Question/Recommendation Request: How can New Mexico hospitals increase the number of COVID-19 patients who can be safely and effectively monitored and treated on an outpatient basis?

The definition of COVID-19 Outpatient Care for these recommendations is: Discharge or release of a patient with known or suspected COVID-19 disease from an inpatient hospital bed, emergency department/urgent care, or COVID-19 Clinic to be treated and monitored at home or at a supervised medical shelter until recovery or the need to return to a higher level of care.

This guidance is intended to assist with the outpatient management of patients with respiratory compromise who are clinically stable with moderate COVID-19 symptoms but who, if monitored on an outpatient basis, do not require hospitalization due to severity of symptoms, need for hospital-based infusion, or significant comorbid conditions. Patients who have mild symptoms or who are being discharged after substantial recovery from COVID-19 should be discharged using existing hospital procedures for self-care and follow-up. This guidance includes recommendation to address logistical and implementation considerations as well as clinical assessment and care.

Recommendations for implementation of COVID-19 Outpatient Care:

1. Monitoring of patients on an outpatient basis should be technology-based, should identify clinical decompensation early, and must intervene as indicated to either sustain effective outpatient care or return to hospital.

2. Due to the presence of moderate COVID-19 symptoms addressed by these recommendations, discharge should occur only if an initial follow-up visit can be completed within 24 hours after discharge. Schedule and frequency of subsequent visits should be determined by clinical presentation and progress.

3. Telemedicine or other forms of remote monitoring should be used wherever possible to limit provider exposure, use of PPE, and disease spread.

4. Healthcare systems should coordinate safe and effective transfer to a higher level of care through the New Mexico “hub and spoke” model.¹

5. In-person follow-up visits, if required, should take place using appropriate personal protective equipment (PPE) for the provider and only if the patient is willing and able to use a face mask or other adequate covering and comply with infection control practices during the visit.

6. Health systems should consider a partnership with local EMS agencies for facilitated telemedicine visit, or utilize existing community paramedicine assessment protocols, when in-depth assessment is indicated. Hospitals should contact their local EMS agency leadership to determine the agency’s capabilities and determine methods for scheduling and coordination of visits, and to discuss the potential for additional urgent medical calls for services for patients requiring return to hospital.

7. Other techniques and methods for COVID-19 Outpatient Care follow-up will vary depending on availability, patient need, and technological capability, and can include:
   - Home healthcare agencies
   - Primary care providers
   - COVID-19 follow-up clinics
   - Telephone calls
   - Supervised medical shelter staff
   - Video visits via computer, tablet or smartphone
   - Remote patient monitoring platforms

8. COVID-19 Outpatient Care activities and follow-up care can be coordinated using existing case management divisions or teams, if available.
9. Identification of patients who are suitable for COVID-19 Outpatient Care can occur through evaluation during hospital or ED visits, or from canvassing community members based on COVID-19 test results. Proactive canvassing through call-back systems following positive test results, if available, can be a valuable tool to identify patients in the early course of disease and prevent some hospitalizations.

10. Supplies for COVID-19 Outpatient Care (e.g. portable oxygen, oxygen concentrators, pulse-oximeters, thermometers, etc.) should be obtained from established vendors. The use of non-FDA-approved devices may be appropriate under certain circumstances.

11. Prior to discharge of a patient for COVID-19 Outpatient Care, the provider or care team should assess the patient’s living arrangement to determine:
   a. Adequate family or supervised medical shelter support for the patient’s needs;
   b. Adequate proximity to both outpatient visit resources and acute hospital care for emergency treatment
   c. Reliable telephone service
   d. Accessibility of home environment for follow-up care
   e. Internet or smart phone service, if needed for electronic remote monitoring;
   f. The ability of the household to support appropriate quarantine procedures and COVID-Safe practices;
   g. Potential language barriers for outpatient care; and
   h. Understanding of the risk of smoking in the home for oxygen use

12. Health systems should develop COVID-19 Patient Education Teams to prepare patients for COVID-19 Outpatient Care and follow-ups.

13. Medical billing varies and is evolving for COVID-19 Outpatient Care telehealth visits, monitoring activities, therapies, and durable goods and supplies. Facilities should consider costs against their needs to increase their ability to manage the number of patients presenting with COVID-19. The CMS website should be monitored for changes to policies related to COVID-19.

14. Health systems should review their capability to accept Bluetooth-capable or other electronic device input into the electronic health record via a patient portal, which could expand the ability to conduct outpatient assessment and billing for services.

15. Access to a compatible communication device (smartphone, laptop or tablet) for the patient may be limited. Commercial cellular carriers may offer assistance in obtaining devices and services in patient homes. Agencies should use their Information Technology departments to contact cellular providers for partnerships.

16. New Mexico state leadership should work to maximize and resolve gaps and conflicts in reimbursement from Medicare, Medicaid and private payor systems for telehealth, home health care, EMS visits, medications, durable goods and devices, and identify sources of direct payment or procurement outside of insurance systems. Cities and counties should identify unspent COVID-19 response funds that can be used for purchases of medical devices and technology for outpatient care.

**Recommendations for assessment and management of COVID-19 Outpatient Care patients:**

Considering that the majority of patients with COVID-19 experience hypoxia and respiratory compromise, these recommendations are focused on patients with respiratory symptoms and the equipment needed for their outpatient management. Providers should recognize that there are many presentations of COVID-19 in addition to respiratory symptoms that may require additional assessment.

1. Patients should undergo evaluation for risk of clinical decompensation prior to being enrolled in an outpatient COVID-19 Outpatient Care and until recovery. Multiple factors should be considered in individual patients when assessing the appropriateness for COVID-19 Outpatient Care. This assessment will help determine equipment needs including pulse-oximeter and supplemental oxygen, the frequency of outpatient assessments, and timing of provider follow-up. Risk assessment should be based on the patient’s risk for developing severe COVID-19 disease and on the patient’s existing comorbid conditions. (See comorbid conditions below.)
2. Stratification into risk groups should occur to facilitate the management of large numbers of cases. (See attached examples of risk groups.)

3. Low risk and asymptomatic patients can seek follow-up care with a primary care provider or COVID-19 follow-up clinic without need for outpatient care. Patients who are in severe distress or are critically ill are not appropriate for outpatient management and should remain hospitalized.

4. Risk assessment for outpatient management should entail an evaluation of both dyspnea and oxygenation.

   **Assessment of Dyspnea:**

   *Mild dyspnea* – Dyspnea that does not interfere with daily activities (e.g., mild shortness of breath with activities such as climbing one to two flights of stairs or walking briskly).

   *Moderate dyspnea* – Dyspnea that creates limitations to activities of daily living (e.g., shortness of breath that limits the ability to walk up one flight of stairs without needing to rest, or interferes with meal preparation and light housekeeping tasks).

   Patients falling into both the mild or moderate category should be discharged with a pulse-oximeter. Patients with greater than moderate levels of dyspnea should not be managed on an outpatient basis.

   **Assessment of Oxygenation:**

   New Mexico’s variation in altitude may affect oxygenation and the provider’s assessment of “adequate oxygenation.” Higher altitude regions may consider an oxygen level of 90% as adequate whereas lower altitudes may consider the more standard 94% as adequate oxygenation. Oxygenation should be considered in the broader context of patient assessment of dyspnea and patient comorbidities.

5. Providers should observe the following oxygenation criteria for outpatient management:

   - Oxygen saturation > 90% on <4 lpm via NC AND patient can walk 50 ft without oxygen dropping below 90% on oxygen
   - Oxygen remains stable during an observation period (minimum recommendation is for 4 hours) in the ED, UCC or other outpatient setting. Providers will need to take into consideration the timing of disease presentation and need for close outpatient follow up.
   - Oxygen remains stable during hospitalization and, at time of discharge, patient maintains oxygen saturation as noted above.

6. Oxygen and peripheral supplies (nasal canula and 25-50 ft of tubing) should be arranged prior to discharge if patients meet criteria for supplemental oxygen.

7. Providers should ensure that a discharged patient has a pulse oximeter, understands the purpose of the device, understands how to operate it, and understands the desired frequency and method for recording and reporting. Some types of oximetry devices can be returned to healthcare systems for cleaning and re-use. (See attached example.)

8. Providers should encourage patients to practice established respiratory care practices such as humidification and appropriate hydration, and limit the time spent lying flat on their back with guidance provided on frequent repositioning.

9. Healthcare systems should establish clear guidelines for identifying worsening symptoms during COVID-19 Outpatient Care and triggers for return to a higher level of care. Patients should be informed of these guidelines and encouraged to self-refer for care if needed, regardless of follow-up visit schedules. Systems should consider recommending return to the Emergency Department or an Urgent Care Center, or calling 911, if:

   a. The patient has worsening shortness of breath, chest pain, or dyspnea
   b. There is an increasing respiratory effort with exertion
   c. Respiratory Rate is > 30 with exertion
   d. Oxygen saturation is <90% on 4L via nasal cannula
   e. Overall patient deterioration occurs including mental status changes, dehydration, lethargy, or any other development causing outpatient care team concerns
Assessment:

1. Comorbidities the CDC classifies as established or possible risk factors\textsuperscript{3,4} for severe COVID-19 include:

   **Established risk factors**
   - Cancer
   - Chronic kidney disease
   - Chronic obstructive pulmonary disease
   - Immunocompromised state from solid organ transplant
   - Obesity (body mass index $\geq 30$ kg/m\textsuperscript{2})
   - Pregnancy
   - Serious cardiovascular disease
   - Heart failure
   - Coronary artery disease
   - Cardiomyopathies
   - Sickle cell disease
   - Smoking
   - Type 2 diabetes mellitus

   **Possible risk factors**
   - Asthma (moderate to severe)
   - Cerebrovascular disease
   - Cystic fibrosis
   - Hypertension or high blood pressure
   - Immunocompromised state from hematopoietic cell transplant, HIV, use of corticosteroids or other immunosuppressing agents, other immunodeficiencies
   - Liver disease
   - Neurologic conditions, such as dementia
   - Overweight (body mass index $\geq 25$ but $< 30$ kg/m\textsuperscript{2})
   - Pulmonary fibrosis (having damaged or scarred lung tissue)
   - Thalassemia (a type of blood disorder)
   - Type 1 diabetes mellitus

   These comorbidities are associated with severe COVID-19 in adults of all ages. The evidence for the comorbidities listed as established risk factors is more consistent and extensive than that for the comorbidities listed as possible risk factors. Risk of severe disease also rises steadily with age.

2. Children: Underlying medical conditions are also associated with severe illness in children, but evidence on which are associated is limited. Children with the following conditions might be at increased risk for severe illness: obesity, medical complexity, severe genetic disorders, severe neurologic disorders, inherited metabolic disorders, sickle cell disease, congenital heart disease, diabetes, chronic kidney disease, asthma and other chronic lung disease, and immunosuppression due to malignancy or immune-weakening medications.\textsuperscript{4}

Red Flags/Concerns:
- COVID-19 Outpatient Care may not be appropriate for patients who must remain hospitalized for infusion therapy that cannot be completed on an outpatient basis.
- Patients with moderate symptoms of COVID-19 or other conditions should not be discharged for outpatient care if reliable and nearby follow-up care is not available, or if the patient cannot participate effectively.
- Patients with moderate symptoms of COVID-19 or other conditions should not be discharged for outpatient care if the distance to emergency care or availability of emergency transport prohibits timely response.
- Enhancing the ability of hospitals to discharge COVID-19 patients for outpatient care will have some positive impact on the level of hospital strain in New Mexico, but will not significantly reduce the overall levels of hospitalization due to the need of many patients for high levels of care.
- There will be a limit to how many patients each health system can monitored on an outpatient basis due to the competing need for health care providers to be engaged in hospital-based care.
- Billing and reimbursement gaps must be resolved in order to maximize the usefulness of COVID-19 Outpatient Care.
References:


Contributors:

Erika Campos, CHRISTUS St. Vincent Health System
Colleen Catanach, CHRISTUS St. Vincent Health System
Dr. Rebecca Fastle, UNM Health Sciences Center
Dr. Grant Scott, UNM Health Sciences Center
Dr. Laura Banks, UNM Health Sciences Center
Janine Brunjes, UNM Health Sciences Center
Harry Kallipolitis, Eastern New Mexico Medical Center
Brooke Carnathan, Carlsbad Medical Center
Dr. Nancy Guinn, Presbyterian Health Services
Kelly Gabriele, Presbyterian Health Services
Shaleen Brown, San Juan Regional Medical Center
Kyle Thornton, New Mexico EMS Bureau
Based on Vanderbilt University Medical Center Care Model (March 2020)
Updated November 1, 2020

PURPOSE

To implement a dedicated COVID-19 to Home (C2H) Clinic consisting of Physicians, Advanced Practice Providers, Registered Nurses, Medical Assistants, and Customer Service Representatives, to provide close monitoring of patients who are COVID-19 positive, suspected positive (test pending) or negative results with COVID-19 like illness who are discharged to home for self-isolation and/or do not require hospitalization.

GOALS

1. Risk stratify patients initially and until recovery to ensure safe and effective care at home
2. Identify decompensation early and intervene as clinically indicated to sustain effective care at home or transfer to a higher level of care
3. Coordinate safe and effective transfer to a higher level of care when indicated
4. Utilize telemedicine for frequent monitoring to promote social distancing
5. Partner with EMS for facilitated telemedicine visit when in-depth assessment is indicated
6. Decrease the number of COVID-19 related visits to Urgent Care and the Emergency Department
7. Decrease the number of admitted patients to Hospital secondary to safe and effective care at home
8. Monitor discharged patients who were hospitalized to continue recovery at home and identify if need to return to hospital is warranted.
9. Decrease healthcare worker exposure to COVID-19
10. Conserve PPE
11. Promote social distancing to flatten the curve and mitigate overwhelming the local healthcare infrastructure

SUPPORTING DOCUMENTS

APPENDIX A RISK STRATIFICATION AND MONITORING GUIDELINES
APPENDIX B URGENT/EMERGENT TRANSFER TO HIGHER LEVEL OF CARE
APPENDIX C C2H RN
APPENDIX D C2H PROVIDER
COVID-19 to Home (C2H) Clinic Protocol: APPENDIX A

**RISK STRATIFICATION AND MONITORING GUIDELINES**

<table>
<thead>
<tr>
<th>RISK LEVEL</th>
<th>LOW RISK</th>
<th>MODERATE RISK</th>
<th>HIGH RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATIENT CRITERIA</strong></td>
<td>Less than 65 years old</td>
<td>Not currently on oxygen</td>
<td>65 years of age or older</td>
</tr>
<tr>
<td></td>
<td>NO comorbid conditions i.e. heart disease, lung disease, diabetes, immunocompromised, BMI greater than 40, etc.</td>
<td>NO comorbid conditions i.e. heart disease, lung disease, diabetes, immunocompromised, BMI greater than 40, etc.</td>
<td>Any patient of any age with positive history of comorbid conditions i.e. heart disease, lung disease, diabetes, immunocompromised, BMI greater than 40, chronic or former smoker, etc.</td>
</tr>
<tr>
<td></td>
<td>MILD symptoms i.e. no fever, slight cough, no difficulty breathing or shortness of breath, runny nose, sore throat, slight body aches or fatigue, etc.</td>
<td>MODERATE symptoms i.e. fever, persistent cough, some difficulty breathing or shortness of breath, nausea, decreased appetite, decreased hydration, diarrhea, etc.</td>
<td></td>
</tr>
</tbody>
</table>

| **REFERRAL** | Call 505-609-6284 to refer or schedule a patient for initial visit with C2H Provider | Call 505-609-6284 to refer or schedule a patient for initial visit with C2H Provider | Call 505-609-6284 to refer or schedule a patient for initial visit with C2H Provider |
| | o Leave a message if no answer or after hours | o Leave a message if no answer or after hours | o Leave a message if no answer during business hours |
| | C2H RN will contact patient to schedule same day or next business day | C2H RN will contact patient to schedule same day or next business day | o After hours/weekends, contact the C2H Provider On Call at 505-334-3404 |
| | | | C2H RN will contact patient to schedule same day or next business day |

| **C2H TEAM** | C2H Provider – Initial Visit and discharge visit. | C2H Provider – Initial and Recurring Visits | C2H Provider – Initial and AM Recurring |
| | | C2H RN – Recurring Visits | C2H RN – Recurring PM Visits |
| | | | EMS – Facilitated Telemedicine Visit |

| **VISIT FORMAT** | Virtual (audio only or audio + video) | Virtual (audio only or audio + video) | Virtual (audio only or audio + video) |

| **VISIT FREQUENCY** | Start at day 1 = 1 day after onset of symptoms or test date if unknown symptom onset. | Start at day 1 = 1 day after onset of symptoms or test date if unknown symptom onset. | Start at day 1 = 1 day after onset of symptoms or test date if unknown symptom onset. |
| | Contact day 1, 4, 7, and 10 from symptom onset or day of testing if not known. | Every 2 days | Daily M-F in AM = C2H Provider |
| | o If worsening symptoms, notify and schedule visit with C2H Provider | o If improving on day 10 can discharge from clinic. | Daily M-F in PM = C2H RN |
| | o If asymptomatic, mild and improving symptoms on day 7 schedule an appointment with provider for discharge on day 10 | o If not improving on day 10, continue every other day until asymptomatic 14 to 21 days or as per C2H provider discretion. | o Notify C2H Provider through phone call NOT email if worsening symptoms or trends since AM C2H Provider visit |
| | No scheduled weekend follow up | No scheduled weekend follow up | Weekends PRN = C2H Provider discretion. |
| | o If negative swab and mild to no symptoms discharge from C2H and have them follow up with their established PCP or establish with PCP of patients choice. | When asymptomatic or improving symptoms 10 days out, discharge form C2H Clinic | C2H Provider may schedule EMS Facilitated Telemedicine Visit when a more in-depth assessment is clinically indicated |
| | | o If no PCP, assist patient in establishing with PCP of choice | When asymptomatic or improving symptoms 10 days out discharge form C2H Clinic |
| | | Start a day 0 = date tested | o If no PCP, assist patient in establishing with PCP of choice |
| | | Every 2 days | If not improving on day 10, continue daily until |
| | | Daily on day 6 to 12 | If not improving on day 12, |
| | | o If improving on day 12, next on day 14 | If not improving on day 12, |
| | | o If not improving on day 12, | |

**COVID-19 POSITIVE, SUSPECTED POSITIVE (TEST PENDING) OR COVID-19 LIKE ILLNESS**
| TESTING RESULTS RECEIVED AFTER ESTABLISHED WITH C2H CLINIC | continue daily until asymptomatic  
• No scheduled weekend follow up  
• When asymptomatic, discharge form C2H Clinic  
  o If no PCP, assist patient in establishing with PCP of choice | asymptomatic or improving symptoms 14 to 21 days out or as per C2H provider discretion |

- This is a protocol and is to be used as one. Ultimate care and medical decisions are at the discretion of the caring provider and deviation from the protocol may occur.
URGENT/EMERGENT TRANSFER TO HIGHER LEVEL OF CARE

C2H Provider and/or C2H RN Assessment Findings

High risk concern indicative of rapid decompensation:
- Unable to speak full sentences
- Unable to walk 5 steps without becoming severely short of breath
- If previously on oxygen should be within 1-2 L of baseline rate and not requiring more than 5 L
- SPO2 less than 3% decrease from baseline when ambulating
- If oxygen needs to be initiated – refer to higher level of care
- Persistent pain or chest pressure
- Signs or symptoms of shock i.e. cold, clammy, new onset confusion, decrease level of consciousness, low urine output, etc.

Consider the following as potentially high risk in the context of clinical presentation:
- HR greater than 125; RR greater than 24; SBP less than 90; SPO2 less than 88% on room air

Coordinate Transfer to Higher Level of Care

- Advise patient of need for urgent/emergent treatment
- Inform patient of recommendation to go via EMS
  - Obtain consent
    - Dispatch will need consent which is required for medical care
    - Failure to obtain consent could be noted as battery
    - If patient is refusing transport via EMS, determine if patient meets ACDC Criteria
      - A = AUTONOMY
        - Patient is an independent adult (or emancipated minor) with, at least at baseline, mental competence who is not a ward (does not have a guardian).
        - The patient usually makes decisions for himself/herself. Must be present and meet the ACDC criteria, and the patient must be medically stable.
      - C = CAPACITY
        - At the moment in question, the patient has decision-making capacity.
        - Has normal intelligence.
        - Has a normal mental status and is alert and oriented.
        - Is NOT under the influence of drugs or alcohol.
        - Has normal (or situationally appropriate) vital signs i.e. the patient is not so hypoxic, hypotensive or otherwise medically unstable that it affects his/her mental status/ability to process information.
        - Is appropriately conversant and does not appear to be having any evidence hallucinations, bizarre delusions or other form of acute psychosis or delirium.
        - Has a normal, or baseline, neurological exam коordination/gait.
        - Does NOT have suicidal or homicidal ideation.
      - D = DISCLOSURE
        - The EMTs upon arrival will disclose the specific risks of refusing transport, which (as applicable) may include severe worsening of their acute condition possibly resulting in death, permanent disability, etc.
      - C = COMPREHENSION
        - The patient fully understands the risks he/she incurs by refusing transport including death, permanent disability, etc. and clearly demonstrates such to the EMTs.
- Confirm the following with the patient prior to calling dispatch at 505-334-6622
  - Patient contact number
  - Patient physical address
  - If able, stay connected with the patient when calling
    - Via doxy.me, keep the patient on video
    - Via iPHONE or ANDROID, add call
  - Instruct patient/caregivers to wash hands and wear a mask prior to EMS arrival
- If patient refuses EMS transport and able to go by POV
  - Instruct patient/caregivers to wash hands and wear a mask
  - Go straight to the ED
  - Upon arrival be sure to inform COVID-19 positive or suspect positive or negative with COVID-19 like illness
- Provide detailed report to dispatch and ED of incoming patient via EMS and/or POV

OPERATIONAL COPY LAST UPDATED 11.01.20
COVID-19 to Home (C2H) Clinic Protocol: APPENDIX C

C2H RN

- Will check the daily COVID-19 test tracking list for newly tested patients.
- Will contact each newly tested patient to screen and or schedule patient as follows
  - Introductions and purpose of follow up call
    - “Hello, my name is _____ and I’m an RN at SJRMC. I am calling to follow up with you in regards to your recent COVID-19 testing and follow up care. As of today, your results are _____ (pending, negative or positive). Do you have a PCP?”
  - If YES to PCP:
    - Encourage patient to schedule a follow up appointment with their PCP today or next business day
    - Contact the patient’s PCP office to inform patient COVID-19 positive, suspected positive (test pending) or COVID-19 like illness with negative results and instructions provided to patient to contact PCP office for follow up care
    - PCP may refer patient to C2H Clinic to follow patient for COVID-19 positive, suspected positive (test pending) or COVID-19 like illness
      - C2H Provider will keep PCP informed of progress
      - C2H Provider will contact PCP when patient discharged from C2H Clinic to ensure continuity and transition of care
  - If patient requests (without prompting) to be followed by C2H Clinic or unable to obtain timely appointment with PCP and calls back
    - C2H RN will explain C2H purpose, goals and proceed with conducting initial risk assessment – see APPENDIX A
    - C2H RN will explain first visit with C2H provider and ongoing frequency based on initial risk assessment – see APPENDIX A
    - Patient will be scheduled by C2H RN for first visit with C2H Provider the same day or within one business day
      - C2H Provider will contact PCP to inform of patient request
      - C2H Provider will keep PCP informed of progress
      - C2H Provider will contact PCP when patient discharged from C2H Clinic to ensure continuity and transition of care
    - Prior to ending call, C2H RN will reinforce COVID-19 self-care and/or caregiver patient education
  - If NO to PCP:
    - RN will explain C2H purpose, goals and proceed with conducting initial risk assessment – see APPENDIX A
    - RN will explain first visit with C2H provider and ongoing frequency based on initial risk assessment – see APPENDIX A
    - Patient will be scheduled by C2H RN for first visit with C2H Provider the same day or within one business day
      - C2H RN will document nurse visit utilizing dot phrases specific to level of risk
      - C2H RN will notify C2H Provider by phone call immediately after speaking to the patient of any change in worsening patient condition and as outlined on risk assessment. RN will document change of condition in a note but must be treated as a critical value and verbal communication is needed. DO NOT SEND AN EMAIL OF MEDICAL DECOMPENSATION – See APPENDIX A
      - C2H RN will participate in C2H Huddle

- C2H RN to document outcomes of all patients contacted on daily tracking spreadsheet
C2H PROVIDER

Overview as of 11/1/20

- Attend C2H Clinic Huddle as determined by C2H team.
- During initial visit
  - Confirm C2H RN risk assessment and frequency of monitoring
  - Ensure or assist patient with obtaining home pulse oximetry monitor per protocol
- Discuss daily events with each patient
- Determine plan for the next day for each patient
- Utilize appropriate dot phrase to facilitate efficient documentation

General Outpatient COVID-19 Treatment Recommendations

Angiotensin-Converting Enzyme (ACE) Inhibitors and Angiotensin Receptor Blockers (ARBs) PER NIH

- Persons with COVID-19 who are prescribed ACE inhibitors or ARBs for cardiovascular disease (or other indications) should continue these medications (AII).
- The COVID-19 Treatment Guidelines Panel (the Panel) recommends against the use of ACE inhibitors or ARBs for the treatment of COVID-19, except in a clinical trial (AIII).
  - 

Corticosteroids Per NIH

For management of COVID-19

- On the basis of the preliminary report from the Randomized Evaluation of COVID-19 Therapy (RECOVERY) trial, the Panel recommends using dexamethasone 6 mg per day for up to 10 days for the treatment of COVID-19 in patients who are mechanically ventilated (AI) and in patients who require supplemental oxygen but who are not mechanically ventilated (BI).
  - Therefore, patients may be discharged from the hospital on dexamethasone if they have not completed 10 days of steroids.

For patients on chronic corticosteroids

- Oral corticosteroid therapy that was used prior to COVID-19 diagnosis for another underlying condition (e.g., primary or secondary adrenal insufficiency, rheumatological diseases) should not be discontinued (AIII). On a case-by-case basis, supplemental or stress-dose steroids may be indicated (AIII).
- Inhaled corticosteroids that are used daily for patients with asthma and chronic obstructive pulmonary disease for control of airway inflammation should not be discontinued in patients with COVID-19 (AIII).

HMG-CoA Reductase Inhibitors (Statins) PER NIH

- Persons with COVID-19 who are prescribed statin therapy for the treatment or prevention of cardiovascular disease should continue these medications (AII).
- The Panel recommends against the use of statins for the treatment of COVID-19, except in a clinical trial (AIII).

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) PER NIH

- Persons with COVID-19 who are taking NSAIDs for a comorbid condition should continue therapy as previously directed by their physician (AIII).
- The Panel recommends that there be no difference in the use of antipyretic strategies (e.g., with acetaminophen or NSAIDs) between patients with or without COVID-19 (AIII).

Influenza Vaccination

- Although data are lacking on influenza vaccination for persons with COVID-19, on the basis of practice for other acute respiratory infections, the Panel recommends that persons with COVID-19 should receive an inactivated influenza vaccine (BIII). The Centers for Disease Control and Prevention (CDC) has provided guidance on the timing of influenza vaccination for inpatients and outpatients with COVID-19 (see Interim Guidance for Routine and Influenza Immunization Services During the COVID-19 Pandemic).

Diagnosis of Influenza and COVID-19 When Influenza Viruses and SARS-CoV-2 Are Cocirculating

- Only testing can distinguish between severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and influenza virus infections and identify SARS-CoV-2 and influenza virus coinfection.
- When SARS-CoV-2 and influenza viruses are cocirculating, the Panel recommends testing for both viruses in all hospitalized patients with acute respiratory illness (AIII).
• When SARS-CoV-2 and influenza viruses are cocirculating, the Panel recommends influenza testing in outpatients with acute respiratory illness if the results will change clinical management of the patient (AIII).
• Testing for other pathogens should be considered depending on clinical circumstances, especially in patients with influenza in whom bacterial superinfection is a well-recognized complication.
• See the CDC Information for Clinicians on Influenza Virus Testing and the Infectious Diseases Society of America (IDSA) Clinical Practice Guidelines for more information.

Antiviral Treatment of Influenza When Influenza Viruses and SARS-CoV-2 Are Cocirculating
• The treatment of influenza is the same in all patients regardless of SARS-CoV-2 coinfection (AIII).
• For influenza treatment in hospitalized and non-hospitalized patients, see the CDC and IDSA recommendations on antiviral treatment of influenza.

Antithrombotic Therapy

Labaratory Testing:
• In non-hospitalized patients with COVID-19, there are currently no data to support the measurement of coagulation markers (e.g., D-dimers, prothrombin time, platelet count, fibrinogen) (AIII).

Chronic Anticoagulant and Antiplatelet Therapy:
• Patients who are receiving anticoagulant or antiplatelet therapies for underlying conditions should continue these medications if they receive a diagnosis of COVID-19 (AIII).

Venous Thromboembolism Prophylaxis and Screening:
• For non-hospitalized patients with COVID-19, anticoagulants and antiplatelet therapy should not be initiated for prevention of venous thromboembolism (VTE) or arterial thrombosis unless there are other indications (AIII).
• Hospitalized adults with COVID-19 should receive VTE prophylaxis per the standard of care for other hospitalized adults (AIII). A diagnosis of COVID-19 should not influence a pediatrician’s recommendations about VTE prophylaxis in hospitalized children (BIII). Anticoagulant or antiplatelet therapy should not be used to prevent arterial thrombosis outside of the usual standard of care for patients without COVID-19 (AIII).
• Hospitalized patients with COVID-19 should not routinely be discharged on VTE prophylaxis (AIII). Using Food and Drug Administration-approved regimens, extended VTE prophylaxis can be considered in patients who are at low risk for bleeding and high risk for VTE as per protocols for patients without COVID-19 (see text for details on defining at-risk patients) (BII).
• There are currently insufficient data to recommend for or against routine deep vein thrombosis screening in COVID-19 patients without signs or symptoms of VTE, regardless of the status of their coagulation markers (BIII).

Treatment:
• Patients with COVID-19 who experience an incident thromboembolic event or who are highly suspected to have thromboembolic disease at a time when imaging is not possible should be managed with therapeutic doses of anticoagulant therapy as per the standard of care for patients without COVID-19 (AIII).

Special Considerations During Pregnancy and Lactation:
• Management of anticoagulation therapy during labor and delivery requires specialized care and planning and should be managed similarly in pregnant patients with COVID-19 as other conditions that require anticoagulation in pregnancy (AIII).
• Unfractionated heparin, low molecular weight heparin, and warfarin do not accumulate in breast milk and do not induce an anticoagulant effect in the newborn; therefore, they can be used in breastfeeding women with or without COVID-19 who require VTE prophylaxis or treatment (AIII). In contrast, direct-acting oral anticoagulants are not routinely recommended due to lack of safety data (AIII).

Vitamin C Per NIH

Rationale for Using Vitamin C in Patients With COVID-19
Vitamin C (ascorbic acid) is a water-soluble vitamin that is thought to have beneficial effects in patients with severe and critical illnesses. It is an antioxidant and free radical scavenger that has anti-inflammatory properties, influences cellular immunity and vascular integrity, and serves as a cofactor in the generation of endogenous catecholamines.1,2 Because humans may require more vitamin C in states of oxidative stress, vitamin C supplementation has been evaluated in numerous disease states, including serious infections and sepsis. Because serious COVID-19 may cause sepsis and acute respiratory distress syndrome (ARDS), the potential role of high doses of vitamin C in ameliorating inflammation and vascular injury in patients with COVID-19 is being studied.

Recommendation for Non-Critically Ill Patients With COVID-19
• There are insufficient data for the COVID-19 Treatment Guidelines Panel (the Panel) to recommend either for or against the use of vitamin C for the treatment of COVID-19 in non-critically ill patients.

Rationale
Because patients who are not critically ill with COVID-19 are less likely to experience oxidative stress or severe inflammation, there is no compelling reason to use vitamin C in this setting.

Vitamin D Per NIH

Recommendation
• There are insufficient data to recommend either for or against the use of vitamin D for the prevention or treatment of COVID-19.
**Zinc Per NIH Recommendations**

- There are insufficient data to recommend either for or against the use of zinc for the treatment of COVID-19.
- The COVID-19 Treatment Guidelines Panel (the Panel) **recommends against** using zinc supplementation above the recommended dietary allowance for the prevention of COVID-19, except in a clinical trial (BIII).

**Recommendation for oxygenation**
- Patients are encouraged to lay in a prone position while sleeping or when lying down.
- Studies have shown benefit of oxygenation with this position.
- Patients may not be able to strictly follow, but it is a guideline for them to attempt.
- Encourage Incentive Spirometry with Instructions on Use
- Reinforce patient education on when to monitor and record SPO2 on log if available

**Review and consider all items outlined on the SJRMC COVID-19 Discharge Checklist from Inpatient Setting**

**Recommendations for follow-up of COVID-19 positive patients**
- **Discontinuation of Self-Isolation:**

**Persistent Symptoms or Illnesses After Recovery from Acute COVID-19**

There have been an increasing number of reports of patients who experience persistent symptoms after recovering from acute COVID-19. At this time, there is limited information on the prevalence, duration, underlying causes, and effective management strategies for these lingering signs and symptoms. Some of the symptoms overlap with the post-intensive care syndrome that has been described in patients without COVID-19, but prolonged symptoms and disabilities after COVID-19 have also been reported in patients with milder illness, including outpatients.

Some of the persistent symptoms that have been reported include:

- fatigue, joint pain, chest pain, palpitations, shortness of breath, and worsened quality of life.
- One study from China found that pulmonary function was still impaired 1 month after hospital discharge. A study from the United Kingdom reported that among 100 hospitalized patients (32 received care in the ICU and 68 received care in hospital wards only), 72% of the ICU patients and 60% of the ward patients experienced fatigue and breathlessness at 4 to 8 weeks after hospital discharge. The authors of the study suggest that post-hospital rehabilitation may be necessary for some of these patients.
- Neurologic and psychiatric symptoms have also been reported among patients who have recovered from acute COVID-19.
- High rates of anxiety and depression have been reported in some patients using self-report scales for psychiatric distress.
- Younger patients have been reported to experience more psychiatric symptoms than patients aged >60 years.
- Patients may continue to experience headaches, vision changes, hearing loss, loss of taste or smell, impaired mobility, numbness in extremities, tremors, myalgia, memory loss, cognitive impairment, and mood changes for up to 3 months after diagnosis of COVID-19.

More research is needed to better understand the pathophysiology and clinical course of these post-infection sequelae and to identify management strategies for patients.

**Key Points**

- **CAUTION:** Patients can look ok and speak to you normally, BUT are very hypoxic, “Happy Hypoxia.” Lung compliance remains good. Closely monitor RR and saturations. Rapid decompensation can occur within 6-24 hours.
- Tylenol for fever and body aches. Many patients complain of an extreme headache. Can use NSAID if contraindications for Acetaminophen.
- Hydration is very important. Many patients are having diarrhea. During this phase, COVID-19 is considered infectious and can be transmitted through the feces. Use with **CAUTION and as Last resort:** Imodium with patients who are having a lot of discomfort and may be getting dehydrated. It is not recommended to stop diarrhea due to the importance of shedding out the virus.
- Stop stool softeners if patients are on these because of increased risk of diarrhea with COVID-19.
- Can prescribe use of antiemetics, if needed.
- **OK to use cough and cold medicine.**
- **Cough:** Can prescribe Tessalon Perles if needed.
- **MDI at home is OK.** If patient is asthmatic or COPD and has nebs available, patient is to isolate in a single room to use and keep room closed to others during treatment and then close room for 1 hour after treatment to allow particles to settle after aerosolization.
- Encourage Ventolin inhaler to be used PRN.
- Encourage good hand hygiene and use of mask if patient has to be around others in the home. It is best practice for patient to self isolate in a safe area of the home with access to water, bedroom, and restroom. NOTE: Not all patients are able to do this.
WORKFLOW: C2H PROVIDER

- If any prescriptions are given, see if they can be delivered to the home by a family member who is healthy (not in the same home) or by the pharmacy. Some pharmacies deliver (Kare Drug, CVS, Pinon Hills). Call pharmacy to see if they are willing to deliver medications to the patient. Pharmacy may also be able to deliver a pulse oximetry with medication, if available.

- Assessment:
  - Make sure you have every patient ambulate in the room to assess for SOB. This also helps assess orthostatics.
  - You can assess RR by listening to the patient breath over the phone for 1 minute or by instructing a family member to place their hand on patient's chest and count rise and fall (as one breath) for 1 minute. Timed by provider.
  - If patient's saturations look like they are trending down or having shortness of breath, instruct patient to check pulse ox q 2 hours.
  - If available: Have the patient take temperature, BP, HR, O2 saturations. If able, count the RR of patient while observing them via Video.
HOME PULSE-OXIMETER

What is a pulse-oximeter?

A pulse-oximeter is a small, portable medical device that measures the oxygen saturation levels in the blood when clipped on a person’s finger.

How does the pulse-oximeter work?

The pulse-oximeter uses small rays of light and light sensors to measure the difference between red blood cells that are carrying oxygen and red blood cells that are not carrying oxygen. A normal oxygen saturation is 90-100%.

You will see two numbers on the pulse-oximeter. One is the SpO2% which is your oxygen saturation. The other is the PRbpm which is your heartrate/pulse.

The pulse-oximeter is battery operated and runs on two AAA batteries.

There are 6 display modes. Once the oximeter is turned on, each time the power switch is pushed, the oximeter will switch to another display mode. Your oximeter has a default brightness of 4. There are 10 levels of brightness and, if you wish to change the brightness of your oximeter, press and hold the power switch.

Why have I been given a pulse-oximeter?

Your oxygen level continues to be low without oxygen and you will be going home on oxygen. You have been given a pulse-oximeter to help check your oxygen levels while you still need oxygen. Your oxygen saturation should be between 90-100%.

How do I use the pulse-oximeter?

First, it is important to remove any nail polish to the finger used with the pulse-oximeter as nail polish can interfere with an accurate reading.

Turn the power on. Insert your finger into the pulse-oximeter.

Hold still to obtain a good reading. If your finger moves during the reading, the reading may not be good.

Record the reading on a sheet of paper with the date, time, heart rate and oxygen saturation. Present this information to the home health nurse or the follow up clinic.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Heart Rate/Pulse</th>
<th>Oxygen Saturation</th>
</tr>
</thead>
</table>

How often should I check my oxygen level?

You should check your oxygen level when you wake up, two other times during the day, and before bedtime. Write down the reading for the home health nurse or follow up clinic.

You should also check your oxygen saturation level if you are having worsening shortness of breath, worsening fatigue, or difficulty breathing.

When should I call 911, return to the Emergency Department, or be seen?

Call immediately if you are feeling very short of breath, are having difficulty breathing, or if your oxygen level is less than 87% and you are having difficulty breathing.