



July 30, 2021

King County EMS: Updated COVID-19 Exposure, Quarantine, and Isolation Algorithm

Background: The prevalence of COVID-19 (SARS-CoV-2) continues to increase in King County as a consequence of the emergence of the highly infectious delta variant. The large majority of new infections, hospitalizations, and deaths occur among unvaccinated persons. Nonetheless no vaccine is perfect (the current vaccines are ~90% effective), so we are updating the algorithm for screening and surveillance for EMS in King County. The updated algorithm has been reviewed and approved by King County Public Health leadership and is consistent with the recent updates from the CDC.

In summary, any EMS provider who experiences a COVID exposure regardless of their vaccination status should undergo serial surveillance testing typically early after the exposure is recognized and then at day 7 following the exposure. Vaccinated persons do NOT need to quarantine so long as they remain asymptomatic. Unvaccinated persons must still quarantine. Importantly, there is now good evidence that the POCCT can be used to screen asymptomatic persons following an exposure so that a PCR test is only required for a symptomatic person or a person who has a positive POCCT result.

Vaccination is the best strategy to protect ourselves, coworkers, and the patients and community we pledge to serve. The vaccination is safe and remarkably effective. The benefits of the vaccination even for young healthy persons far outweigh the risks especially when we consider the acute and convalescent consequences caused by COVID infection.

Please refer to the updated algorithm for specific scenarios. Red font highlights the updates.

Thank you for your service and leadership.

Tom Rea MD
Medical Program Director
King County EMS















Michael Sayre MD
Medical Director
Seattle Fire Department



COVID-19 Exposure Guidelines for Return to Work: Definitions

Definitions:

- **Close contact** - being within approximately 6 feet of a person for a **cumulative time of 15 minutes or more over a 24 hours period** (time limit does not apply for aerosol generating procedures (AGP), any duration of exposure to AGP is considered a close encounter) OR having direct unprotected contact with infectious secretions (ex: coughing directly into the face of the exposed individual) or excretions.
- **Exposure** - close contact with a person with COVID-19, including 48 hours prior to their symptom onset.
- Exposure Risk Level of Provider and person with COVID-19 PPE coverage:

	Person with COVID-19			 High-risk, quarantine needed  Lower-risk, review needed  Low-risk, no quarantine
	No mask	Cloth covering or facemask	AGP	
Provider with no mask				
Provider + facemask				
Provider + facemask + eye protection				
Provider + full MEGG			N95 equivalent	

- Masks should be placed on patients with suspected COVID-19 whenever feasible. The mask will reduce transmission from the source patient.
- The facemask standard is the surgical mask at minimum. Single layer masks are inadequate PPE.
- For AGPs, providers must wear a respirator (N95, P100) for adequate protection. Red boxes indicate high-risk scenarios due to exposure of provider eyes, nose, mouth to virus.
- **Universal Source Control Measures:** *facemasks are universally recommended for everyone in a facility, because of the potential for asymptomatic and pre-symptomatic transmission.*
- **Symptoms** - include the following: fever (temperature $\geq 100F$), chills, cough, muscle or body ache, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea.
 - Symptoms may appear up to 14 days after exposure. Median time 4-5 days.
 - *Review if a person has received a COVID-19 vaccine within the previous 3 days as immune response to the vaccine can sometimes produce symptoms.*
- **AGP** – Aerosol Generating Procedures - AGP include the following: open suctioning of airway, sputum induction, CPR, intubation, non-invasive ventilation (CPAP/BIPAP), manual ventilation (BVM); further evidence is needed, but risk is suggested for: nebulizer administration and high flow O2 delivery.
- **Quarantine** – people who are *not currently showing* symptoms, but are at increased risk from exposure and potentially pre-symptomatic, and need to stay away from others to prevent potential spread
- **Isolation** – people who are actively infected and infectious as evidenced by a positive test with or without symptomatic illness. These persons need to stay away from others to prevent spread.
- **PCR testing** – RT-PCR testing to detect SARS-CoV-2 RNA in the nose and pharynx. The test is the gold-standard with regard to accuracy. Serological testing (antibody testing using blood specimen) should not be used to determine acute infection. *In this algorithm, positive and negative COVID-19 refers to PCR testing.*
- **POCCT** – Point-of-care COVID testing with FDA-approved rapid antigen testing performed by each crew member. The result is available within ~15 minutes of test performance. **A positive POCCT test must be confirmed with a PCR test.**
- **Vaccine** - All providers are strongly encouraged to obtain the COVID-19 vaccine series. The COVID-19 vaccine protects the individual, their coworkers, their family, and the patients.
- **Documented COVID-19 Vaccine** – Issued CDC card or information confirmed on Washington State Immunization Information System (WSIIS) that includes date of vaccine series completion.



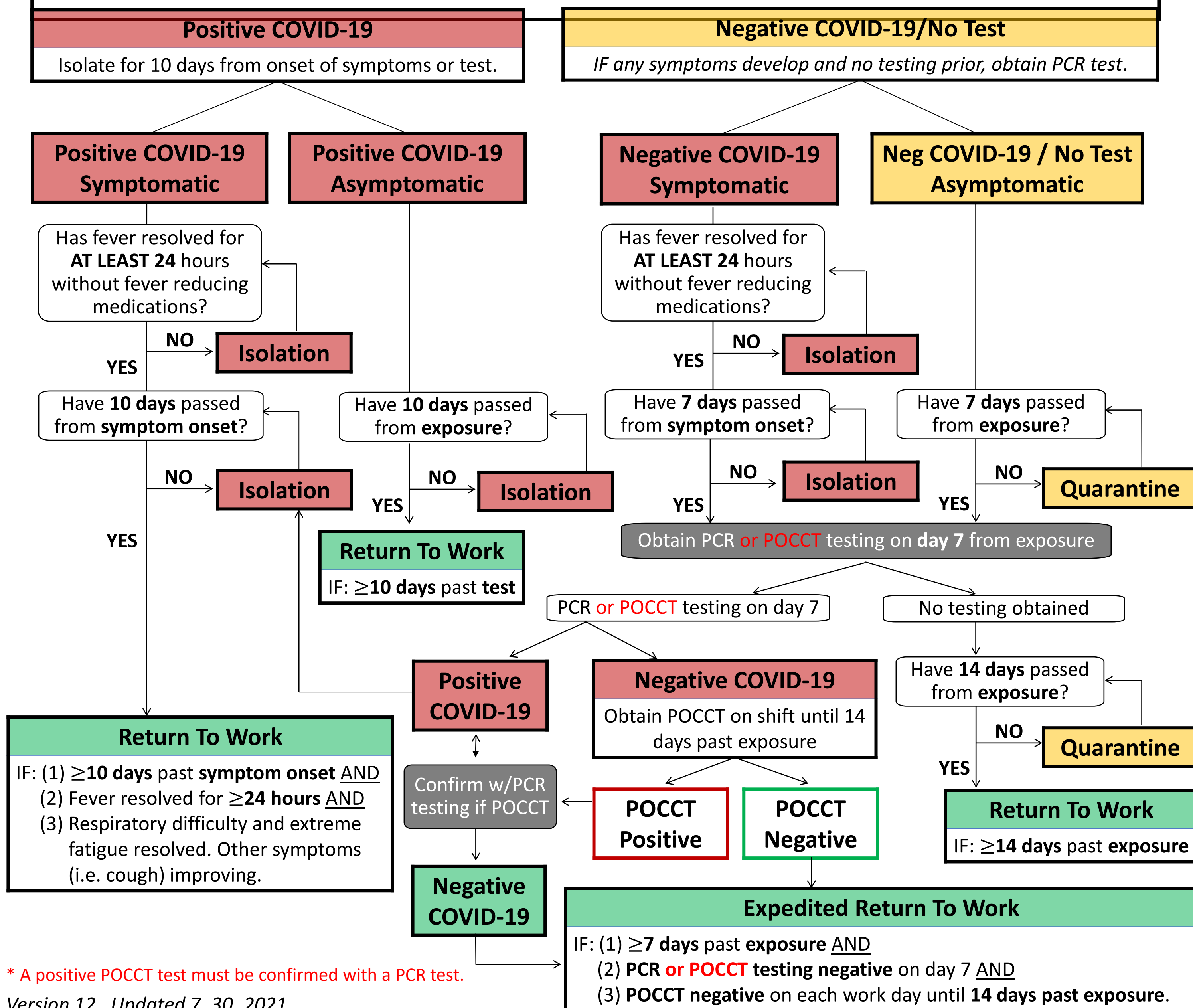
COVID-19 Exposure Guidelines for Return to Work: Known Exposure for Unvaccinated Provider

Confirmed High-Risk COVID-19 Exposure for Unvaccinated Provider

For all confirmed exposures (patient and non-patient exposures):

1. If vaccine series completed OR diagnosed with COVID by PCR test in past 90 days, go to page 3.
2. Enter into Symptom Tracker and monitor symptoms daily AND
3. Obtain PCR or POCCT* testing (generally advised to do initial test ASAP), regardless of symptom status. The goal of early testing is contact tracing to identify upstream source of the confirmed COVID-19 infection.
4. Quarantine – unvaccinated persons must quarantine after an exposure:
 - FULL 14 days of quarantine OR
 - EXPEDITED RETURN IF 1) (repeat) PCR testing on day 7 is negative AND 2) subsequent POCCT is negative on return to work.

- Isolation
- Quarantine
- No Restriction



* A positive POCCT test must be confirmed with a PCR test.



COVID-19 Exposure Guidelines for Return to Work: Known Exposure: Full vaccination or prior COVID-19

Documented Exposure to Person with COVID-19
Full Vaccination

For all confirmed exposures (patient and non-patient exposures):

1. Enter into symptom tracker AND
2. Monitor symptoms for **14 days past exposure** AND
3. **Perform repeated surveillance with POCCT between days 2-5 and on day 7*** AND
4. Safety of the workforce is paramount. Please provide documentation of vaccination or prior infection.

- Isolation
- Quarantine
- No Restriction

Any symptoms?

Asymptomatic

Persons vaccinated do NOT need to quarantine. *If symptoms do develop, isolate and obtain PCR testing. Refer to page 2.*

Symptomatic

Isolate and obtain PCR testing.

Eligibility Criteria

VACCINATION: To be eligible to forgo quarantine, the exposed individual must be **≥ 2 weeks** from final vaccine

NO

POCCT Positive

Perform POCCT repeated surveillance testing Early (day 2-5) AND again on Day ~7

POCCT Negative

Stay At Work

Refer to page 2 for Guidance for Known Exposures

COVID-19 Exposure Guidelines for Return to Work: Known Exposure

Confirmed High-Risk COVID-19 Exposure

For all confirmed exposures (patient and non-patient exposures):

1. If vaccine series completed, go to page 3.
2. Enter into Symptom Tracker and monitor symptoms daily AND
3. Obtain PCR testing (generally advised to do initial test ASAP), regardless of symptom status. The goal of early testing is contact tracing to identify the upstream source of the confirmed COVID-19 infection.
4. Quarantine while potentially pre-symptomatic:
 - FULL 14 days of quarantine OR
 - EXPEDITED RETURN [E-1] (repeat) PCR testing on day 7 is negative AND 2) subsequent POCCT is negative on return to work.

The flowchart details the following paths:

- Positive COVID-19 Symptomatic:** Isolate for 10 days from onset of symptoms or test. If fever resolved for at least 24 hours without fever-reducing medications, and 10 days have passed from exposure, return to work. If not, repeat PCR testing on day 7. If PCR is positive, isolate for 10 days from symptom onset. If PCR is negative, repeat POCCT on shift until 14 days past exposure. If POCCT is positive, isolate for 10 days from symptom onset. If POCCT is negative, return to work.
- Positive COVID-19 Asymptomatic:** Isolate for 10 days from exposure. If 10 days have passed from exposure, return to work. If not, repeat PCR testing on day 7. If PCR is positive, isolate for 10 days from exposure. If PCR is negative, repeat POCCT on shift until 14 days past exposure. If POCCT is positive, isolate for 10 days from exposure. If POCCT is negative, return to work.
- Negative COVID-19 Symptomatic:** Isolate for 10 days from onset of symptoms or test. If fever resolved for at least 24 hours without fever-reducing medications, and 7 days have passed from symptom onset, return to work. If not, repeat PCR testing on day 7. If PCR is positive, isolate for 10 days from symptom onset. If PCR is negative, repeat POCCT on shift until 14 days past exposure. If POCCT is positive, isolate for 10 days from symptom onset. If POCCT is negative, return to work.
- Neg COVID-19 / No Test Asymptomatic:** If any symptoms develop and no testing prior, obtain PCR testing. If PCR is positive, isolate for 10 days from exposure. If PCR is negative, return to work.

Return to Work criteria for POCCT Negative:
 IF: (1) ≥10 days past symptom onset AND
 (2) Fever resolved for ≥24 hours AND
 (3) Respiratory difficulty and extreme fatigue resolved. Other symptoms (i.e. cough) improving.

Expedited Return To Work criteria:
 IF: (1) ≥7 days past exposure AND
 (2) PCR testing negative on day 7 AND
 (3) POCCT negative on each work day until 14 days past exposure.

Version 11. Updated 02-XX-2021. Adapted from WA DOH and CDC. Page 2 of 5.

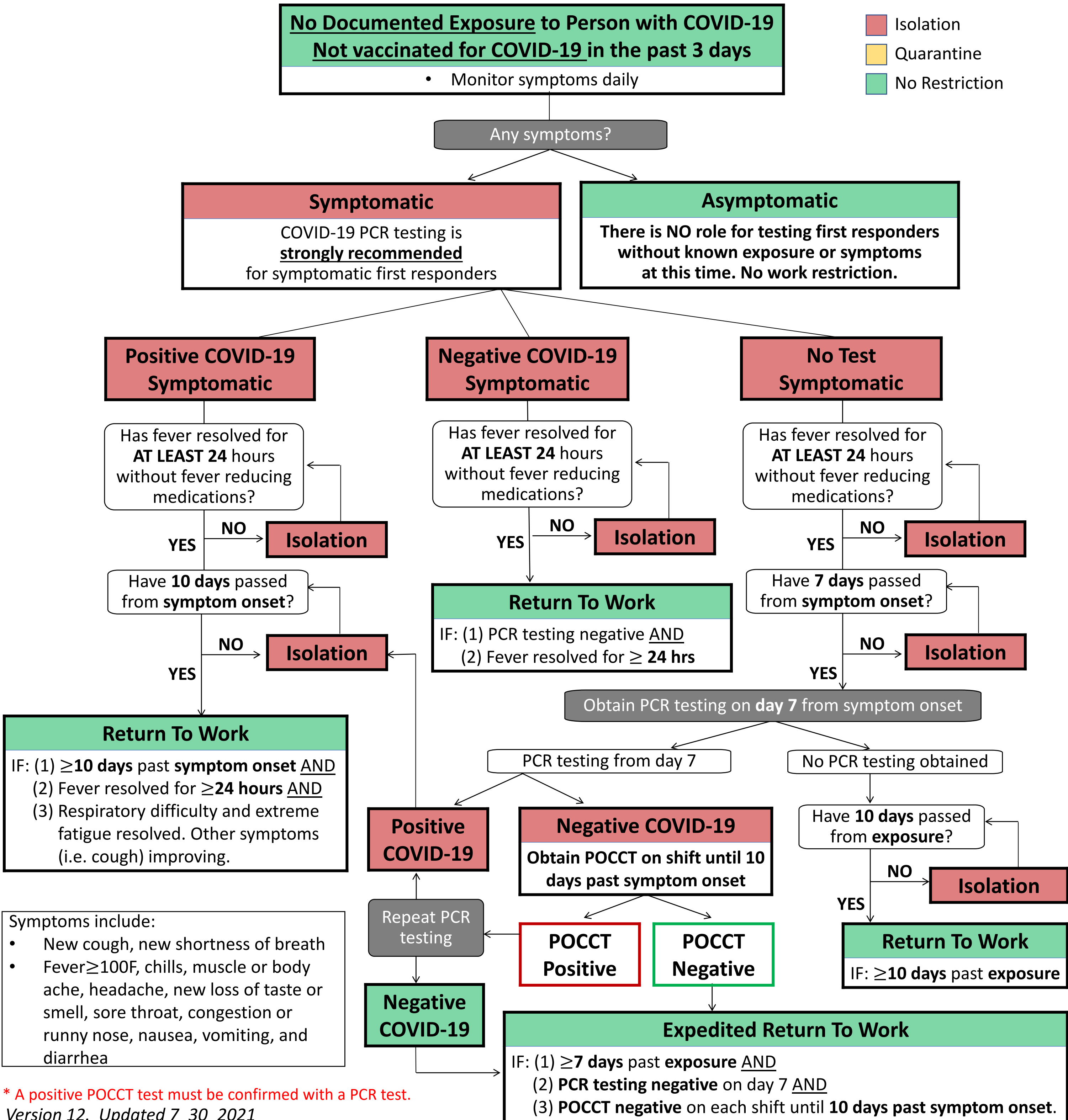
* A positive POCCT test must be confirmed with a PCR test.

* A person who has had COVID infection within the past 90 days does not require POCCT surveillance. Surveillance is required if the provider's past COVID infection > 90 days from the exposure.



COVID-19 Exposure Guidelines for Return to Work:

Known Exposure and not vaccinated within past 3 days



* A positive POCCT test must be confirmed with a PCR test.

Version 12. Updated 7_30_2021

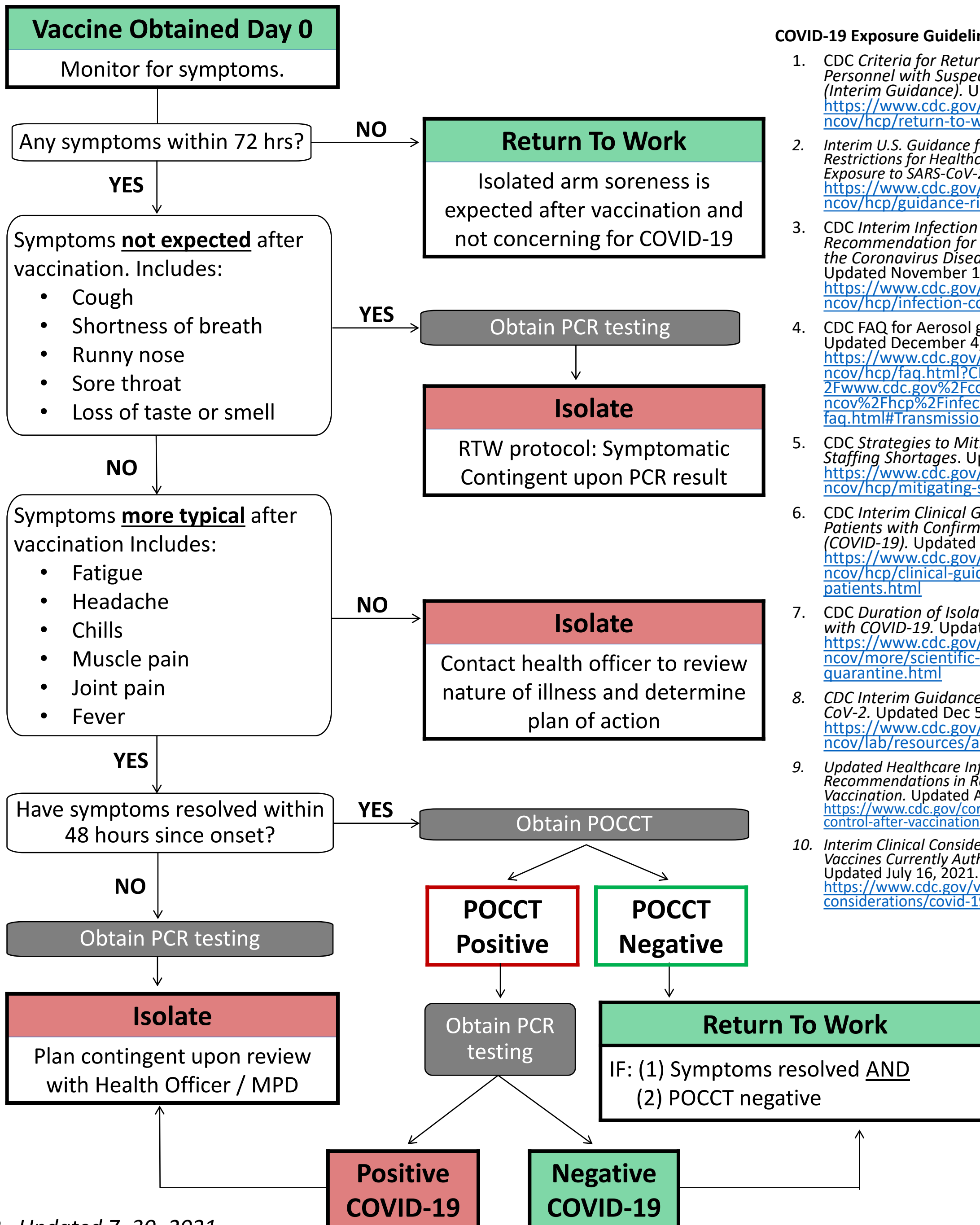
Adapted from WA DOH and CDC



COVID-19 Exposure Guidelines for Return to Work: Symptoms within 3 days of COVID-19 Vaccination

EMS providers are strongly encouraged to receive vaccination. Some people will have symptoms due to the immune response to vaccination. The challenge is to distinguish immune-related symptoms from the vaccine from a COVID-19 infection. The following protocol assumes: (1) that the provider has NOT been exposed to a person with known COVID-19 in the previous 14 days and (2) that the provider did not have symptoms on the day of vaccination.

If a provider develops symptoms within the first 3 days vaccination, please see the algorithm below:



COVID-19 Exposure Guideline References:

1. CDC Criteria for Return to Work for Healthcare Personnel with Suspected or Confirmed COVID-19 (Interim Guidance). Updated June 1, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html>
2. Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to SARS-CoV-2. Updated March 11, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>
3. CDC Interim Infection Prevention and Control Recommendation for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic. Updated November 14, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>
4. CDC FAQ for Aerosol generating procedures. Updated December 4, 2020. https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Finfection-control-faq.html#Transmission
5. CDC Strategies to Mitigate Healthcare Personnel Staffing Shortages. Updated July 17, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/mitigating-staff-shortages.html>
6. CDC Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease (COVID-19). Updated November 3, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html>
7. CDC Duration of Isolation and Precautions for Adults with COVID-19. Updated Dec 2, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html>
8. CDC Interim Guidance for Antigen Testing for SARS-CoV-2. Updated Dec 5, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html>
9. Updated Healthcare Infection Prevention and Control Recommendations in Response to COVID-19 Vaccination. Updated April 27, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-after-vaccination.html>
10. Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States. Updated July 16, 2021. <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html>