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- 4 Kamradt-Scott A. WHO's to blame? The World Health Organization and the 2014 Ebola outbreak in west Africa. *Third World Quart* 2016; **37**: 401–18.
- 5 Frenk J, Moon S. Governance challenges in global health. *N Engl J Med* 2013; **368**: 936–42.
- 6 West-Oram PGN, Buyx A. Global health solidarity. *Public Health Ethics* 2017; **10**: 212–24.
- 7 Oberth G, Torres MA, Mumba O, O'Connor M. A quarter for prevention? Global Fund investments in HIV prevention interventions in generalized African epidemics. *Univers J Public Health* 2017; **5**: 231–41.
- 8 Zerhouni E. GAVI, the Vaccine Alliance. *Cell* 2019; **179**: 13–17.
- 9 Velasquez G. The right to health and medicines: the case of recent multilateral negotiations on public health, innovation and intellectual property. *Bioethics* 2014; **14**: 67–74.
- 10 Wilson K, Tigerstrom B, McDougall C. Protecting global health security through the International Health Regulations: requirements and challenges. *CMAJ* 2008; **179**: 4448.
- 11 Suthar AB, Allen LG, Cifuentes S, Dye C, Nagata JM. Lessons learnt from implementation of the International Health Regulations: a systematic review. *Bull World Health Organ* 2018; **96**: 110–21E.
- 12 WHO. WHO's role in emergencies. 2019. <https://www.who.int/news-room/q-a-detail/who-s-role-in-emergencies> (accessed June 3, 2020).
- 13 WHO Regional Office for Africa. WHO Health Emergencies Programme in the African Region: annual report 2016. Geneva: World Health Organization, 2017.
- 14 Friedman S. COVID-19 has blown away the myth about “First” and “Third” world competence. *The Conversation*, May 13, 2020. <https://theconversation.com/covid-19-has-blown-away-the-myth-about-first-and-third-world-competence-138464> (accessed June 3, 2020).
- 15 Lei Ravelo J. Battered with criticism, what's next for WHO? *Devex*, May 18, 2020.
- 16 Brown TM, Cueto M. The World Health Organization and the world of global health. In: Parker R, Sommer M, eds. *Routledge handbook of global public health*. Abingdon: Routledge, 2010: 18–30.
- 17 Gill S, Benatar S. Global health governance and global power: a critical commentary on the *Lancet*–University of Oslo Commission report. *Int J Health Serv* 2016; **46**: 346–65.
- 18 Smith RD, MacKellar L. Global public goods and the global health agenda: problems, priorities and potential. *Glob Health* 2007; **3**: 9.
- 19 Moon S, Röttingen J, Frenk J. Global public goods for health: weaknesses and opportunities in the global health system. *Health Econ Policy Law* 2017; **12**: 195–205.
- 20 Landrigan PJ, Fuller R, Acosta NJR, et al. The *Lancet* Commission on pollution and health. *Lancet* 2017; **391**: 462–512.



Retraction—Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis

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After publication of our *Lancet* Article,¹ several concerns were raised with respect to the veracity of the data and analyses conducted by Surgisphere Corporation and its founder and our co-author, Sapan Desai, in our publication. We launched an independent third-party peer review of Surgisphere with the consent of Sapan Desai to evaluate the origination of the database elements, to confirm the completeness of the database, and to replicate the analyses presented in the paper.

Our independent peer reviewers informed us that Surgisphere would not transfer the full dataset, client contracts, and the full ISO audit report to their servers for analysis as such transfer would violate client agreements and confidentiality requirements. As such, our reviewers were not able to conduct an independent and private peer review and therefore notified us of their withdrawal from the peer-review process.

We always aspire to perform our research in accordance with the highest ethical and professional guidelines. We can never forget the responsibility we have as researchers to scrupulously ensure that we rely on data sources that adhere to our high standards. Based on this development, we can no longer vouch for the veracity of the primary data sources. Due to this unfortunate development, the authors request that the paper be retracted.

We all entered this collaboration to contribute in good faith and at a time of great need during the COVID-19 pandemic. We deeply apologise to you, the editors, and the journal readership for any embarrassment or inconvenience that this may have caused.

MRM reports personal fees from Abbott, Medtronic, Janssen, Roivant, Triple Gene, Mesoblast, Baim Institute for Clinical Research, Portola, Bayer, NupulseCV, FineHeart, and Leviticus. FR has been paid for time spent as a committee member for clinical trials, advisory boards, other forms of consulting, and lectures or presentations; these payments were made directly to the University of Zurich and no personal payments were received in relation to these trials or other activities since 2018. Before 2018 FR reports grants and personal fees from SJM/Abbott, grants and personal fees from Servier, personal fees from Zoll, personal fees from Astra Zeneca, personal fees from Sanofi, grants and personal fees from Novartis, personal fees from Amgen, personal fees from BMS, personal fees from Pfizer, personal fees from Fresenius, personal fees from Vifor, personal fees from Roche, grants and personal fees from Bayer, personal fees from Cardioentis, personal fees from Boehringer Ingelheim, other from Heartware, and grants from Mars. ANP declares no competing interests.

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1 Mehra MR, Desai SS, Ruschitzka F, Patel AN. Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis. *Lancet* 2020; published online May 22. [https://doi.org/10.1016/S0140-6736\(20\)31180-6](https://doi.org/10.1016/S0140-6736(20)31180-6).