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# Covid-19: Evusheld is approved in UK for prophylaxis in immunocompromised people

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The UK's drug regulator has approved a combination of two monoclonal antibodies to prevent covid-19 in people who are unlikely to mount an immune response from vaccination or for whom vaccination is not recommended.

Evusheld, a combination of the two long acting antibodies tixagevimab and cilgavimab, is authorised for covid-19 prevention by the Medicines and Healthcare Products Regulatory Agency (MHRA). The government's independent advisory body, the Commission on Human Medicines, endorsed the approval after independently reviewing the evidence.[1]

Almost 500 000 people in the UK are immunocompromised, including people with blood cancers, those taking immunosuppressive drugs after an organ transplant, or those with conditions such as multiple sclerosis and rheumatoid arthritis. The treatment could offer this group of patients, many of whom are still shielding, protection against covid-19 and help them feel more confident about returning to a normal life.

June Raine, MHRA chief executive, said, "While covid-19 vaccines continue to be the first line of defence, we know that some people may not respond adequately to these vaccines and for a small number they may not be recommended. For these people, Evusheld could provide effective protection against covid-19."

Evusheld, developed by AstraZeneca, is given as two separate sequential intramuscular injections. It can be given in a GP surgery or in the community rather than, as for other monoclonal antibodies, needing to be given by intravenous infusion in hospital. Recipients should not currently be infected with or had recent known exposure to a person infected with covid-19.

The treatment is a combination of two long acting antibodies that work by binding to the spike protein on the outside of the SARS-CoV-2 virus. This in turn prevents the virus from attaching to and entering human cells.

The main evidence to support the approval came from a phase 3 study called Provent which found that Evusheld reduced the risk of developing symptomatic covid-19 by 77%, with protection from the virus continuing for at least six months. The trial is ongoing and more data are being generated to establish an exact duration of protection.

There is no current clinical data on protection against the omicron variant but the MHRA advises that a higher dose of the product—600 mg rather than 300 mg—may prevent illness based on the concentrations needed to neutralise this variant in vitro.

Hugh Montgomery, principle investigator of the Provent trial and professor of intensive care medicine at University College London, said, "Sensible behaviours combined with vaccination offer excellent protection from severe illness for most of the UK. But for some our new freedoms impose a prison sentence: they do not mount adequate antibody responses to vaccines, meaning that they are more vulnerable to SARS-CoV-2 infection and to more serious consequences from it. For them, one option is to receive the antibody through an intramuscular injection." He added, "Side effects seem mild and few and protection long lasting."

In December 2021 the US drug regulator granted emergency use authorisation to Evusheld for use in adults and children over 12.[2] In the UK, the MHRA has previously approved two monoclonal antibodies—the combination Ronapreve (casirivimab and imdevimab)[3] and Xevudy (sotrovimab)—for use in the UK as treatments, but not for use as prophylaxis.[4]

Penny Ward, an independent pharmaceutical physician and visiting professor in pharmaceutical medicine at King's College London, said, "This treatment could be a good way to protect patients who are not able to respond normally to vaccination. Many of these people are continuing to shield while covid is still circulating in the community and this agent could help them feel more confident to return to a more normal life."

Paul Moss, chief investigator of the UK Coronavirus Immunology Consortium, commented, "The clinical data for pre-exposure prophylaxis is strong and this will be a boost for the health and morale of patients. We know that many people with primary or secondary immune deficiency do not make adequate antibody responses after vaccination and this represents a major step forward."

1 www.gov.uk/government/news/evusheld-approved-to-prevent-covid-19-in-people-whose-immune-response-is-poor
2 Kmietowicz Z. Covid-19: Monoclonal antibodies authorised in US as alternative to vaccines for certain groups. *BMJ* 2021;375:n3064. doi: 10.1136/bmj.n3064 pmid: 34893506
3 Mahase E. Covid-19: Monoclonal antibody treatment to be rolled out to hospital patients with no antibody response. *BMJ* 2021;374:n2319. doi: 10.1136/bmj.n2319 pmid: 34548277
4 Mahase E. Covid-19: UK approves monoclonal antibody sotrovimab for over 12s at high risk. *BMJ* 2021;375:n2990. doi: 10.1136/bmj.n2990 pmid: 34857518