COVID-19 Testing Guidance (Nucleic Acid Amplification / PCR Testing)

12/8/2020 Updates from Prior Version
1. Added three additional COVID-19 symptoms to guide testing: new onset fatigue, headache, and congestion/runny nose 2. For patients with new COVID-19 symptoms following initial recovery of COVID-19 illness, re-testing for COVID-19 is reasonable, especially if more than 90 days since original illness

General Principles

1. COVID-19 testing should only be performed if it changes patient management
    a. Example of over-testing: Patients who are transferred in with an existing positive COVID-19 test from an outside hospital
2. Point-of-care ('Rapid') COVID-19 testing on *inpatients* is discouraged as it is resource intensive. Order routine COVID-19 testing for most patients, with turnaround time of 1 day.
3. For inpatients, repeat COVID-19 testing (i.e., ordering a 2nd COVID-19 test if 1st test is negative) to make an initial COVID-19 diagnosis may be considered any of the following situations:
    a. High clinical suspicion with no alternative diagnosis, worsening respiratory status, clinical deterioration, **or** admission to ICU (endotracheal sample or bronchoalveolar lavage after intubation preferred)
4. "Presumptive COVID-19" patient status
    a. *Even if all COVID-19 testing is negative* (regardless of number of tests), if the patient has clinical features concerning for COVID-19, then admit to COVID-19 unit with COVID-19 infection precautions and add EPIC infection status for "Presumptive COVID-19".
        i. COVID-19 clinical features include compatible symptoms, chest X-ray/CT findings, or undifferentiated respiratory illness

Whom to test for COVID-19

1. A patient with symptoms or signs consistent with COVID-19 (emphasis on new or unexpected symptoms):
    a. Symptoms include:
        - Fever (including *subjective fever and chills*)
        - Cough
        - Shortness of breath
        - Sore throat
        - Body aches
        - New loss of taste / smell
        - Fatigue
        - New headache
        - Congestion/runny nose

2. Patients for whom universal COVID-19 testing is currently considered (this list will change over time based on community COVID-19 prevalence, indication, and testing availability):
    a. Patients admitted with any of the following risk factors: homelessness, congregate settings (e.g., nursing home, homeless shelters, jail/prison)
    b. Pregnant women admitted for Labor and Delivery
    c. Patients undergoing transplant (solid organ or hematologic transplant) or chemotherapy treatment
    d. Patients prior to qualifying OR/IR/endoscopy procedures or prior to any aerosol-generating procedure of the airway / upper digestive tract (for specific list of qualifying procedures, see "Pre-procedure, Pre-surgical COVID Testing Protocols" in Clinical Resources section of Rush COVID-19 intranet page)

3. For asymptomatic patients (i.e., no COVID-19 symptoms), testing may be considered for the following groups. *Note: Rush does not currently provide asymptomatic testing for these following categories; these asymptomatic patients may seek testing at an alternative test center (e.g., Illinois Dept. of Public Health testing site) if they meet the following criteria*:
    a. Unprotected close contacts of persons with COVID-19 infection, within 14 days of exposure.
        i. Per Illinois Department of Public Health, a close contact is defined as someone who was within 6 feet of an infected person for a total of 15 minutes or more starting from 48 hours before illness onset until the time the COVID-infected person is isolated
        ii. Testing of close contacts is optional, as a negative COVID-19 test does not preclude a positive test on a subsequent day within the incubation period and does not affect length of quarantine

    b. Patients or healthcare workers instructed by public health / infection control to undergo testing because they are part of a COVID-19 cluster investigation.

4. Testing of asymptomatic patients (i.e., no COVID-19 symptoms) is *discouraged* for:
    a. Patients who want to undergo periodic 'surveillance' of infection because of on-going risk (e.g., workplace risk).
        i. Rationale: A negative COVID-19 test on any given day does not preclude a positive test on a subsequent day.
        ii. Rush healthcare personnel may be advised to undergo surveillance testing in event of an exposure or cluster investigation, as determined by Infection Prevention.
        iii. For all other asymptomatic patients, Illinois Department of Public Health's State-Operated Community-Based Test Sites may offer additional COVID testing opportunities with no restriction or cost.

Considerations for Outpatient Re-Testing (e.g., return visit to emergency room or primary care setting)

Prior COVID-19 Test Result	Current Outpatient Symptoms	COVID-19 Re-Test?
Positive	Continued symptoms, not improving	**No:** COVID-19 infection already established. Assess for symptoms/signs of severe COVID-19 disease. Search for other causes of symptoms.
	New episode of COVID-19-like symptoms	**Yes:** to diagnose potential re-infection, especially if >90 days from initial COVID-19 infection. Per CDC, re-infection within 90 days of initial infection is rare, and prolonged (12 weeks) shedding of COVID-19 RNA remnants can occur *without live virus*.
Negative	Continued symptoms, not improving	**Consider re-testing if symptoms consistent with COVID-19** Search for other causes of symptoms.
	New episode of COVID-19-like symptoms	**Yes** Search for other causes of symptoms.