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Consultant Pharmacists for Healthcare Organizations, Industry, and the Community.

To: All Administrators, Directors of Nursing, and Medical Directors
From: Dr. William C. Hallett, Pharm.D., MBA, BCGP, C-MTM
Date: March 24, 2020; updated March 31, 2020
Subject: COVID-19 UPDATE: Hydroxychloroquine

Background

There has been much recent discussion on Hydroxychloroquine as one of the possible medications that may be useful for those infected by SARS-CoV-2, the virus which causes COVID-19. While, as of this writing, no official FDA approval for the use of Hydroxychloroquine in COVID-19 has been granted, FDA approval for “Off-Label” use appears possible and perhaps imminent. That said, several States have enacted executive orders to restrict use, making the immediate future of its use in our setting uncertain.

Discussion

Despite these uncertainties, it is possible that over the coming days and weeks, we may see some (and possibly even significant) use of Hydroxychloroquine in our various practice settings. While Hydroxychloroquine has been used for malaria and rheumatoid arthritis for many decades, because of its limited use, the precautions and side effects may not be well known to most. To that end, we have prepared a document titled, “**Hydroxychloroquine Fact Sheet for Long Term Care Nurses and Clinicians**”. (Attached, see below.)

It is important to note that cardiac side effects, in particular QT interval prolongation, is of special concern with this medication, especially when used in combination with other medications that may cause this same effect. To assist prescribers, I have attached a chart titled, “**Common Medications Used in Long Term Care with Risk of QT Prolongation**”. (Also attached, see below.)

Utilization

It is once again important to remind prescribers that while numerous clinical trials are underway here in the United States and abroad *as of this writing, the FDA has not approved hydroxychloroquine for use for chemoprophylaxis or treatment of COVID-19 in the Long Term Care setting.* We are continuing to monitor the FDA status along with the clinical literature and emerging information on this medication. Additionally, we have tremendous information on many other potential therapeutic modalities, and we welcome your questions. Please do not hesitate to reach out to us if we can be of assistance!

Respectfully,

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Hydroxychloroquine Fact Sheet for Long Term Care Nurses and Clinicians

As new data emerges on the possible treatments for COVID-19 infections, older medications such as Hydroxychloroquine have been quickly pushed in to clinical trials and use in our clinical environment.

*It is important to note that the following information is provided to assist and remind clinicians of the precautions associated with this medication, and is not in any way meant to endorse use or infer safety or efficacy, as at the time of this publication, **Hydroxychloroquine is not currently FDA approved, labeled, or otherwise indicated for COVID-19 treatment or prophylaxis for patients outside of the acute care setting.***

FDA Approved Indications: Uncomplicated Malaria, Lupus Erythematosus, Rheumatoid Arthritis. *Also authorized for:* Hospitalized COVID-19 adult and adolescent patients weighing more than 50kg

How Supplied: 200mg tablets, non-film coated tablets that may be crushed, if necessary.

Warnings and Monitoring of Particular Importance to LTC Nurses and other Clinicians:

Cardiac Effects, including Cardiomyopathy and QT prolongation:

- **Hydroxychloroquine prolongs the QT interval.** Ventricular arrhythmias and torsades de pointes have been reported in patients taking hydroxychloroquine, and use with other medications that also cause QT prolongation is not advised by the manufacturer.
- **Life-threatening and fatal cardiomyopathy** have been reported with use. ECG findings may include atrioventricular, right or left bundle branch block.

Hypoglycemia: Hydroxychloroquine has been shown to cause severe hypoglycemia including loss of consciousness that could be life threatening, even in residents not previously known to be diabetic.

Lowering of Seizure Threshold: Residents with known seizure disorders may be at higher risk of breakthrough seizures when taking Hydroxychloroquine.

Worsening of psoriasis and porphyria: Use of Hydroxychloroquine in patients with psoriasis may precipitate a severe attack of psoriasis.

Other Important Precautions:

Hepatic/Renal Disease: Use with caution in patients with hepatic disease or alcoholism or in conjunction with known hepatotoxic drugs; monitor labs for blood disorders and be advised that any dosage prescribed may need to be evaluated and possibly reduced.

Important Drug Interactions:

Digoxin: May increase digoxin levels. Serum digoxin levels should be closely monitored in patients receiving combined therapy.

Insulins and antidiabetic meds: May enhance the effects of a hypoglycemic treatment, a decrease in doses of insulin or antidiabetic drugs may be required.

Other Common Adverse Effects: Dizziness, headache, psychosis, pruritis, weight-loss, diarrhea, nausea, vomiting

As always, please see the FDA Full Prescribing Information for complete details, including additional important warnings and precautions, located here:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2007/009768s041lbl.pdf



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**Common Medications Used in Long Term Care
with Risk of QT prolongation**

Macrolide Antibiotics

- Azithromycin (Zithromax)
- Clarithromycin (Biaxin)
- Erythromycin

Fluoroquinolone Antibiotics

- Levofloxacin (Levaquin)
- Ciprofloxacin (Cipro)
- Moxifloxacin (Avelox)

Antipsychotics

- Haloperidol (Haldol)
- Thioridazine (Mellaril)
- Ziprasidone (Geodon)
- Quetiapine (Seroquel)

Antidepressants

- Escitalopram (Lexapro)
- Citalopram (Celexa)
- Amitriptyline (Elavil)
- Fluvoxamine (Luvox)

Cardiac and Antiarrhythmics

- Amiodarone (Pacerone, Cordarone)
- Sotalol (Betaone)

Others

- Hydroxychloroquine (Plaquenil)
- Ondansetron (Zofran)
- Methadone
- Sumatriptan (Imitrex)
- "Azole" Antifungals – Multiple, including:
 - Fluconazole (Diflucan)
 - Ketoconazole (Nizoral)

***Please note:** *This list is not intended to be all-inclusive. Please see full prescribing information for these and all prescribed medications when QT prolongation is a clinical concern.*