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CDC HEALTH ADVISORY

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Severe Illness Associated with Using Non-Pharmaceutical Chloroquine Phosphate to Prevent and Treat Coronavirus Disease 2019 (COVID-19)

Summary
Chloroquine phosphate, when used without a prescription and supervision of a healthcare provider, can cause serious health consequences, including death. Clinicians and public health officials should discourage the public from misusing non-pharmaceutical chloroquine phosphate (a chemical used in home aquariums). Clinicians should advise patients and the public that chloroquine, and the related compound hydroxychloroquine, should be used only under the supervision of a healthcare provider as prescribed medications.

Background
The Centers for Disease Control and Prevention (CDC) has become aware of two individuals who ingested non-pharmaceutical chloroquine phosphate, a chemical for aquarium use that is commercially available for purchase at stores and through internet websites. One of the individuals died shortly after arrival to the hospital. The second individual was critically ill with severe gastrointestinal symptoms and cardiac conduction abnormalities. Upon recovery, the surviving individual reported to the media that they ingested the product to prevent infection with SARS-CoV-2, which causes coronavirus disease 2019 (COVID-19), after seeing information on the medical use of chloroquine on television. The product in their possession was in powder form inside a 2.2-lb. container and labeled “for Ornamental Fish Use Only”. CDC is also aware of unconfirmed media reports that these commercially available aquarium-use chemicals may be out of stock due to potential increased demand by the public.

At this time, there are no routinely available pharmaceutical products that are FDA-approved for the prevention or treatment of COVID-19. Pharmaceutical chloroquine phosphate and hydroxychloroquine sulfate are approved by the US Food and Drug Administration (FDA) to treat specific medical conditions, such as malaria, lupus, and rheumatoid arthritis. Currently, these medications are being studied and evaluated as treatment for COVID-19; however, their efficacy to either prevent or treat this infection are unknown. In overdose situations or when used inappropriately, these medications can lead to severe toxicity, including cardiac rhythm disturbances such as prolonged QT, severe hypokalemia, cardiovascular collapse, seizures, coma, and death. Inappropriate uses include taking commercially available non-pharmaceutical preparations, taking chloroquine phosphate or hydroxychloroquine sulfate without a prescription, and taking additional doses not recommended by a healthcare provider. Chloroquine phosphate has a narrow therapeutic index—it can be toxic at levels not much higher than those used for treatment—which raises the risk of inadvertent overdose.

Recommendations for Clinicians and Public Health Officials
1. Educate patients on the serious risks of misusing non-pharmaceutical chloroquine products and other aquarium use chemicals.
2. Counsel your patients on the importance of taking medications only as prescribed and as directed by healthcare providers.
3. Contact your local poison center (1-800-222-1222) to report cases and to obtain specific medical management of chloroquine and hydroxychloroquine poisoning.
4. Adverse events related to pharmaceuticals can be reported to the FDA MedWatch program (https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program).

Adverse events related to non-pharmaceutical products can be reported by emailing FDA-COVID-19-Fraudulent-Products@fda.hhs.gov or calling 1-888-InfoFDA (1-888-463-6332).

Recommendations for the Public

1. Do **not** ingest aquarium use products or any other chemicals that contain chloroquine phosphate. These chemicals are not intended for human consumption and can lead to serious health consequences, including death.
2. Medications like chloroquine phosphate and hydroxychloroquine sulfate should be taken only when prescribed by and under the supervision of your healthcare provider and always according to the instructions provided.
3. Seek immediate medical attention if you are experiencing any unexpected symptoms after taking chloroquine or hydroxychloroquine by contacting your healthcare provider or your poison center (1-800-222-1222).

For More Information

- CDC coronavirus website (https://www.cdc.gov/coronavirus)
- U.S. Government coronavirus website (https://www.coronavirus.gov/)
- FDA Letter to Stakeholders (https://www.fda.gov/animal-veterinary/product-safety-information/fda-letter-stakeholders-do-not-use-chloroquine-phosphate-intended-fish-treatment-covid-19-humans)
- Banner Health (Phoenix, AZ) press release (https://bannerhealth.mediaroom.com/chloroquinephosphate)
- Dailymed (https://dailymed.nlm.nih.gov/dailymed/index.cfm) for medical prescribing information
- American College of Medical Toxicology (https://www.acmt.net) for poisoning information
- Association of American Poison Control Centers (https://www.aapcc.org)

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.

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##This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations##