

**COVID-19 Outpatient Medication Stewardship Guidance
For Retail and Clinic Pharmacists and Providers**

Please note: Updates are underlined.

June 16, 2020

General patient care treatment guidance:

- Medications to treat COVID-19 are **currently on shortage or may become short in the near future**.
- Patients diagnosed with pneumonia with suspected COVID-19 infection should begin community acquired pneumonia (CAP) treatment until COVID-19 is confirmed.
- CDC recommends supportive care as best care in COVID-19 infected patients in the outpatient setting.
- The National Institute of Health (NIH) states, **“There are insufficient data for the Panel to recommend either for or against any antiviral or immunomodulatory therapy in patients with COVID-19 with mild or moderate illness (AIII).”**
- Because COVID-19 is a novel virus, there is very limited evidence to support effective treatments.

Medication specific prophylaxis and treatment guidance:

<p>Hydroxychloroquine Chloroquine</p>	<ul style="list-style-type: none"> • <u>Prophylaxis with hydroxychloroquine should not be utilized based on results from a large, US based, randomized, placebo controlled trial.</u> • The FDA only recommends use of hydroxychloroquine in clinical trials or hospitalized patients. • <u>NIH Panel recommends against the use of chloroquine or hydroxychloroquine for the treatment of COVID-19, except in a clinical trial (AII). The FDA has withdrawn the EUA for hydroxychloroquine and chloroquine. Treatment effects, if any, cannot be supported or refuted with currently available literature. To make further recommendations, we will wait until final data from the large WHO-funded randomized study is published. Current data limitations include small studies, in vitro work, or larger retrospective trials with significant confounding by indication. Recently, large trials have been retracted in the literature.</u>
<p>Azithromycin</p>	<ul style="list-style-type: none"> • The NIH recommends against HQ and azithromycin combination specifically for COVID. Azithromycin, or alternatively doxycycline, can be used empirically as part of a CAP pathway while confirmatory testing is occurring.
<p>Kaletra (lopinavir-ritonavir)</p>	<ul style="list-style-type: none"> • In a recent in vivo study, it did not show benefit compared to standard of care. The NIH recommends against the use of this therapy at this time. Additional studies are ongoing, including those with combination therapy.
<p>Ribavirin</p>	<ul style="list-style-type: none"> • There is no evidence to support ribavirin monotherapy as a treatment for COVID-19 at this time.
<p>Oral steroids</p>	<ul style="list-style-type: none"> • <u>Data is limited and inconclusive for use in COVID-19. This does not preclude use of steroid for other indications, such as COPD, refractory septic shock, ARDS, etc.</u>
<p>General inhaled treatment</p>	<ul style="list-style-type: none"> • If needed for non-<u>COVID-19</u> indications, administer inhaled (by mouth or nasal) medications in the patient’s home setting in a closed room away from other people to minimize exposure.
<p>Beta agonist and anticholinergic inhaled treatment</p>	<ul style="list-style-type: none"> • Carefully assess each person under investigation (PUI) or known COVID-19 positive patient prior to ordering any inhaled therapy. <ul style="list-style-type: none"> • NOTE: The American Association of Respiratory Care SARS CoV-2 Guidance Document states that there is no role for inhaled bronchodilation in patients with COVID-19 unless the patient has co-morbid asthma or COPD. • If treatment is necessary and patients are low risk for COVID-19, nebulized therapy with use of appropriate PPE may be considered in the setting of MDI shortage. Consult local Infection Control for nebulized therapy process guidance.

	<ul style="list-style-type: none"> • Reserve albuterol for PUI or COVID-19 positive patients with known asthma and clinical signs of bronchospasm (wheezing). • Reserve ipratropium for PUI or COVID-19 positive patients with COPD.
NSAIDs	<ul style="list-style-type: none"> • Persons with COVID-19 who are taking NSAIDs for a co-morbid condition should continue therapy as previously directed by their physician. May use either acetaminophen or NSAIDs as antipyretic strategies. Please note, that not all fevers need to be brought to normothermia
ACE inhibitors and ARBs	<ul style="list-style-type: none"> • The HFSA, ACC, and AHA recommend continuation of RAAS (renin-angiotensin-aldosterone system) antagonists for those patients who are currently prescribed such agents for indications for which these agents are known to be beneficial, such as heart failure, hypertension, or ischemic heart disease. Do not use these agents for the sole treatment of COVID-19.
Statins	<ul style="list-style-type: none"> • Continue statins if prescribed for other indications. Do not use these agents for the sole treatment of COVID-19.
H2 antagonists / Famotidine	<ul style="list-style-type: none"> • <u>Continue H2 antagonists / famotidine for other indications. There is not sufficient evidence to recommend in the absence of another clinical indication.</u>

Supplement guidance

Many supplements are being trialed anecdotally for treatment of COVID-19. There are continued claims without substantiated clinical efficacy. The below list of supplements does not have reliable evidence for prevention or treatment of COVID-19:

- Colloidal silver
- Echinacea
- Elderberry
- Airborne™
- Emergen-C™
- Melatonin
- Zinc
- Thiamine
- Ascorbic acid

Prescription guidance:

- Limit hydroxychloroquine, chloroquine, and lopinavir/ritonavir (Kaletra®) to a one month supply on patients for continuation of established therapy for documented rheumatological disease or HIV infection
- Valid prescription will include diagnosis documentation of new chronic rheumatological disease or HIV infection.
- If hydroxychloroquine or chloroquine is written for COVID-19 prophylaxis, discuss with the provider the lack of data to utilize for this. Convey that it is inappropriate at this time. It should not be dispensed.
- Azithromycin therapy for CAP should not exceed 5 days.
- If MDI albuterol is not available or patient lives alone dispensing nebulized albuterol is appropriate. Administration of respiratory medications may cause the patient to cough. Instruct patients to self-administer nebulized medications in an open air environment (e.g. porch or patio). If an open air environment is not available an isolated room within their home is an acceptable alternative.

References

1. COVID-19 Treatment Guidelines Panel. Coronavirus Disease 2019 (COVID-19) Treatment Guidelines. National Institutes of Health. Available at <https://www.covid19treatmentguidelines.nih.gov/> Last updated 6/11/2020.
2. U.S. Food and Drug Administration. FDA Revokes Emergency Use Authorization for Chloroquine and Hydroxychloroquine. Released June 15, 2020. Available from: <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-revokes-emergency-use-authorization-chloroquine->

- [and?utm_campaign=FDA%20Revokes%20Emergency%20Use%20Authorization%20for%20Chloroquine%20and%20Hydroxychloroquine&utm_medium=email&utm_source=Eloqua](#)
3. FDA. FDA cautions against use of hydroxychloroquine or chloroquine for COVID-19 outside of the hospital setting or a clinical trial due to risk of heart rhythm problems. Available from: <https://www.fda.gov/drugs/drug-safety-and-availability/fda-cautions-against-use-hydroxychloroquine-or-chloroquine-covid-19-outside-hospital-setting-or>
 4. National Institute of Health. COVID-19 Treatment Guidelines. Available from: <https://covid19treatmentguidelines.nih.gov/overview/management-of-covid-19/>
 5. Gautret P, Lagier J, Parola P, et al. Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an openlabel nonrandomized clinical trial. Available from: https://drive.google.com/file/d/186Bel9RqfsmEx55FDum4xY_IWShnGbj
 6. Yao X, Zhang M, Cui C, et al. In vitro antiviral activity and projection of optimized dosing design of hydroxychloroquine for the treatment of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Published by Oxford University Press for the Infectious Diseases Society of America. Downloaded from <https://academic.oup.com/cid/advance-article-abstract/doi/10.1093/cid/ciaa237/5801998>
 7. Clinical Pharmacology. Drug Interaction Report: hydroxychloroquine and azithromycin. Retrieved from <https://www.clinicalkey.com/pharmacology/reports/interactions?gpcid=1046&gpcid=89&dt=true&type=p>
 8. American College of Cardiology. Ventricular arrhythmia risk due to hydroxychloroquine-azithromycin treatment for COVID-19. Available from: <https://www.acc.org/latest-in-cardiology/articles/2020/03/27/14/00/ventricular-arrhythmia-risk-due-to-hydroxychloroquineazithromycin-treatment-for-covid-19>
 9. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html>
 10. FDA advises patients on use of non-steroidal anti-inflammatory drugs (NSAIDs) for COVID-19. Available from <https://www.fda.gov/drugs/drug-safety-and-availability/fda-advises-patients-use-non-steroidal-anti-inflammatory-drugs-nsaids-covid-19>
 11. Cao B, Wang Y, Wen D, et al. A trial of lopinavir–ritonavir in adults hospitalized with severe Covid-19. NEJM. March 18, 2020. DOI: 1056/NEJMoa2001282 Available from: <https://www.nejm.org/doi/full/10.1056/NEJMoa2001282>
 12. HFSA/ACC/AHA Statement Addresses Concerns Re: Using RAAS Antagonists in COVID-19. Available from: <https://www.acc.org/latest-in-cardiology/articles/2020/03/17/08/59/hfsa-acc-aha-statement-addresses-concerns-re-using-raas-antagonists-in-covid-19>
 13. Boulare DR, Pullen MF, Bangdiwala AS et al. A randomized trial of hydroxychloroquine as postexposure prophylaxis for COVID-10. NEJM, June 3, 2020. DOI: 10.1056/NEJMoa2016638
 14. Freedberg DE, Conigliaro J, Wang TC et al. Famotidine use is associated with improved clinical outcomes in hospitalized COVID-19 patients: a propensity score matched retrospective cohort study. Gastroenterology. 2020 May 21 [Preproof]. PMID: 32446698. DOI: 10.1053/j.gastro.2020.05.053.

Distributed by Karen McConnell, PharmD, on behalf of the CommonSpirit Health System P & T Committee
KarenMcconnell@catholicealth.net