Cohort study

Pre-existing health inequalities in vaccine uptake were exacerbated among ethnic communities during COVID-19 pandemic

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Implications for practice and research

- Pre-existing inequalities in health for the ethnic minorities become more pronounced during a public health crisis, such as the ongoing COVID-19 pandemic. The healthcare system needs to account for these phenomena in addition to continuous improvement in healthcare access for these vulnerable communities.
- More research on innovative and tailored approaches is needed to develop long-term strategies to improve health literacy, vaccine uptake and overall improved healthcare access by the ethnic minority communities in developed countries.

Ethnic communities in developed countries face health inequalities due to challenges such as socioeconomic hurdles, communication and navigational barriers, racism and discrimination.[1] This also made them highly vulnerable regarding COVID-19 and its health implications. The authors of this study[2] examined inequalities among various ethnic demographic subgroups and compared the magnitudes of inequalities within ethnic communities in COVID-19 vaccine uptake to those in regular seasonal influenza vaccine uptake.

Watkinson *et al*[2] conducted a retrospective cohort analysis using deidentified primary care and COVID-19-related electronic health data from Greater Manchester Care Record. The dataset contained ~2.8 million records. Ethnic groups were categorised to 18 UK Census groups and were used as the exposure variable. Outcome variables were the first dose of COVID-19 vaccination and seasonal influenza vaccination. The researchers used Cox proportional hazards models to estimate relationships between ethnic groups and vaccine uptake.

First doses of COVID-19 vaccines were given to 83.64% of the eligible (~1.09 million) candidates. Among the ethnic minority groups, 15 had lower uptake rates compared with the White British group. Only Bangladeshi and 'other ethnic groups' had a higher uptake than the White British group. Inequalities were more prominent among the groups—'other Black background', Black African, Arab and the Black Caribbean. Regarding influenza, 55.71% of the eligible population (0.42 million) were vaccinated. 'White and Black Caribbean' and 'White and Black African' groups had lower influenza vaccine uptake compared with the 'White British group'. Among the population eligible for both vaccinations, inequalities in COVID-19 vaccine uptake exceeded inequalities in influenza vaccine uptake for almost all ethnic minority groups.

This study demonstrated that pre-existing health inequalities in ethnic minority communities were further exacerbated during COVID-19. Other studies within[3] and beyond[4] England also concur with the results of this study. In addition, studies on a previous pandemic—H1N1 influenza[5] showed similar inequalities where there was less uptake of vaccines in the ethnic communities. These reports highlight that the existing system to support and facilitate healthcare access for the ethnic minority communities fell short, especially during surge capability scenarios. A range of interconnected factors including systemic, socioeconomic, accessibility and literacy might have contributed to the low vaccine uptake among the ethnic minority groups. Examples include strict requirements for vaccination appointments, locations of vaccination centres, a lack of vaccination information in languages other than English, and public health messaging disregarding cultural diversity. This points towards the need for community-engaged, culturally tailored and long-term health literacy initiatives[6] for health promotion and preventive health issues such as low vaccine uptake.

The authors of this study, being true to the core of the community-engaged research, ensured public and community involvement and engagement to inform their study design. They conducted online public discussion groups with diverse members of their community to plan the study and contextualise their findings on inequalities in vaccine uptake. These discussions also shaped their use of language, analytic approach and community engagement. For example, they made a decision not to refer to 'vaccine hesitancy' in their work as this term could lead to disengagement from critical dialogue.

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References

1 **Chowdhury N**, Naeem I, Ferdous M, *et al*. Unmet healthcare needs among migrant populations in Canada: exploring the research landscape through a systematic integrative review. *J Immigr Minor Health* 2021;**23**:s10903-020-01086-3:353–72.

2 **Watkinson RE**, Williams R, Gillibrand S, *et al*. Ethnic inequalities in COVID-19 vaccine uptake and comparison to seasonal influenza vaccine uptake in greater Manchester, UK: a cohort study. *PLoS Med* 2022;**19**:e1003932.

3 **Gaughan CH**, Razieh C, Khunti K, *et al*. COVID-19 vaccination uptake amongst ethnic minority communities in England: a linked study exploring the drivers of differential vaccination rates. *J Public Health*;11.

4 **DiRago NV**, Li M, Tom T, *et al*. COVID-19 Vaccine Rollouts and the Reproduction of Urban Spatial Inequality: Disparities Within Large US Cities in March and April 2021 by Racial/Ethnic and Socioeconomic Composition. *J Urban Health* 2022;**99**:191–207.

5 **Andrulis DP**, Siddiqui NJ, Purtle J, *et al*. H1N1 influenza pandemic and racially and ethnically diverse communities in the United States assessing the evidence and charting opportunities for advancing health equity, 2012. Available: 10.13140/RG.2.2.20511.10402 [Accessed Jul 2022].

6 **Turin TC**, Chowdhury N, Petermann L. Reinvent, Reformulate & Redirect: Health and wellness literacy for immigrant/ethnic-minority communities under a Health Literacy Council, 2022. Available: https://obrieniph.ucalgary.ca/sites/default/files/Health Literacy Council_policy brief.pdf [Accessed Jul 2022].