

Differences in SARS-CoV-2 vaccine uptake among people living with HIV compared to people without HIV: a nationwide register-study in Sweden

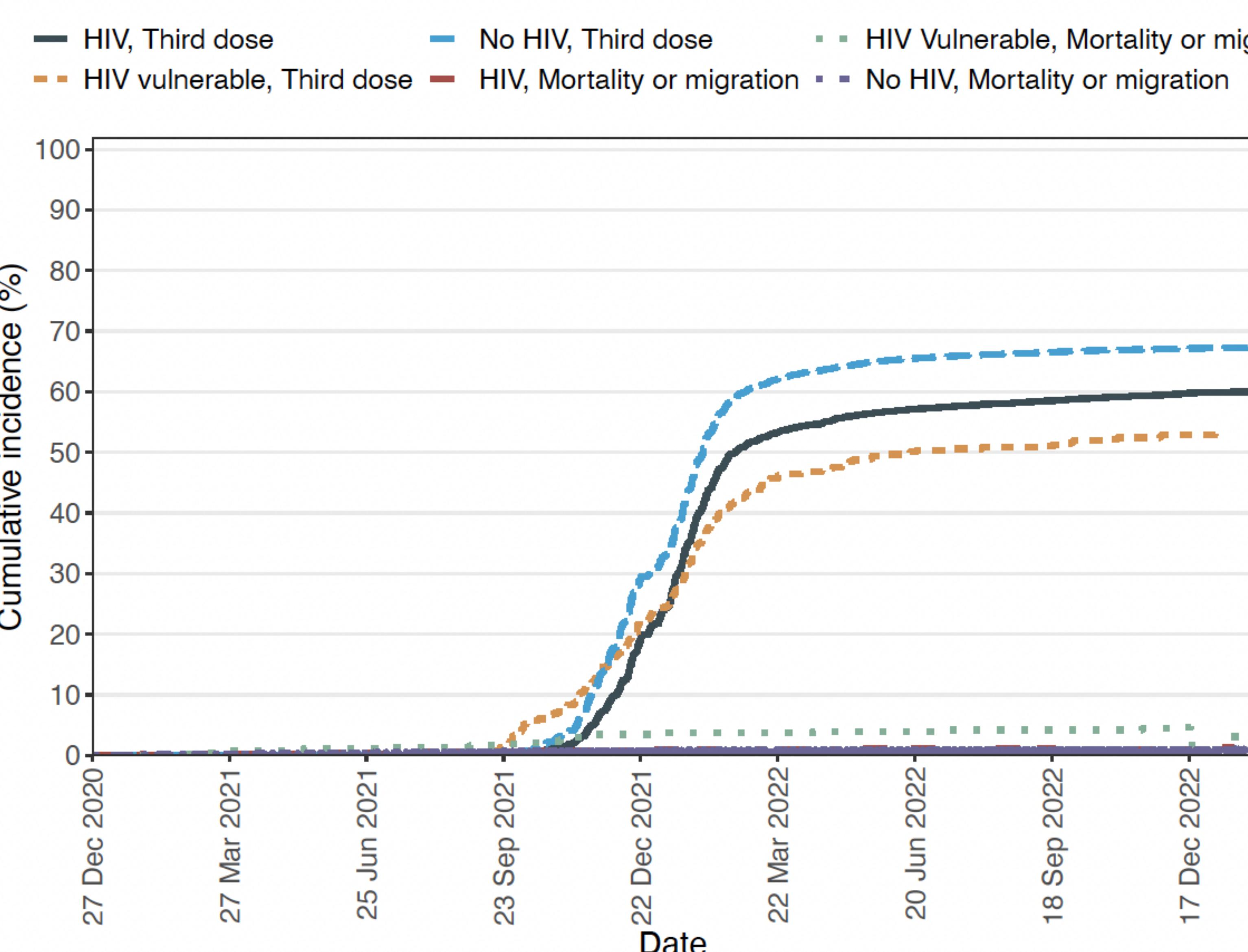
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Conclusion

People living with HIV (PLHIV) had lower **unadjusted** SARS-CoV-2 vaccine uptake compared to people without HIV.

Adjusted vaccine uptake was higher in PLHIV, especially when adjusting for being born outside Sweden.

PLHIV ≥ 65 years were less likely to be vaccinated with 3 or more doses vs. people without HIV.



Introduction & aim

Sparse data exists on SARS-CoV-2 vaccine uptake in PLHIV vs. people without HIV. This study aimed to compare their vaccine uptake.

Methods

- Register-based nationwide cohort study
- Study population: all adults alive by the 2020-02-01 in Sweden, **8 176 200**
- Clinically vulnerable HIV (prioritized for vaccination):
 - CD4+ T-cells <50, opportunistic illness the last 6 months before start of study OR
 - CD4+ T-cells between 50-200 combined with detectable viral load
- Modified Poisson regression → relative risks

Relative Risks of Vaccine Uptake

	All	Migrant	≥ 65 years	Low income
Dose 1, PLHIV	1.054 (1.044-1.064)	1.076 (1.061-1.09)	0.997 (0.979-1.016)	1.072 (1.053-1.091)
Dose 1, Vulnerable PLHIV	1.023 (0.979-1.069)	1.016 (0.956-1.079)	1.057 (1.014-1.102)	1.021 (0.957-1.088)
Dose 2, PLHIV	1.062 (1.051-1.072)	1.088 (1.072-1.104)	0.993 (0.974-1.013)	1.082 (1.062-1.103)
Dose 2, Vulnerable PLHIV	1.032 (0.984-1.082)	1.035 (0.971-1.104)	1.071 (1.027-1.116)	1.032 (0.964-1.105)
Dose 3, PLHIV	1.168 (1.148-1.189)	1.343 (1.307-1.38)	0.969 (0.942-0.997)	1.218 (1.178-1.259)
Dose 3, Vulnerable PLHIV	1.085 (0.999-1.178)	1.212 (1.078-1.361)	1.043 (0.946-1.15)	1.188 (1.058-1.335)
Dose 4, PLHIV	1.237 (1.198-1.277)	1.549 (1.459-1.646)	0.95 (0.912-0.989)	1.271 (1.194-1.354)
Dose 4, Vulnerable PLHIV	1.136 (0.982-1.315)	1.838 (1.481-2.281)	0.907 (0.757-1.086)	1.292 (1.029-1.624)
Dose 5, PLHIV	0.982 (0.924-1.043)	1.175 (1.02-1.353)	0.906 (0.854-0.961)	1.011 (0.886-1.154)
Dose 5, Vulnerable PLHIV	0.916 (0.701-1.198)	1.511 (0.913-2.503)	0.687 (0.513-0.921)	0.922 (0.579-1.467)

Adjusted for: Age, sex, socio-economic level, comorbidities, region of birth, previous SARS-CoV-2 infection. The analyses was performed on the whole study population, people born outside Sweden (migrant), people over ≥ 65 years, and people with low income.

Results

7237 PLHIV, 431 clinically vulnerable PLHIV, and 8 168 340 people without HIV.

- Median age: PLHIV 50y, clinically vulnerable PLHIV 53y, and PWoH 49y
- Females: 39%, 39%, and 50%.
- Migrants: 64%, 68%, and 22%

There was a significant interaction between region of birth and HIV-status, where adjustment for region of birth made PLHIV have higher vaccine uptake compared to people without HIV.

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