and whether these have implications for mental and sexual wellbeing.

We aimed to identify different clusters of adverse outcomes, to investigate associated socio-demographic and lifestyle factors, and to compare risk of depression and low sexual wellbeing (dissatisfaction and distress with sex life) between groups.

**Methods** We used data from the British National Surveys of Sexual Attitudes and Lifestyles (NATSAL 3, 2010–2012; men n=5113; women n=7019; ages 16–74). Latent Class Analysis (Mplus, version 8) used 16 variables relating to sexually transmitted infections (and associated sexual risk behaviours and attitudes), sexual coercion and sexual function problems, with men and women analysed separately. Multinomial logistic regression (Stata/SE14.2) assessed factors associated with class membership.

**Results** We found four groups for men, and six for women. Male groups were: low risk/problems (81%), sexual function problems (9%), worried risk-takers (5%) and unworried risk-takers (5%). Female groups were: low risk/problems (60%), sexual function problems (7%), worried risk-takers (3%), unworried risk-takers (8%), sex-avoiding (20%) and high vulnerability (2%). Unworried risk-takers did not perceive themselves as being at risk, whereas worried risk-takers did. Unworried were more likely than worried risk-takers to be older (men: OR 2.2; 95% CI 1.1 to 4.2), or smokers (women: OR 1.7, 95% CI 1.1 to 2.6). The high vulnerability group (found in women only) reported sexual risk, sexual function problems and coercion, and was characterised by drug and alcohol use (compared to low risk/problems group, OR 3.5, CI 1.5–8.3). Compared to low risk/problems groups, other groups were more likely to be depressed, distressed and dissatisfied with their sex life, with odds ratios (all p<0.05) for different groups ranged as follows: depression: men 2.1–3.5, women 2.9–8.4; distressed: men 1.5–4.9, women 3.2–13.9; dissatisfied: men 2.6 (only sexual function problems group p<0.05), women 2.1–11.9. The highest odds occurred among women in the high vulnerability and sexual function problems groups.

**Conclusion** Identification of different sexual risk/problem groups, all at risk of depression and low sexual well-being, is helpful for planning sexual health policies and services. Of particular interest are two distinct groups of risk-takers (worried and unworried), and a group of women (but not men) who are vulnerable to a range of adverse sexual health outcomes and warrant particular public health attention.

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**Abstracts**

**RF6 INEQUALITIES IN NON-INITIATION OF HPV VACCINE: CROSS-SECTIONAL FINDINGS FROM A UK COHORT**

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**Background** HPV vaccination (HPVs) was introduced in the UK in 2008; currently 87%–93% of teenage girls receive at least one dose in school. Uptake is lower in more deprived areas, and, small regional studies report, among Black and minority ethnic groups. Associations with parental and household factors, and school attendance are less clear. Using data from a UK prospective cohort we tested the hypothesis that HPVs initiation is lower among those with parents from Black and minority ethnicity groups, living in low income households, and not attending school.

**Methods** We estimated the percentage of 5690 14-year-old girls participating in the Millennium Cohort Study whose parent reported HPVs initiation. We used logistic regression to calculate crude and adjusted odds ratios (OR) of HPVs initiation and examined associations with parental ethnic group (baseline White), school type (non-fee-paying (baseline)/fee-paying/no school), history of school exclusion (baseline no exclusions), and household income (OECD quintile (baseline highest quintile)). Analyses were weighted for survey design (Stata: Release 15; StataCorp LP).

**Results** 5265 girls (weighted percentage: 92.3%; 95% CI [91.3, 93.2]) received at least one dose of HPVs; 399 (7.2%; 6.4, 8.1) no doses; 26 (0.5%; 0.3, 0.9) not known. Parents from Bangladeshi (86.1%; 80.3, 90.4), Black African (84.9%; 78.7, 91.0) and ‘other’ ethnic groups (81.0%; 70.4, 92.3) received at least one dose of HPVs; 91.3, 93.2) received at least one dose of HPVs; 399 (7.2%; 6.4, 8.1) no doses; 26 (0.5%; 0.3, 0.9) not known. Parents from Bangladeshi (86.1%; 80.3, 90.4), Black African (84.9%; 78.7, 91.0) and ‘other’ ethnic groups (81.0%; 70.4, 92.3)). The highest odds occurred among parents from Black and Minority Ethnic (OR: 0.30; 0.16, 0.58), Black African (OR: 0.43; 0.23, 0.80) or ‘other’ ethnic groups (OR: 0.57; 0.35, 0.93), Black African (OR: 0.87; 0.57, 1.39) and those previously excluded or not currently in school (85.2%; 78.9, 89.9). After adjusting for age, ethnicity, school type, exclusions and household income, girls with parents from Bangladeshi (OR: 0.57; 0.35, 0.93), Black African (OR: 0.43; 0.23, 0.80) or ‘other’ ethnic groups (OR: 0.57; 0.35, 0.93), Black African (OR: 0.87; 0.57, 1.39) and those previously excluded or not currently in school (85.2%; 78.9, 89.9).

**Conclusion** In the UK, there are marked inequalities in HPVs initiation, with lower uptake among children from poorer households, with parents from Bangladeshi, Black African or other ethnic groups, and those previously excluded or not currently in school. This is the first report of HPVs initiation using a nationally representative cohort. Further work is needed to evaluate interventions for HPVs catch-up in the groups we have identified, who may also be at greater risk of missing cervical screening. Understanding reasons for non-initiation and developing interventions to engage parents from these groups is central to reducing inequalities in HPVs uptake.

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**RF7 PREVALENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN GREATER GLASGOW AND CLYDE: AN ECOLOGICAL STUDY BY AGE, SEX, SOCIOECONOMIC AND SMOKING STATUS**

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**Background** Previously it was estimated that Greater Glasgow and Clyde (GGC) had a COPD prevalence of 2.4%. COPD has traditionally been associated with males and those from deprived areas. Socioeconomic inequalities in COPD have been largely linked to socioeconomic inequalities in smoking, the most important risk factor for COPD in high income countries. This study aims to calculate the prevalence of COPD in GGC by age, sex, and SES adjusting for smoking status.
LIFE COURSE SOCIOECONOMIC CIRCUMSTANCES AND DEMENTIA PREVALENCE: EVIDENCE FROM THE ENGLISH LONGITUDINAL STUDY OF AGEING

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Background Dementia represents a major public health impact. Previous work showed that higher socio-economic status (SES) is protective against dementia, through mentally engaging and socially interactive occupations and activities. However, the associations with childhood SES and social mobility are not well understood. We examined four SES indicators (father’s social class, own education, occupational class and wealth) as well as social mobility across life, in relation to dementia prevalence.

Methods The data used are from 2032 men and women aged ≥65 years at recruitment, from the English Longitudinal Study of Ageing (ELSA), an ongoing, representative prospective cohort study. Seven waves of data between 2002/03 (wave 1) and 2014/15 (wave 7) were analysed. Dementia was determined by doctor-diagnosis combined with a score above the threshold of 3.38 on the Informant Questionnaire on Cognitive Decline in the Elderly. Education has been grouped into university degree, A-levels and no education, and occupation into professional, intermediate, routine and manual. Wealth (property, savings, or other financial assets) was divided in quintiles, while social mobility was derived by combining childhood SES and adult occupational class into three stable SES levels (low, medium, high), and upwards or downwards trends. The highest SES indicator or stable-high were used as reference groups. Multivariable logistic regressions were employed to estimate the associations between each baseline SES indicator and dementia prevalence by wave 7, while controlling for age, sex, marital status, long-standing limiting illness, and subsequent gradual adjustment for all other SES markers.

Results Crude prevalence of COPD among all ages in GGC is 2.74% and among those aged 40+ years in GGC was 5.67%, higher in females 5.95% than males, 5.36%. Comparing prevalence of COPD between males and females, rates were higher for males until age 39 and equivalent for ages 40–49 years. However, for 50–59 years old prevalence among females was 3.84 compared with 3.15 among males, and for 60–69 year olds, prevalence was 8.15% for females compared with 7.26% for males. Thereafter prevalence was greater among males; for 70–79, 80–89 and 90+ years, prevalence among males was 11.81%, 12.03% and 7.56% respectively, compared with 11.76%, 10.58% and 6.38% among females. Prevalence of COPD in SIMD 1 (most deprived) was almost 3.5 times of that in SIMD 5 (least deprived). Adjusting for age and sex, SES inequalities in COPD increased with SIMD1 prevalence 4.8 times that of SIMD5. After adjustment for age and sex, smoking, and current smoking, SIMD1 prevalence was 2.45 times that of SIMD5.

Conclusion Prevalence of COPD in GGC is higher than previously estimated. It is also higher among females than males at ages 50–70 years. Inequalities in COPD are evident and become greater on adjustment for age and sex. Smoking accounts for around half of the gap in prevalence of COPD between most and least deprived, however inequalities in COPD persist after adjustment for smoking status.