

# COVID-19: PROPHYLACTIC USE OF HYDROXYCHLOROQUINE (HCQ)



A Rapid Guidance Summary from the Penn Medicine Center for Evidence-based Practice  
Last updated April 21, 2020 10:00 pm All links rechecked April 20 unless otherwise noted.

## Key questions answered in this summary

- Is hydroxychloroquine effective for prevention of clinical disease in patients who have been exposed to the 2019-nCoV coronavirus?  
*Use of hydroxychloroquine for treatment of confirmed COVID-19 disease is outside the scope of this report.*

## Summary of major recommendations

- There are no clinical guidelines that support use of hydroxychloroquine or chloroquine for prevention of COVID-19 disease outside of approved clinical trials.
- There are no hospitals using hydroxychloroquine or chloroquine for prevention of COVID-19 disease outside of approved clinical trials.

## Guidelines on prophylactic use of hydroxychloroquine

Source	Recommendations
<b>Public health agencies</b>	
<a href="#">CDC</a> April 13	Hydroxychloroquine and chloroquine are under investigation in clinical trials for pre-exposure or post-exposure prophylaxis of SARS-CoV-2 infection, and treatment of patients with mild, moderate, and severe COVID-19.
<a href="#">INESS</a> April 2	Despite some encouraging results from clinical trials involving small cohorts of patients, the available data do not support the widespread use of chloroquine or hydroxychloroquine in patients with COVID-19.
<a href="#">FDA</a> April 9	There are currently no FDA-approved medical countermeasures for COVID-19. Emergency use authorization for hydroxychloroquine applies only to patients hospitalized with COVID-19 disease.
<a href="#">WHO</a> March 27	WHO is actively following the ongoing clinical trials that are being conducted in response to COVID-19, including studies looking at the use of chloroquine and its derivative, hydroxychloroquine, for treatment and/or prevention. Currently, there is insufficient data to assess the efficacy of either of these medicines in treating patients with COVID-19, or in preventing them from contracting the coronavirus.
<a href="#">Public Health England</a> March 25	Chloroquine and hydroxychloroquine are not licensed to treat COVID-19 related symptoms or prevent infection. Clinical trials are ongoing to test chloroquine and hydroxychloroquine as an agent in the treatment of COVID-19 or to prevent COVID-19 infection. These clinical trials are still not completed, so no conclusions have been reached on the safety and effectiveness of this medicine to treat or prevent COVID-19.
<a href="#">ECDC</a>	No guidance relating to treatment or prophylaxis.

Source	Recommendations
<b>Professional societies</b>	
<a href="#">ASHP</a> March 23	<p>During this crisis, there is understandable concern over the health and safety of loved ones. However, inappropriate prescribing of these experimental treatments to have “just in case” or for patients who are not at high risk of severe illness may lead to an inadequate supply of medications for those who need them most. Similarly, stocking up and hoarding can also create shortages or exacerbate existing shortages.</p> <p>Outpatient prescriptions for these medications should include a documented diagnosis from the prescriber consistent with the FDA-approved indication or other literature-supported, off-label use</p> <p>Outpatient prescriptions should be dispensed only:</p> <ol style="list-style-type: none"> <li>In coordination with discharge planning from an inpatient setting for continuity of care, or</li> <li>For patients with a confirmed positive test for SARS-CoV-2, or</li> <li>For patients designated as a Person Under Investigation (PUI).</li> </ol>

INESS- Institut national d'excellence en santé et services sociaux (Quebec)

ASHP–American Society of Health System Pharmacists

CPA–Canadian Pharmacists Association

## Evidence reviews on prophylactic use of hydroxychloroquine

Source	Findings
<a href="#">ASHP</a> April 17	<p>Only limited clinical trial data available to date to evaluate use of hydroxychloroquine for treatment or prevention of COVID-19.</p> <p>Efficacy and safety of hydroxychloroquine for treatment or prevention of COVID-19 not established.</p> <p>Additional data needed to determine whether in vitro activity against SARSCoV-2 corresponds with clinical efficacy for treatment or prevention of COVID19.</p> <p>Additional data needed to substantiate initial reports of efficacy for treatment and identify optimal dose and duration.</p> <p>Various clinical trials are being initiated in the US and elsewhere to evaluate hydroxychloroquine for prevention of COVID19 in the healthcare setting or in household contacts of patients with the disease [see full review for trial IDs].</p> <p><i>None of the clinical studies discussed in the review involved patients without confirmed COVID-19 diagnosis.</i></p>
<a href="#">CEBM</a> April 14	Current data do not support the use of hydroxychloroquine for prophylaxis or treatment of COVID-19. There are no published trials of prophylaxis.
<a href="#">SIDP</a> April 3	Prophylactic use not discussed

ASHP–American Society of Health System Pharmacists

SIDP–Society of Infectious Disease Pharmacists

CEBM–University of Oxford Centre for Evidence-based Medicine

## Medical center guidance on prophylactic use of hydroxychloroquine

Hospital	Policy/recommendation
<a href="#">Mass. General</a> April 18	There is currently no proven role for post exposure prophylaxis for people with a known COVID-19 exposure. They should follow self-quarantine for 14-days and monitor for symptoms. Healthcare workers should follow instructions from Occupational Health.
<a href="#">Brigham</a> April 17	No provision for prophylactic or outpatient use.
<a href="#">Cleveland</a> April 16	In accordance with state regulations, hydroxychloroquine may not be prescribed without a confirmed diagnosis of COVID-19 disease.
<a href="#">Washington</a> April 15	Post exposure prophylaxis (PEP) of COVID-19 is not currently recommended. For household contacts or health care workers with COVID-19 exposure, there is an ongoing randomized clinical trial of hydroxychloroquine PEP at UW Medicine (NCT04328961).

Hospital	Policy/recommendation
<a href="#">Penn Medicine</a> April 10	We do not recommend routine post-exposure prophylaxis. If signs/symptoms develop, follow treatment guidelines above. Despite reports of efficacy of azithromycin plus hydroxychloroquine to treat SARS-CoV-2, azithromycin should not be added to hydroxychloroquine only to treat SARS-CoV-2. The efficacy of combination azithromycin and hydroxychloroquine comes from a study with significant limitations. In addition, the International Society of Antimicrobial Chemotherapy recently redacted the article because of scientific concerns.
<a href="#">Mt. Sinai</a> April 10	Hydroxychloroquine is NOT recommended for use in patients without PCR-confirmed COVID-19
<a href="#">Johns Hopkins</a> April 8	Hydroxychloroquine is currently being investigated in post-exposure prophylaxis in healthcare workers (NCT04308668).
<a href="#">Michigan</a> April 6	The data is not strong enough to recommend routine use of hydroxychloroquine.
<a href="#">Toronto</a> April 2	Chloroquine and hydroxychloroquine (with or without azithromycin) are not recommended for patients with COVID-19 outside of approved clinical trials or where other indications would justify its use (e.g. chronic rheumatological conditions).
<a href="#">Yale</a> March 24	There are currently no FDA approved medications for treatment of COVID-19; but several readily available oral medications have demonstrated possible activity against SARS CoV-2 including hydroxychloroquine, HIV-1 protease inhibitors (e.g., lopinavir-ritonavir, atazanavir, tipranavir), and azithromycin. None of these agents have been studied in large clinical trials (with or without placebo) to support their off label use in the ambulatory setting for the treatment/prevention of COVID 19 patients. The use of these “re-purposed” medications in the outpatient setting is inappropriate, and will result in shortages, which will impact treatment of patients for whom these medications are indicated by FDA approval, established clinical experience, or for the severely ill inpatients with COVID-19. Outpatient prescribing of hydroxychloroquine, HIV-1 protease inhibitors, and azithromycin should be reserved ONLY for patients who have medical conditions where their use has been established and there are no other alternatives.

## Definition of terms

**Guideline:** Guidance developed by a professional society or government agency, intended for use at multiple hospitals.

**Policy:** Guidance developed at a hospital for use at that hospital. It may be based on guidelines or on expert opinion.

## About this report

A Rapid Guidance Summary is a focused synopsis of recommendations from selected guideline issuers and health care systems, intended to provide guidance to Penn Medicine providers and administrators during times when latest guidance is urgently needed. It is not based on a complete systematic review of the evidence. Please see the CEP web site for further details on the methods for developing these reports.

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