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Determinants of uptake of a third dose of SARS-CoV-2 vaccines in patients with inflammatory bowel disease

Patients with inflammatory bowel disease (IBD) are frequently treated with immunosuppressive treatments that can affect serological responses to SARS-CoV-2 vaccination.¹ On Sept 1, 2021, the Joint Committee on Vaccination and Immunisation recommended a third dose for immunosuppressed patients, with patients with IBD eligible after Nov 26, 2021.²

We assessed SARS-CoV-2 third dose vaccination uptake in patients with IBD receiving infliximab or vedolizumab infusions at John Radcliffe Hospital (Oxford, UK) and the Royal London Hospital (London, UK). All patients were initially recruited in April, 2020, for our ongoing SARS-CoV-2 seroprevalence study and included if still attending the infusion units at the time of data collection (459 patients in Oxford, and 295 patients in London).³ 21 patients could not be contacted (mainly because they changed addresses or hospitals) or switched therapies. These were all patients in London, which might reflect a difference in demographic factors (eg, moving houses more often) and the greater tendency at the London centre to offer subcutaneous treatments as an alternative to infusions. Thus, 733 patients were included in our analysis. Vaccination status was determined via electronic medical records (Electronic Patient Records and the National Immunisation and Vaccination System) on March 2, 2022.

We report an 88.0% (404/459) uptake of the third dose in Oxford

and 64.2% (176/274) in London, yielding a mean uptake of 79.1% (580/733), higher than the 58.5% in the general English population (appendix p 1).⁴ Younger age, Crohn's disease, use of anti-TNF therapy, non-White ethnicity, and more severe deprivation on the Multiple Deprivation Index were significantly associated with decreased uptake of the third dose on univariate logistic regression (appendix pp 2–3). Gender was not significantly associated with uptake of the third dose. After multivariate regression analysis, younger age (odds ratio [OR] per year increase 1.05, 95% CI 1.03–1.06; $p=1.14 \times 10^{-7}$), Crohn's disease (OR 0.60, 0.38–0.94; $p=0.0274$), non-White ethnicity (OR 0.58, 0.36–0.93; $p=0.0240$), and more severe deprivation (OR per unit increase of the deprivation index 1.22, 95% CI 1.13–1.33; $p=1.33 \times 10^{-6}$) remained significantly associated with reduced uptake of the third dose.

In conclusion, although the uptake of the third dose of SARS-CoV-2 vaccination in patients with IBD attending infusion centres in Oxford and London is higher than the national uptake, younger patients, patients with Crohn's disease, patients of non-White ethnicity, and of lower socioeconomic status show higher rates of vaccine hesitancy. Given the evidence that a third dose of vaccine is critical to confer adequate protection against the dominant omicron variant,⁵ addressing this issue in this vulnerable patient population is of utmost clinical importance.

JOL declares research grants paid to his institution from the Leona M and Harry B Helmsley Charitable Trust; investigator-initiated research grants from AbbVie, Gilead, and Pfizer; consulting fees from AbbVie, Allergan (Warner Chilcott), Atlantic Healthcare, Bristol Myers Squibb, Celgene, Celltrion, Ferring Pharmaceuticals, Galapagos, Gilead, GlaxoSmithKline, Janssen, Eli Lilly, Merck Sharp & Dohme, Napp, Pfizer, Takeda, and Vifor Pharma; and lecture and speaker fees from AbbVie, Bristol Myers Squibb, Celgene, Celltrion, Ferring

Pharmaceuticals, Galapagos, Gilead, GSK, Janssen, Eli Lilly, Merck Sharp & Dohme, Napp, Norgine, Pfizer, Takeda, and Vifor Pharma. JJS has declares being director of the UK IBD Registry and grants from the Leona M and Harry B Helmsley Charitable Trust. All other authors declare no competing interests. We thank Bessie Cipriano, Ashley Kingston, James Chivenga, Chris Groves, Jennifer Hollis, Stephanie Jones (Oxford Radcliffe Biobank), the Oxford Inflammatory Bowel Disease Cohort Biomedical Research Centre, which is supported by the National Institute for Health Research Biomedical Research Centre (Gastroenterology and Mucosal Immunology Theme), University of Oxford, and the Oxford Inflammatory Bowel Disease Cohort Investigators. This work was partly supported by The Leona M and Harry B Helmsley Charitable Trust as part of the ICARUS study (grant number 2107-04731).

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Published Online
April 6, 2022
[https://doi.org/10.1016/S2468-1253\(22\)00120-0](https://doi.org/10.1016/S2468-1253(22)00120-0)
See Online for appendix