

**Results** In all the three countries, this study finds health expenditure to be the predominant out of pocket cost incurred by women experiencing violence. Women who experience violence also have statistically significant higher depression, disability and acute illness scores, and thus indicate the broader health impacts of VAWG. These health impacts affect the overall productivity of women experiencing violence. Approximately 80 million productivity work days in Pakistan, 65 million productivity work days in Ghana, and 8.5 million productivity work days in scaled population of South Sudan are lost due to women experiencing any violence. The productivity loss indicates the significant impact VAWG has on the overall economy.

**Conclusion** The results of this study on the socioeconomic cost of VAWG highlight the need for crucial action by a wide range of actors, from local authorities and community leaders to national government. Moreover, the results suggest the potential burden that VAWG places on the health sector in the countries studied. The health and economic impacts outlined in this study together build a strong economic case for investment by government and donors in the prevention of VAWG.

**OP97** **DISPARITIES IN BREAST CANCER SCREENING UPTAKE ACCORDING TO TYPE OF MENTAL ILLNESS: A POPULATION-BASED RECORD LINKAGE STUDY**

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**Background** Evidence from the United States (US) suggests that uptake of breast cancer screening is lower for women with severe mental illness, but it is unclear whether this applies to the United Kingdom (UK) where services are free at the point of access. Furthermore, no attempt has been made to investigate whether this finding extends to the more prevalent mental disorders. The aim of this study was to conduct the first population-wide record linkage study of the influence of poor mental health and different types of mental disorder (as assessed by use of psychotropic medications) on routine breast screening uptake in the UK.

**Methods** Breast screening records were obtained from the National Breast Screening System (NBSS) and were subsequently linked to 2011 Census data within the Northern Ireland Longitudinal Study (NILS). This resulted in a cohort of 57,328 women who were followed through one complete three-year screening cycle of the National Health Service (NHS) breast screening programme. Psychotropic medication receipt was derived from a centralised prescribing database and classified according to prescriptions in the three months preceding screening invite. Other individual and household-level cohort attributes known to be associated with breast screening uptake were derived from Census records. Logistic regression was employed to calculate age-only and fully-adjusted odds ratios (ORs) and 95% confidence intervals of attendance at breast screening.

**Results** Over a third of women received at least one prescription for psychotropic medication in the three months prior to screening invite and these women were 15% less likely to attend screening (OR 0.85: 0.81–0.88). Although significantly reduced uptake was observed for individuals in receipt of all

types of psychotropic medication, attendance was particularly low for women prescribed antipsychotics (OR 0.63: 0.56–0.70), anxiolytics (OR 0.61: 0.57–0.66), or hypnotics (OR 0.68: 0.63–0.72). Additionally, there was evidence that this association was further influenced by severity of mental illness (as assessed by duration of medication usage).

**Conclusion** This study advances our current understanding of the factors contributing to suboptimal breast screening uptake rates, confirming the existence of disparities in breast screening uptake for individuals with poor mental health in the United Kingdom (U.K), and for the first time, demonstrating that the observed disparities vary according to the type and severity of mental disorder examined. The extension of this association to common mental disorders is of particular concern given the high prevalence of these disorders worldwide.

**OP111** **ORAL HEALTH, DISABILITY AND PHYSICAL FUNCTION: RESULTS FROM STUDIES OF OLDER PEOPLE IN THE UK AND USA**

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**Background** Disability and poor physical function have major impacts on the health and well-being of ageing populations. Poor oral health (tooth loss, periodontal (gum) disease, dryness of mouth) are also very common health problems in older populations, and adversely impact nutrition and quality of life. Studies suggest that poor oral health in older age is associated with disability, however most studies have limited oral health measures. We investigated the association of a range of objectively and subjectively assessed oral health markers with disability and physical function in two population-based studies of older people in the UK and USA.

**Methods** Cross-sectional analyses were conducted in the British Regional Heart Study (BRHS) comprising men aged 71–92 (n=2147) from 24 British towns, and the US Health, Aging and Body Composition (HABC) Study comprising men and women aged 71–80 (n=3075). Assessments included objective measures of oral health (periodontal disease, tooth count), and subjective measures (dry mouth, self-reported oral health, dental service use), and disability [mobility limitations, Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL)], and physical function (grip strength, gait speed, chair stand test). Logistic regression models, adjusted for confounding variables, were used to examine the associations between oral health and disability and physical function.

**Results** In the BRHS, dry mouth, tooth loss, and cumulative oral health problems ( $\geq 3$  problems) were associated with greater risks of mobility limitations, problems with ADL and IADL; these remained significant after adjustment for confounding variables (for  $\geq 3$  dry mouth symptoms, odds ratio (OR)=2.68, 95%CI=1.94–3.69; OR=1.76, 95%CI=1.15–2.69; OR=2.90, 95% CI: 2.01, 4.18, respectively). Similar results were observed in the HABC Study for mobility limitations and ADL (for  $\geq 3$  oral health problems, OR=2.19, 95%

CI: 1.56–3.07; OR=2.63, 95% CI: 1.81–3.81, respectively), after full-adjustment. In the BRHS, periodontal pocket depth greater >3.5 mm was associated with increased risk of being in the bottom quintile of grip strength (OR=1.59, 95%CI: 1.14–2.20). Moreover, dry mouth was associated with the top quintile of gait speed in the BRHS, and bottom quintile of grip strength in the HABC Study (OR=1.75, 95% CI: 1.22, 2.50; OR=2.43, 95%CI=1.47–4.01, respectively).

**Conclusion** Markers of poor oral health, particularly dry mouth, poor self-rated oral health and having more than one oral health problems were associated with higher risks of disability and impaired physical function in older populations. Investigations to assess these associations prospectively and the underlying pathways are needed.

## Pregnancy/Maternal Health 2

OP98

### EFFECTS OF DIFFERENT SMOKING PATTERNS DURING PREGNANCY ON PERINATAL OUTCOMES: AN ANALYSIS OF MATERNAL SMOKERS IN THE SOUTHAMPTON WOMEN'S SURVEY

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**Background** Maternal smoking during pregnancy has an established causal relationship with poor perinatal outcomes including low birthweight and preterm birth. Nonetheless, a significant minority of women, especially those in lower socio-economic groups, continue to smoke throughout their pregnancy despite current interventions to quit. In this group, it has been suggested that harm-reduction may be a more attainable goal. A previous study of low-income pregnant women in a Dublin maternity hospital (The Rotunda) showed that quitting smoking for even a part of pregnancy (partial quitting) resulted in higher birthweight than those who continued to smoke throughout. Further support for this strategy for harm-reduction is required. Our objective was to determine whether the relationship between different smoking patterns among pregnant smokers and perinatal outcomes could be replicated in the UK Southampton Women's Survey (SWS) cohort.

**Methods** Women who were smoking at the time of conception (taken as last menstrual period) were categorised according to their smoking status across pregnancy into sustained quitters, partial quitters (who quit smoking in either the first or third trimester alone) or sustained smokers (who continued to smoke throughout pregnancy). Linear regression analyses with birthweight and gestational age as the dependent variables, and smoking status as the exposure were performed. The choice of confounders (child sex, parity, maternal weight and prudent diet score) was guided by a Directed Acyclic Graph (DAG).

**Results** Of the 3,158 women who became pregnant, 768 were smokers at conception. Of these, 697 (91%) had complete smoking data with 355 (51%) being sustained smokers, 81

(12%) partial quitters and 261 (37%) sustained quitters. Compared with infants born to sustained smokers, infants born to sustained quitters and partial quitters were heavier at birth by 361 g (95% CI: 284 g, 438 g) and 203 g (92 g, 315 g), respectively, adjusted for confounders. Sustained quitters had a longer gestation by 3.5 days (1.7 days, 5.2 days) compared with sustained smokers, adjusted for confounders, but no difference was seen for partial quitters.

**Conclusion** These results from the SWS, after adjusting for a wide range of available confounders, closely replicated the findings in Dublin, providing further support for partial quitting by pregnant smokers as a harm-reduction strategy for off-spring. While sustained quitting is clearly most desired, for women who cannot quit for the duration of their pregnancy, partial quitting should be encouraged as a strategy to reduce some of the harmful effects of smoking on offspring.

OP99

### HYPERTENSIVE DISORDERS IN PREGNANCY AND CHILDHOOD DIAGNOSIS OF ASTHMA

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**Background** Hypertensive disorders of pregnancy (HDP), the most common pregnancy complication, have been linked to childhood morbidity. Few studies have investigated the relationship between HDP and asthma in the offspring, with existing research showing conflicting results. The primary aim of this study was to explore the association between HDP and the development of asthma at or before the age of seven years using the UK Millennium Cohort Study (MCS).

**Methods** Participants were born between 2000–2001 and recruited at 9 months, the first wave of the MCS, and subsequently participated in waves 2, 3 and 4 when they were three, five and seven years respectively. The study cohort consisted of singleton children, where the mother was the main respondent at the first wave and participated in the fourth wave at age seven years. HDP were self-reported by mothers at the first wave, where women were asked whether they had gestational hypertension, chronic hypertension, pre-eclampsia or eclampsia. The primary outcome was parent-reported diagnosis of asthma, based on responses to the International Study of Asthma and Allergies in Childhood (ISAAC) core questionnaire at age seven years. Crude and adjusted logistic regression models were used for data analysis. We adjusted for a range of potential confounders including socio-demographics (e.g. ethnicity, maternal age), obstetric factors (e.g. preterm delivery, parity), and established risk factors for asthma (e.g. parental smoking, family history of asthma, exposure to pollution). Moreover, we examined the risk of asthma among small for gestational age (SGA) children who were exposed to HDP compared to children not exposed to HDP.

**Results** At the first wave, 18,818 children were recruited and 13,061 (69%) participated in the fourth wave at age seven years and were included in the analysis. 984 women (8%) reported having HDP and 2151 (16%) of the children had developed asthma by age seven years. In the crude logistic model HDP was significantly associated with asthma (OR=1.37; (95% CI: 1.17–1.61)) and the association was almost unchanged in the adjusted model (OR=1.39; (95% CI: