

# Hydroxychloroquine for COVID-19

Variation in regional political preferences predicted new prescriptions after President Trump's endorsement

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## Summary

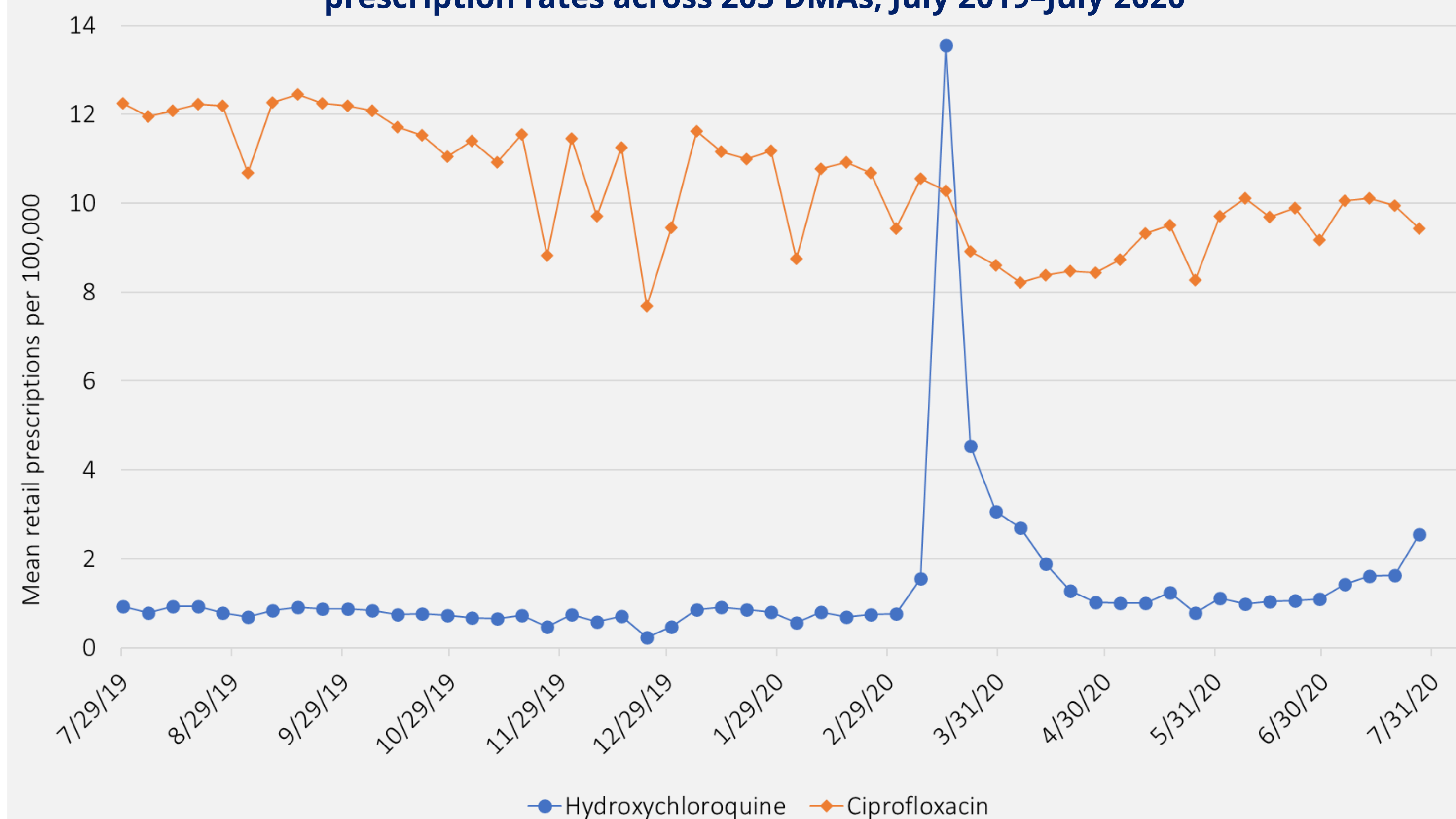
On March 19, 2020, President Trump endorsed using hydroxychloroquine for COVID-19 treatment, despite inconclusive evidence of the drug's effectiveness. This study sought to understand the influence of political preferences on prescription uptake by quantifying the relationship between a geographic area's partisan leaning and hydroxychloroquine prescription rates following Trump's endorsement.

The analysis used hydroxychloroquine prescriptions filled in 205 continental U.S. Designated Market Areas (DMAs) between March 1, 2018, and July 31, 2020, and percentage of votes for Donald Trump in the 2016 presidential election. Associations were estimated using an empirical strategy resembling difference-in-differences models.

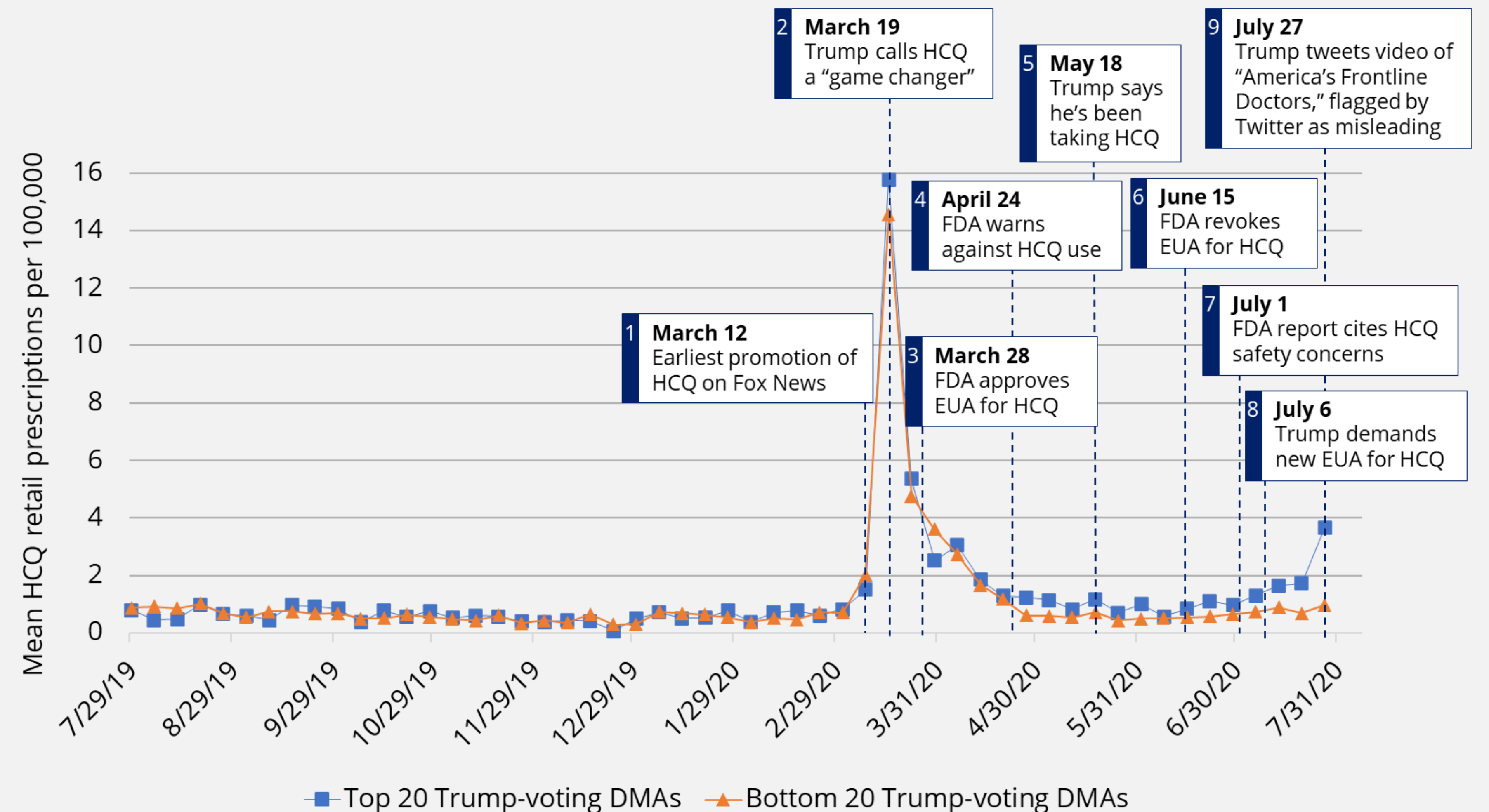
Prior to President Trump's endorsement, mean weekly hydroxychloroquine prescription rates were similar across DMAs with the most and the least Trump vote percentages (0.56 and 0.49 scripts per 100,000). After Trump's endorsement, although both high- and low-Trump-voting DMAs experienced sharp increases in weekly hydroxychloroquine prescription rates, results indicate **a 1-percentage-point increase in share of Trump votes was associated with 0.013, or 2%, more weekly hydroxychloroquine prescriptions per 100,000 ( $b=0.013$ ,  $t=2.20$ ,  $p=.028$ )**. The effect was robust to using 2016 U.S. House Republican votes, 2020 Trump votes, and a 2016 Trump vote median-split indicator. Placebo tests with azithromycin and ciprofloxacin showed negative associations with Trump's endorsement, opposite of the hydroxychloroquine phenomenon.

These results suggest President Trump's endorsement of an untested therapy—further bolstered by FDA approval and magnified by partisan media—influenced prescribing behavior, especially when that endorsement aligned with communities' political leanings.

Mean weekly hydroxychloroquine and ciprofloxacin retail prescription rates across 205 DMAs, July 2019–July 2020



Mean weekly hydroxychloroquine retail prescription rates in the top 20 and the bottom 20 Trump-voting DMAs, July 2019–July 2020



Notes: HCQ = hydroxychloroquine, DMA = U.S. Designated Market Area, FDA = U.S. Food and Drug Administration, EUA = Emergency Use Authorization

## Key Takeaways

- Hydroxychloroquine prescription rates rose in pro- and anti-Trump areas after Trump's endorsement of hydroxychloroquine for COVID-19
- However, **weekly hydroxychloroquine prescription rates rose disproportionately in pro-Trump areas**
- Under uncertainty—when there is no gold standard of care—physicians and patients may rely on not only medical expertise but also politicized public health communications when deciding on a course of care

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<https://read.dukeupress.edu/jh ppl/article/doi/10.1215/03616878-9716698/293751/Hydroxychloroquine-for-COVID-19-Variation-in>

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