Urgent Care COVID-19 Toolkit

Inspiring Excellence, Advancing the Specialty

College of Urgent Care Medicine
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Summary

COVID-19 has been one of the toughest public health issues that healthcare professionals have seen in recent times. Urgent Care Centers have been at the forefront of diagnosing and treating COVID-19 infections. Every aspect of care delivery associated with this illness has been a moving target for all healthcare providers. From its evolving clinical presentation to the development of diagnostic and treatment modalities, COVID-19 has challenged us to evolve as clinicians. But from our observations, the strength and resilience shown by urgent care providers has been stronger than the challenges that have been posed.

As the dynamics of COVID-19 continue to change, we as providers need to be prepared to stay updated on the latest information that will help us take care of our patients. Being aware of and understanding   the resources that we have available is crucial is staying ahead of this illness and in helping our patient and communities. The goal of this toolkit is to provide you those resources. It will be a living document updated by the College as new information becomes available. We also encourage our members to notify us when new information becomes available. COVID-19 is changing and so must we as frontline healthcare providers.

Table of Contents

Introduction

COVID-19 was first identified in December 2019 and urgent care centers across the country have been target destinations since the very beginning. According to the Center for Disease Control and Prevention (CDC), the first cases in the US were reported in January 2020. Since then, there have been more than 79 million cases till date, with more than 900,000 deaths. Globally, the impact is even more staggering, with more than 400 million total cases, along with more than 6 million deaths. Urgent Care Centers (UCCs) have played a critical role is diagnosing and treating COVID-19, particularly during the surges that have occurred during various time frames since the onset of this illness.

There have been several challenges that have been unique to COVID-19 from a clinical perspective. Perhaps the greatest challenge has been our constantly evolving understanding of the virus and its genetic lineages. The SARS-CoV-2 variants have been emerging and circulating since the beginning of the COVID-19 pandemic and this has posed great challenges with understanding their transmission, potential to cause serious illness, response to vaccines and medications. The major variants of concern to date have been the Delta and the Omicron variant, particularly because of their increased transmissibility. We have already seen two major surges associated with each of these variants.

In addition to the physical illness, the mental and emotional toll that COVID-19 has inflicted on both patients and healthcare workers has been immense. According to the Organisation for Economic Cooperation and Development (OECD), the COVID-19 crisis has heightened the risk factors generally associated with poor mental health – financial insecurity, unemployment, fear – while protective factors – social connection, employment and educational engagement, access to physical exercise, daily routine, access to health services – fell dramatically, leading to a significant and unprecedented worsening of population mental health. From March 2020 onwards, prevalence of anxiety and depression increased and, in some countries, even doubled.

This toolkit aims at providing resources to urgent care teams to help providers and practices with understanding how to handle various aspects of patient care that are specific to COVID-19. With the ever-changing knowledge of COVID-19, we hope the toolkit will provide information regarding resources that providers can turn to for the latest information.

Transmission and Clinical Presentation

The first step in identification of COVID-19 infection is a good history and exam. A good resource for updates on clinical presentation can be found on the CDC website.

Certain aspects of a patient's presentation are important to identify:

1. Exposure: According to the CDC, the incubation period for COVID19 is thought to extend to 14 days, with a median time of 4-5 days from exposure to symptom onset.

2. Clinical presentation: The signs and symptoms of COVID-19 present at illness onset vary, but over the course of the disease many people with COVID-19 will experience the following:

   - Fever or chills

   - Cough

   - Shortness of breath or difficulty breathing: More commonly reported in patient who are hospitalized.

   - Fatigue

   - Muscle or body aches

   - Headache

   - New loss of taste or smell

   - Sore throat

   - Congestion or runny nose

   - Nausea or vomiting

   - Diarrhea

3. Severity: The illness severity can be broadly separated into three categories:

   - Mild to moderate (mild symptoms up to mild pneumonia)

   - Severe (dyspnea, hypoxia, or more than 50% lung involvement on imaging)

   - Critical (respiratory failure, shock, or multiorgan system dysfunction)

   The CUCM has also developed a risk stratification tool which can help providers in determining the illness severity and guide appropriate triage/disposition. A supplemental document to this is the CUCM's Abnormal Vital Signs policy that serves as a tool to identify abnormal vital signs for all patients walking into our urgent care centers.

Diagnostic Testing

Diagnostic testing has posed one of the biggest challenges since the very beginning of COVID-19. Testing has evolved a lot and has gone from only in laboratory testing to on site rapid testing to home testing. The types and numbers of tests available now are ever increasing in number and can cause a lot of confusion even amongst some of the most seasoned providers. Here are some tools that might be helpful.

1. Performing the appropriate test starts with collecting the correct sample. Here is information from the FDA regarding the various sample types that can be collected for COVID-19:
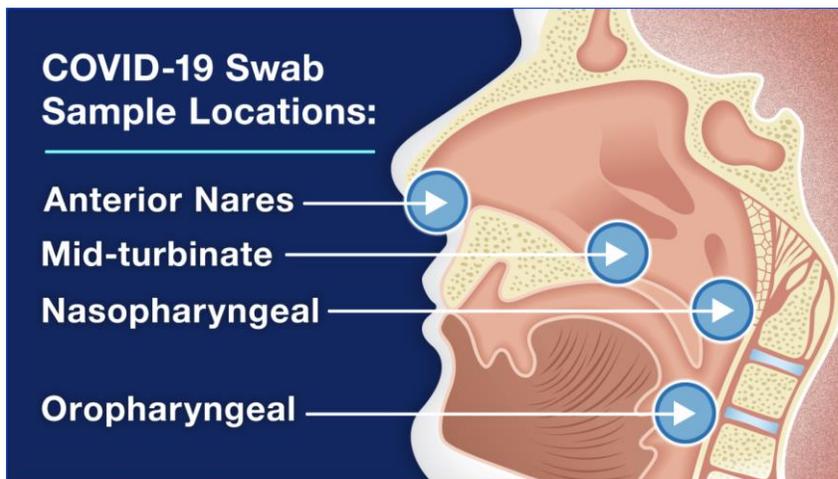
- Anterior Nares (Nasal) – takes a sample from just inside the nostrils

- Mid-turbinate – takes a sample from further up inside the nose

- Nasopharyngeal – takes a sample from deep inside the nose, reaching the back of the throat, and should only be collected by a trained health care provider

- Oropharyngeal – takes a sample from the middle part of the throat (pharynx) just beyond the mouth, and should only be collected by a trained health care provider

2. Test types:

   Currently, there are two different COVID-19 tests available:

   i. Diagnostic tests:
       - Molecular tests NAAT, such as PCR
       - Antigen tests

Here is a table from the CDC that helps understand the differences between Molecular and Antigen testing:

| Table 1. Summary of Some Differences Between Nucleic Acid Amplification Tests (NAATs) and Antigen Tests		
	NAATs	Antigen Tests
Intended Use	Detect *current* infection	Detect *current* infection
Analyte Detected	Viral Ribonucleic Acid (RNA)	Viral Antigens
Specimen Type(s)	Nasal, Nasopharyngeal, Oropharyngeal, Sputum, Saliva	Nasal, Nasopharyngeal, Saliva
Sensitivity	Varies by test, but generally high for laboratory-based tests and moderate-to-high for POC tests	Varies depending on the course of infections, but generally moderate-to-high at times of peak viral load*
Specificity	High	High
Test Complexity	Varies by Test	Relatively Easy to Use+
Authorized for Use at the Point-of-Care	Most are not, some are	Most are, some are not
Turnaround Time	Most 1–3 days; some could be rapid 15 minutes	Ranges from 15 minutes–30 minutes+
Cost/Test^	Moderate (~$75–$100/test)	Low (~$5–$50/test)
Advantages	Most sensitive test method available Short turnaround time for NAAT POC tests, but few available Usually does not need to be repeated to confirm results	Short turnaround time (approximately 15 minutes)+ When performed at or near POC, allows for rapid identification of infected people, thus preventing further virus transmission in the community, workplace, etc. Comparable performance to NAATs in symptomatic persons and/or if culturable virus present, when the person is presumed to be infectious
Disadvantages	Longer turnaround time for lab-based tests (1–3 days) Higher cost per test A positive NAAT diagnostic test should not be repeated within 90 days, since people may continue to have detectable RNA after risk of transmission has passed	May need confirmatory testing Less sensitive (more false negative results) compared to NAATs, especially among asymptomatic people

*The decreased sensitivity of antigen tests might be offset if the point-of-care antigen tests are repeated more frequently (i.e., serial testing at least weekly).

^Costs for: NAATs ⤤ , Antibody tests ⤤

+Refers to point-of-care antigen tests only.

4

Also, CDC provides guidance regarding the clinical application of the results from Antigen testing:
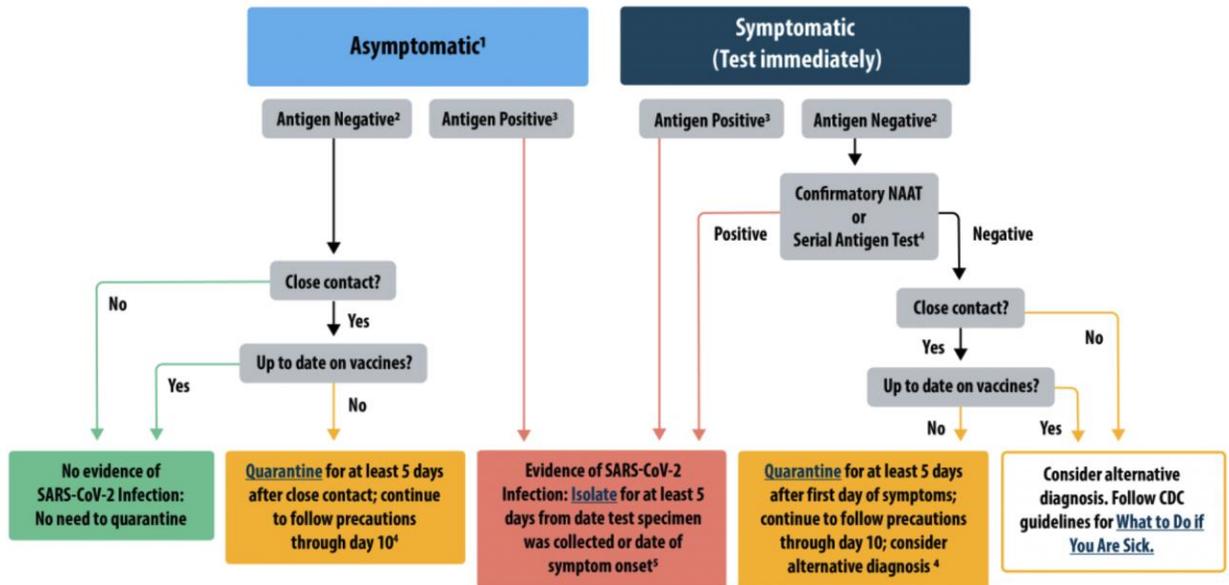
ii. Antibody tests: According to the FDA, antibody tests should not be used to diagnose a current SARS-CoV-2 infection or COVID-19 and, at this time, should also not be used to check for immunity.

All the above information can be accessed via the following webpages:

https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html#table1

https://covid19.nih.gov/covid-19-testing#the-state-of-covid19-testing-1

https://www.fda.gov/consumers/consumer-updates/covid-19-test-basics

https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/testing.html

https://www.centerforhealthsecurity.org/covid-19TestingToolkit/

Treatment Modalities

With multiple modalities now available for the treatment of COVID-19 infection in adults, we are now able to offer more in terms of treatment to patients who present in an outpatient setting. The National Institute of Health provides a comprehensive review and recommendations for the treatment of COVID-19 in the ambulatory outpatient setting. Detailed information regarding this can be found on the following webpages:

Bebtelovimab	BEB 175 mg as a single IV injection, administered over ≥30 seconds. Patients should be observed for ≥1 hour after injection.	≤7 days

https://www.covid19treatmentguidelines.nih.gov/

Treatment should be considered for all patients who are at risk of severe disease. In the event of shortages, consider the following risk group stratification for prioritization of the use of anti-SARS-CoV-2 therapy):

Table A. Patient Risk Groups for Prioritizing the Use of Anti-SARS-CoV-2 Therapy

Tier	Risk Groups
1	• Immunocompromised individuals who are not expected to mount an adequate immune response to COVID-19 vaccination or SARS-CoV-2 infection due to their underlying conditions, regardless of their vaccine status (see Immunocompromising Conditions below); *or* • Unvaccinated individuals who are at the highest risk of severe disease (anyone aged ≥75 years or anyone aged ≥65 years with additional risk factors)
2	• Unvaccinated individuals who are at risk of severe disease and who are not included in Tier 1 (anyone aged ≥65 years or anyone aged <65 years with clinical risk factors)
3	• Vaccinated individuals who are at high risk of severe disease (anyone aged ≥75 years or anyone aged ≥65 years with clinical risk factors) • Vaccinated individuals who have not received a COVID-19 vaccine booster dose are likely to be at higher risk for severe disease; patients who have not received a booster dose and who are within this tier should be prioritized for treatment.

Tier	Risk Groups
4	• Vaccinated individuals who are at risk of severe disease (anyone aged ≥65 years or anyone aged <65 with clinical risk factors) • Vaccinated individuals who have not received a COVID-19 vaccine booster dose are likely to be at higher risk for severe disease; patients who have not received a booster dose and who are within this tier should be prioritized for treatment.

Current therapy includes the following categories of treatment:

Monoclonal antibodies (MAB) are synthesized proteins that mimic the body's natural antibodies. MAB infusion therapy involves infusion or injecting one or more synthetic antibodies that attach to the SARS-CoV-2 virus spike protein to prevent viral entry into cells. Unlike active immunity, the monoclonal antibodies only last for days to weeks, though benefits start immediately after administration. If a mutation in the spike protein occurs at the monoclonal antibody binding site, the monoclonal antibody may be less effective or ineffective. As outbreaks with new variants

occur, new monoclonal antibody therapy needs to be developed to ensure effectiveness.

Oral anti-viral therapy
Oral anti-viral therapy are pharmacological agents that interfere with viral replication.

Investigational studies are ongoing to develop therapies against COVID-19 disease. Because the process for FDA approval is complicated and time consuming, the FDA may issue an Emergency Use Authorization (EUA). An EUA allows the Food and Drug Administration (FDA) to facilitate the use of an unapproved treatment during the times of a public health emergency when the certain criteria are met including when no adequate, alternative or approved therapies are available. When an EUA is authorized, treatment must follow the conditions of the EUA and off-label use is not permitted.

Timeline of MAB therapy

MAB threapy	EUA issued	EUA withdrawn	Notes
Bamlanivimab	11/9/2020	2/4/2020	Resistance, specifically E484K variant
Bamlanivimab and etesevimab	2/9/2021	1/24/2022	Ineffective against Omicron
Casirivimab and imdevimab	11/20/2021	1/24/2022	Ineffective against Omicron
Sotrovimab	5/26/2021	4/5/2022	Ineffective against Omicron BA.2
Bebtelovimab	2/11/2022	current	Activity against BA.2

As of this publication of 4/17/2022, the only MAB treatment with an EUA is bebtelovimab due to activity against the Omicron BA.2 variant. Providers are strongly encouraged to reference CDC and HHS websites to receive the most up-to-date information

Comparison of current therapies (as of 4/17/2022)

	Bebtelovimab	Ritonavir-Boosted Nirmatrelvir	Molupiravir	Remdesivir
Classification	MAB	Anti-viral	Anti-viral	Anti-viral
FDA Status	EUA	EUA	EUA	FDA approved
Administration	IV	Oral	Oral	IV
Time from symptom onset	7 days * Note change from 10 days to 7 days vs soltrovimab	5 days	5 days	7 days
Drug-drug interaction potential	Low	High	Low	Moderate
Comments	Requires infusion	Significant drug-drug interactions	High teratogenicity potential	Not practical for outpatient use

Since the onset of the COVID-19 pandemic, numerous other medications with potential anti-viral effects have been considered and evaluated for the treatment of acute COVID-19 infection. While some therapeutics demonstrated promise in initial studies, larger-scale studies have been inconclusive or demonstrated no benefit.

Table B. Dosing Regimens for the Drugs Recommended for High-Risk, Nonhospitalized Adults With Mild to Moderate COVID-19, Listed in Order of Preference Based on Efficacy and Convenience of Use

Drug Name	Dosing Regimen	Time From Symptom Onset[a]
Ritonavir-Boosted Nirmatrelvir (Paxlovid)	**eGFR ≥60 mL/min:** • Nirmatrelvir 300 mg with RTV 100 mg PO twice daily for 5 days **eGFR ≥30 to <60 mL/min:** • Nirmatrelvir 150 mg with RTV 100 mg PO twice daily **eGFR <30 mL/min:** • **Not recommended** **Severe Hepatic Impairment (Child-Pugh Class C):** • **Not recommended**	≤5 days
Remdesivir	RDV 200 mg IV on Day 1, followed by RDV 100 mg IV once daily on Days 2 and 3.[b,c] Each infusion should be administered over 30–120 minutes. Patients should be observed for ≥1 hour after infusion as clinically appropriate.	≤7 days
Bebtelovimab	BEB 175 mg as a single IV injection, administered over ≥30 seconds. Patients should be observed for ≥1 hour after injection.	≤7 days
Molnupiravir	Molnupiravir 800 mg PO twice daily for 5 days	≤5 days

[a] Per EUA criteria or clinical trial entry criteria.

[b] An eGFR <30 mL/min at screening or <90 days before screening was considered an exclusion criterion in the outpatient RDV study PINETREE, but only if a participant's weight was <48 kg. See the Remdesivir section for a discussion of RDV use in patients with renal impairment.

[c] If RDV is administered to patients who have a new or increasing need for supplemental oxygen but who are discharged from the ED because hospital resources are limited and inpatient admission is not possible, the total duration of therapy is ≤5 days.

Key: BEB = bebtelovimab; ED = emergency department; eGFR = estimated glomerular filtration rate; EUA = Emergency Use Authorization; IV = intravenous; PO = orally; RDV = remdesivir; RTV = ritonavir

Another good resource for treatment related information is https://www.ebmedicine.net/ebmblog/rapid-reference/covid-therapeutics/.

An important aspect of treatment for COVID-19 are the quarantine and isolation recommendations. Here are a few resources that can help determine the correct type and duration of these:

1. CDC Calculator: https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html
2. COVID-19 Quarantine and Isolation Guidance by Population (ri.gov)

Post-COVID Conditions:

According to the CDC, the term "Post-COVID Conditions" is an umbrella term for the wide range of physical and mental health consequences experienced by some patients that are present four or more weeks after SARS-CoV-2 infection, including by patients who had initial mild or asymptomatic acute infection. Some patients who have been infected with Covid suffer demonstrable organ injury as a consequence of their infection. These include, for example, cardiac consequences of myocarditis, pulmonary scarring from pneumonitis or treatment barotrauma, renal and brain injury. These conditions are best managed by specialists in the involved organ system. Moreover, up to 3% of patients who have had Covid, but have no demonstrable organ injury, continue to have ongoing respiratory, constitutional, neurological, and mental health symptoms up to 3 months after infection (https://www.medpagetoday.com/infectiousdisease/covid19/94524?xid=nl_mpt_DHE_2021-09-16&eun=g1457973d0r&utm_source=Sailthru&utm_medium=email&utm) and symptoms can be seen in children as well (https://www.medpagetoday.com/infectiousdisease/covid19/97055). Among these patients, common symptoms include fatigue, headache, dyspnea, chest pain, cognitive impairment, depression and anxiety. Unfortunately, there are no diagnostics tests to confirm Post-COVID Syndrome, so the urgent care evaluation should be as usual if patients present with these complaints. If that evaluation is unrevealing and patients have had recent COVID-19 infection, the approach to further evaluation and treatment should be multi-disciplinary and is still evolving.[1]

Here are certain tools that we can provide to our patients to help them manage these conditions:

https://longcovidalliance.org/

https://www.longcovidkids.org/

1. Vanichkachorn G, et al. Post-COVID-19 Syndrome (Long Haul Syndrome): Description of a Multidisciplinary Clinic at Mayo Clinic and Characteristics of the Initial Patient Cohort. *Mayo Clin Proc*. 2021;96(7):1782-1791

Conclusions

COVID-19 has truly shaken the entire world since it surfaced in 2019. Urgent Care Centers and their teams have been at the frontlines, taking care of patients through some of the toughest times that both patients and providers have seen. Our capability to care for patients has evolved, almost simultaneously with the advances in diagnostic testing and treatment. Even with some of the toughest barriers in place since the very beginning, urgent care teams have been doing what they do best, taking care of patients. Supporting each other through these tough times to emerge victorious against COVID-19 is an extremely daunting task and is something that every urgent care team member is prepared to confront. The clinical uncertainties coupled with the mental and emotional stresses while taking care of our patients are immense. With teamwork, support, and resilience, we will be able to overcome these hurdles.