UNDIFFERENTIATED RESPIRATORY PATIENTS

ED UPFRONT RAPID EVALUATION AND TRIAGE

**Fever OR SOB OR Cough?**

Include subjective fever and chills. Anosmia may be early symptom. Atypical presentations: Chest Pain, Vomiting, Diarrhea. Risk factors: Elderly, Immunocompromised, COPD, HTN, CAD, DM.

- **NO**
  - **USUAL CARE**

- **YES**
  - **DISCHARGE**
    - Well-appearing patients without extreme vital sign derangements.
    1. Click the COVID-19 Discharge box in Dispo.
    2. Use the COVID-19 Eval button in My Notes.
    3. Order Ambulatory COVID-19 Testing like you would a prescription in Dispo.
      - Do this only if clinically warranted and the patient has no other route for testing.
    4. Give the patient strict ED return precautions. We anticipate that a small percentage of discharged patients will deteriorate and require a return visit.

- **SEND TO MAIN ED**
  - Ill-appearing or high risk patients with concerning vital signs, and/or those who are unable to follow discharge instructions.
    - Not all patients require labs or imaging.
    - If they do, see “ED Ordering Guidelines.”

For more info, see the [Upfront Triage Guidelines](#).
UNDIFFERENTIATED RESPIRATORY PATIENTS

MAIN ED - ROUTINE CARE

Ill-Appearing OR Significant Vital Sign Abnormalities?

Hypoxia OR SOB OR Fever OR COVID-19 + with Worsening Symptoms OR High Risk

Patients may appear well even with deviations in vital signs. Other factors (elderly, underlying cardiac or pulmonary illnesses, immunosuppressed states, morbid obesity) may factor into clinical judgement & decisions.

ED WORKUP

- Supportive Care
  - IV or Oral Fluids (avoid large fluid boluses)
  - Antipyretic (acetaminophen is preferred)
  - Nasal Cannula Supplemental Oxygen

- Labs and Imaging
  - Not all patients require investigations.
  - See Main ED - Ordering Guidelines
  - Consider POCUS.

Discharge

1. Click COVID-19 Discharge box in Dispo.
2. Use Ambulatory COVID-19 Test as needed.

Admit to Medicine Floor

1. Click the COVID-19 Precautions box in admit order.
4. These patients deteriorate quickly. You must reevaluate the pt before they go upstairs to make sure they do not need escalation of care.

Nursing Home Patients
- TBD

Psych or ETOH Patients with Mild Symptoms
- Consider admission for COVID testing with psychiatric consultation.
UNDIFFERENTIATED RESPIRATORY PATIENTS

MAIN ED - ROUTINE CARE

**III-Appearing OR Significant Vital Sign Abnormalities?**

- Hypoxia OR SOB OR Fever OR COVID-19 + with Worsening Symptoms OR High Risk

*Patients may appear well even with deviations in vital signs. Other factors (elderly, underlying cardiac or pulmonary illnesses, immunosuppressed states, morbid obesity) may factor into clinical judgement & decisions.*

**ED WORKUP**

- **Supportive Care**
  - IV or Oral Fluids (avoid large fluid boluses)
  - Antipyretic (acetaminophen is preferred)
  - Nasal Cannula Supplemental Oxygen

- **Labs and Imaging**
  - Not all patients require labs or CXR.
  - Consider POCUS.

**IS THE DISEASE MILD?**

- Negative Workup AND Normal Respiratory Rate AND Room Air or Walking Sat >93%?

**IS THE DISEASE SEVERE?**

- RR > 24 OR HR > 125 OR CURB 65 > 3 OR O2 Sat < 93% (3L NC) AND CXR with infiltrate

**DISCHARGE**

1. Click **COVID-19 Discharge box** in Dispo.
2. Use **Ambulatory COVID-19 Test** as needed.

**ADMIT TO MEDICINE FLOOR**

1. Click the **COVID-19 Precautions** box in the admit order.
2. Order **Inpatient COVID-19 Testing**.
4. These patients deteriorate quickly. You must reevaluate the pt before they go upstairs to make sure they do not need escalation of care.

**ADMIT TO MICU OR NP15**

1. Click the **COVID-19 Precautions** box in admit order.
2. Order **Inpatient COVID-19 Testing**.

**CALL MICU ATTENDING**

See Main ED - Critical Care
# LABORATORY TESTS

**Regular ED Sepsis Labs**

CBC, BMP, LFTs, UA, CG4, Blood and Urine Cultures

**Presentation-Specific Labs**

Troponin or D-Dimer*

* May be confounders if clinical suspicion not high.

**Known COVID Positive, Admitted or Sick Patients**

<table>
<thead>
<tr>
<th>Test</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP</td>
<td>Troponin</td>
</tr>
<tr>
<td>Procalcitonin</td>
<td>D-Dimer</td>
</tr>
<tr>
<td>Ferritin</td>
<td>HIV-1/HIV-2 Ab/Ag</td>
</tr>
<tr>
<td>LDH</td>
<td>Cytokine panel</td>
</tr>
<tr>
<td>PT/PTT</td>
<td>Fibrinogen</td>
</tr>
</tbody>
</table>

Refer to the [Lab Observations Document](#) for more info.

## IMAGING

### Chest X-Ray - (use clinical judgement)
- If COVID likely & O2sat > 93% → No XR
- If O2sat < 93%, complicated disease suspected or for procedural confirmation → Portable XR

**CT or CTA Chest → not for COVID eval**

Note: avoid imaging to conserve PPE & prevent contamination. May use POCUS.

### Typical Findings on XR or CT

- Bilateral patchy opacities
- Ground glass infiltrates

### Atypical Findings on XR or CT

- Unilateral disease
- Pleural effusion (can exist)

### Maximize POC Ultrasound to Avoid DI Exposures

*Consider POCUS evaluations in sick or deteriorating patients*

- **Lung:**
  - pleural thickening (line looks thick)
  - bilateral patchy B lines
  - subpleural consolidations / larger consolidation

- **Echo:**
  - decreased EF (pre-existing or new)

- **IVC:**
  - fluid guidance

- **Procedures:**
  - peripheral & central access (must use probe cover)
  - performance & confirmation prior to portable CXR

- **Exposure:**
  - clean probes and touched surfaces with purple-top Sani-wipes.

- **Potential Aerosolization:**
  - take off unnecessary items, use probe cover, wipe down whole machine with purple-top Sani-wipes.
Respiratory Distress  OR  New or Increased O2 Requirement?

Attending to Attending ICU Conversation

RESUSCITATE

NO

ADMIT TO MEDICINE FLOOR
1. Click the COVID-19 Precautions checkbox in the admission order.
3. Continuous pulse ox and VS monitoring.
4. Re-evaluate frequently for signs of deterioration.

See Main ED - Routine Care

AIRWAY
Put on FULL PPE, AIRWAY CART outside the room

• Consider Early Intubation.
  ○ Can trial up to 5L NC with facemask covering it. If fails 5L NC, use NRB. Escalate to NRB at any time.
  ○ DO NOT delay intubation.

• Avoid NIPPV, HFNC, Venti or Neb Masks when possible. These are aerosolizing.

• Use RSI & Video Laryngoscopy when possible. Avoid BVM for preox. If BVM needed, use low tidal volumes with filter.

• Use a Negative Pressure Room if possible.

• Perform all other procedures while in full PPE in the room (OG, central line, ABG).

• Refer to COVID ED Airway and Respiratory Care Guidelines for more information.

Airway Bag = Disposable stylet, glidescope covers, cord covers, one-way PEEP valve, HEPA filter.

BREATHING (VENT)

• Vent Settings: ARDSnet Protocol
  ○ Low tidal volumes
  ○ Higher PEEP (15-20 mmHg if needed)
  ○ Refer to YNHHS High PEEP Protocol

• Nebs: Use MDI with spacer for non-intubated pts if needed. For intubated pts, consider aerosolized adaptor for nebs.

CIRCULATION

• Fluids: Avoid large fluid boluses.

• Pressors: Consider early pressors for hypotensive patients (levophed 1st, vasopressin 2nd).

• Central Access: Left IJ is preferred CVC site. Confirm fluid needs and CVC placement with Ultrasound. Consider peripheral pressors if patient is too dyspneic / hypoxic to lie flat for CVC placement.

Full PPE = Brand New N95 + Face Shield + Hair Net + Impermeable Gown + Double Gloves + Shoe Covers
Admit and check the "COVID-19 Precaution" box

**Tachypnea >24 or Tachycardia >125**

**AND**

- Fever or
- High-risk COVID exposure or
- Known COVID +

---

**YES**

Does disease quality as severe:
- SaO2 (3L) < 93%
- Chest x-ray with infiltrate
  **OR**
  - CURB-65 ≥ 3 (criteria below)

---

**YES**

Alternate diagnosis: asthma, COPD, etc.

Usual ED evaluation and triage

---

**NO**

Call MICU attending

Admit to MICU or NP15

---

**YES**

Admit and check the "COVID-19 Precaution" box

**NO**

Discharge home with follow-up

---

**CURB-65 Protocol:**
1 point for each of the following criteria
- Confusion
- Urea >7 mmol/L
- RR ≥ 30
- Blood pressure: SBP ≤ 90 mmHg or DBP ≤ 60 mmHg
- Age > 65
Placeholder - ED Cardiac Arrest Guide