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## ZSFG: COVID-19 Testing Guidance: Whom to test and whom not to test

### **Whom to test for COVID-19:**

- Patient with symptoms suggestive of COVID-19
- All patients being admitted to hospital or going to PES unless they meet criteria for not testing (see orange box at right)
- Any patient going to a congregate living setting or other location that requires documented test result
- Testing procedures do not vary by vaccination status.

### **Whom NOT to test:**

- (1) patient asymptomatic, and has a negative test  $\leq 3$  days ago
- (2) patient has a positive test  $< 90$  days ago and no strong suspicion for COVID-19 reinfection\*  
*\* Infrequent cases of reinfection have been reported. Recommend consultation with infectious diseases if you suspect this in a patient.*
- (3) asymptomatic newborns born in hospital to a mother who has tested negative, or who has pending results
- (4) asymptomatic newborns readmitted  $\leq 3$  days after discharge

### **Pre-procedure COVID-19 testing for inpatients or patients being admitted after a procedure:**

#### **Pre-procedure testing is recommended for all patients except:**

- (1) patient asymptomatic, and has a negative test  $\leq 3$  days ago
- (2) patient has a positive test  $< 90$  days ago and no strong suspicion for COVID-19 reinfection\*
- (3) Testing procedures do not vary by vaccination status

### **Antigen testing for asymptomatic COVID-19 positive patients being admitted:**

- (1) For asymptomatic patients diagnosed on admission with COVID-19 by PCR, if patient going to H66/68 ward, can order COVID-19 antigen test to be performed on ward.
- (2) If antigen test is negative, could indicate PCR signifies past COVID-19 disease that is no longer infectious. Could also indicate false positive PCR result. In this case, repeat a second antigen test the following day. If two antigen tests are negative, following a positive PCR test, discuss case with COVID / Infectious Diseases team to consider removal of isolation precautions.
- (3) Vaccination status plays no role in this evaluation.

# ZSFG: COVID-19 Testing Guidance

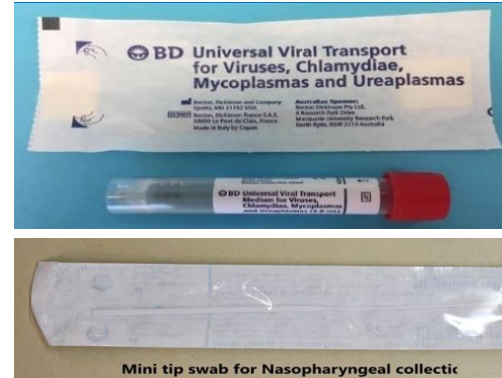
All patients being admitted and in need of testing

ER patients with symptoms who can be discharged to a location where they can self-isolate

## Routine Molecular Tests

Turnaround time: ~4-24 hours

Standard collection: NP swab in viral transport media



•Do not order rapid test if already planning to do regular test.

Patients going to Psych Emergency Services or 7L

Asymptomatic patient who will discharge to another facility, jail, or congregate living facility

Emergent procedures and surgeries ONLY when results will affect patient management\*

\* Collect second specimen and send for routine molecular test at same time to avoid delay in patient movement.

Symptomatic patient who can be discharged but cannot effectively self-isolate

Option to do confirmatory regular test in select cases if IDNow test is negative. (Can consider if patient symptomatic or if you have higher suspicion for COVID-19)

## Abbott IDNow Test\*

Turnaround time: ~1 hour (One test run at a time)

\*If being admitted will require a routine test in addition.

### Specimen Collection:

NP swab in black top sterile tube without liquid (NOT in VTM tube)

Supplies are limited: rapid test availability may vary from day to day



ER patients who require testing before disposition

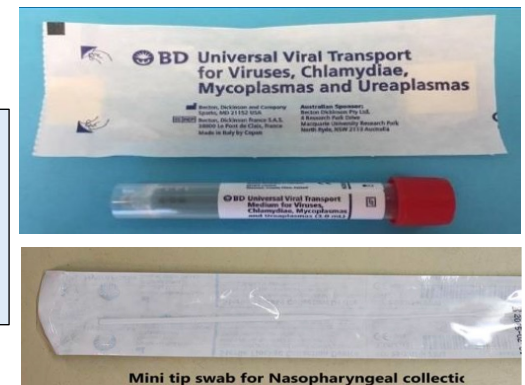
Patients outside of ED who need a rapid test

## Cepheid Xpert Test

Turnaround time: ~2 hours

Available for certain patient groups so long as test is available

Supplies are limited: rapid test availability may vary from day to day



# ZSFG: Joint Testing for COVID-19 and other Respiratory Pathogens

**If ordering COVID-19 testing combined with testing for influenza and/or other respiratory pathogens:**

→ obtain **ONLY** a nasopharyngeal specimen (nasal and oropharyngeal specimens not accepted)

**If ordering just COVID-19 testing:**

- nasopharyngeal sample preferred
- nasal swab acceptable
- can use oropharyngeal (least preferred)

**Sample collection for combined COVID + other viral testing:**

- ALL tests can be performed from a **single nasopharyngeal swab in universal viral transport media (pink fluid)**

**This section is for ordering testing for other respiratory viral tests:**

- **Influenza:** use only for symptomatic patients
- **RPP:** use only for symptomatic inpatients

**Order isolation when ordering testing, if patient not already in isolation.**

COVID-19 Lab and isolation panel ✔ Accept

**COVID-19** ✔ Accept ✖ Cancel  
 Once, First occurrence today at 1531 P  
 Swab, Pharynx  
 Process Inst.: For COVID-19 ONLY testing, Nasopharyngeal, Nasal, and oropharyngeal specimens acceptable.  
If ordering Flu/RPP and COVID-19, nasopharyngeal specimens ONLY. Combined testing can be run on one specimen.

Frequency:       
 Starting:    At:    
 First Occurrence: **Today 1531**  
 Scheduled Times   
 12/09/20 1531

Type:    
 Employed in healthcare setting?     
 Symptomatic for COVID-19 as defined by CDC?     
 Resident in a congregate (group) care setting?     
 Specimen Type:   
 Specimen Src:

**Other respiratory viral tests**

- Influenza A/B and RSV by PCR  
For symptomatic patient < 24 months old only
- Influenza A & B by PCR  
For symptomatic patients ONLY
- Respiratory Panel by PCR  
For symptomatic patients being admitted for inpatient care ONLY

**COVID-19 Isolation order**  
**Review before selecting isolation level.**

- Suspected or Confirmed COVID-19 NOT needing an aerosol generating procedure (AGP)  
Contact, low level respiratory isolation and eye shield
- Suspected or Confirmed COVID-19 NEEDING an aerosol generating procedure (AGP)  
Contact, high level respiratory isolation, and eye shield
- Patient with routine screening test pending (not suspected to have COVID-19) OR patient is declining testing OR patient

⚠ Next Required ✔ Accept

This section is for ordering COVID-19 testing

Indicate which pathogens you wish to test for. (Do not need to specify or request specific test platforms).

# ZSFG: Guidance on Ordering Isolation for Patients being Tested for COVID-19

	Patients with COVID-19 who do not meet criteria for discontinuing isolation (see p.8)	Patients with COVID-19 who DO meet criteria for discontinuing isolation (see p.8)	Patients with symptoms, awaiting COVID-19 test result	Asymptomatic patients awaiting COVID-19 test result OR having workup for suspected false positive or false negative test OR patients in quarantine	Asymptomatic <u>unvaccinated</u> patients who decline COVID-19 test  (asymptomatic fully vaccinated patients do not need testing upon admission)
<b>Isolation Order</b>	Place patient in private room on low level respiratory isolation + contact isolation + eye protection  (or place on high level respiratory + contact + eye protection, if patient needing aerosol generating procedure)	Standard precautions	Place patient in private room on low level respiratory isolation + contact isolation + eye protection  (or place on high level respiratory + contact + eye protection, if patient needing aerosol generating procedure)	Place patient in private room on low level respiratory isolation + eye protection  *If patient asymptomatic, and retesting after having a negative test earlier in the hospitalization, use standard precautions	Place patient in private room on low level respiratory isolation + eye protection  [After 14 days, can shift to standard precautions]
<b>Healthcare worker</b>	Wear N95 + eye protection + gloves + gown	Universal PPE (isolation mask)	Wear N95 + eye protection + gloves + gown	Wear N95 + eye protection (gown not required)	Wear N95 + eye protection (gown not required)
<b>Patient</b>	Patient should wear isolation mask when any healthcare provider is in the room.				
<b>Preferred location after admission</b>	Negative pressure room if admitted to H32/34/36/38 ICU  H66/H68 if floor  (subject to change)	Usually to a non-COVID-19 unit	<u>Higher COVID-19 suspicion:</u> negative pressure room in H32/34/36/38 ICU or H66/H68 if ward (subject to change)  <u>Lower COVID-19 suspicion:</u> non-COVID units	Usually to a non-COVID-19 unit	Usually to a non-COVID-19 unit

If patient being re-tested on admission after a negative IDNow test, continue PPE until confirmatory test returns

**Symptoms of COVID-19**

- Fever: temp > 37.8C or 100F
- Cough
- Sore throat
- Shortness of breath
- Chills
- Headache
- Body aches
- Fatigue
- Loss of smell
- Runny nose
- Nasal congestion
- Nausea, vomiting, diarrhea

**Suggestive Findings**

- Hypoxia, tachypnea
- Leukopenia or lymphopenia
- CXR with bilateral abnormalities
- CT chest with peripheral opacities, ground glass pattern

**Higher Suspicion for COVID-19**

- Syndrome with predominant fever, cough, dyspnea, or fatigue; moderate-severe symptoms, suggestive radiologic findings
- Close contact with a person diagnosed with COVID-19

Can page MOD at 443-5166 for admission to medicine. They can help triage to appropriate team.

# ZSFG: Routing and Procedures for Admitted Patients with COVID-19 or with Pending Tests

## Guidance on cohorting patients and sharing rooms:

(1) Confirmed COVID-19 positive patients may be cohorted together in shared rooms if no other infections are present. (2) PUIs cannot be cohorted together. (3) PUIs cannot be cohorted with confirmed COVID-19 positive patients. (4) Quarantined patients cannot be cohorted together. (5) COVID-19 negative patients needing an AGP should not be roomed/cohorted with other patients. If necessary due to bed shortage, then contact infection control (pager 415.443.1566) for discussion if M-F 9a-5p (otherwise, place in isolation and contact infection control in AM).

	<b>Asymptomatic unvaccinated patient having admission screening test for COVID-19</b>	<b>PUI or COVID-19 positive patient who needs isolation (see p.6) and who does <u>NOT</u> need an aerosol generating procedure</b>	<b>PUI or COVID-19 positive patient who needs isolation (see p.6) and who needs an aerosol generating procedure</b>	<b>Quarantine patient</b> (Tested negative or has not been tested, but requires quarantine due to an exposure)
<b>Level of Isolation Needed</b>	Low level resp isolation + eye protection	Low level resp isolation + contact precautions + eye protection	High level resp isolation + contact precautions + eye protection	Low level resp isolation + eye protection
<b>Type of Room</b>	<b>Private</b> (not negative pressure)	<b>Private</b> (negative pressure not required, but can use to collocate COVID-19 positive patients in one part of ward [per unit-specific plans])	<b>Private room (mandatory)</b> <b>Negative pressure</b> (if available)	<b>Private</b> (not negative pressure)
<b>PPE to wear</b>	N95 Eye protection	N95 Eye protection Gown and gloves	N95 Eye protection Gown and gloves	N95 Eye protection
<b>How to transport patient places</b>	Patient → wear isolation mask, cover with clean sheet Transporter → wear N95 + eye protection			
<b>After patient discharge, how long to hold room before next patient enters?</b>	<p><u>COVID-19 test pending or positive:</u> No AGP done: no hold (since asymptomatic/not coughing) AGP done: •Neg pressure room: <b>30 minutes</b> •Standard room: <b>60 minutes</b></p> <p><u>COVID-19 test negative:</u> No hold.</p>	AGP NOT done: <b>15 minutes</b>	<p>If AGP done in last 60 minutes: •Neg pressure room: <b>hold 30 minutes</b> •Standard room: <b>hold 60 minutes</b></p> <p>If no AGP done in last 60 minutes: <b>hold 15 minutes</b></p>	No hold.

## ZSFG: Guidance on Discontinuing Isolation in Patients with COVID-19

For patients who are: (1) hospitalized, (2) need a procedure or surgery, (3) need an aerosol generating procedure, (4) transferring to or residing in SNF	
<b>Patients who have remained asymptomatic</b>	<b>DC isolation when:</b> At least 10 days have passed since the date of the first positive viral diagnostic test
<b>Mild-moderate COVID-19 illness</b>	<b>DC isolation when ALL criteria are met:</b> 1. At least 10 days have passed since symptoms first appeared AND 2. At least 24 hours have passed since last fever without use of fever reducing medications AND 3. Symptoms (e.g. cough, shortness of breath) have improved
<b>Severe or critical COVID-19 illness</b>	<b>DC isolation when ALL criteria are met:</b> 1. At least 20 days have passed since symptoms first appeared (or sooner if antigen testing negative and in consultation with COVID/ID team), AND 2. At least 24 hours have passed since last fever without use of fever reducing medications AND 3. Symptoms (e.g. cough, shortness of breath) have improved
<b>Severely immunocompromised (both mild/moderate, and severe critical illness)</b>	<b>Follow guidance above based on illness severity</b>  See page 9 for definitions of illness severity and immunocompromising conditions

For patients who are: (1) transferring to or residing in a community setting, (2) transferring to or residing in a non-SNF congregate setting, or (3) attending an outpatient visit without an AGP	
<b>Patients who have remained asymptomatic</b>	<b>DC isolation when:</b> 1. At least 10 days have passed since the date of the first positive viral diagnostic test
<b>Patients who are symptomatic</b>	<b>DC isolation when ALL criteria are met:</b> 1. At least 10 days have passed since symptoms first appeared AND 2. At least 24 hours have passed since last fever without use of fever reducing medications AND 3. Symptoms (e.g. cough, shortness of breath) have improved
<b>Patients with severe or critical illness OR who are severely immunocompromised</b>	<b>Follow guidance above based on illness severity.</b>  Consult SFDPH isolation and quarantine guidelines, depending on location to which patient being discharged, and consult with receiving facility.  <a href="https://www.sfdph.org/dph/COVID-19/Isolation-and-Quarantine.asp">https://www.sfdph.org/dph/COVID-19/Isolation-and-Quarantine.asp</a>

### **Illness severity definitions:**

**Mild Illness:** Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, or abnormal chest imaging.

**Moderate Illness:** Individuals who have evidence of lower respiratory disease by clinical assessment or imaging, and a saturation of oxygen (SpO<sub>2</sub>) ≥94% on room air.

**Severe Illness:** Individuals who have respiratory frequency >30 breaths per minute, SpO<sub>2</sub> <94% on room air (or, for patients with chronic hypoxemia, a decrease from baseline of >3%), ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO<sub>2</sub>/FiO<sub>2</sub>) <300 mmHg, or lung infiltrates >50%. (Patients should meet one of these criteria for at least 12 hours when deciding whether severe illness is present.)

**Critical Illness:** Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

### **Severely immunocompromising conditions:**

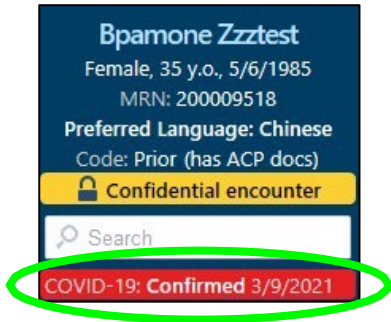
1. Currently on chemotherapy for malignancy
2. <1 year after hematopoietic stem cell or solid organ transplant
3. Hematologic malignancy that may suppress the immune system
4. Untreated HIV infection with CD4+ T-lymphocyte count < 200
5. Combined primary immunodeficiency disorder
6. On prednisone >20mg/day (or other steroid equivalent) for >14 days
7. Receiving a biologic immunomodulatory agent



# ZSFG: Visual Guide to Resolving COVID-19 Infection Banners and Removing Isolation Orders

## How to "resolve" a COVID-19 infection status:

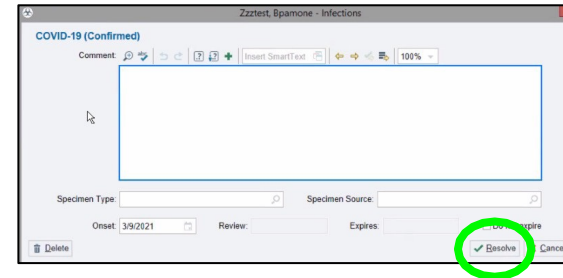
1. In the storyboard, the red banner indicates patient's COVID-19 status is currently "confirmed".



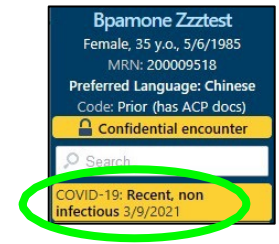
2. Hover over this red banner: this will reveal infection status. Click "resolve".



3. A window will come up: click "resolve"

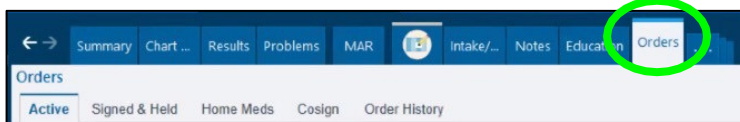


4. Now the storyboard will show the COVID-19 status as "recent, non-infectious".

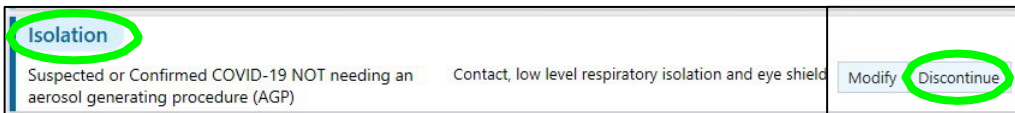


## How to remove COVID-19 isolation orders (i.e., how to discontinue COVID-19 isolation):

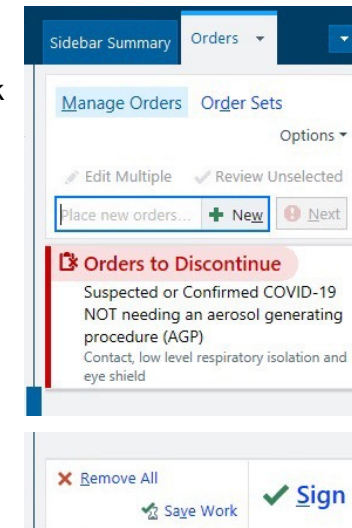
1. Within the inpatient encounter, go to the orders tab



2. Scroll down to the Isolation section and click "discontinue"



3. The discontinuation order will appear in the right hand sidebar. Click "sign" at the bottom to finalize the order.



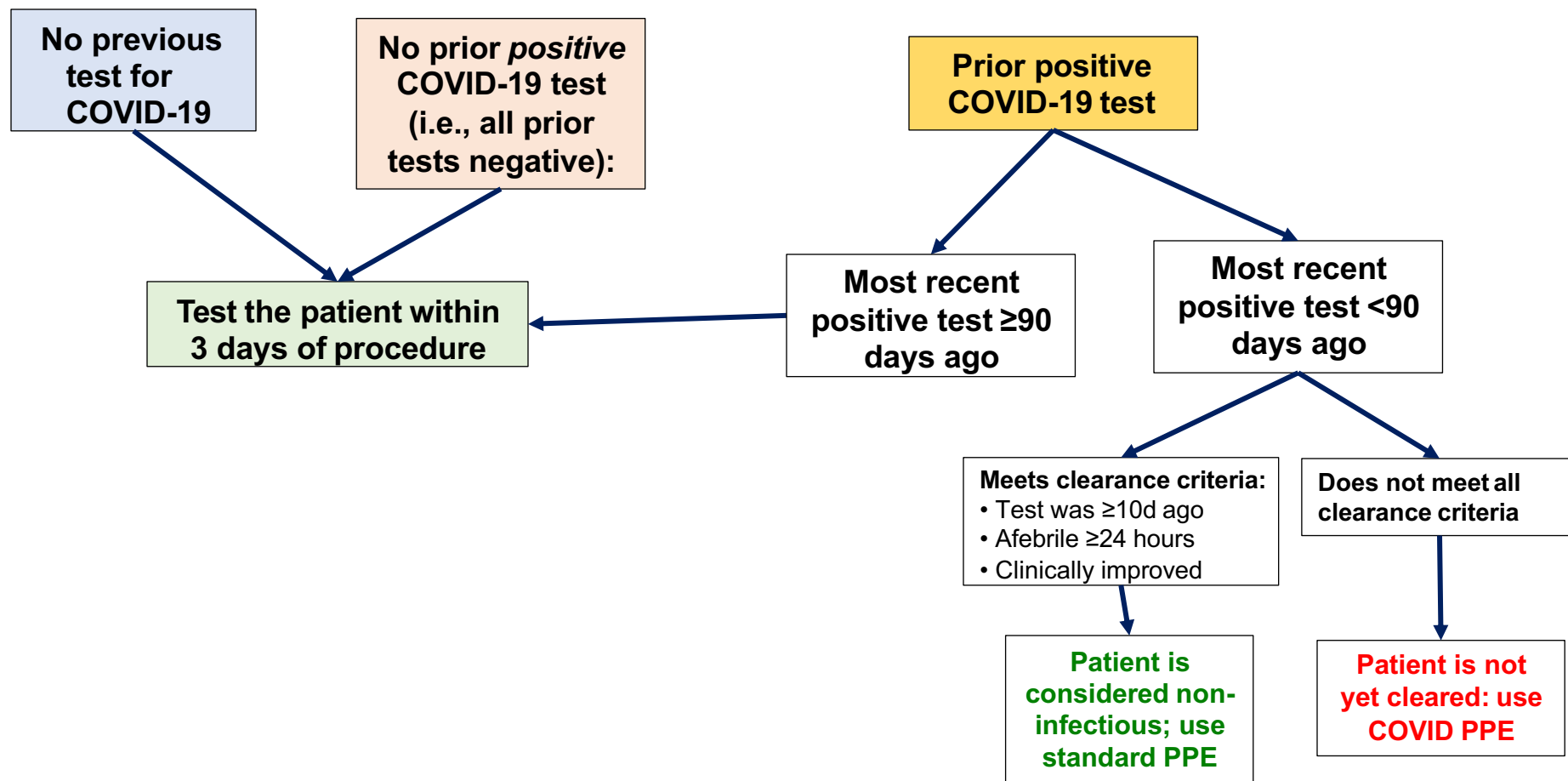
**Patients need to be placed in hospital quarantine in consultation with infection control team in the following situations:**

- 1. Patients who are determined to have been exposed to a COVID-19 positive healthcare worker**
- 2. Patients who are admitted and are not vaccinated for COVID-19, and had a close/household COVID-19 exposure**
- 3. Patients who are not up to date on COVID-19 vaccination, defined as not yet having had a booster shot (consult: <https://www.sfdph.org/dph/COVID-19/Isolation-and-Quarantine.asp>), AND who are <5 days after return from international travel**

**Quarantine length:  
10 days in all situations**

- Patient in quarantine for 10 days following last/latest date of exposure**
- Place patient in low level respiratory isolation with eye shield. Gown not necessary.**
- Patient should have COVID-19 test on day 9 of quarantine.**
- On day 10: if patient has remained asymptomatic, and the day 9 test is negative, can lift quarantine on day 10.**
- If at any point during quarantine, patient manifests a new COVID-19 symptom → test for COVID-19 immediately & place patient into full COVID-19 isolation (i.e., add contact precautions to what is already in place)**

## ZSFG: Evaluating Patients before Inpatient Surgeries or Procedures



N95s are recommended for use when doing any AGP, regardless of COVID-19 status

## ZSFG: Guidance on Patients Needing Aerosol Generating Procedures

- **N95s are recommended for use when doing any AGP, regardless of COVID-19 status**
- **For any patient needing an AGP who may need to be in a shared room, refer to pink box on Slide 7.**

### General Principles

- Both N95s and PAPRs are appropriate for caring for COVID-19 patients.
- PAPRs have specific uses—discussed here
- PAPRs should not be worn on top of other respirators like N95s or face masks.
- If a healthcare worker has a respiratory illness and wears a PAPR—it circulates their exhaled air into the surroundings, posing risks to others.
- Healthcare worker wearing an N95 does not have to wait any amount of time before entering a room in which an aerosol generating procedure has been performed or is being currently performed.

### 1. High Flow Nasal Canula Oxygen:

- **Not considered an AGP**
- Try oxygen by nonrebreather face mask first
- PAPR not needed—N95 is sufficient
- Try to have patient wear isolation mask

### 2. Bronchodilators:

- **Are considered an AGP**
- Try MDI with spacer before using nebs
- Can wear N95 or PAPR to give neb treatments
- RTs can give neb treatments, and can wear N95 or PAPR
- Can prioritize patients for neg-pressure rooms
- After neb is done, persons in N95 can enter without delay

### 3. Non-invasive Ventilation (NIV:BiPAP, CPAP):

- **Is considered an AGP**
- NIV: BiPAP/CPAP: not indicated for hypoxemic respiratory failure due to pneumonia/other respiratory infections. Can use HFNC & consider early intubation if appropriate. But situations for NIV where appropriate/needed, e.g. COPD, heart failure, will exist.
- Healthcare workers: can wear N95 or PAPR
- If patient uses NIV at home, consult pulmonary to assess whether it is needed in hospital or not

### 4. Open Tracheal Suctioning:

- **Is considered an AGP** (closed tracheal suctioning: not an AGP)
- Can wear N95 or PAPR

### 5. Intubation and Extubation:

- **Is considered an AGP**
- If concerns about respiratory decompensation, be in touch with ICU team early, and consider early intubation
- Healthcare workers in room during intubation or extubation: can wear N95 or PAPR
- Minimize number of people in room to those essential

### 6. Code Blue:

- **Chest compressions and intubation are considered AGPs**
- Healthcare worker managing airway: can wear N95 or PAPR
- When bag used for ventilation, fit with a filter
- Obtain transport ventilator as soon as possible
- Minimize number of people in room to those essential

•NOTE: Negative air pressure rooms are for protecting staff outside the room when door opens/closes (not for protecting healthcare worker while they are in the room).