

Cost-effectiveness of therapeutics for COVID-19 patients: a rapid review and economic analysis

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Disclosure of interests of authors

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Primary conflicts of interest: Paul Dark is the National Deputy Medical Director of the National Institute for Health and Care Research Clinical Research Network. He is a Local Principal Investigator for both the RECOVERY and REMAP-CAP platform trials, NIHR Urgent Public Health (UPH) pandemic research Advisory Group Lead Link for REMAP-CAP and specialist member of NIHR UPH Advisory Group. His NHS host hospital Research and Innovation Department has been contracted and paid to provide advice on the use of tocilizumab for Roche and sotrovimab for GlaxoSmithKline both in COVID-19. He supported the activity as a named NHS expert employed by the Northern Care Alliance NHS Foundation Trust (Salford Care Organisation) but received no personal payments. Ronan McMullan received grants or had contracts with NIHR HTA programme, NIHR Efficacy and Mechanisms Evaluation Programme, Medical Research Council (MRC) and Invest Northern Ireland (with Randox Lab Ltd). He was also paid honorarium for giving a lecture from Gilead Sciences Ltd in the past 36 months. Matt Stevenson provided advice to AstraZeneca Rare Disease regarding an unrelated intervention in an unrelated disease area. There are no other conflicts of interest within this project team.

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Plain language summary

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Plain language summary

Coronavirus disease 2019 is an infectious disease that can cause death and long-term ill-health. Treatments exist that can be provided in hospital to reduce the number of deaths from coronavirus disease 2019. Treatments also exist which can be provided in the community for people at high risk of needing to be admitted to hospital to reduce the number of admissions and to reduce the number of deaths from coronavirus disease 2019. However, the value for money of these treatments has not been estimated. We took the clinical effectiveness of nine treatments from published literature sources and built a model that estimated the value for money of six treatments compared with care without these treatments. Three treatments were excluded due to confidential prices. The results of the model showed that many treatments in a hospital setting had estimates of cost-effectiveness that would normally be seen to be good value for money using the thresholds published by the National Institute of Health and Care Excellence. The same was true for some treatments in a community setting. However, it is also possible that these treatments are not good value for money. The benefit of the drugs and value for money is highly uncertain as studies trying to estimate the gain have been done with (1) previous variants of the virus causing coronavirus disease 2019 being widespread, (2) where the proportion of people who have had vaccinations or who had previously had coronavirus disease 2019 is low and (3) where standard treatment was that when coronavirus disease 2019 was first identified, and not the drugs used now. Because of these differences, and the unknown price of some interventions, we cannot confidently say which (if any) treatments help patients the most, or which treatment represents the best value for money. Further research, in current conditions, would improve the accuracy of our answers.

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