

## Hydroxychloroquine: an urgent quality use of medicines issue

- There is no strong evidence to support the use of hydroxychloroquine for the treatment of mild to moderate infection with SARS-CoV-2 (COVID-19).
- There is no published evidence that the duration or severity of symptoms of mild infection with COVID-19 is reduced with hydroxychloroquine
- There is no evidence that prophylaxis with hydroxychloroquine reduces the risk of infection with SARS-CoV-2

**The evidence:** To date, the evidence for hydroxychloroquine in COVID-19 is based on *in vitro* data suggesting antiviral activity against SARS-CoV-2,<sup>1</sup> with very limited evidence from a small uncontrolled study of 36 hospitalised patients with COVID-19 in France.<sup>2</sup> There is no evidence for hydroxychloroquine in the management of mild or moderate COVID-19, nor for pre or post prophylaxis of COVID-19. The use of hydroxychloroquine should ideally be limited to the management of hospitalised patients with proven severe bilateral interstitial pneumonia due to COVID-19, in the setting of clinical trials with or without concurrent antiviral medication.

**The role in clinical practice:** The potential role of hydroxychloroquine in the management of COVID-19 has gained much attention. Coinciding with this, there is increasing concern that hydroxychloroquine is being prescribed by many sectors of the medical profession, dentists and non-medical prescribers. This is resulting in a critical shortage of hydroxychloroquine for the treatment of patients with rheumatological conditions and limiting access for patients hospitalised with severe COVID-19. This is particularly true for patients with systemic lupus erythematosus (SLE) who are at increased risk of flares if hydroxychloroquine is discontinued.<sup>3</sup>

Hydroxychloroquine has important safety considerations, including cardiac (potential to significantly prolong the QTc interval), skin, ocular and haematological toxicity.

**In summary:** General practitioners are urged not to prescribe hydroxychloroquine for the management or prophylaxis of COVID-19. Doing so at present is not based on quality evidence of efficacy, puts patients at risk of serious adverse effects, places pressure on community pharmacists, and risks the supply of hydroxychloroquine for patients with proven need for the drug.

### References:

1. Colson P, et al. Chloroquine and hydroxychloroquine as available weapons to fight COVID-19. *Int J Antimicrob Agents*. 2020 Mar 4:105932. doi: 10.1016/j.ijantimicag.2020.105932. [Epub ahead of print]
2. Yao X, 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). *Clin Infect Dis*. 2020 Mar 9. pii: ciaa237. doi: 10.1093/cid/ciaa237. [Epub ahead of print]
3. Aouhab Z, Hong H, Felicelli C, Tarplin S, Ostrowski RA. Outcomes of Systemic Lupus Erythematosus in Patients who Discontinue Hydroxychloroquine. *ACR Open Rheumatol*. 2019 Oct 18;1(9):593-599.

22<sup>nd</sup> March 2020

Joy Gailer, Clinical Pharmacist, Drug and Therapeutics Information Service (DATIS)

With thanks to Nadine Hillock (Senior Pharmacist, Antimicrobial Surveillance Programs) and Prof Catherine Hill for editorial input