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Key finding

Patients with ANCA vasculitis who miss more specialist outpatient appointments have more emergency care episodes, highlighting the importance of regular care and support to attend appointments.

VOICES of Vasculitis
Vasculitis Outcomes In relation to Care Experiences Study

VERSUS ARTHRITIS

Sociodemographic factors associated with clinic non-attendance and unscheduled emergency care episodes in ANCA-associated vasculitis

Background:

Individuals with antineutrophil cytoplasmic antibody (ANCA) vasculitis can face a **'double whammy' of health inequities**: navigating healthcare systems designed to manage common conditions, in addition to the impact of other socioeconomic determinants of health. However, the intersection between healthcare use and socio-economic health determinants is poorly understood.

Aim:

To explore the **association between outpatient clinic non-attendance and emergency care episodes** (emergency department attendances and unscheduled hospital admissions) and **individual sociodemographic factors** in a national ANCA vasculitis cohort.

Methods:

- A **population-based data linkage study** using routine healthcare data obtained from patients with ANCA vasculitis in Scotland between 01/01/2011 and 31/10/2020.
- Records were linked using unique patient identifiers, pseudonymised, and accessed through the **Trusted Research Environment** for national datasets in Scotland (eDRIS).
- A **Bayesian Bivariate Poisson regression** adjusted for demographic features. The coefficient for time was estimated from the data. Patient level intercept terms estimated the correlation between number of missed outpatient appointments and emergency admissions.
- Results are reported as incident ratios (IRs) with 95% credibility intervals (CrI).

Results:

792 patients were included: median age 62.4 (95th percentiles 24.3 - 85.2), 52.8% female, with median follow up of 3.7 years (95th percentiles 0.1 - 9.4).

- People **living in the least deprived areas** had **fewer emergency care episodes** (IR 0.51 (0.37, 0.64)) and **fewer missed outpatient appointments** (IR 0.61 (0.41, 0.83)) compared to those living in the most deprived areas (Figure 1).
- **Older people** had **more emergency visits** (IR 1.19 (1.12 ,1.27) per decade) but **fewer missed outpatient appointments** (IR 0.86 (0.79, 0.92) per decade).

- People **living in rural settings** had **fewer emergency care episodes** (IR 0.80 (0.62, 1.01)) and **fewer missed outpatient appointments** (IR 0.61 (0.42, 0.81)) compared to those living in urban settings.
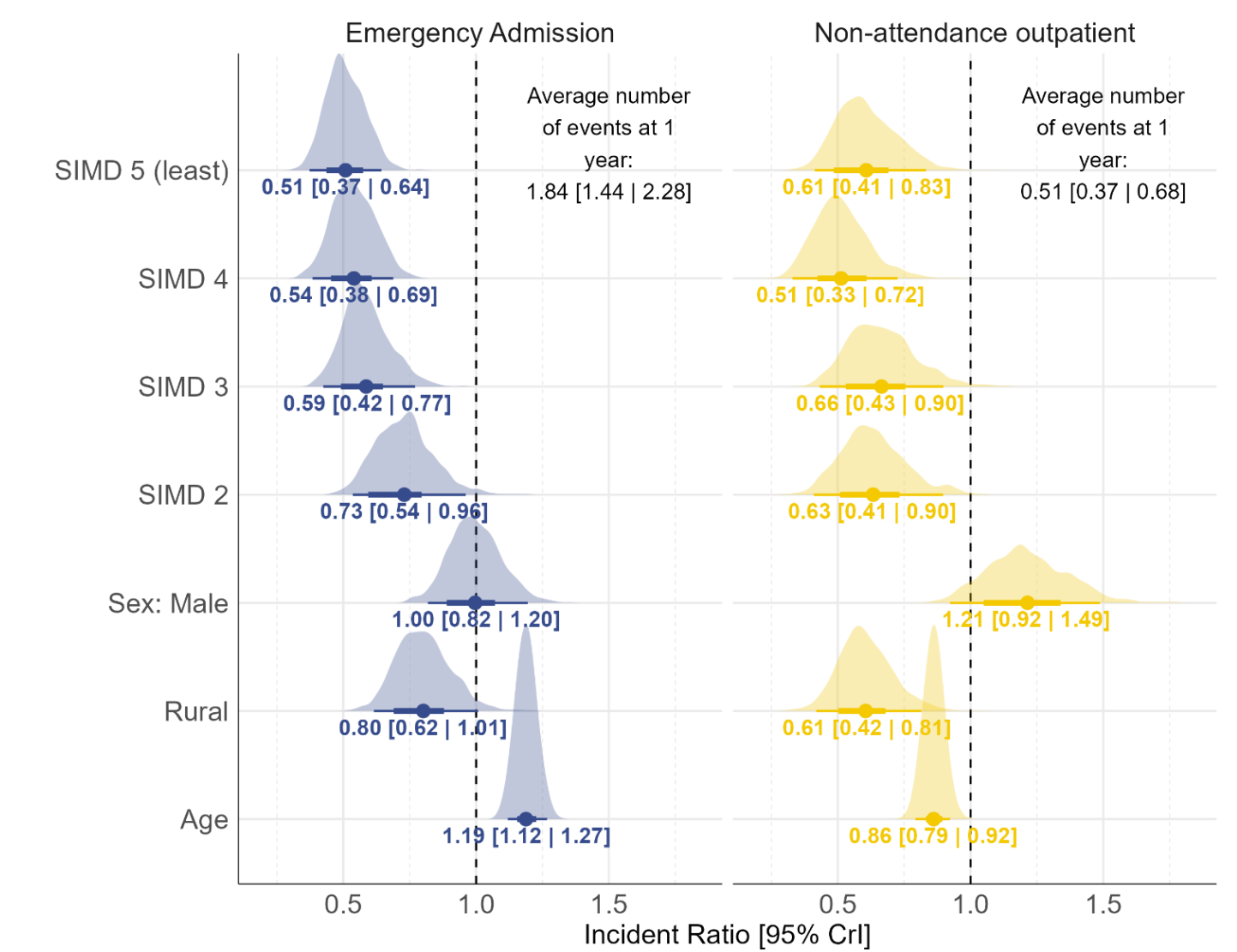

Figure 1. Incident Ratio for the number of emergency episodes and missed appointments. Numbers represent the mean posterior estimate with the 95% Credibility Intervals. Age was centred on the median age for this cohort and decade scaled. Average number of events refers to the baseline group (i.e., median age, Urban, SIMD 1, and the average effect for men and women).

Overall, individuals who miss more outpatient appointments have more emergency care episodes, even after accounting for differences in socio-demographics characteristics (Figure 2).
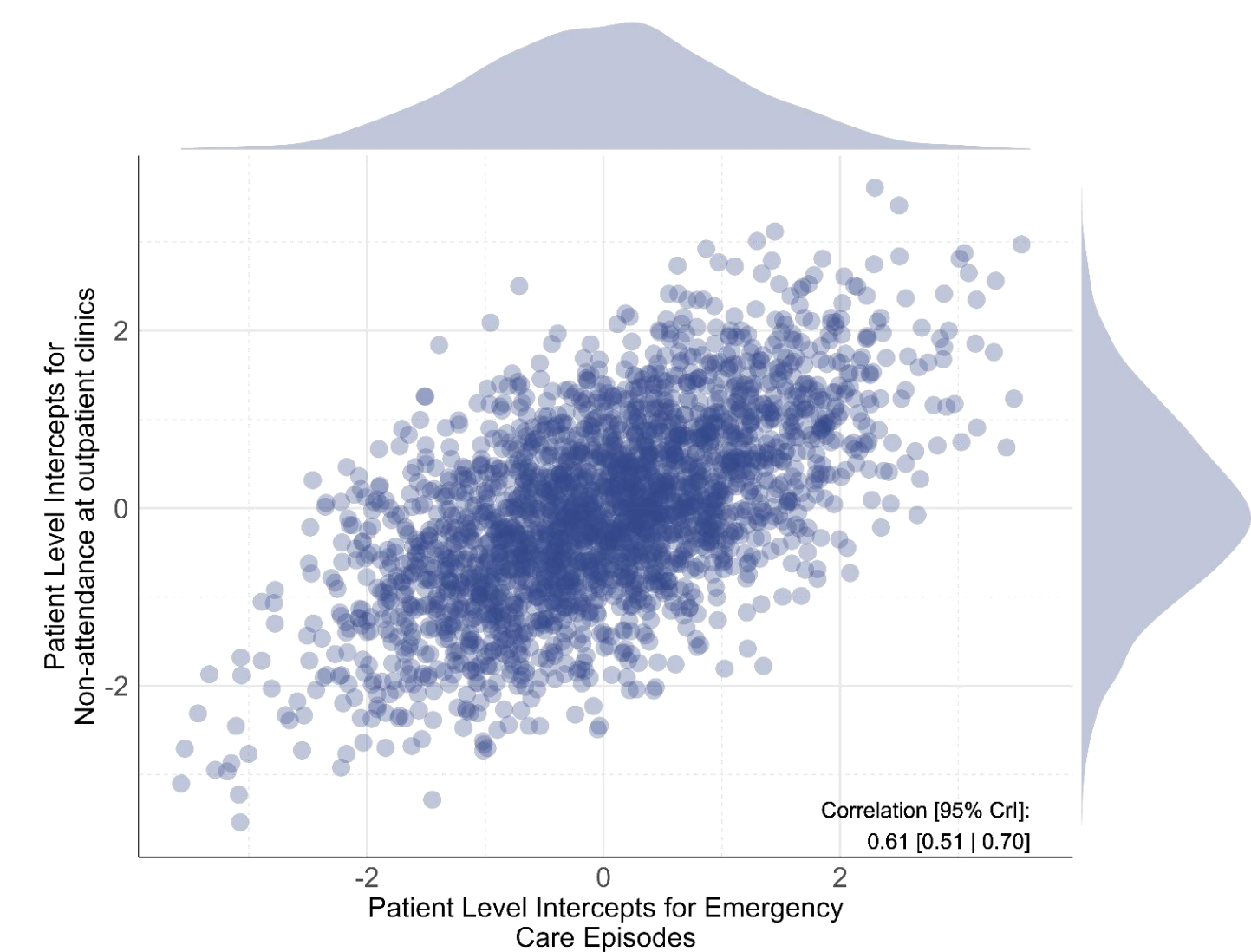

Figure 2. Correlation between non-attendance at outpatient clinics and emergency care episodes in individuals with ANCA vasculitis, adjusted for age, sex, local area deprivation and rural/urban classification. Data shown is simulated (n=1000) based on model outputs to avoid individual disclosure risk.

Conclusions:

These findings can help **inform strategies to support delivery of equitable person-centred models of care for people with ANCA vasculitis** and other rare autoimmune rheumatic conditions.