Coronavirus Disease-2019 (COVID-19)
Diagnosis and Treatment Guidelines for Ambulatory Care Providers

The following guidelines have been generated based on scientific and practical observations in the care of thousands of patients coming to Henry Ford Health System facilities since mid-March. These diagnosis and treatment guidelines – prepared with input from experts at Henry Ford, including those in Infectious Diseases, Infection Control and Prevention, Primary Care, Pulmonary Medicine and Employee Health – convey the best practices put into place by our team of care professionals during this fast-moving pandemic.

As always, please continue to seek out the latest care information by accessing reputable sources, including the OneHENRY Pathology and Laboratory Medicine and HFHS COVID-19 webpages or the COVID-19 Resources page on the HFPN website.

For serologic testing, please refer to COVID-19 IgG Antibody Testing.

For treatment guidelines, please refer to COVID-19 Clinical Management Guideline.

Who should be considered for a COVID-19 PCR test?

Patients with mild or moderate symptoms suggestive of COVID-19 not requiring admission. Please see SARS-CoV-2 (COVID-19) Testing Criteria for further details.

Typical symptoms include:

- Fever*
- Shaking and chills
- Drenching sweats
- Body aches
- Headache
- Runny nose or nasal congestion
- New Cough
- New shortness of breath
- Sore throat
- Loss of taste and/or smell
- Nausea or vomiting
- Diarrhea

More atypical presentations:

- Signs or symptoms of hypercoagulability including PE or DVT, arterial thrombus
- Cardiac issues, including myocarditis, pericarditis and pericardial effusions
- CNS encephalopathy stroke
- Skin conditions and unusual rashes such as purpuric

**Fever is not always consistently present; less than 50% of patients have fever at the time of diagnosis of COVID-19.*

Which COVID-19 testing is available?

PCR tests performed on either a nasopharyngeal or nasal swab can be performed offsite at one of our testing sites. Testing requires an order in EPIC and an appointment for testing. The HFHS lab will process the specimen with turn-around time of 24 – 48 hours.

Antibody (serologic) testing is now available at HFHS and may be considered in symptomatic individuals with a negative PCR AND after 14 days of symptom onset or in exposed asymptomatic individuals after 14 days of exposure. A reactive test result may indicate a past exposure to SARS-CoV-2, but it is unknown if presence of antibody translates to durable immunity against Covid-19. There is a chance that this reactive result is a false positive. This is particularly true for low incidence populations (low pre-test probability). Note, serology (antibody) testing is not a primary diagnostic test for disease and molecular assays (PCR tests) should be used to diagnose symptomatic individuals.

Does a positive PCR test mean the individual is shedding viable virus and is infectious to others?

People who test positive for the coronavirus are most infectious two days before they first experience symptoms and five days afterward and may have a positive PCR test at that time. A patient who has recovered from COVID-19 clinically may still have a positive PCR test for several weeks after illness onset; the positive test likely represents shedding of non-infectious viral fragments and not ongoing infectivity.

Therefore, re-testing as a test of cure is not recommended even for healthcare workers. Henry Ford is currently using a non-test-based strategy for return to work for its workforce. A universal masking strategy for the workforce in addition to all ambulatory patients and visitors coming into HFHS facilities will continue until further notice to add additional safety protective measures.

As all tests are imperfect, so too is the PCR test. It may be falsely negative due to sampling error, test dynamics, intermittent shedding or other factors. So, if clinical suspicion is high, assume the patient has COVID-19 infection. Such patients do not necessarily need retesting if your management will not change.

What is the recommendation for a healthcare worker patient who has a positive test?

HFHS healthcare workers (HCW) should contact Employee Health (313-651-1119) for advice about quarantining at home. Other HCWs and first responders should consult

with their own company's Employee Health as return to work strategies may vary. If patients have mild disease they may be managed as an outpatient.

When should a COVID-19 positive/suspected patient be sent to the hospital?
Providers and patients should be aware that clinical worsening of respiratory symptoms may be abrupt and require a call ahead and Emergency Medicine services. These symptoms include:

- Difficulty breathing
- Chest pain or pressure
- Blue lips or face
- "Silent" Hypoxia which is initially exertional and then at rest. If the patient has a pulse oximeter, recommend walking for 2 minutes and assessing for a drop to <94% O2
- Severe diarrhea with suspected dehydration.
- Overall worsening with suspicion for pneumonia
- Patients with acute encephalopathy or suspicion for myocarditis or pericarditis or effusion.

Patients may abruptly worsen after days 7-10 of clinical illness due to an inflammatory response so it is reasonable to check in on your patients by video-visit or telephone at least once during this time.

What is the duration of home isolation for suspected or confirmed COVID-19?
Refer to the CDC's Home Isolation guidelines and local health department recommendations for further guidance.

What is the Patient Protocol for suspected or confirmed COVID-19 at an Ambulatory visit?

- Outpatient visits will be conducted as a mobile video-visit or telephone check-in as clinically appropriate.
- At times an in-person evaluation may be required if the patient cannot be managed virtually or telephonically
- Patients and their essential visitors must wear a procedure mask at all times while in a medical center or clinic (including while entering the facility)
- Healthcare providers caring for COVID-19 positive patients should wear a procedure mask and eye protection at all times. Follow COVID-19 PPE requirements guideline:
    - Frequent hand hygiene should be performed
- The exam room can be cleaned and used again immediately as long as an aerosol-generating procedure (AGP) was not performed in the room.

- N95s and gowns are not required unless an AGP is being performed
- Consult your Infection Prevention and Control team for further guidance.

What treatment should be offered to homebound COVID-19 patients with mild to moderate disease?

Those with symptoms such as:

- Cough
- Myalgia
- Fever with no dyspnea
- Pulse ox (if available is >94% on RA or better yet with exertion)
- No pulmonary infiltrates (if radiography performed)

Recommendations include:

- Social distancing
- Symptom relief of cough with: vaporizer, humidifier, inhalers, dextromethorphan if dry cough, guaifenesin for productive cough. Acetaminophens or NSAIDs for symptom relief
- Investigational Bamlanivimab monoclonal antibody therapy for select patient population (Clinical Indications for Use of Bamlanivimab (MAB) Guideline).

Should NSAIDs be avoided in patients with COVID-19 infection?

There was some initial concern that NSAIDs could worsen the course of illness in COVID-positive patients. However, recent FDA communication reiterates that ultimately the risk-benefit assessment for using NSAIDs in patients should not be influenced by COVID-19 disease status alone.

Are ACEi/ARB safe to use in COVID-19 positive patients?

Likewise, there was initial theoretical concern that ACEi/ARB could be harmful in patients with COVID-19 infection. ACE-2 serves as a binding site for coronavirus uptake in human cells, allowing viral replication. However, the evidence is not there to commence COVID-19 patients on these agents unless they have other indications for such therapy. For patients already on ACEi/ARB COVID-19 infection is not an indication to discontinue these agents. Additionally, the European Society of Cardiology put out a statement to refute any potential negative connections and advocates for managing patients' ACEi/ARB therapy similarly regardless of their COVID-19 disease. Therefore, the decision to continue or start ACEi/ARB should not be made based on COVID-19 status.

Should hydroxychloroquine or azithromycin be started in the ambulatory setting?

We do not recommend starting hydroxychloroquine and/or azithromycin for either prophylaxis or treatment of COVID-19 as both have unproven efficacy and significant toxicities. Both drugs prolong QTc and can result in Torsades de Pointe; caution should be used when prescribing either agent for non-COVID related indications especially for

patients who have risk factors for sudden cardiac death. These drugs have a long half-life, especially hydroxychloroquine, which is up to 50 days. Other adverse effects of hydroxychloroquine include anxiety, glycemic alterations, depression, psychosis, seizures and hepatic injury.

What is the role of steroids in the treatment of COVID-19?

The RECOVERY collaborative group randomized controlled trial demonstrated mortality benefit with dexamethasone. Guidelines strongly recommend corticosteroids be given for the treatment of **hospitalized** patients with severe and critical COVID-19. For patients who received steroids in-house but did not complete a course of therapy this could be continued at home for no more than a total (inpatient and outpatient) of 10 days (COVID-19 Clinical Management Guideline).

There are no data that outpatient prophylactic steroids will prevent clinical deterioration and guidelines recommend **AGAINST** the use of corticosteroids in the treatment of patients with non-severe COVID-19.

What infection control precautions should COVID-19 positive patients take at home to protect their families?

The goal is physical isolation within the home, ideally using a separate bed, bedroom and bathroom, if feasible. Frequent cleaning of high-use surfaces such as counters and doorknobs. Also, they should avoid sharing household items such as dishes, cups/glasses, silverware, towels, bedding or electronics with the person who is sick. If there is face-to-face interaction, the positive patient should wear a mask, as should the other family members. In dealing with personal care, caregiver to wear gloves and mask.

What is the respiratory care of the COVID-19 patient post-hospital discharge?

Patients recovering from COVID-19 pneumonia should be counseled that their return to normal respiratory health may be protracted especially in the present of other underlying chronic respiratory illnesses. They may require bronchodilators or inhaled corticosteroids for the same indications you are familiar with.

What is the management of COVID-19 patients who have recovered enough for discharge from the hospital, but still require supplemental oxygen at home?

Recommendations for these patients includes the following:

- Continue home oxygen until pulse ox is consistently above 94%, preferably with activity
- Can consider discontinuing if patient significantly improved clinically and pulse ox not available.
- If O2 requirements persist for 4 weeks or more, patient should be referred to pulmonary medicine.

What do I do if my patient is pregnant?

Although there remains concern about pregnant women who have other viral infections during pregnancy, pregnant women do not appear to be at increased risk for COVID-19 (from limited observations). Vertical transmission, if it occurs, appears to be rare. For pregnant women, recommend close follow-up with OB/GYN.

Is breast feeding a mode of transmission of COVID-19 to the baby?

There are risks of a COVID-19 infected mother passing along COVID while lactating via droplets from the mother's respiratory tract. It is recommended that if the infected mother cannot express breast milk and have someone else feed the baby, she should practice hand hygiene and wear a mask to prevent droplet transmission. The virus has not been reported to be present in breast milk (in limited studies). Breast milk is still preferred to formula for most infants.

What special precautions does a COVID-19 patient need to prepare for surgery or a procedure?

Please consult with the surgeon or proceduralist to evaluate "time-sensitivity" of planned procedure. All pending surgical procedures are being individually evaluated by the surgical teams.

What are other concerns in the ambulatory setting for COVID-19 patient care?

COVID-19 patients are hypercoagulable so a high index of suspicion should be given for blood clots or thromboembolism either present on presentation or as a late complication. Additionally, secondary bacterial pneumonia may occur post hospitalization.

If a COVID-19 positive or COVID-suspected patient needs to be seen in the office, how can I protect my staff and myself?

Universal masking with a surgical (procedural) mask for BOTH the provider and patient confer adequate protection for routine visits. For non-AGP, an N-95 mask is not necessary. The HCW should also wear eye protection during the entire clinic visit.

Frequent hand hygiene is recommended.

Special considerations for symptomatic COVID-19 positive patients who are also part of the HFHS workforce

If the employee remains symptomatic without enough improvement for Employee Health to clear them for return to work, they may be directed to follow-up with their primary care physician. Please evaluate for complications of COVID-19 as noted above.

- If symptoms require care or persist, the employee will be referred to primary care physician for treatment and determination of return to work dates

- HFHS Employee Health will continue to follow employee to understand return to work info and date.

If you have further questions about COVID-19 and patient care, please contact Infectious Diseases via e-consultation in EPIC. For more urgent concerns, please call the Infectious Diseases doctor on call at your site.

For questions about Infection Prevention Control lease contact the team for your business unit listed in the table below.

For questions regarding weaning O2 in the ambulatory setting, please contact pulmonology at your site.

For questions regarding anticoagulation, please contact hematology at your site.

For patients who are also part of the HFHS workforce, please consult with Employee Health for return to work advice.

Henry Ford Health System Infection Prevention & Control Department	
Business Unit	**Pager/On-Call/After-Hours**
Henry Ford Hospital	313-350-4215
HF Wyandotte	734-883-8006
HF West Bloomfield	248-325-3901, 248-235-2220
HF Macomb	586-681-1569, 586-681-1570, 586-681-2008
HF Allegiance	517-205-4967, 517-205-5468, 517-205-4943
HF Medical Group	313-850-8208, 313-953-5752, 313-829-5693
Community Care Services	248-303-7997