Guidance for Clinicians

Evaluation and Testing for COVID-19 Novel Coronavirus Infection

Updated March 15, 2020

Updates (3/15/2020):

- Added section to suggest general priorities for COVID-19 testing (page 1)
- Updated specimen collection guidelines – NP swab can be submitted without OP swab (page 4)

The CDC has expanded its criteria for testing to include a wider group of symptomatic patients and clinicians should use their judgment to determine if a patient has signs and symptoms compatible with COVID-19 and whether they should be tested (see https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-criteria.html). Most patients with confirmed COVID-19 have developed fever[1] and/or symptoms of acute respiratory illness (e.g., cough, difficulty breathing).

Priorities for COVID-19 testing may include:

1. Hospitalized patients who have signs and symptoms compatible with COVID-19, in order to inform decisions related to infection control.
2. Other symptomatic individuals such as older adults and individuals with chronic medical conditions and/or an immunocompromised state that may put them at higher risk for poor outcomes (e.g., diabetes, heart disease, receiving immunosuppressive medications, chronic lung disease, chronic kidney disease).
3. Any persons including healthcare personnel[2] who, within 14 days of symptom onset, had close contact[3] with a suspect or laboratory-confirmed[4] COVID-19 patient, or who have a history of travel from affected geographic areas[5] (see below) within 14 days of their symptom onset.

COVID-19 Testing: Criteria for Testing at SF Public Health Laboratory

The San Francisco Public Health Laboratory (SFPHL) has limited capacity to test specimens for SARS-CoV-2, the virus that causes COVID-19. **For testing at SFPHL, priority is as follows**:

1. Hospitalized patients with pneumonia/ARDS and no etiology identified
2. Fever or respiratory symptoms in a close contact of a patient with lab-confirmed COVID-19 within 14 days of symptom onset
3. Long-term care facility resident with new fever, cough, or shortness of breath or other acute symptoms concerning for COVID-19, with no other etiology identified

These criteria are narrower than the CDC criteria and are intended to prioritize COVID-19 testing by the SFPHL to rapidly identify patients at higher risk of having or transmitting COVID-19 in key populations.

COVID-19 Testing at Clinical and Commercial Laboratories

Given SFPHL testing limitations**, clinicians are encouraged to pursue testing at clinical and commercial labs if they do not meet the SFPHL clinical criteria outlined above.** Testing is currently being offered by clinical and commercial labs including LabCorp, Quest and ARUP, and additional laboratories are expected to offer testing within the coming weeks. There is no need to contact SFDPH when arranging testing via non-public health laboratory.

In addition, San Francisco clinicians and clinical facilities are recommended to:

- **Identify patients who may have a febrile respiratory illness**
    - Place visible signage requesting visitors with a fever and recent international travel to immediately notify healthcare staff. COVID-19 travel alert posters are available at www.sfcdcp.org/covid19hcp.
    - Screen all patients at triage for signs or symptoms of febrile respiratory illness and if present, the patient should wear a surgical mask and be placed in a private room with the door closed or separated from others by at least 6 feet.
    - Ensure all healthcare workers interacting with the patient don a surgical mask.
- **Evaluate whether the patient's presentation is compatible with COVID-19 and whether they should be tested**
    - All patients with suspected COVID-19 should also be tested for common causes of respiratory infection and pneumonia as clinically indicated. Note that the coronavirus test available on molecular viral testing panels does not test for the novel coronavirus COVID-19.
    - Patients who meet SFDPH COVID-19 criteria for testing, above.
        - See specimen collection and handling instructions, below.
        - Contact SFDPH Communicable Disease Control & Prevention by phone at 415-554-2830 from 8am-5pm to request a case number to send specimens to SFPHL.
    - Patients who **do not** meet SFDPH COVID-19 criteria for testing, but the provider assesses that testing may be indicated.
        - Clinicians may arrange for testing via non-public health laboratories as available. Check with the specific laboratory for details regarding its specimen handling guidelines.
        - **There is no need to contact SFDPH when arranging testing via non-public health laboratory.**
        - If your patient's COVID-19 testing returns positive, Per Title 17 of the California Code of Regulations, all diagnosing providers and laboratories must report cases of COVID-19 to SFDPH at 415-554-2830.
- **Observe infection control procedures for suspected COVID-19 patients**
    - Ensure the patient is wearing a surgical mask
    - Isolate the masked patient in a private room with the door closed. Isolation in an airborne infection isolation room (AIIR) is preferred, if available
    - Wear appropriate personal protective equipment (PPE) consisting of gloves, gown, respiratory protection (N95 mask or PAPR) and eye protection (goggles or face shield).
    - Observe standard, contact, and airborne precautions plus eye protection.
- **Disposition**
    - While awaiting COVID-19 test results, patients sick enough to require hospitalization should be managed according to CDC guidelines for infection control in healthcare settings. See: https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html

- While awaiting COVID-19 test results, patients well enough to recuperate at home may be discharged to home with instructions to self-isolate at home until results of testing are available. **Printable patient instructions in multiple languages are posted at https://www.sfcdcp.org/covid19hcp**

Footnotes

[1]Fever may be subjective or confirmed

[2]For healthcare personnel, testing may be considered if there has been exposure to a person with suspected COVID-19 without laboratory confirmation. Because of their often extensive and close contact with vulnerable patients in healthcare settings, even mild signs and symptoms (e.g., sore throat) of COVID-19 should be evaluated among potentially exposed healthcare personnel. Additional information is available in CDC's Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease 2019 (COVID-19).

[3]Close contact is defined as—

a) being within approximately 6 feet of a COVID-19 case for a prolonged period of time; close contact can occur while caring for, living with, visiting, or sharing a healthcare waiting area or room with a COVID-19 case

– or –

b) having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on)

If such contact occurs while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection), criteria for PUI consideration are met.

Additional information is available in CDC's updated Interim Infection Prevention and Control Recommendations for Patients with Confirmed COVID-19 or Persons Under Investigation for COVID-19 in Healthcare Settings.

Data to inform the definition of close contact are limited. Considerations when assessing close contact include the duration of exposure (e.g., longer exposure time likely increases exposure risk) and the clinical symptoms of the person with COVID-19 (e.g., coughing likely increases exposure risk as does exposure to a severely ill patient). Special consideration should be given to healthcare personnel exposed in healthcare settings as described in CDC's Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with COVID-19.

[4]Documentation of laboratory-confirmation of COVID-19 may not be possible for travelers or persons caring for COVID-19 patients in other countries.

[5]Affected areas are defined as geographic regions where sustained community transmission has been identified. For a list of relevant affected areas, see CDC's Coronavirus Disease 2019 Information for Travel.

Specimen Collection Instructions – ANY Lab – Updated 3-15-20

Collect a nasopharyngeal swab (NP swab)

As of March 13, the CDC is now recommending collecting **only** an NP swab.

- Use a synthetic fiber swab with plastic shaft. Do not use calcium alginate swabs or swabs with wooden shafts.
- Insert swab into nostril parallel to the palate, leave swab in place for a few seconds to absorb secretions.
- Place swab immediately into a sterile tube containing 2-3 ml of viral transport media.

If you choose to additionally collect an oropharyngeal swab (OP swab):

- Use a synthetic fiber swab with plastic shaft. Do not use calcium alginate swabs or swabs with wooden shafts.
- Swab the posterior pharynx, avoiding the tongue.
- Place into the **SAME tube of viral transport media as the NP swab**. Combining the NP and OP swabs (if you choose to collect an OP swab) into **one specimen tube** is critically important to conserve supplies of testing reagents.

Note: We recommend collecting only a NP swab. If collecting both, NP and OP swabs must be placed **together** in a **single** viral transport media, such as ones used to collect NP swabs for influenza testing, shown here. Improper collection, such as placing swabs in bacterial culture media, will void the specimen and delay testing.

An NP swab is the priority specimen. If you would like to test any of the following specimens, please call SFDPH at 415-554-2830 to discuss:

- **Sputum:** Collect sputum only if the patient is producing sputum; **do not perform sputum induction procedures**. Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile, leak- proof, screw-cap sputum collection cup or sterile dry container.
- **Bronchoalveolar lavage, tracheal aspirate, or pleural fluid:** 2-3 mL in a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.
- **Nasopharyngeal wash/aspirate or nasal aspirate.** Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

Store all specimen types at 2-8°C for up to 72 hours after collection. If a delay in testing or shipping is expected, store specimens at -70°C or below.

Note: If specimens cannot be collected at the healthcare facility, do not refer the patient to another facility to obtain specimens. Instead, notify SFDPH at 415-554-2830 to discuss.

Specimen Handling Instructions – San Francisco Public Health Lab ONLY

(Note: these instructions are for sending specimens to SFPHL only. If you are sending to another clinical or commercial lab, check with the specific laboratory for details regarding its specimen handling guidelines.)

Upon approval by SFDPH, arrangements will be made for prompt transport of specimens for COVID-19 testing to the San Francisco Public Health Laboratory (SFPHL). Use Category B infectious substance packaging instructions and transport on a cold pack. The SFPHL will process specimens for testing.

Do not send specimens directly to CDC or CDPH.

For biosafety reasons, it is not recommended to perform viral isolation in cell culture or initial characterization of viral agents recovered in cultures of specimens from a person under investigation for 2019-nCoV.

Please complete the SFPHL General Requisition Form, available here: https://www.sfcdcp.org/public-health-lab/forms-specimen-culture-submission/.

CDC Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Patients Under Investigation (PUIs) for 2019 Novel Coronavirus
https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html

CDC 2019 Novel Coronavirus Guidance for Laboratories.
https://www.cdc.gov/coronavirus/2019-nCoV/lab/index.html