

INFLUENCE OF OUTPATIENT CLINIC VISITS ON RECEIPT OF THE COVID-19 VACCINE AMONG PEOPLE WITH AUTOIMMUNE RHEUMATIC DISEASES

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CONCLUSIONS

AIRD patients of older age, Black race, and using certain medications (glucocorticoids, immunosuppressives) were linked to higher odds of COVID-19 vaccination soon after visits with rheumatologists or PCPs. Both rheumatology and primary care clinic visits were associated with more post-visit COVID-19 vaccinations, but there was a higher rate of vaccine receipt after PCP compared to rheumatology visits.

BACKGROUND

- Rheumatologists and primary care providers (PCPs) are trusted clinicians for people with autoimmune rheumatic diseases (AIRD)
- Providers may influence the vaccine decision-making process during outpatient visits

OBJECTIVES

- To determine the factors associated with receipt of the COVID-19 vaccine during immediate follow-up interval after rheumatology or PCP clinic visits

METHODS

- Design:** retrospective cohort study and self-controlled case series (SCCS)
- Setting:** Electronic health records (EHR) at UAB
- Population:** established patients with AIRD with 2+ clinic visits
- Exposure:** presence of PCP or rheumatology clinic visits from 12/8/2020 - 1/8/2024
- Outcome:** “post-visit vaccination” - receipt of COVID-19 vaccine during 8-day post-visit interval
- Analyses:**
 - Cohort: separate multivariable logistic regression models to identify factors independently associated with post-visit vaccine receipt.
 - SCCS: compare incidence of COVID-19 vaccination during post-visit “hazard interval” vs. pre-visit “control interval”, and censored at vaccine receipt or competing events (e.g., death) during these intervals

RESULTS

- 2,628 patients with rheumatology (**Table 1**) and 493 patients with PCP clinic visits, of whom 440 (17%) and 119 (24%) received a COVID-19 vaccine in the 8-day post-visit interval, respectively
- Among those with rheumatology visits, older age (OR=1.17, 95% CI 1.03, 1.33, for every 10-year increase), Black race (OR=1.49, 95% CI 1.15, 1.92), and use of glucocorticoids (OR=1.63, 95% CI 1.25, 2.14), immunosuppressives (OR=1.40, 95% CI 1.03, 1.88), and intravenous immunoglobulin (OR=1.91, 95% CI 1.16, 3.16) were associated with higher odds of post-visit vaccine receipt (**Figure 1a**)
- Among those with PCP clinic visits, older age (OR=1.58, 95% CI 1.22 – 2.06) and Black race (OR=1.70, 95% CI 1.06 – 2.72) were associated with a post-visit vaccine receipt (**Figure 1b**)
- In the SCCS analysis, there were significantly higher rates of vaccine receipt during the post-visit hazard interval compared to control interval after rheumatology (IRR=1.87, 95% CI 1.62 – 2.18, p< 0.0001) and PCP clinic visits (IRR=3.81, 95% CI 2.75 – 5.36, p< 0.0001)

Table 1. Characteristics of individuals with a rheumatology clinic visit stratified by presence or absence of a COVID-19 vaccine occurring during the post-visit interval. Bold denotes p<0.05 for comparisons between the 2 groups.

Characteristic	Clinic visit without associated vaccine, N=2188	Clinic visit with receipt of post-visit vaccine, N=440	p-value
Sex, female, N(%)	1781 (81.4)	367 (83.4)	0.3
Age, mean (SD)	58.1 (14.7)	60.6 (13.4)	0.0004
Race/ Ethnicity^a			0.001
White	1580 (73.2)	283 (64.9)	
Black or African American	528 (24.5)	134 (30.7)	
American Indian or Alaska Native	5 (0.2)	0 (0.0)	
Asian	29 (1.3)	15 (3.4)	
Hispanic or Latinx	17 (0.8)	4 (0.9)	
Rheumatic condition			0.8
Inflammatory arthritis	982 (44.9)	194 (44.1)	
Systemic lupus erythematosus	776 (35.5)	153 (34.8)	
Other connective tissue disease	311 (14.2)	64 (14.5)	
Vasculitis	119 (5.4)	29 (6.6)	
Medication use (binary, Yes/No)^b			
Conventional synthetic DMARDs, Yes	1777 (81.2)	367 (83.4)	0.3
Biologic DMARDs, Yes	884 (40.4)	179 (40.7)	0.9
Glucocorticoids, Yes	1456 (66.5)	344 (78.2)	<0.0001
Immunosuppressives, Yes	314 (14.4)	85 (19.3)	0.01
JAK inhibitors, Yes	206 (9.4)	55 (12.5)	0.05
CD20 inhibitors, Yes	136 (6.2)	46 (10.5)	0.002
IVIG, Yes	68 (3.1)	25 (5.7)	0.01
Phosphodiesterase inhibitors, Yes	57 (2.6)	12 (2.7)	0.9
No. of Rheumatology visits, mean (SD)	5.9 (2.6)	7.3 (2.6)	<0.0001
Total COVID vaccine doses, mean (SD)	3.0 (1.3)	3.8 (1.5)	<0.0001

^amissing for 33 individuals. ^bcategories are not mutually exclusive. ^cmissing for 222 individuals. ^dmissing for 266 individuals. AIRD, autoimmune rheumatic diseases; DMARDs, disease-modifying antirheumatic drugs; IVIG, intravenous immunoglobulin; JAK, janus kinase; SD, standard deviation; SVI, social vulnerability index.

RESULTS

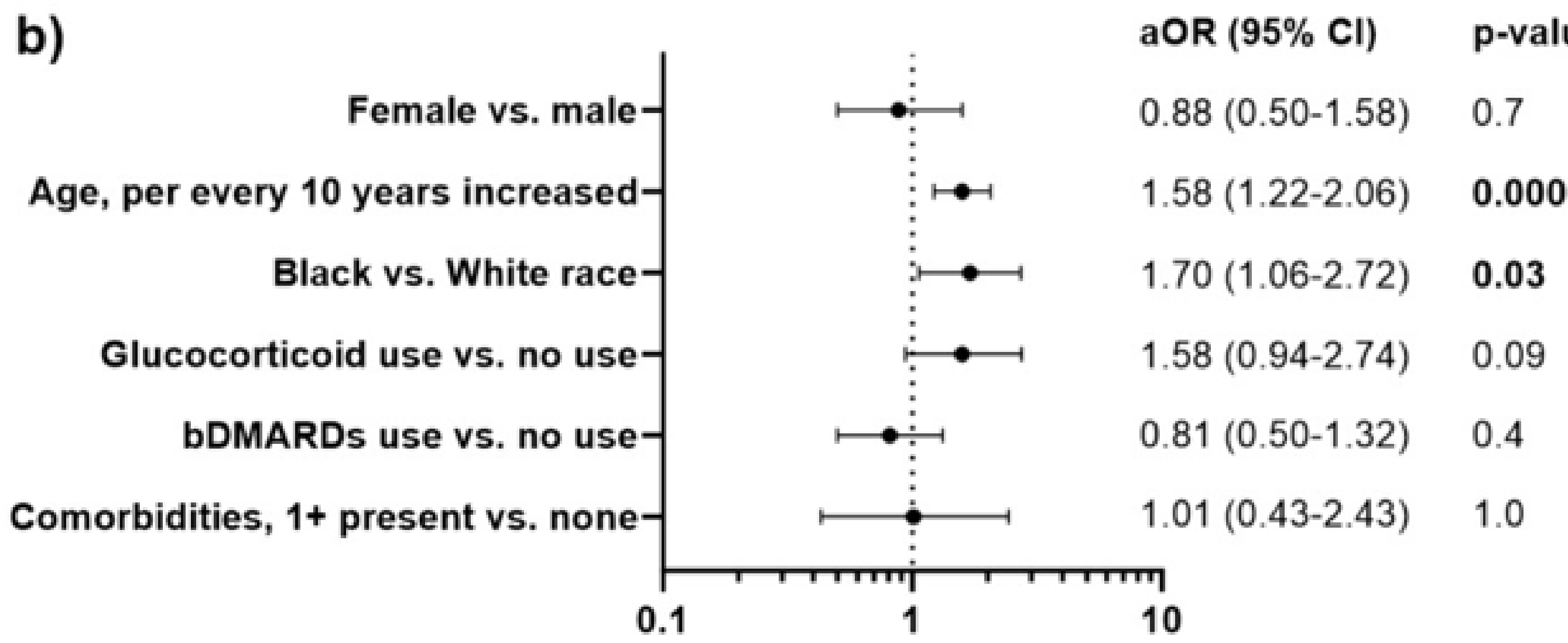
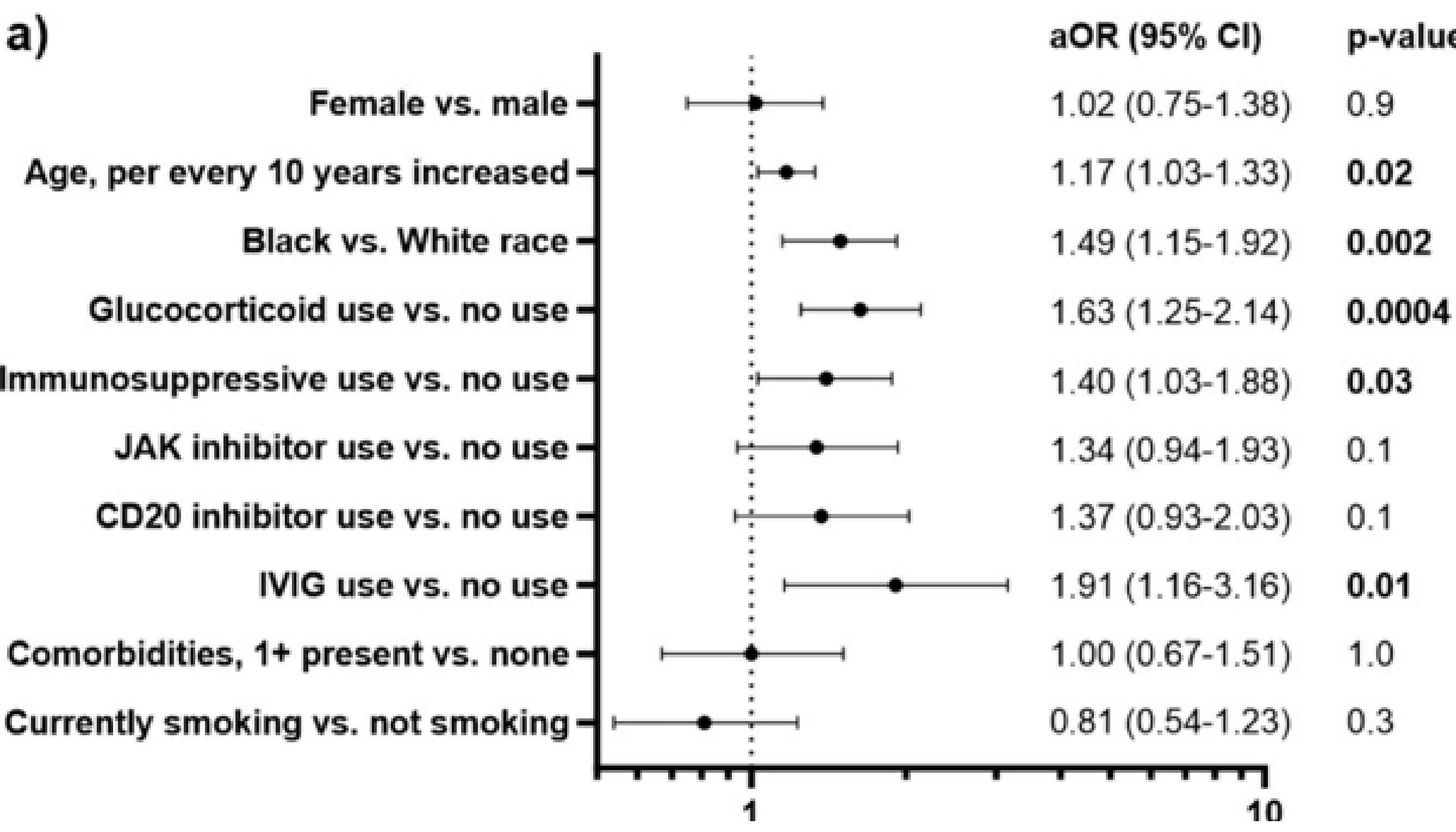


Figure 1. Results of multivariable logistic regression model with odds ratio (OR) and 95% confidence intervals (CI) for covariates associated with receipt of a COVID-19 vaccine during the 8-day post-visit interval after an outpatient **1a)** rheumatology clinic visit or **1b)** primary care clinic visit.

NEXT STEPS

Interventions aimed at improving vaccine uptake could be implemented at or soon after a clinic visit