Spectrum Health

COVID-19 Adult Inpatient Workflow March 27 at 1100

For inpatient adult patients who are showing symptoms of COVID-19, please utilize the following workflow to determine the need for COVID-19 testing:

Key Factors to Testing:

- Testing capability & PPE is limited at this point.
- For any patient transition from ED to Inpatient, an intentional conversation must occur between providers regarding patient specific potential for COVID-19 testing.
- If you have questions, please contact Infection Prevention or Infectious Disease.

The following patients with COVID-19 symptoms should be testing for COVID-19:

Those with fever or cough AND:

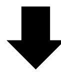
- Patients hospitalized with severe lower respiratory illness
- Pregnant women in the 3rd trimester or in active labor
- Severely immunocompromised as defined by the below:
  - Active chemotherapy
  - Hematology malignancy with prolonged neutropenia
  - Primary immunodeficiency
  - History of bone marrow or solid organ transplant
  - Active treatment for GVHD
  - Daily prednisone or equivalent >2 mg/kg/day
  - TNF inhibitor
  - Age>65
- Health Care and Public Service Worker

Patient presents with following symptoms:

Lower respiratory complaints: cough, dyspnea, (*isolated rhinorrhea does not qualify*) **AND**

Fever (subjective or objective) or Flu Like Symptoms

(Exclusions: patient has known or suspected alternative diagnosis, for example lobar pneumonia. If so, treat alternative diagnosis)



- **Initiate Severe Respiratory Isolation (see box to right)**
- **Obtain 1 NP swab specimen. Send for COVID-19 testing: COVID-19 PCR.**
- **If inhaled treatment required, encourage use of home MDI as able. If nebulizers required, please see severe respiratory isolation precautions (box to the right).**
- *Do not hold patient in ED for pending results. Admit / transfer patient to designated units as able.*

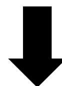
Severe Respiratory Isolation

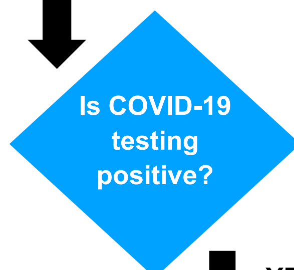
Precautions include the following:

- Gown
- Gloves
- Eye Protection
- Simple Isolation Mask

When using Severe Respiratory Isolation precautions, remember that the following procedures require the additional precautions:

- **Nebulizers**: N95 mask or PAPR
- **CPAP, BiPAP, Home Vents, Act of Intubation/ Extubation, HFNC**: N95 + Negative Pressure if available.





NO

Consider ordering Film Array.

Treat alternative cause and adjust to isolation precautions for diagnosis per policy.

Transfer to alternate floor as able.

*** If clinical concern for COVID-19 remains, please see guidelines for clinical diagnosis below.*

YES

Maintain Severe *Respiratory Precautions.*

- Consider ordering Influenza A/B PCR & starting Tamiflu (if positive).
- Provide therapeutic support.
- Follow treatment guidelines.
- If you have clinical questions, contact the “COVID-19 Provider Resource – Adults” in PerfectServe.

Suspicion Criteria: *For patients admitted with respiratory symptoms + concern for COVID-19 disease BUT COVID-19 AND other viral testing is negative, please consider the following clinical presentation if maintaining a high clinical suspicion of COVID-19:*

SYMPTOMS		
Common Symptoms (>75% prevalence)	**Intermediate Symptoms** (15-40% prevalence)	**Uncommon Symptoms** (<5% prevalence)
• Fever (> or = to 38 degrees) present at any point during the admission • Cough	• Myalgias • Fatigue • Sputum production • Shortness of breath on admission • Septic Shock	Uncommon Symptoms (<5% prevalence) • Nausea and Vomiting • Diarrhea • Hemoptysis • Nasal Congestion

LABORATORY FINDINGS	**IMAGING FINDINGS**
• ***Absolute lymphopenia <1500 per mm3*** *(>80% prevalence)* • Elevated LDH (40% prevalence) • Elevated CRP (severe disease) • Elevated D-dimer (severe disease) • NORMAL WBC count + Procalcitonin	• **Chest CT:** Approximately 85% of all patients with COVID19 have abnormal Chest CT scan, findings include local or bilateral patchy shadowing, ground glass opacities • **CXR:** Abnormal in patients with non-severe disease, sometimes consistent with multifocal PNA. In this patient population with negative testing, non-severe disease, and equivocal or negative chest XR, non-contrast CT chest should be considered. • ***Uncommon***: Pleural effusions and hilar adenopathy

CLINICAL GUIDANCE:
For patients with fever + cough + one or more of the above laboratory or imaging findings, maintain high suspicion of COVID-19. Keep patient in severe respiratory isolation and treat accordingly. Utilize positive or presumed positive COVID-19 discharge instructions upon discharge.

Source: New England Journal of Medicine Feb 28, 2020

Re-testing Criteria: *Please use the following criteria to determine if retesting for COVID-19 should be considered. Note that testing accuracy is dependent upon appropriate technique of specimen collection. Sputum specimens could be considered for retesting.*

Status	**Retesting Criteria**
COVID **POSITIVE** Patients	NO retesting is indicated at this time. Infection Prevention should be consulted to determine if patient can be removed from severe respiratory isolation.
COVID **NEGATIVE Patients with significant Clinical Suspicion** (see above for clinical presentation guidelines)	*Retesting may be indicated with the following scenarios:* • **Respiratory Decline requiring increased Level of Care:** retesting may be considered to confirm etiology • **End of Life Situations:** retesting may be considered for the purposes of preserving PPE and/or directing PPE use within family visitation • **Length of Stay**: retesting may be considered for the purpose of preserving PPE within a longer length of stay ▪ Infection Prevention should be consulted with these scenario

Treatment considerations for patients positive or presumed to be COVID-19 positive (as identified above):

- **PPE**: follow severe respiratory isolation precautions (see sign on door), contact “Hot Zone Boss” as needed for coaching on PPE.

- **Caregiver Limitation**:
    - **RNs and RTs** should serve as primary care providers for direct patient care
    - **Physicians, APPs, Residents** should limit to 1-2 providers per shift
    - **Phlebotomists and Rehab** may provide essential direct patient care as needed
    - **All other team members** (care management, MSW, pharmacy, consulting services, clinical students) should refrain from direct patient care (entering the room). Consider use of virtual or phone communication for subspecialty consults and/or patient & family communication.

- **Consolidate “Batch” Care:**
    - Minimize labs and consults as much as possible
    - Group and “batch” interventions to minimize direct patient contact throughout shift

- **Patient placement:** placement should follow organizational protocols for cohorting until COVID-19 volumes surpass capacity of designated units
    - Hospital Supervisors may be contacted to help facilitate transfers between units as needed
    - Patients not being tested or treated for COVID-19 should be relocated as needed to create capacity within designated units

- **Visitor Movement**: Visitor restriction should continue as established. Visitors permitted on case by case basis. Approved visitors must limit movement to travel between the room and parking lot only. Visitors must wear a mask while en route.