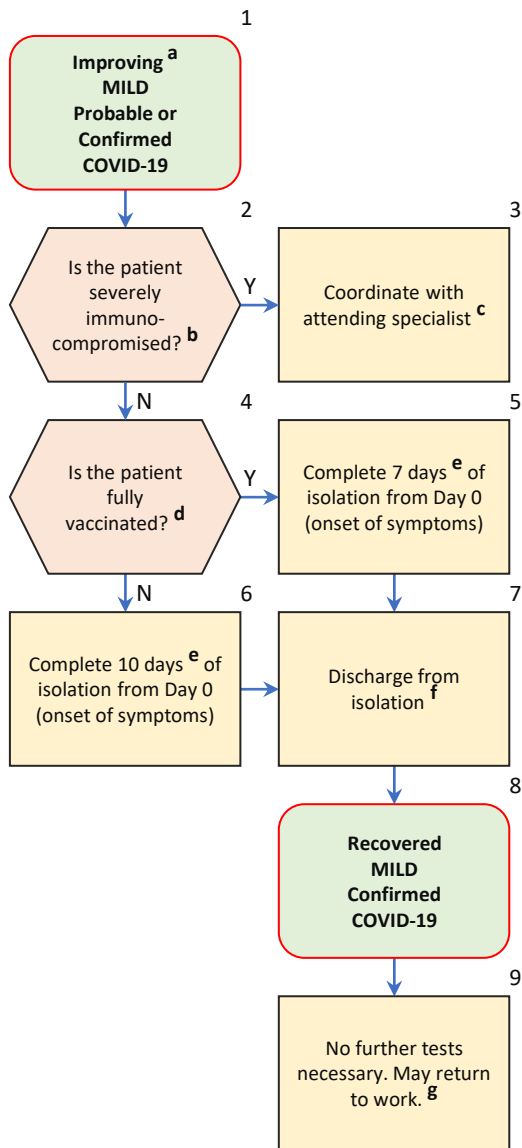


Figure C3 – Mild COVID-19 (Discharge and Reintegration)

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

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FOOTNOTES

^a Improvement of clinical status

- Afebrile for at least 24 hours without antipyretics
- Respiratory symptoms reduced significantly

^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 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 to the individual 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 Philippine COVID-19 Living Recommendations and DOH Advisories on latest vaccination guidelines.

^e Based on DOH Department Memorandum 2022-0013 (January 14, 2022).

^f 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.

^g Refer to workplace guidelines.

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

PART D

MODERATE COVID-19

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

Symptoms present, with no 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 – fulfilled two or more of the following exposures to a probable or confirmed case in the past 14 days:

- poorly ventilated indoor area
- distance <1 meter
- unprotected / no PPE
- exposure >15 mins

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:

1. best clinical judgment of the health provider
2. appropriateness of health care facility
3. geographical access to the next higher-level facility
4. patient context

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

- Individuals are 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%
- Use of saliva as specimen for rapid antigen test is not recommended

e Cluster – group of symptomatic individuals linked by time, geographic location and common exposures, containing at least one RT-PCR confirmed case OR at least two epidemiologically linked, symptomatic persons with positive rapid antigen test

f Typical chest imaging findings of COVID-19:

1. chest radiograph – hazy opacities, often rounded in morphology, with peripheral and lower lung distribution
2. chest CT scan – 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

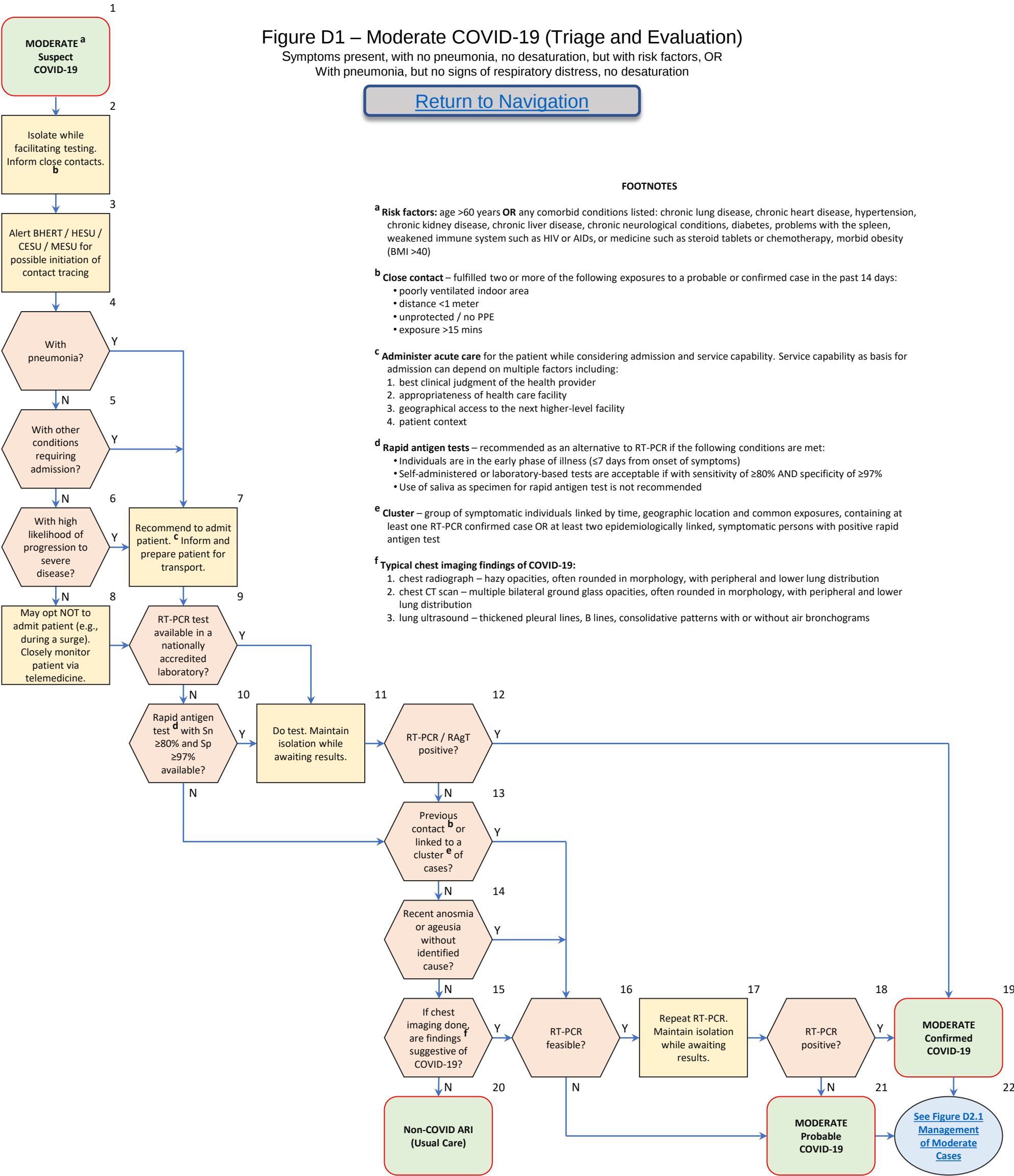
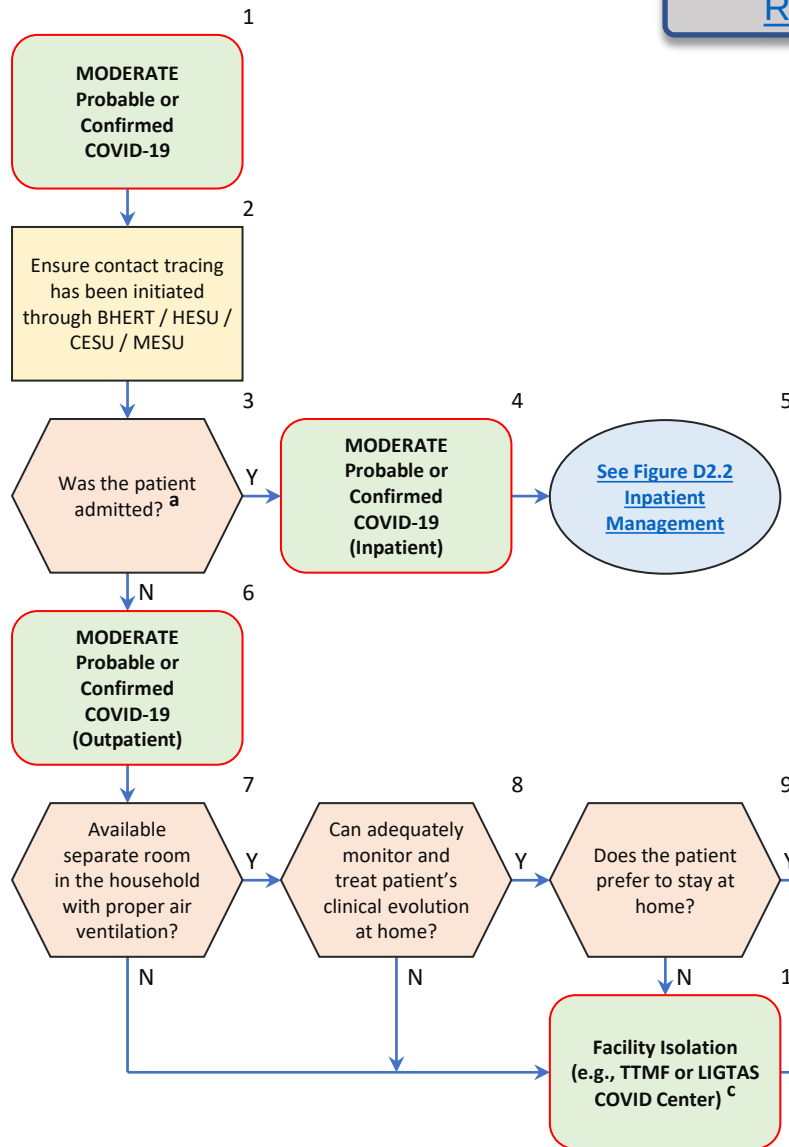


Figure D2.1 – Moderate COVID-19 (Outpatient Management)

Symptoms present, with no 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 can depend on multiple factors including:
1. best clinical judgment of the health provider
 2. appropriateness of health care facility
 3. geographical access to the next higher-level facility
 4. patient context
- ^b Home isolation – Patient in home isolation must stay separate from other household members who are also in home quarantine, with cohorting of contacts with the same status (i.e., symptomatics to stay with other symptomatics, asymptomatics to stay with other asymptomatics). Caregivers must wear mask properly when attending to patient, observe hand hygiene, and limit duration of contact. 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. Note also the difference between isolation (done among symptomatic or confirmed COVID-19 cases) and quarantine (done among asymptomatic close contacts).
- ^c Facility 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).
- ^d Home quarantine – All members of the household must strictly stay at home per LGU protocol.

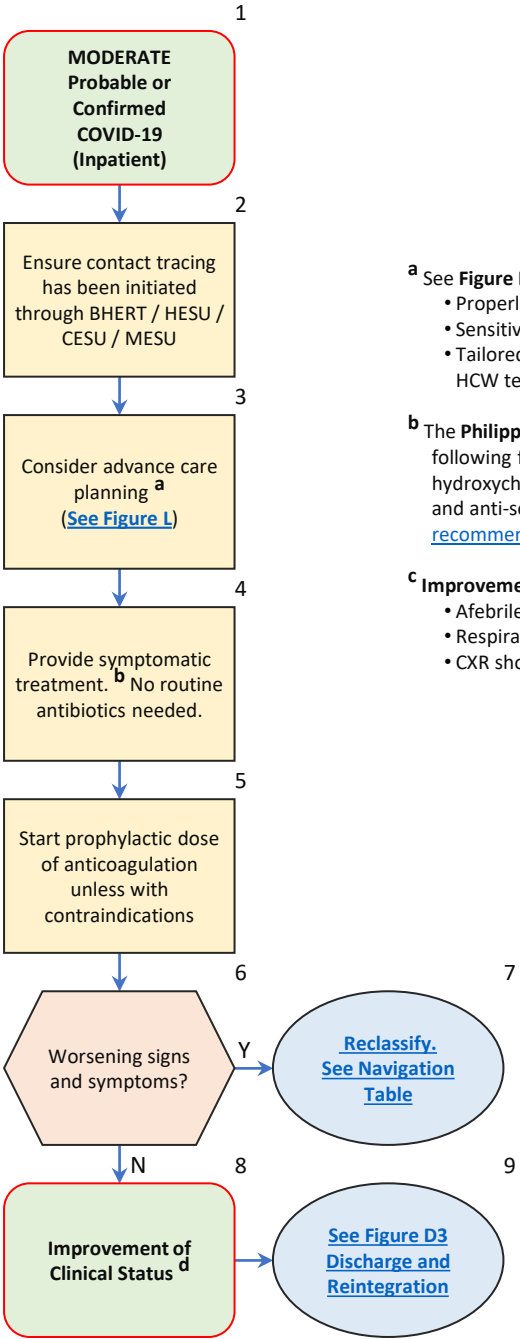
FOOTNOTES (continued)

- ^e Initiate isolation monitoring by Barangay Health Emergency Response Team (BHERT).
- Accomplish a Case Investigation Form (CIF) by BHERT and/or primary care provider.
 - Ensure daily monitoring throughout the duration of isolation and household quarantine. Monitor patient via telemedicine whenever feasible.
 - Facilitate home care and social safety nets as needed.
- ^f The Philippine COVID-19 Living CPG strongly recommends against the use of the following for treatment of COVID-19: azithromycin, convalescent plasma, interferon, hydroxychloroquine, ivermectin, oseltamivir, IV N-acetylcysteine, steam inhalation, and anti-septic mouthwash. See <https://www.psmid.org/philippine-covid-19-living-recommendations/> for details on treatment recommendations.
- ^g Novel COVID-19 drugs and risk factors:
1. **Molnupiravir**: age >60 years, active cancer, chronic kidney disease, chronic obstructive pulmonary disease, obesity, serious heart conditions, or diabetes mellitus
 2. **Bamlanivimab-Etesevimab**: 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
 3. **Casirivimab-Imdevimab**: age >50 years, 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
- ^h Improvement of clinical status
- Afebrile for at least 24 hours without antipyretics
 - Respiratory symptoms reduced significantly
 - CXR shows significant improvement if available

Figure D2.2 – Moderate COVID-19 (Inpatient Management)

Symptoms present, with no pneumonia, no desaturation, but with risk factors, OR
With pneumonia, but no signs of respiratory distress, no desaturation

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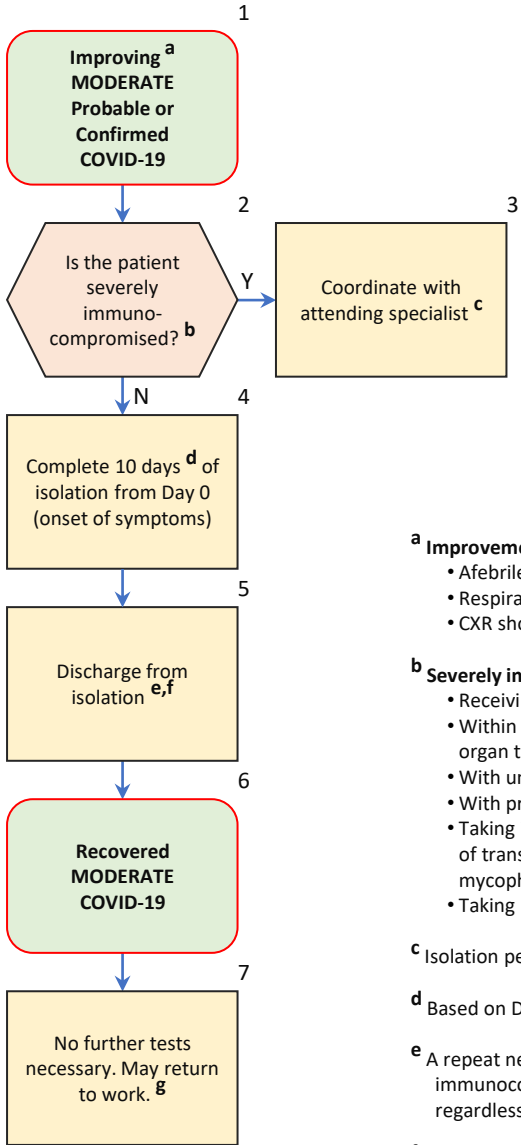
FOOTNOTES

- ^a See **Figure L** for **advanced 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, convalescent plasma, interferon, hydroxychloroquine, ivermectin, oseltamivir, IV N-acetylcysteine, steam inhalation, and anti-septic mouthwash. See <https://www.psmid.org/philippine-covid-19-living-recommendations/> for details on treatment recommendations.
- ^c **Improvement of clinical status:**
- Afebrile for at least 24 hours without antipyretics
 - Respiratory symptoms reduced significantly
 - CXR shows significant improvement if available

Figure D3 – Moderate COVID-19 (Discharge and Reintegration)

Symptoms present, with no 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 24 hours without antipyretics
 - Respiratory symptoms reduced significantly
 - 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** Based on DOH Department Memorandum 2022-0013 (January 14, 2022).
- ^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 Recommendations and DOH Advisories on latest vaccination guidelines.
- ^g** Refer to **workplace guidelines**.
- DOLE-DTI Joint Memorandum Circular 20-04-A (August 15, 2020)
 - DOH Workplace Handbook (September 30, 2020)

PART E

SEVERE COVID-19

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

With pneumonia AND signs of respiratory distress or desaturation

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FOOTNOTES

a Close contact – fulfilled two or more of the following exposures to a probable or confirmed case in the past 14 days:

- poorly ventilated indoor area
- distance <1 meter
- unprotected / no PPE
- exposure >15 mins

b Administer 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 judgment of the health provider
2. appropriateness of health care facility
3. geographical access to the next higher-level facility
4. patient context

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

d See **Figure L** for advanced 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 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 $\geq 97\%$
- Use of saliva as specimen for rapid antigen test is not recommended

f Cluster – group of symptomatic individuals linked by time, geographic location and common exposures, containing at least one RT-PCR confirmed case OR at least two epidemiologically linked, symptomatic persons with positive rapid antigen test

g Typical chest imaging findings of COVID-19:

1. chest radiograph – hazy opacities, often rounded in morphology, with peripheral and lower lung distribution
2. chest CT scan – 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

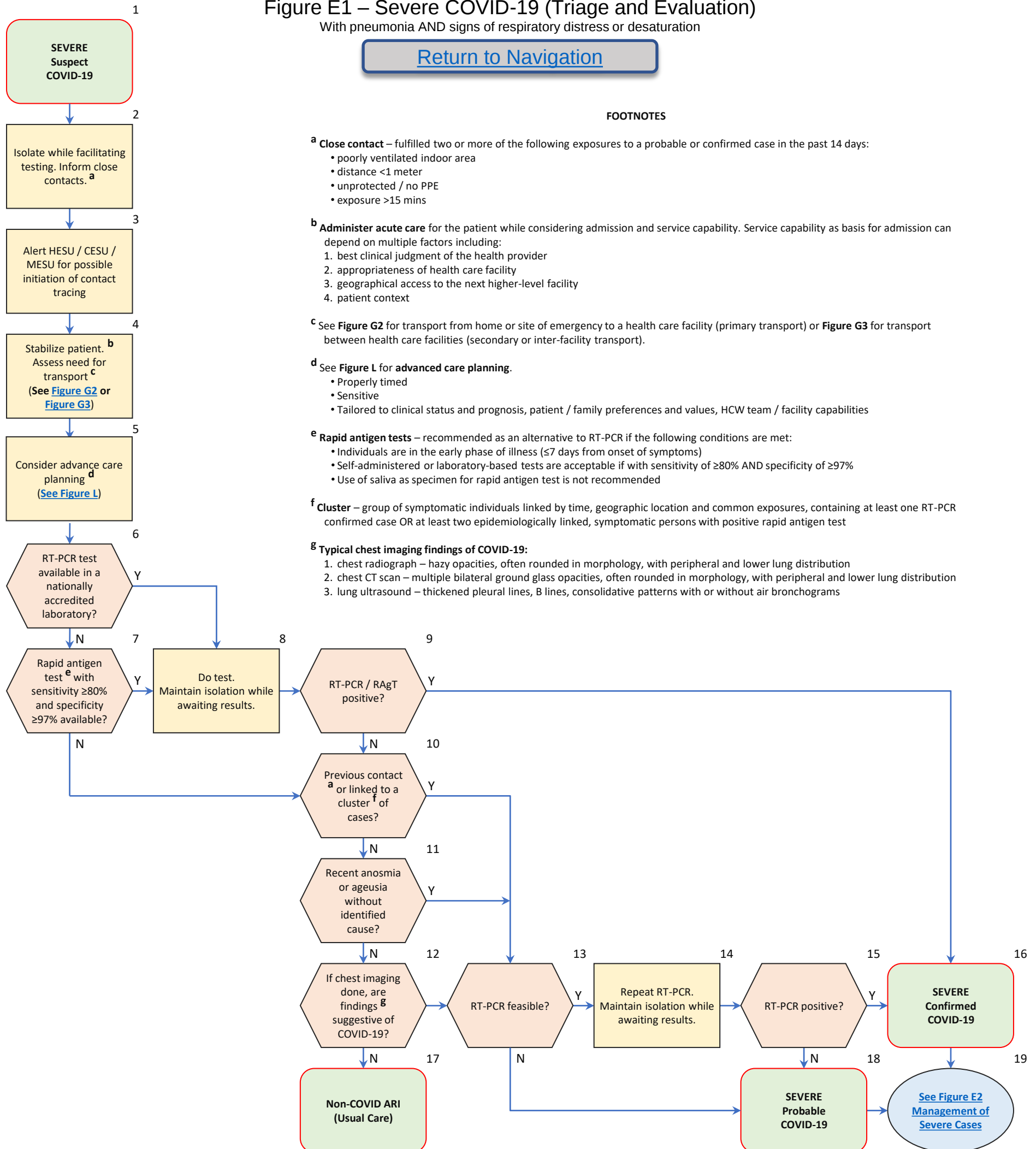


Figure E2 – Severe COVID-19 (Management)
With pneumonia AND signs of respiratory distress or desaturation

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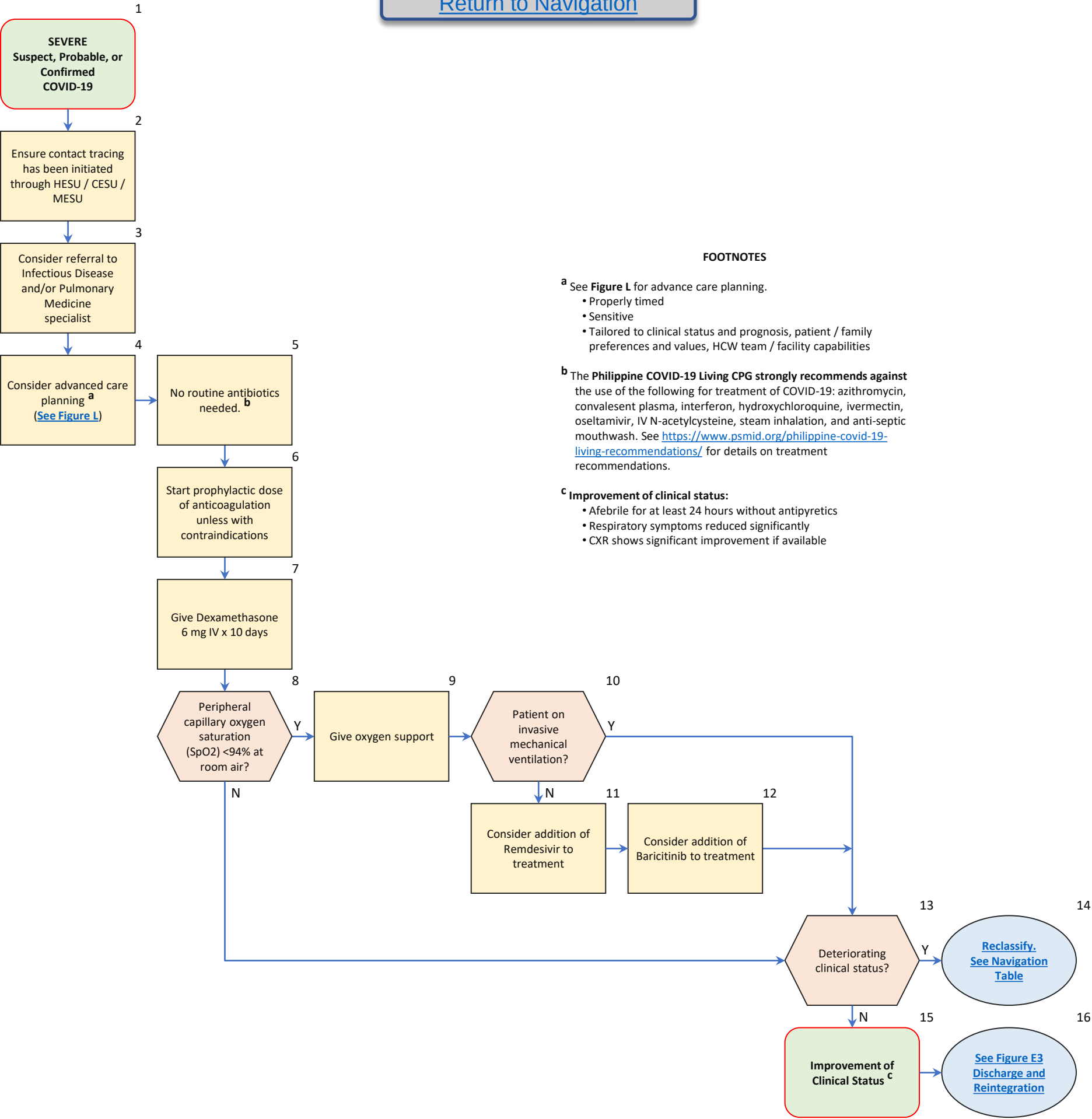
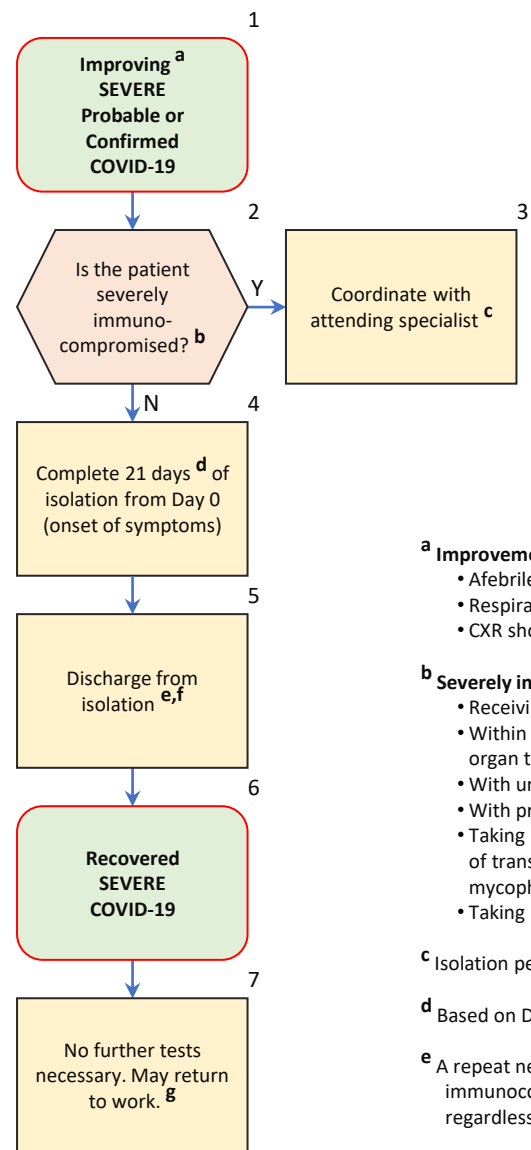


Figure E3 – Severe COVID-19 (Discharge and Reintegration)
With pneumonia AND signs of respiratory distress or desaturation

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FOOTNOTES

- ^a Improvement of clinical status**
- Afebrile for at least 24 hours without antipyretics
 - Respiratory symptoms reduced significantly
 - 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** Based on DOH Department Memorandum 2022-0013 (January 14, 2022).
- ^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 Recommendations and DOH Advisories on latest vaccination guidelines.
- ^g** Refer to **workplace guidelines**.
- DOLE-DTI Joint Memorandum Circular 20-04-A (August 15, 2020)
 - DOH Workplace Handbook (September 30, 2020)

PART F

CRITICAL COVID-19

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Figure F1 – Critical COVID-19 (Triage and Evaluation)

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

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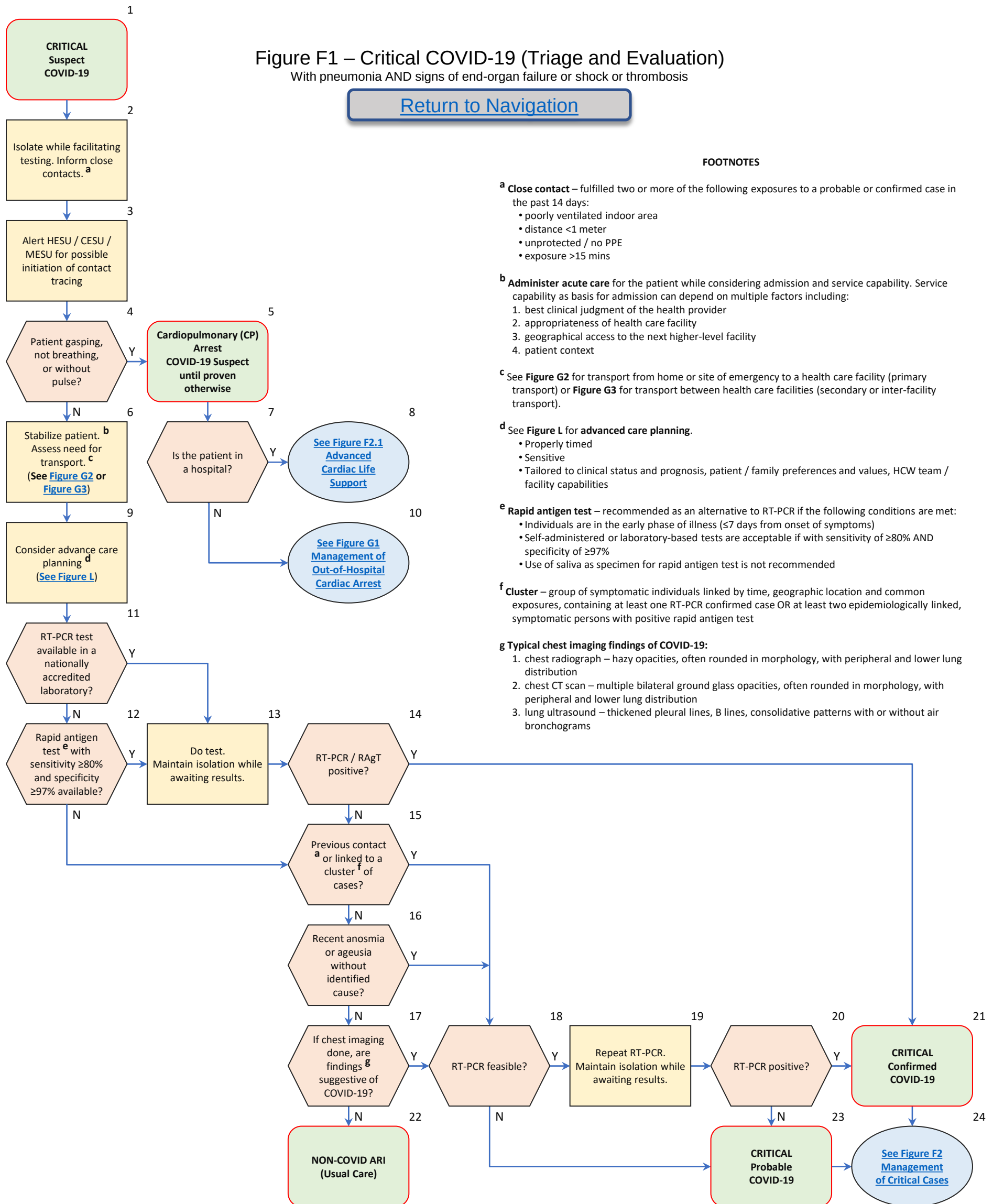


Figure F2 – Critical COVID-19 (Management)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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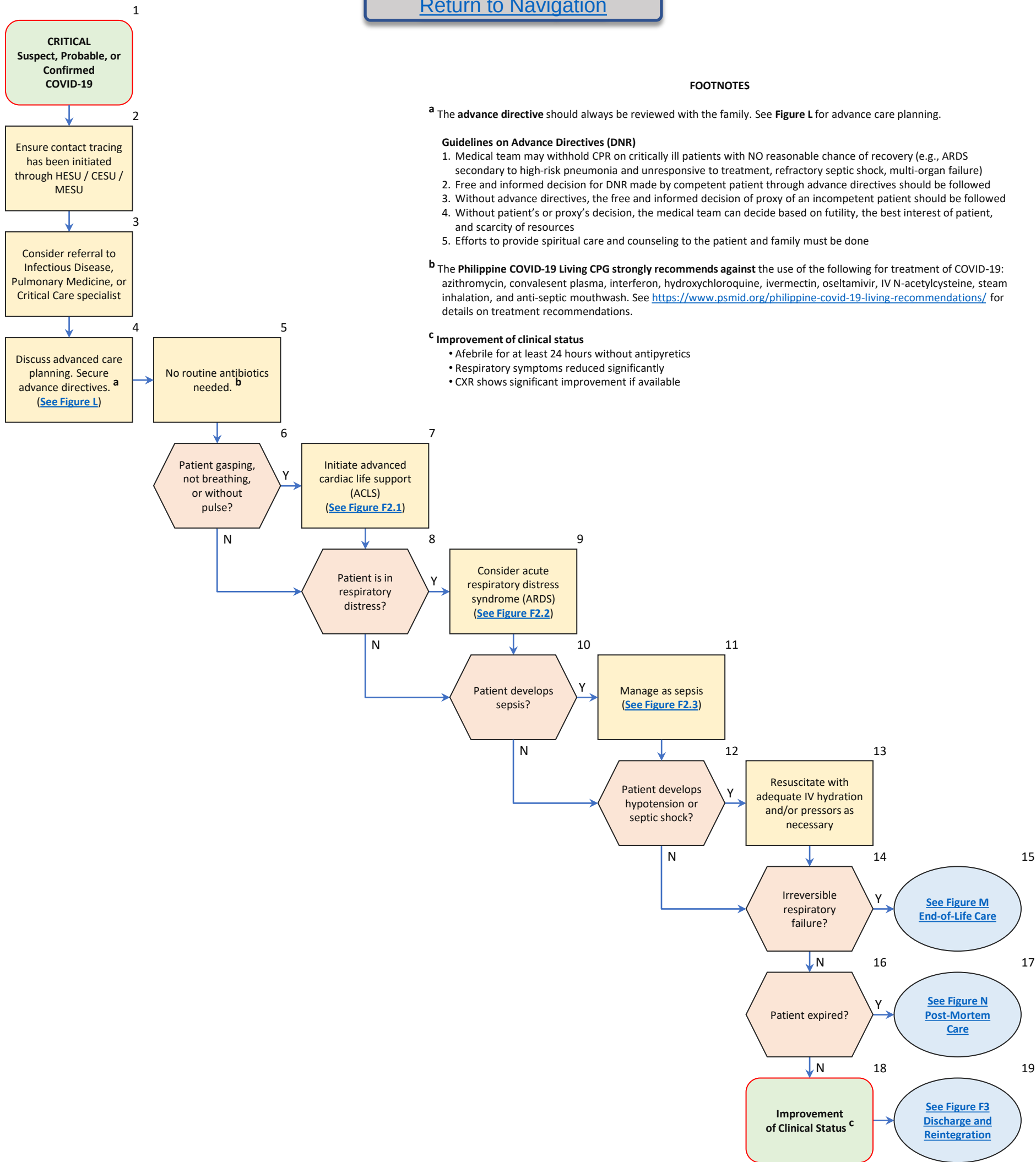


Figure F2.1 – Critical COVID-19 (Advanced Cardiac Life Support or ACLS)

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

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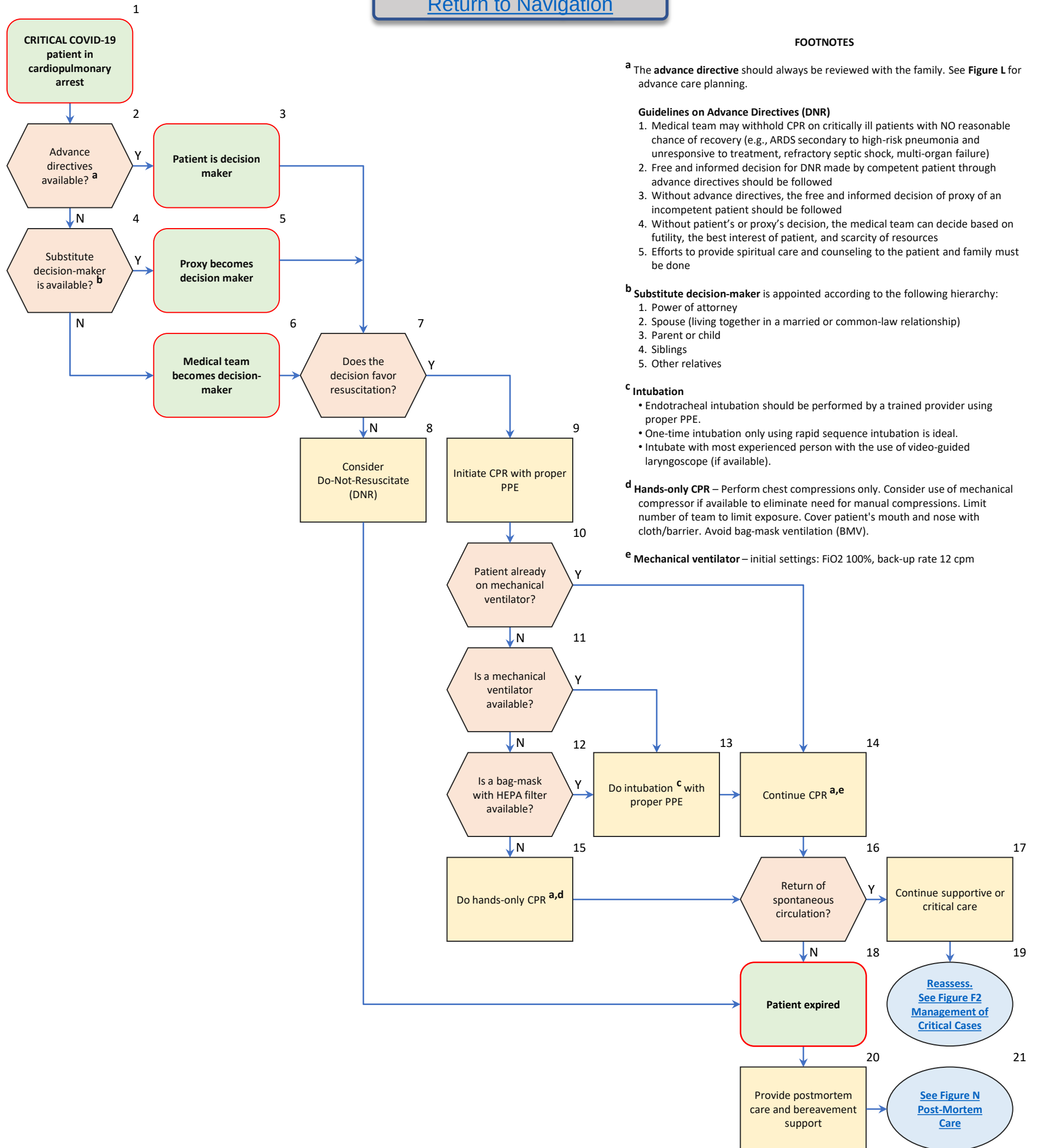
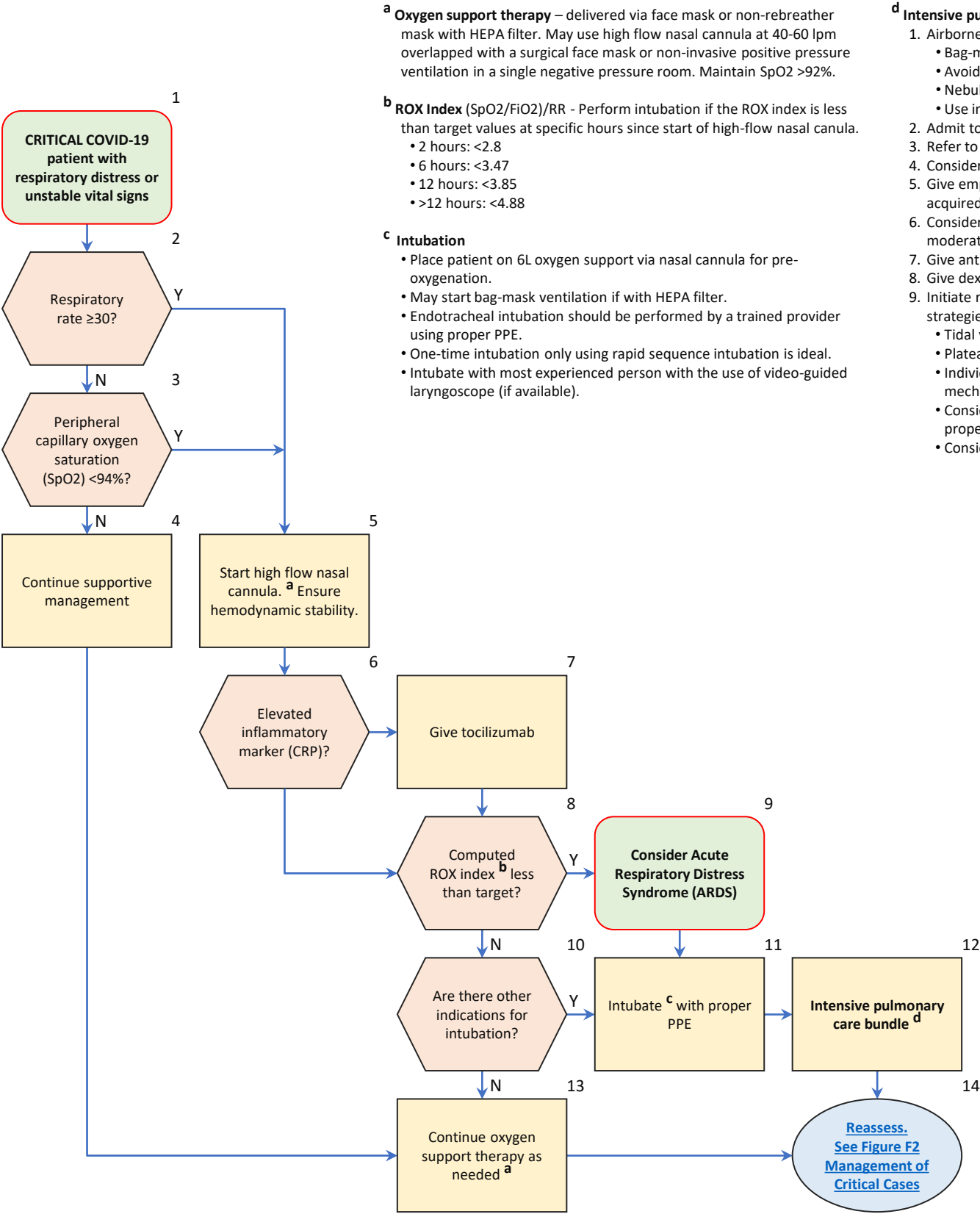


Figure F2.2 – Critical COVID-19 (Management of Acute Respiratory Distress Syndrome or ARDS)
With pneumonia AND signs of end-organ failure or shock or thrombosis

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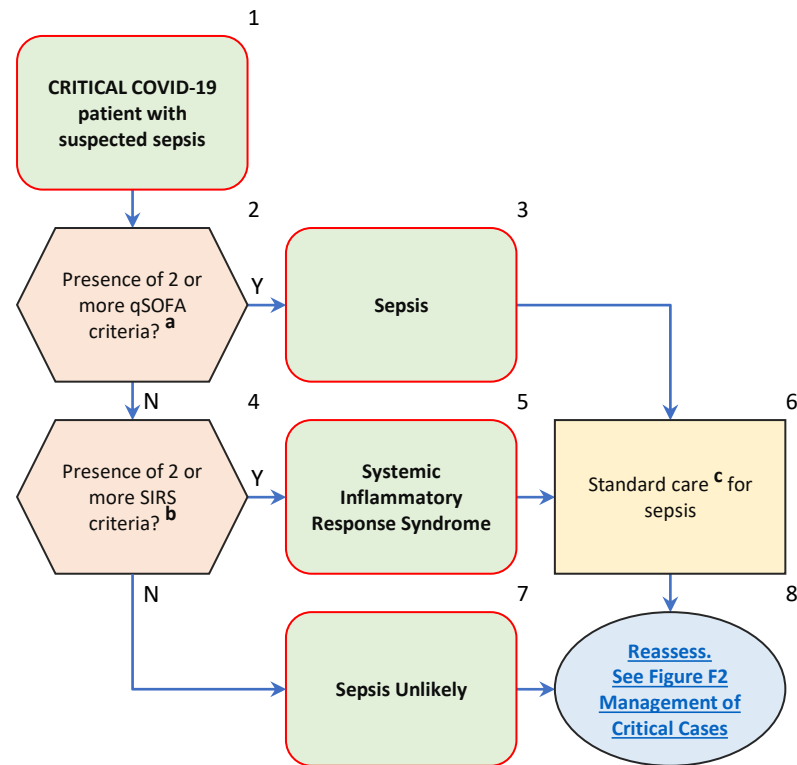
FOOTNOTES

- ^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 >92%.
- ^b ROX Index** (SpO2/FiO2)/RR - Perform intubation if the ROX index is less than target values at specific hours since start of high-flow nasal cannula.
- 2 hours: <2.8
 - 6 hours: <3.47
 - 12 hours: <3.85
 - >12 hours: <4.88
- ^c Intubation**
- Place patient on 6L 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.
 - Avoid disconnecting patient from the ventilator.
 - Nebulization is not recommended. Use metered dose inhalers.
 - 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. Give empiric antimicrobials, guided by the guidelines on community-acquired pneumonia, only if highly suspecting bacterial co-infection
 6. Consider neuromuscular blockade in intubated patient with moderate-severe ARDS.
 7. Give anticoagulation therapy
 8. Give dexamethasone 6 mg IV once a day for 10 days
 9. Initiate recruitment maneuvers and lung protective ventilation strategies
 - Tidal volume 4-8 mL/kg of predicted body weight
 - Plateau pressure <30 cmH₂O
 - Individualize PEEP or employ PEEP strategy based on respiratory mechanics
 - Consider prone positioning for >12 hours in institutions with proper training for maneuver
 - Consider extracorporeal life support

Figure F2.3 – 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

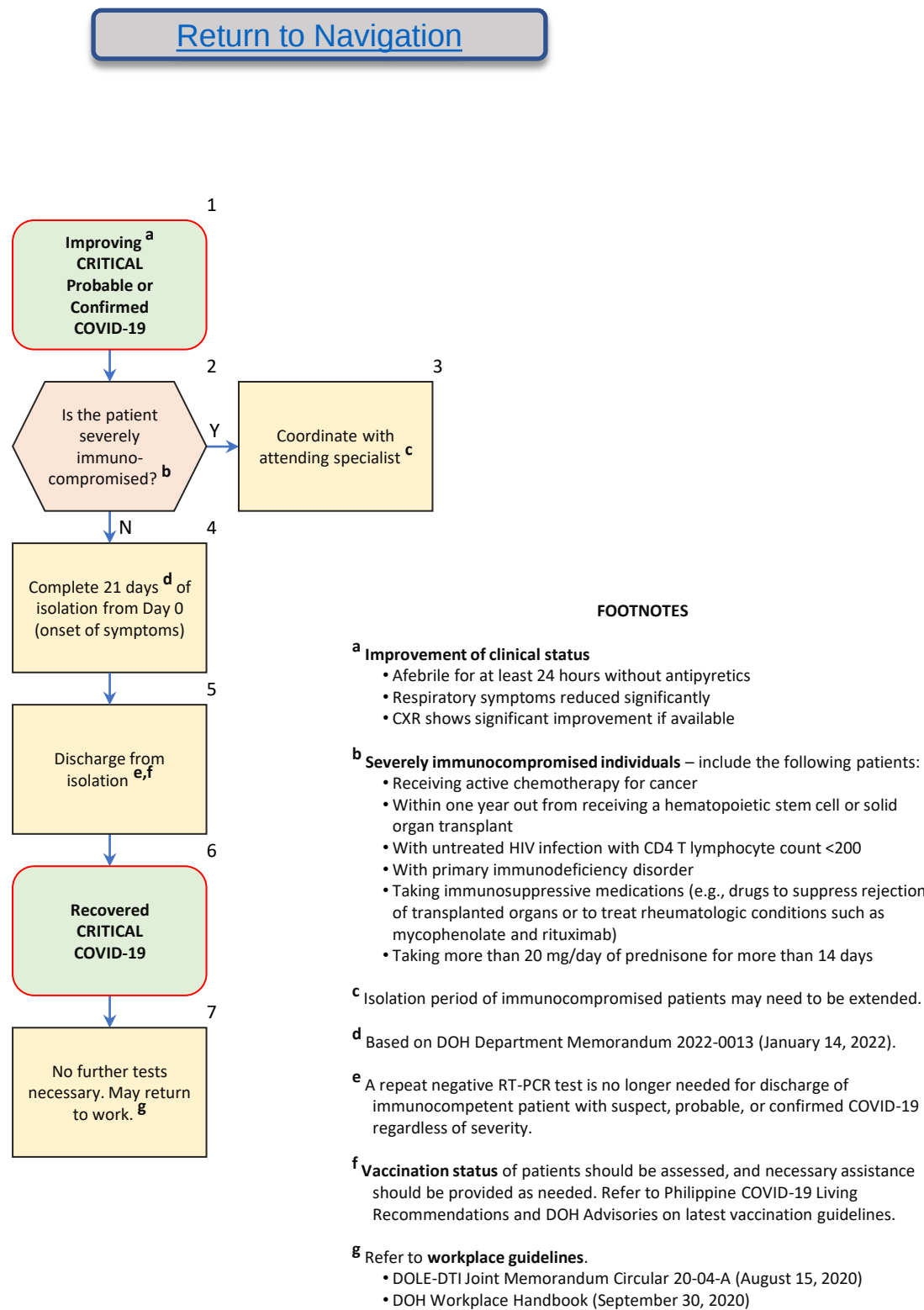
b Systemic Inflammatory Response Syndrome (SIRS) criteria

- 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 F3 – Critical COVID-19 (Discharge and Reintegration)
With pneumonia AND signs of end-organ failure or shock or thrombosis



PART G

EMERGENCY DEPARTMENT

AND TRANSPORT

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Figure G1 – Management of Out-of-Hospital Cardiac Arrest (OHCA) in Adults

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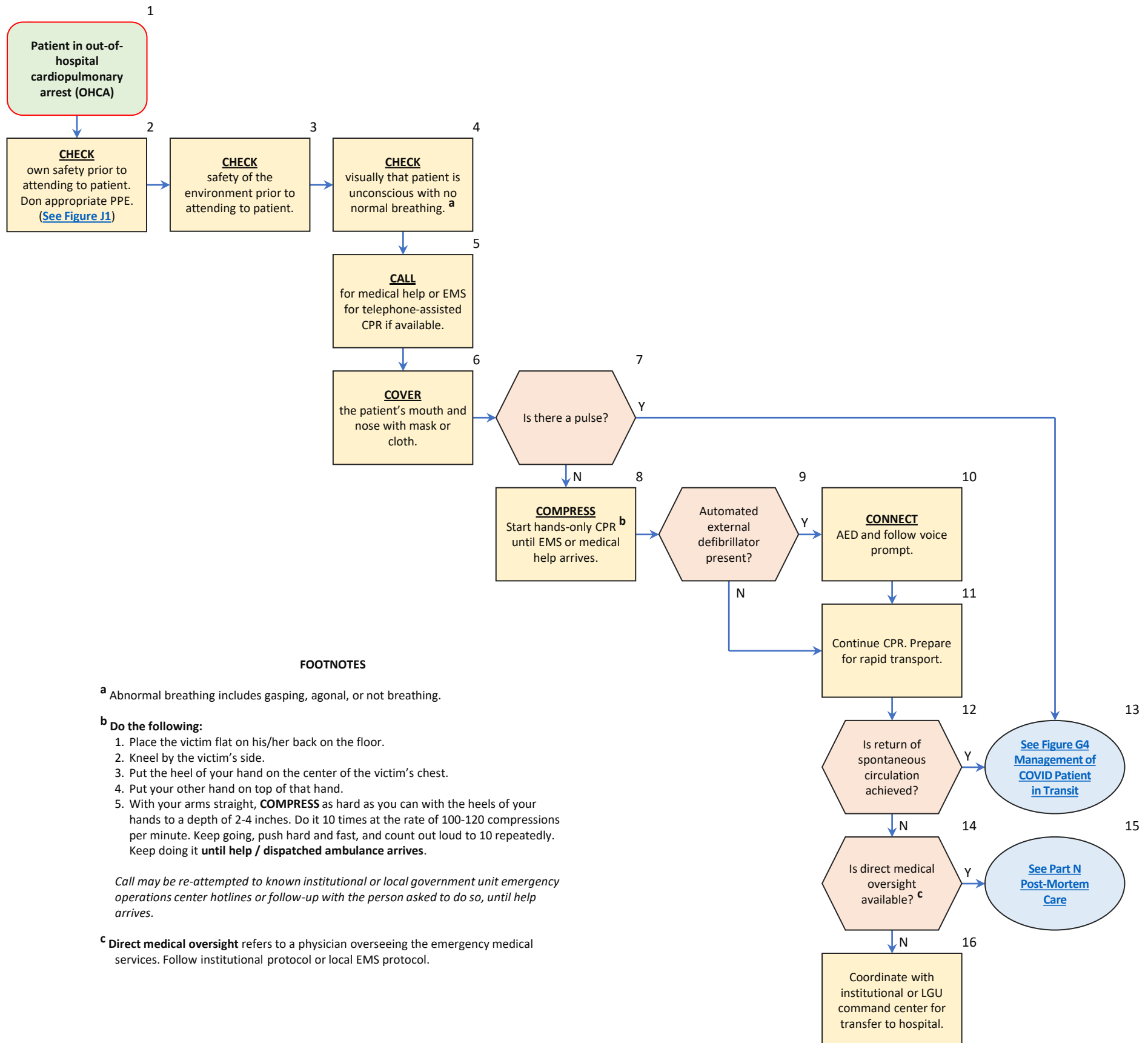
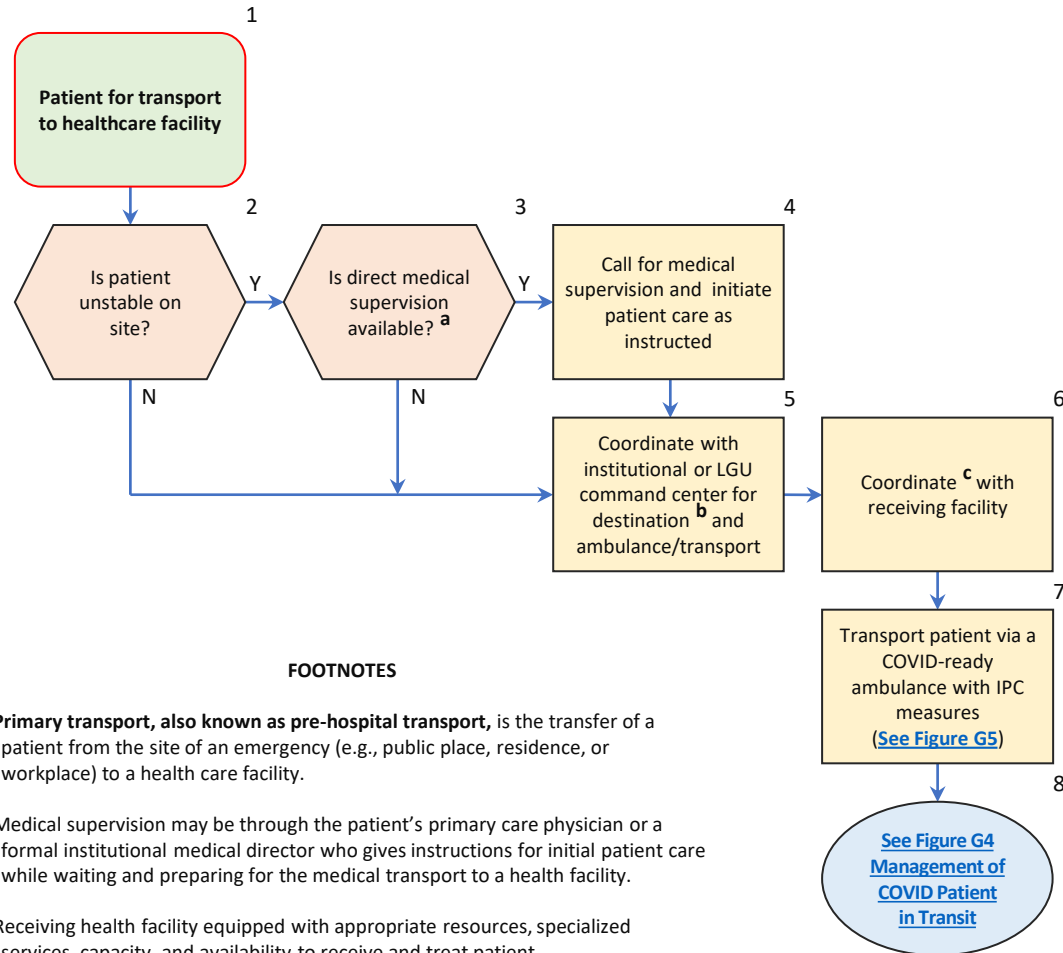


Figure G2 – Primary Transport to a Healthcare Facility*

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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 health care 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 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 G3 – Secondary Transport (Inter-Facility Transport)*

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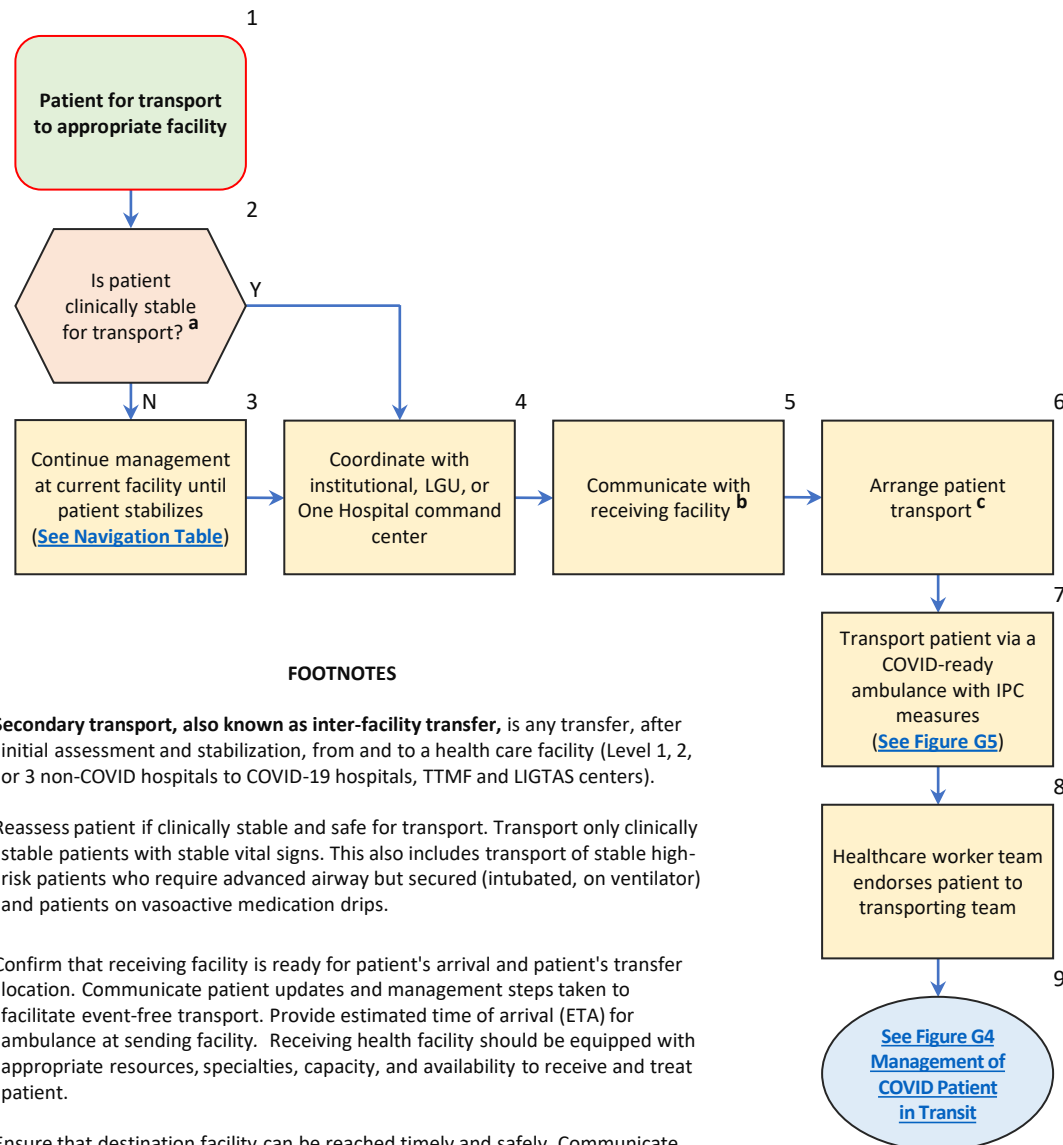


Figure G4 – Management of COVID-19 Patient in Transit

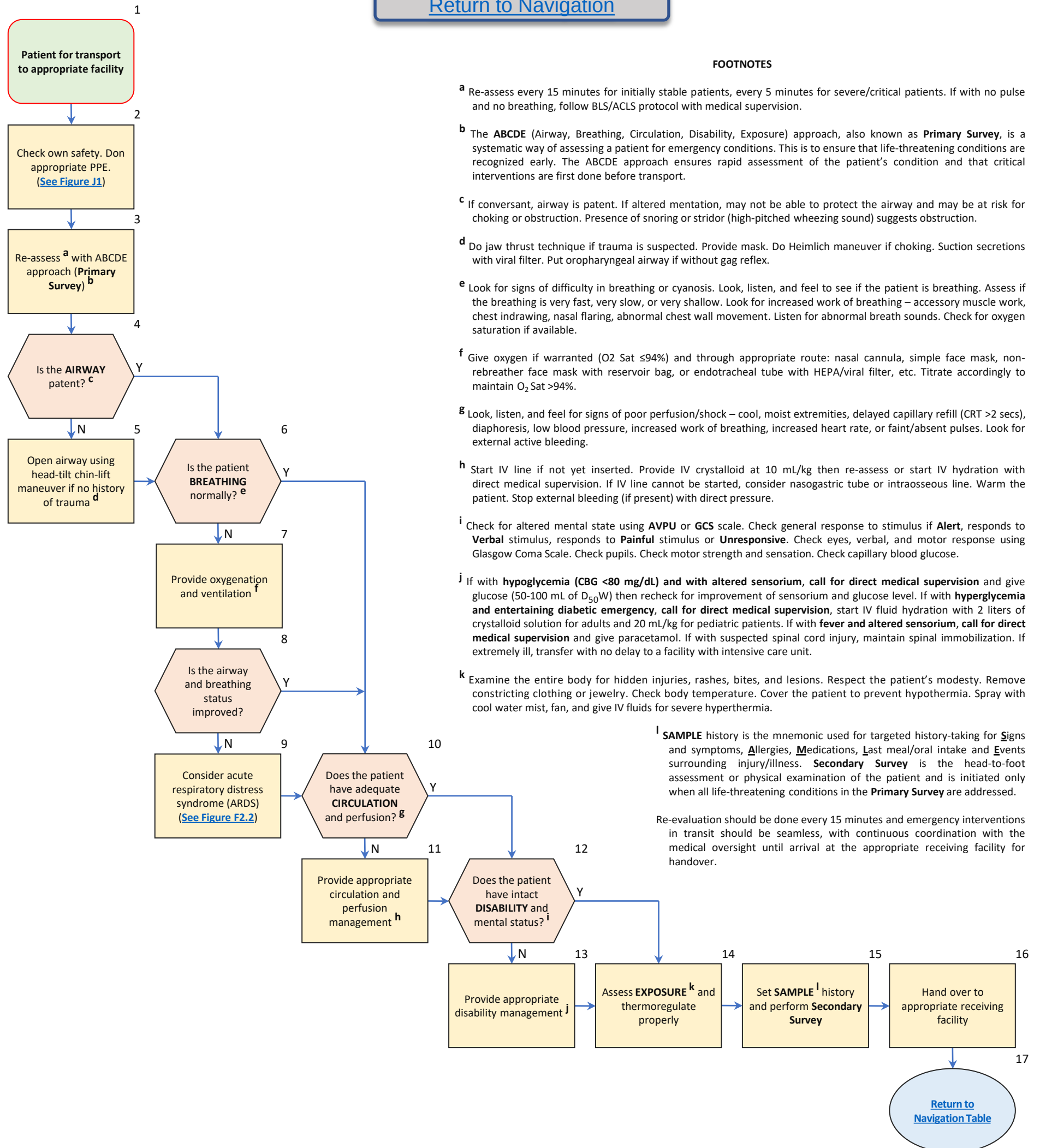
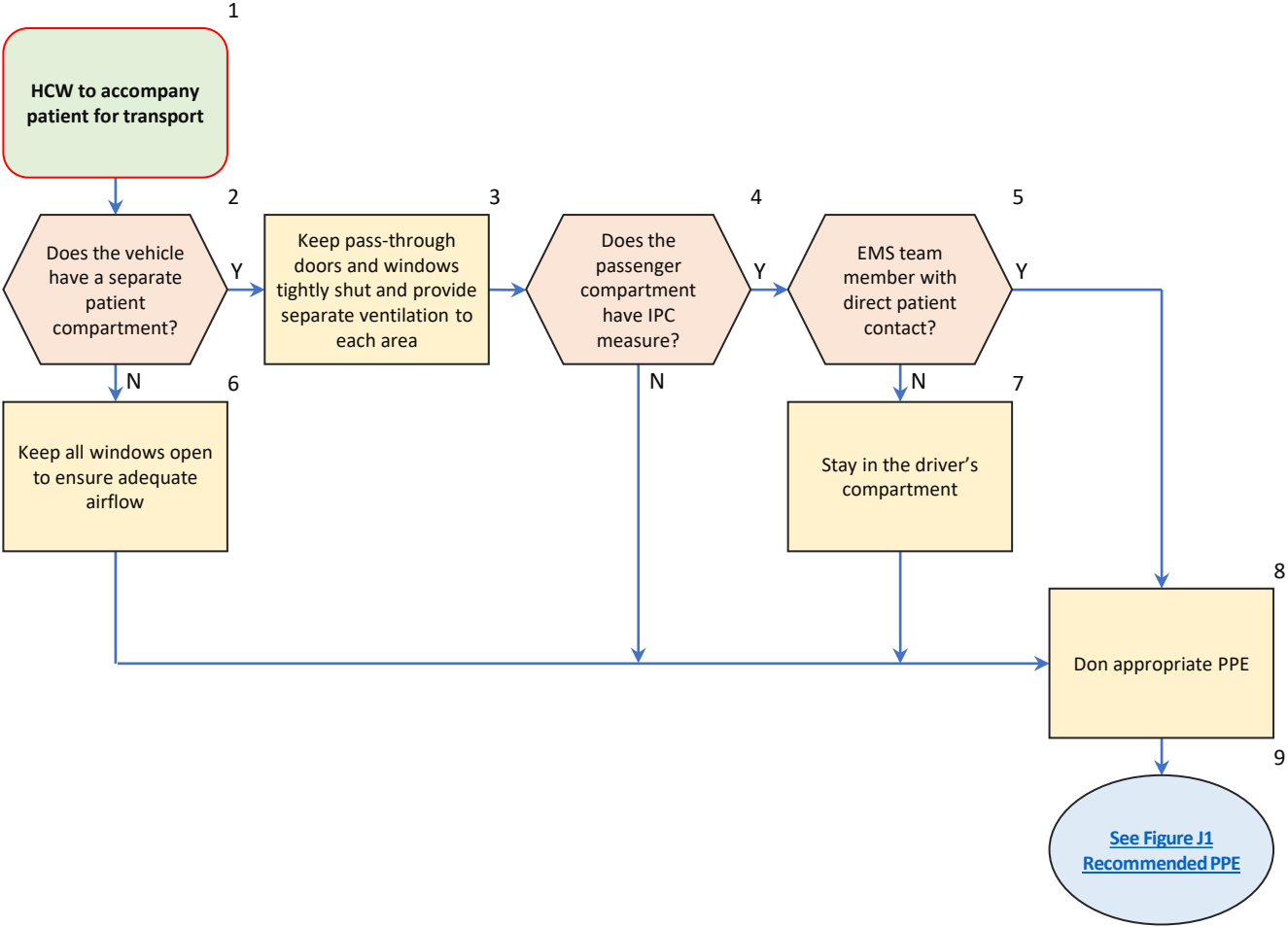


Figure G5 – Infection Prevention and Control (IPC) for Ambulance EMS Team

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PART H

PREGNANCY, LABOR, AND NEWBORN CARE

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Figure H1 – Management of Pregnant Women During the COVID-19 Pandemic

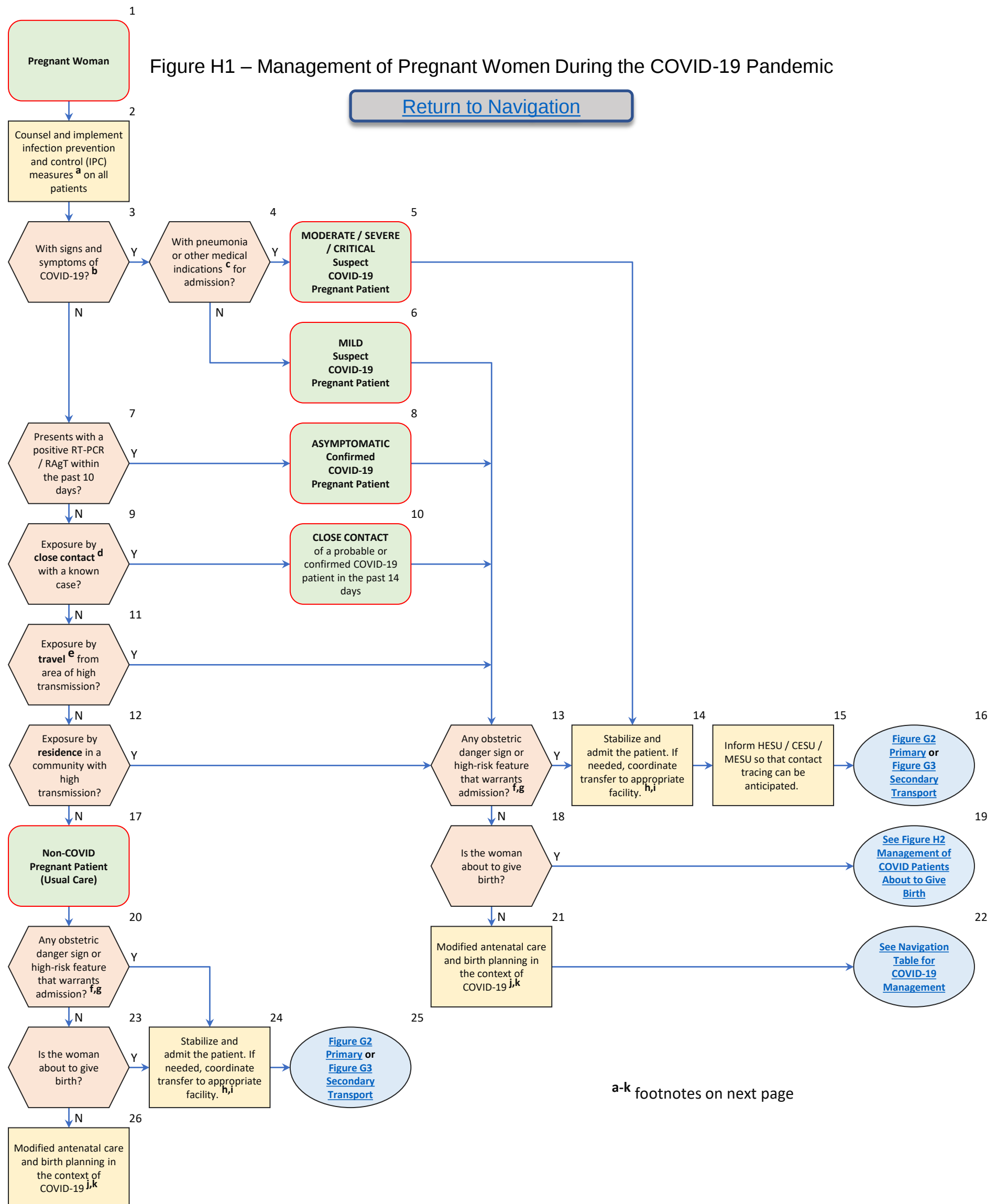


Figure H1 – Management of Pregnant Women During the COVID-19 Pandemic

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

^c Comorbid conditions

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

^d Close contact – fulfilled two or more of the following exposures to a probable or confirmed case in the past 14 days:

- poorly ventilated indoor area
- distance <1 meter
- unprotected / no PPE
- exposure >15 mins

^e Exposure by travel takes into consideration the following factors: travel duration, means of travel, ventilation, crowding, place of origin. Action depends on prevailing policies on border and transportation control.

^f 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 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

^g 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

^h Administer 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 judgment of the health provider
2. appropriateness of health care facility
3. geographical access to the next higher-level facility
4. patient context

ⁱ 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 92-95% at room air.

^j 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 health care 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

^k 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 H2 – Management of COVID-19 Patients About to Give Birth

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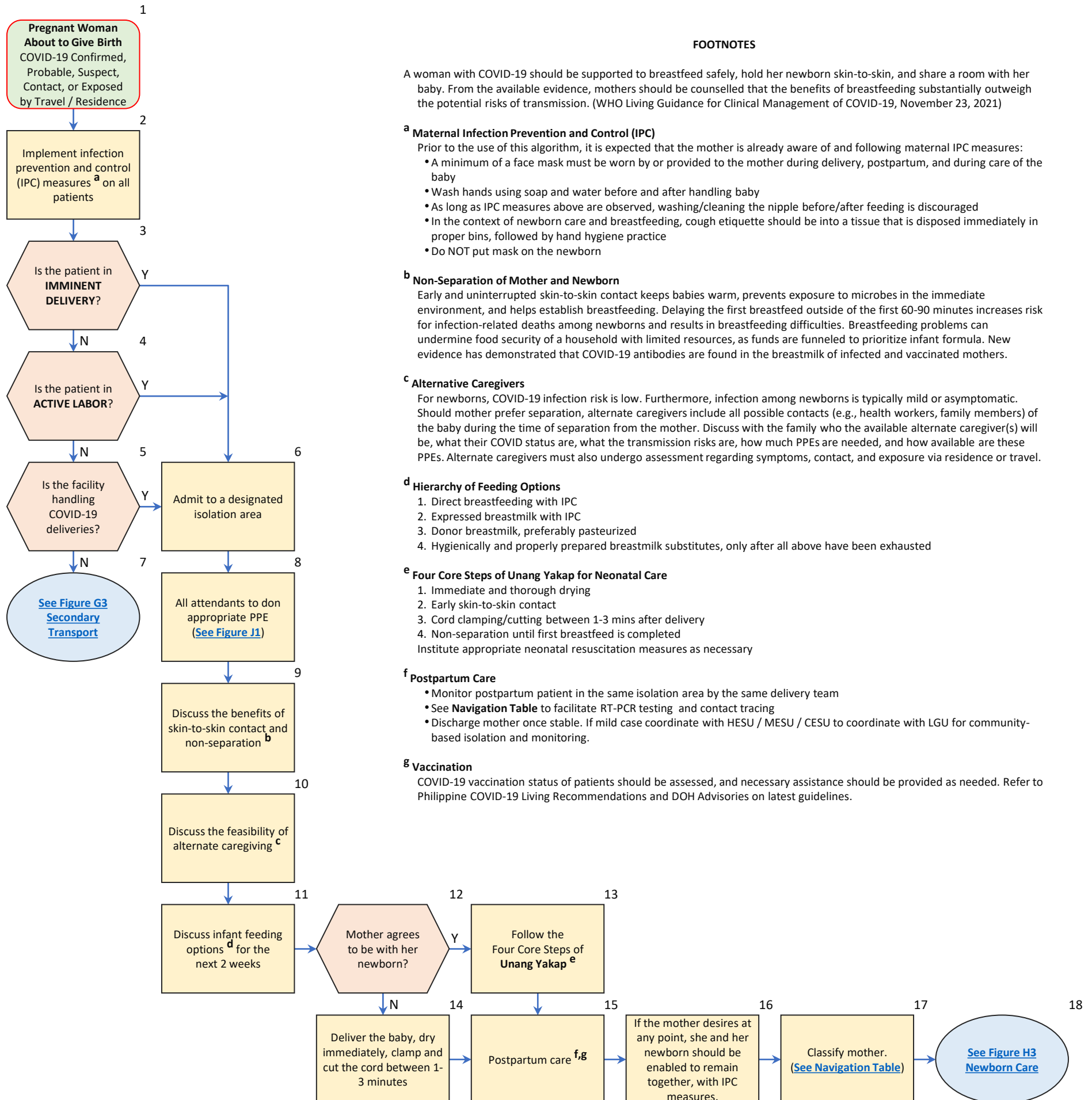
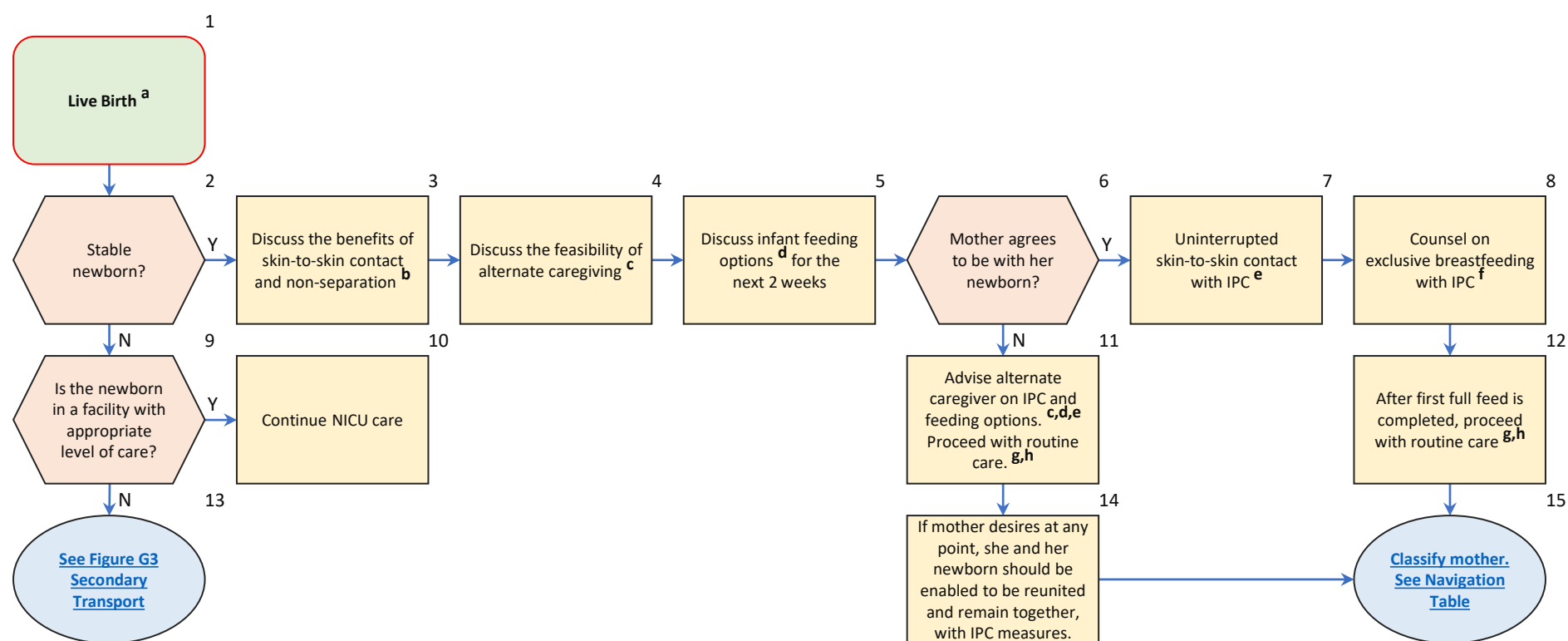


Figure H3 – Care of the Newborn Whose Mother is a COVID-19 Case

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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 may be done at DOH accredited testing centers at 24 hours or once newborn is stable

PART J

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

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Figure J1 – Recommended PPE for Healthcare Workers

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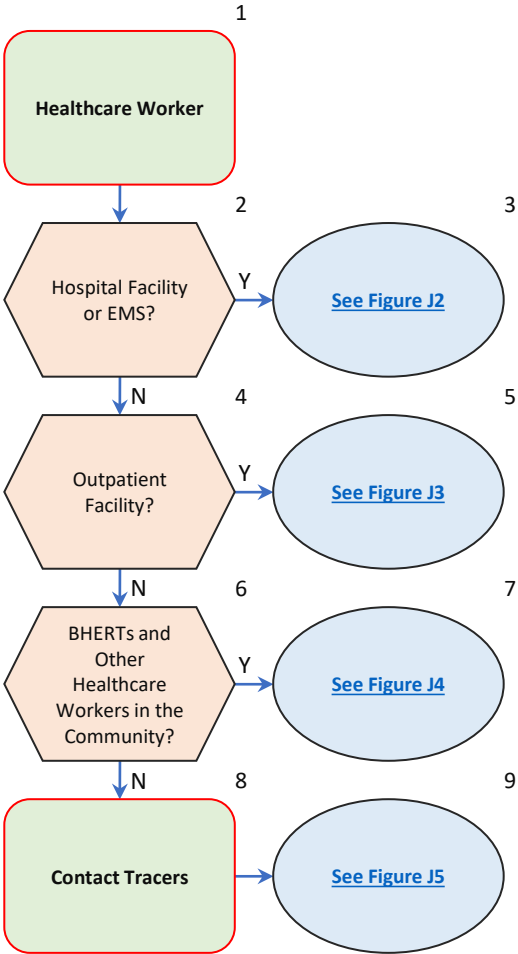
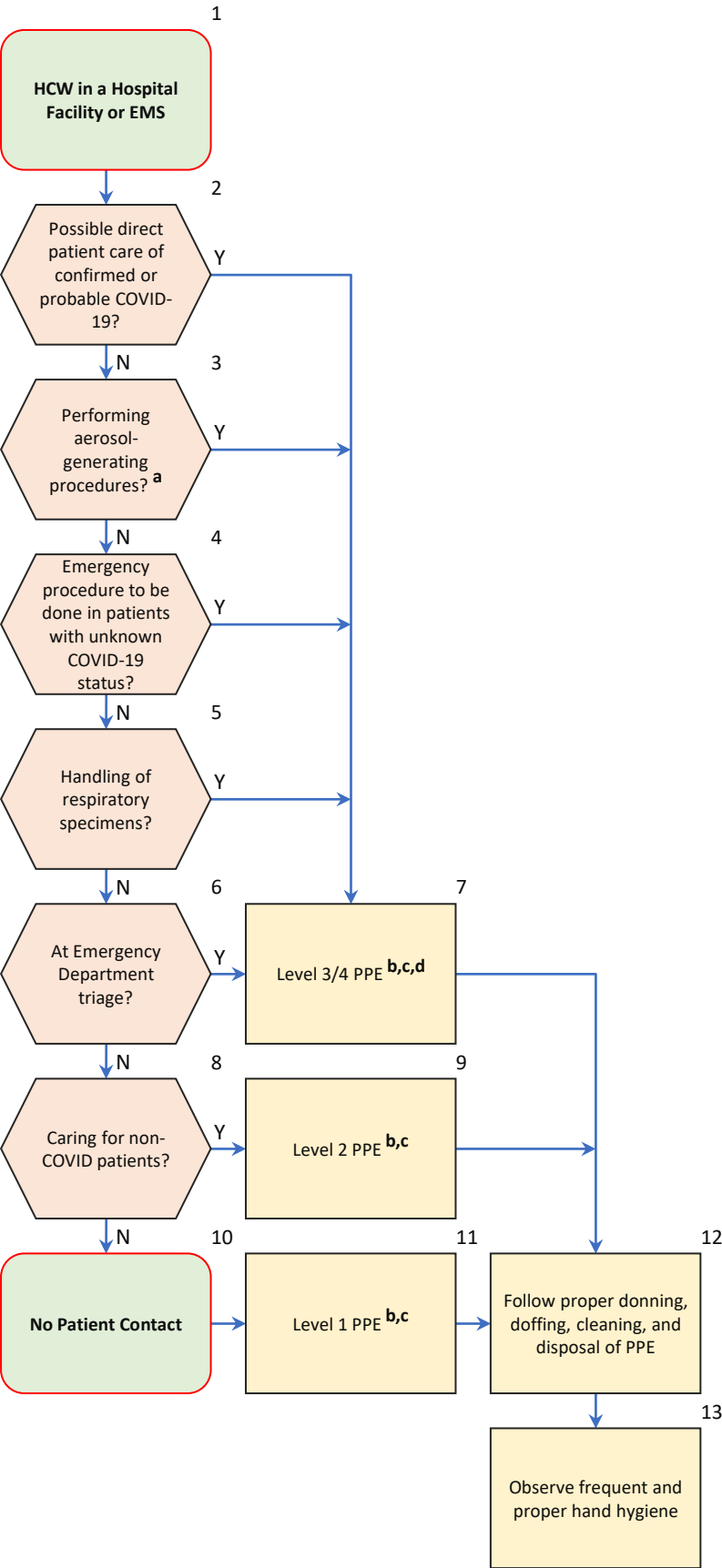


Figure J2 – Recommended PPE for Healthcare Workers in Hospital Facilities and Emergency Medical Services

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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)

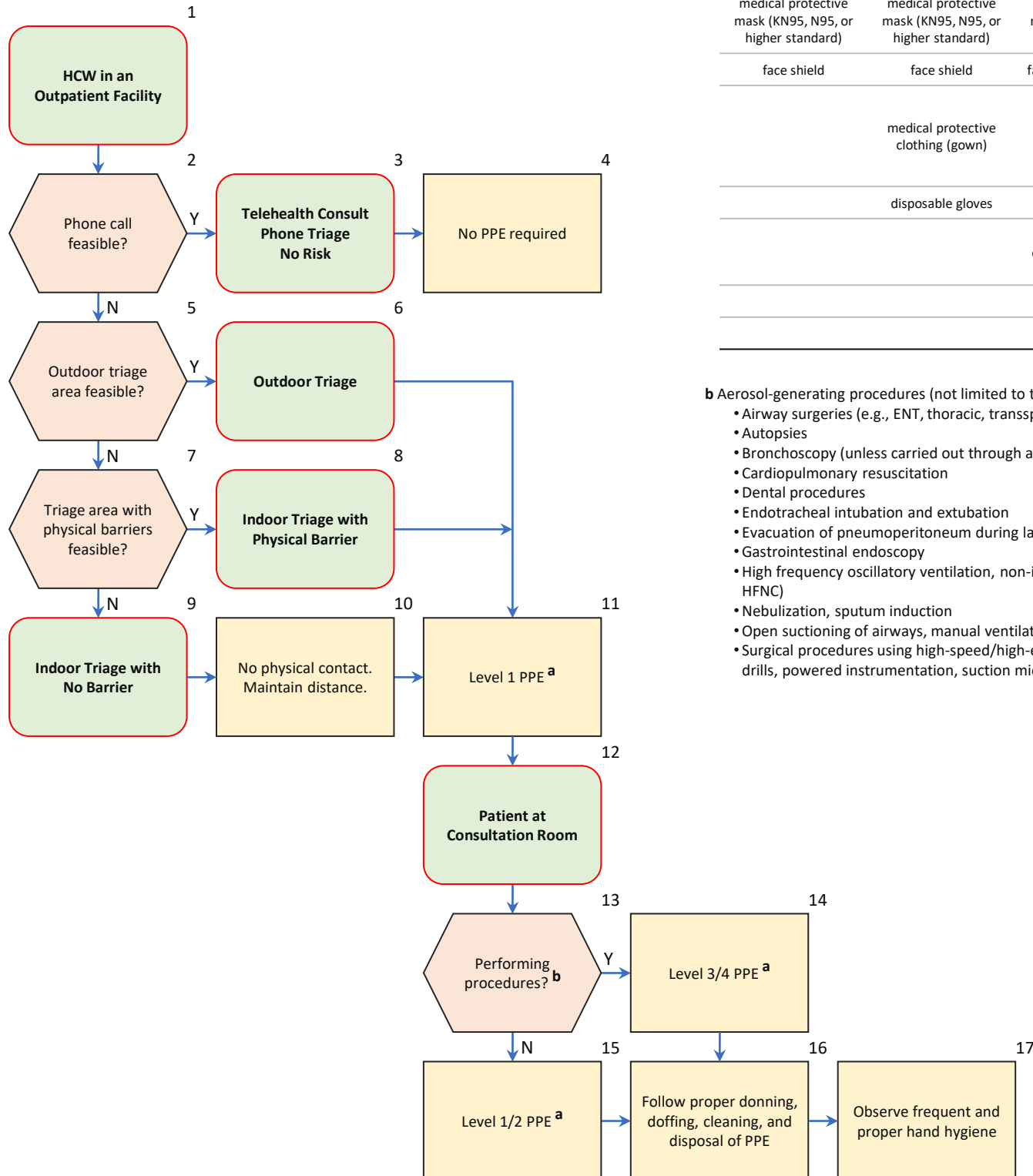
b Levels of PPE:

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 health care 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:

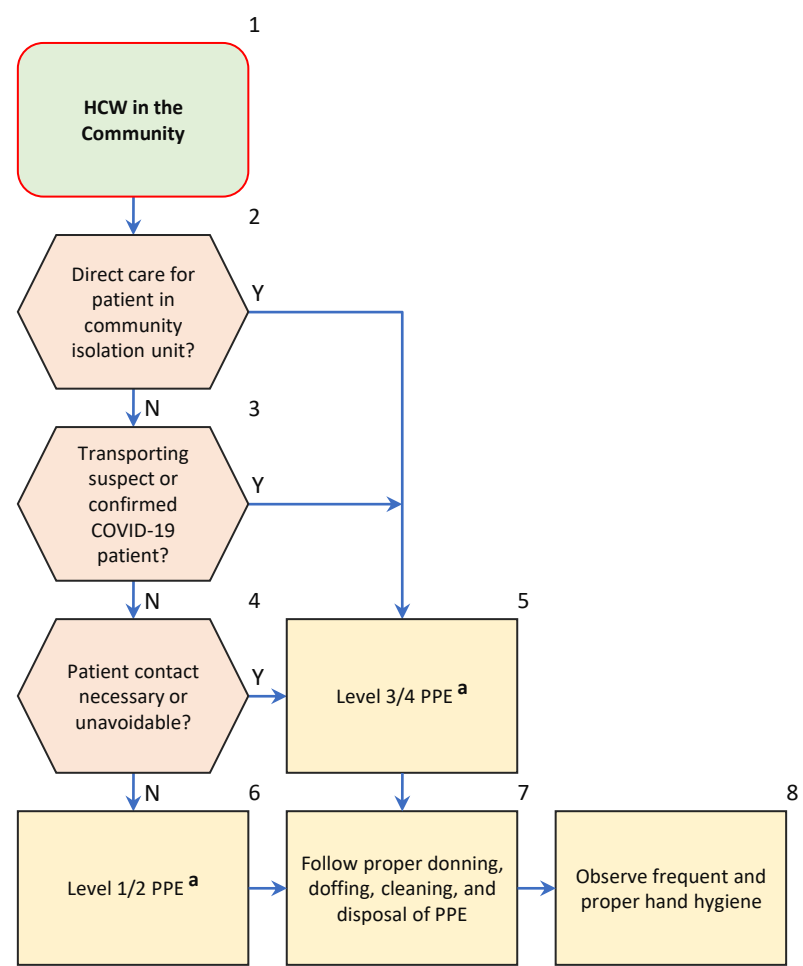
Level 1	Level 2	Level 3	Level 4
medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)	medical protective mask (KN95, N95, or higher standard)
face shield	face shield	face shield or goggles	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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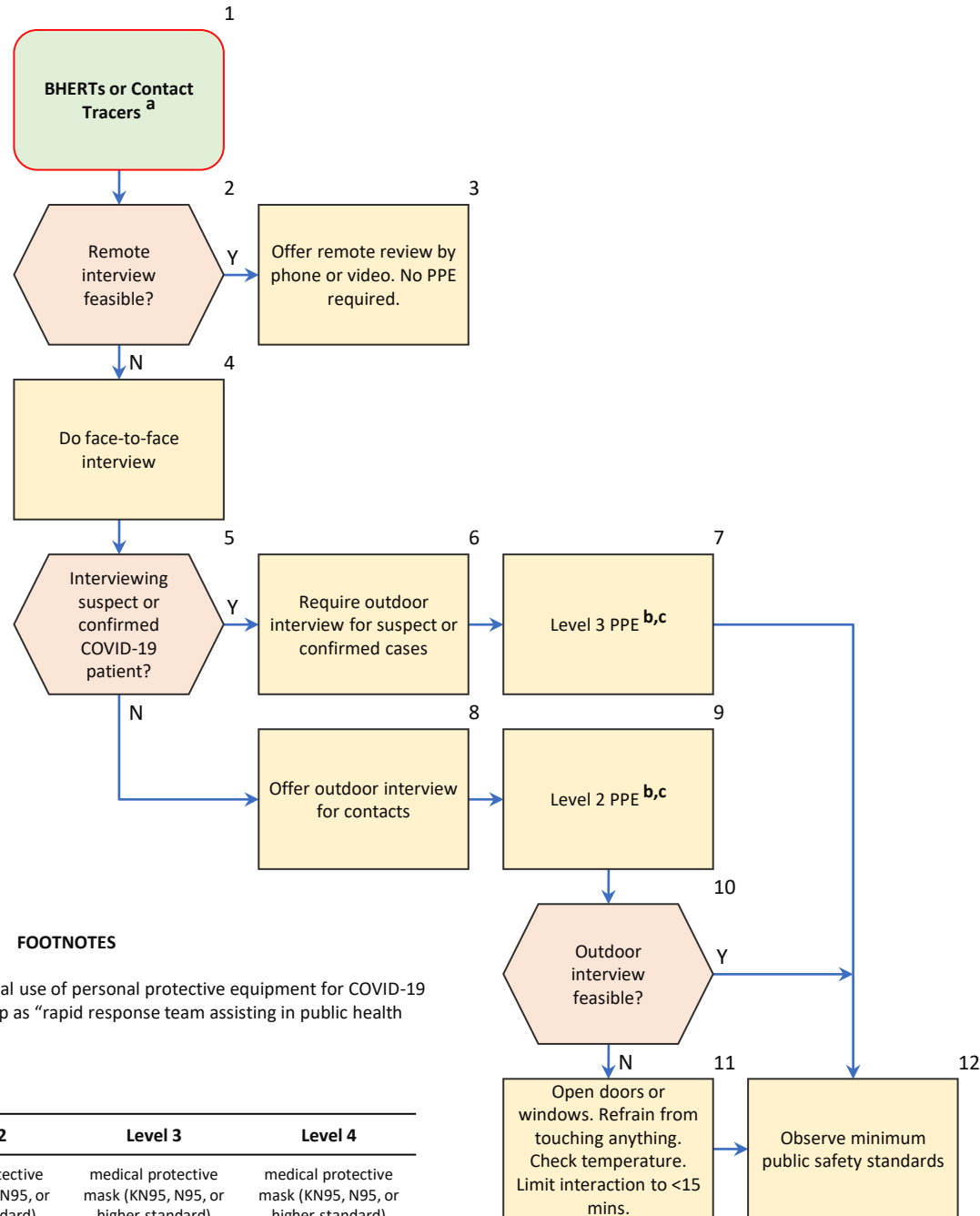
FOOTNOTES

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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	Strong Recommendation	Weak Recommendation
Recommend to Use	• CO2 monitors in enclosed spaces • 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)
Recommend NOT to Use	• Foot baths • UV lamps outside of the clinical setting	• Ionizing air filter in public spaces • Misting tents or disinfection chambers
No Recommendation	• Copper masks (insufficient evidence for or against)	

* Based on the Philippine COVID-19 Living Recommendations as of January 3, 2022

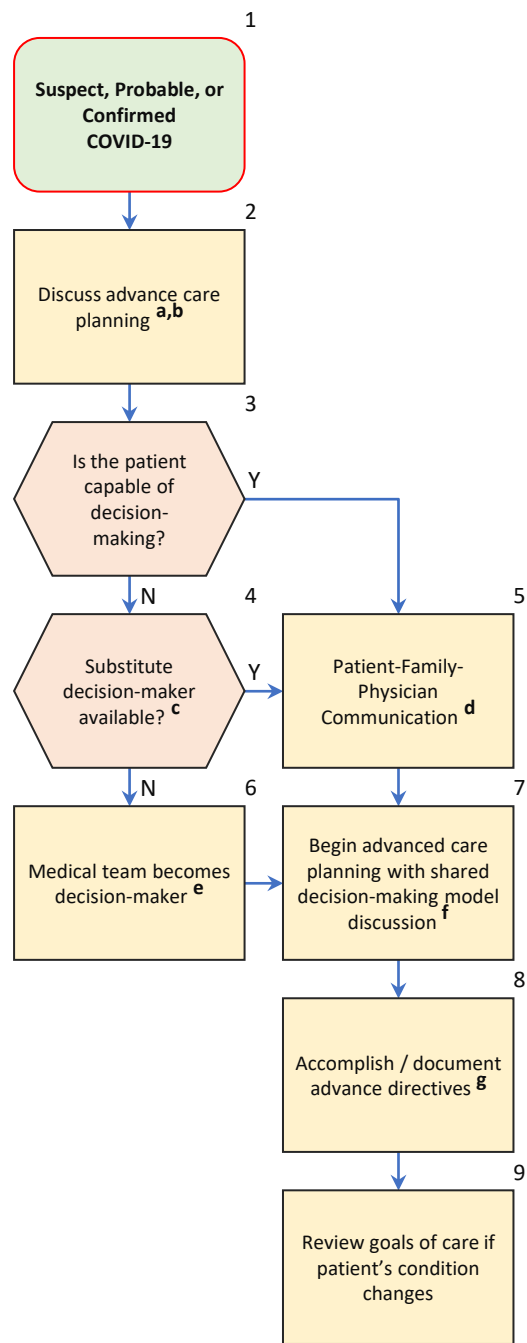
PART L

ADVANCE CARE PLANNING

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Figure L – Advance Care Planning

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FOOTNOTES

^a Timing of ACP discussion – advanced care planning at the onset of serious acute illness will be beneficial and should be given priority. It should be:

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

^b Advance care planning is making decisions about the health care 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 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. 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

^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 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

^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 health care decisions, or is in a persistent vegetative state.

PART M

END-OF-LIFE CARE

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

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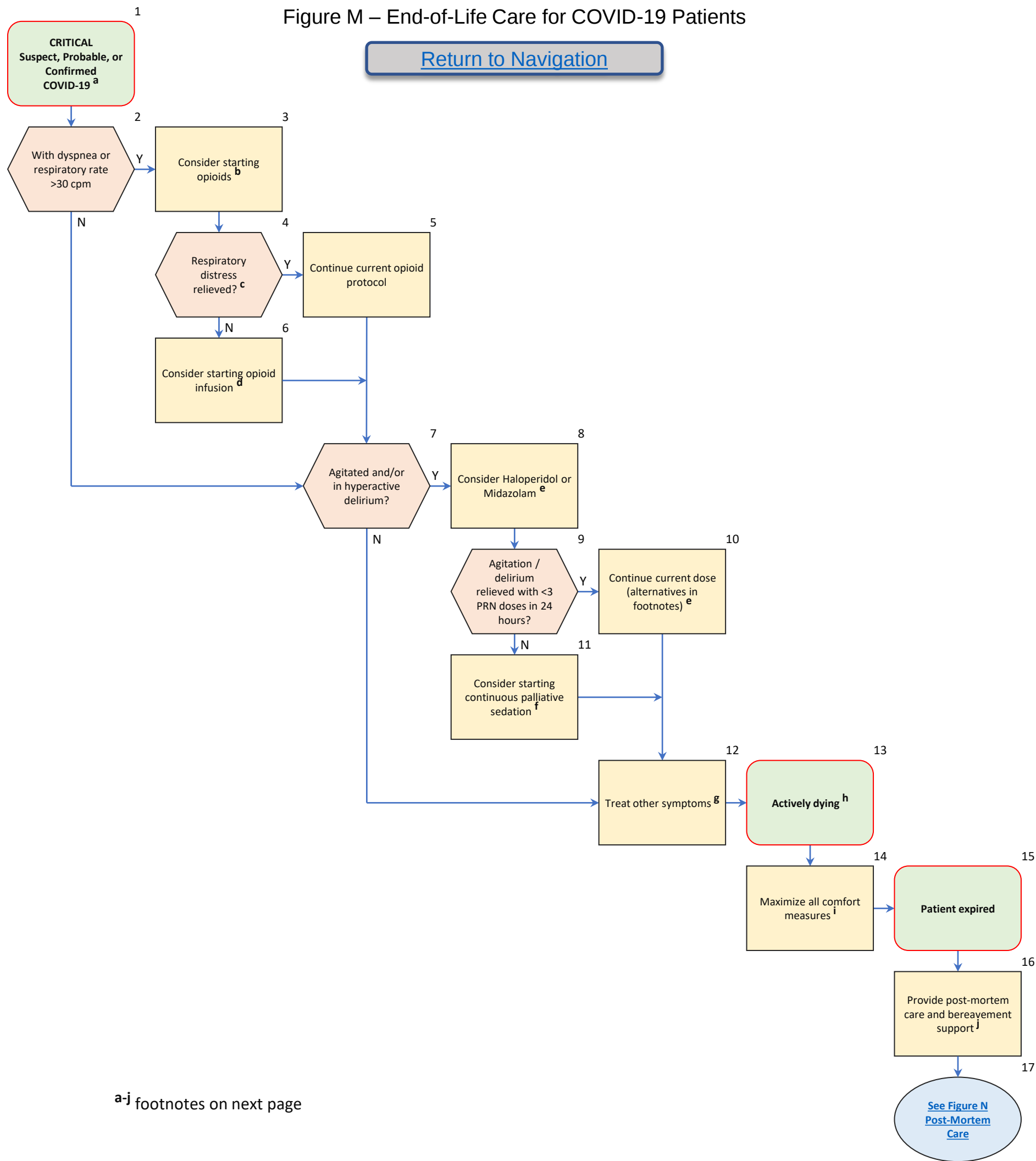


Figure M – End-of-Life Care for COVID-19 Patients

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FOOTNOTES

^a Prerequisite before using this algorithm

Patient / substitute decision-maker are not amenable to life-sustaining interventions and/or medical team see no reasonable chance of recovery. 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 every 15 minutes.
2. Morphine 5-10 mg PO/NGT every 4 hours
3. Fentanyl IV continuous drip 12.5 mcg/hour
4. Oxycodone 10-20 mg IV every 4-6 hours
5. Oxycodone short-acting 10-20 mg PO/NGT every 4-6 hours

- * Do opioid precaution monitoring for opioid-naïve patients
- * Do dose adjustment for opioid-tolerant patients

^c Respiratory distress relieved

1. Respiratory rate <20 cpm
2. 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 2.5 mg IM/SC every 4 hours PRN
2. Midazolam 2 mg IV every 4 hours PRN
3. Midazolam 7.5-15 mg PO every 4-6 hours PRN
4. Diazepam 5 mg IV
5. Diazepam 5 mg PO/NGT
6. Diazepam 10 mg per rectum

^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 clonazepam 1-2 mg sublingual every 6 hours.

^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
 - Morphine controlled-release 10-20 mg every 12 hours
 - Oxycodone 5-10 mg every 12 hours
3. Increased oral 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. Long pauses in breathing; patient's breathing patterns may also be very irregular
2. Blood pressure drops significantly (continuous steady decline of ≥20 mmHg)
3. Patient's skin changes color (mottling) and their extremities may feel cold to touch
4. Patient is in a coma, semi-coma, or cannot be awakened
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

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 health care team should contact the family / caregiver(s) to offer condolences and answer questions of the family

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