year category, where there was no difference. Rates were higher amongst men in each of the three age categories ≥ 75 years. Our analysis indicates that the disparity between hospitalisations for older men and women has narrowed over the period of our study, owing to increased hospitalisations in women and decreased hospitalisation in men.

Conclusion Our analysis of hospitalisation data has seen a convergence in rates between the sexes and a worrying rise in hospitalisations amongst women, particularly among those less than 70 years. This mirrors trends internationally where women have higher rates of COPD than men throughout most of their lifespan, although it appears that they are especially vulnerable before the age of 65. It is known that women are more susceptible than men to lung damage from cigarette smoke and other pollutants, and recent evidence highlights that they have more severe COPD exacerbations than males, resulting in higher hospitalisations. This study confirms these trends and points to the urgent need to raise awareness of this preventable disease, and tackle the high smoking rates that still prevail in Ireland, particularly in socio-economically deprived areas.

P23 USING NATIONAL PHARMACY CLAIMS DATA TO ESTIMATE THE PREVALENCE AND PATTERNS OF MEDICATION USE FOR COPD IN IRELAND

¹E Hurley*, ²S-J Sinnott, ³J Browne, ⁴T McDonnell, ⁵M O'Connor, ¹C Normand. ¹Centre for Health Policy and Management, Trinity College Dublin, Dublin, Ireland; ²Department of Non-communicable Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, UK; ³School of Public Health, University College Cork, Cork, Ireland; ⁴School of Medicine, University College Dublin, Dublin, Ireland; ⁵Department of Public Health, Health Services Executive, Dublin, Ireland

10.1136/jech-2019-SSMabstracts.174

Background Ireland's National Clinical Programme recently produced clinical guidelines on pharmacotherapy for COPD. However, there is no coherent picture of the prevalence of COPD in Ireland, the characteristics of who is receiving medication for COPD and how prescribing aligns with best practice. In view of this, we evaluated medication dispensing data to estimate the age and sex specific prevalence of symptomatic COPD in Ireland, and to identify patterns of medication use which can be used to inform interventions to improve the management of this condition.

Methods We used the Primary Care Reimbursement Service database, a national repository of anonymised pharmacy claims for more than 40% of the Irish population who qualify for the General Medical Services (GMS) scheme; a public health insurance programme for those of lower income and those ≥ 70 years. We used a cohort study design with data from 2016, limiting our population to those aged ≥ 45 years to help remove dispensing for asthma. We examined the distribution of all respiratory medications dispensed, and then the patterns of medication use in those likely to have COPD.

Results From the GMS eligible population (aged ≥ 45 years) with coverage for the entire year ($n=730,832$), there were 170,950 patients dispensed at least one respiratory medication in 2016; equating to approximately 23% of the GMS population ≥ 45 years receiving at least one respiratory medication (21.5% of males and 25.0% of females).

The prevalence of medication use suggestive of COPD in those aged ≥ 45 years was 15.1% (m) and 16.2% (f). Prevalence was higher in females than males aged between 45 and

64 years (13.1% vs. 10.1%, $p<0.0001$); there was no gender difference in those aged 65–74 years; and prevalence was higher in males aged ≥ 75 years (21.7% vs. 18.9%, $p<0.0001$). Prevalence peaked in both sexes in the oldest age category: 21.7% (m) and 18.9% (f). There was significant inhaled corticosteroid (ICS) use, along with underuse of LAMA therapy.

Conclusion The prevalence of medication use consistent with the management of symptomatic COPD mirrors international estimates on prevalence of COPD, and in the absence of a population-based prevalence study, can be used to inform decision making. The high use of ICS, and the under use of LAMA therapy and poor adherence of those newly initiated is of concern. We recommend the development of an educational intervention for health professionals to assist in the implementation of new national prescribing guidelines for the management of COPD.

P24 ONLINE DATING AND SEXUALLY TRANSMITTED INFECTIONS IN ENGLAND: AN ECOLOGICAL STUDY USING GOOGLE TRENDS DATA

^{1,2}LKRP Jennings*, ²C Kypridemos. ¹School of Public Health, Health Education England North West, Greater Manchester, UK; ²Department of Public Health and Policy, University of Liverpool, Liverpool, UK

10.1136/jech-2019-SSMabstracts.175

Background Online dating, and the use of dating smartphone applications has been theorised as a driver behind recent increases in some sexually transmitted infections (STIs). Existing literature is mixed, but some studies demonstrate an increase in high-risk sexual behaviours or STIs in online daters. However, many previous studies have a narrow study population and often rely on survey or interview data, which may not be representative. This ecological study aimed to investigate the association between online dating and STIs by using existing aggregated population-level data.

Methods We used official Public Health England STI incidence data by county or unitary authority in England for 2017. Based on Google Trends internet search data for the names of frequently used dating applications, we constructed a proxy measure for dating application usage, by English location in 2017. We named this measure 'proxy dating app score'. We used generalised linear modelling to explore the association between STI incidence and ranked proxy dating app score while controlling for known confounders (area index of multiple deprivation, proportion of people of black ethnicity in the population, and proportion of people aged under 25 in the population), assuming multiplicative effects. We performed extensive sensitivity analysis to test our assumptions, including a binomial regression model with STI incidence rates as the dependent variable. We used SPSS v22 to conduct the analysis.

Results In our main analysis, we observed a positive association between STI incidence and ranked proxy dating app score. Every increase in proxy dating app score rank was linked to a 7% (95% CI: 4% to 11%, $p<0.01$) rise in the count of STIs. Area deprivation and proportion of people of black ethnicity were also positively associated with count of STIs, 19% (95% CI: 13% to 25%) and 23% (95% CI: 20% to 27%) respectively, while the proportion of people aged under 25 was not a significant predictor. The direction of the associations did not change in the sensitivity analysis.