

Regional Disparities in the Uptake of Differentiated Influenza Vaccines

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Abstract

Significant racial/ethnic inequities in the uptake of differentiated influenza vaccines (DIVs) have been previously reported, though less is known about regional disparities. We conducted a retrospective longitudinal study (2014/15-2017/18 influenza seasons) among privately insured adults aged 65+ years in the US. The exposure was beneficiary's area of residence (US Census Bureau division) and outcome was type of influenza vaccine: differentiated (High-Dose [HDV], adjuvanted, recombinant, and cell-based) versus standard-dose egg-based. Among those vaccinated in physician offices, beneficiaries in the East North Central region were twice as likely to receive a DIV vs those in the South Atlantic, whereas those in the East and West South Central were least likely. Disparities became more pronounced in models adjusted for individual and community characteristics, suggesting that crude uptake estimates understate the true magnitude of disparities. Regional disparities remained even in fully adjusted models, pointing to currently poorly understood factors that may include quality of healthcare, client health literacy and engagement, and other political and cultural factors.

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ETHICS APPROVAL STATEMENT

The University of Manitoba Research Ethics Board approved this study.

CONFLICTS OF INTEREST DISCLOSURE

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AUTHOR CONTRIBUTIONS

Salaheddin Mahmud : Conceptualization, Methodology, Formal analysis, Investigation, Resources, Writing - Original Draft, Visualization, Supervision, Funding acquisition; **Gurpreet Pabla BSc**: Software, Formal analysis, Investigation, Data Curation, Writing - Review & Editing, Visualization; **Christiaan Righolt** : Methodology, Validation, Investigation, Writing - Review & Editing, Project administration; **Geng Zhang MSc** : Software, Data Curation, Writing - Review & Editing, Visualization; **Matthew M. Loiacono** : Investigation, Resources, Data Curation, Writing - Review & Editing, Project administration; **Heidi Kabler** : Conceptualization, Investigation, Writing - Review & Editing, Funding acquisition; **Edward Thommes** : Conceptualization, Investigation, Writing - Review & Editing, Funding acquisition; **Ayman Chit** : Conceptualization, Investigation, Writing - Review & Editing, Funding acquisition

DATA AVAILABILITY STATEMENT

Data used in this article was derived from administrative health and social data as a secondary use. The data was provided under specific data sharing agreements only for approved use. The original source data is not owned by the researchers and as such cannot be provided to a public repository. Source data specific to this article may be accessed with the consent of the data provider, along with the required privacy and ethical review bodies.

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