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We report the first analysis of inequalities in Disability-Free Life Expectancy (DFLE) trends for Australia, based on two cohorts of the nationally representative Household Income and Labour Dynamics in Australia survey. Each cohort was aged 45+ at baseline with 7-years of annual follow-up (Older cohort: 2001-2007, n=6363; Younger cohort: 2011-2017, n=8197). Disability was defined by a Global Activity Limitation Indicator, and socioeconomic position (SEP) by an area-level index of disadvantage. Compared to men in high advantage areas, men residing in low advantage areas experienced smaller gains in life expectancy (3.0 vs 4.6 years at age 65), DFLE (0.6 vs 1.8 years) and years with disability (2.4 vs 2.8 years). In contrast, for women in low advantage areas all years gained in life expectancy (2.6 years) were years with disability, whereas women in high advantage areas experienced gains in DFLE (1.7 years) and even more years with disability (2.7 years).

#### **SOCIOECONOMIC POSITION ACROSS THE LIFE COURSE AND TRENDS IN DISABILITY-FREE LIFE EXPECTANCY IN AUSTRALIA**

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There has been little investigation of how life-course social mobility is linked to Disability-Free Life Expectancy (DFLE). We report novel analysis of the HILDA survey examining how DFLE trends differs by three markers of socio-economic position (SEP): early-life (educational attainment), midlife (occupational level), and late-life (area-disadvantage). All women, irrespective of their educational level, gained years with disability (Age 65: Low education=1.5 and High education=2.5 years). Similar results were obtained by level of occupation, but women with low occupation showed small declines in LE (-0.8 years), all being losses in DFLE. Only women in the most advantaged areas gained DFLE. For men, higher levels of any marker of SEP were associated with DFLE gains that were larger than, or comparable to, gains in years lived with disability, although lower education was associated only with gains in years lived with disability. DFLE trends differ by SEP marker more in women than men.

#### **MULTIMORBIDITY, DISADVANTAGE, AND TRENDS IN DISABILITY-FREE LIFE EXPECTANCY: THE CFAS STUDIES**

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The combined contribution of multi-morbidity and socio-economic position (SEP) to trends in disability free life

expectancy (DFLE) is unknown. We use longitudinal data from the Cognitive Function and Ageing Studies (CFAS I: 1991; CFAS II: 2011), with two year follow up. Disability was defined as difficulty in activities of daily living, and SEP as area-level deprivation. Multi-morbidity was constructed from nine self-reported health conditions and categorised as 0-1, 2-3, 4+ diseases. In 1991 and 2011, shorter total and disability-free years were associated with greater multi-morbidity. Between 1991 and 2011, gains in life expectancy and DFLE were observed at all levels of multi-morbidity, the greatest gain in DFLE being 4 years for men with 0-1 diseases. As multi-morbidity is more prevalent in more disadvantaged groups, further analyses will investigate whether SEP differences remain at all levels of multi-morbidity.

### **SESSION 5850 (SYMPOSIUM)**

#### **WHY BIOPSYCHOSOCIAL DETERMINANTS MATTER: IS AGE JUST A NUMBER?**

Chair: Andrew Steptoe

Ageing is a physiological and dynamic process enduring time, which is influenced by various underlying mechanisms occurring within the biological, psychological and social spheres. We investigated biopsychosocial determinants of subsequent health and mortality in the English Longitudinal Study of Ageing (ELSA) (Steptoe). Cognitive impairment and dementia, particularly Alzheimer's disease (AD), represent significant challenges to individuals, families and healthcare. We found an indication of socioeconomic differentials influencing the mediating biological and psychological pathways in relation to subsequent cognitive health, which was ascertained with a latent g factor across various cognitive domains in the Harmonised Cognitive Assessment Protocol in ELSA (Cadar). We also identified an interplay between socioeconomic markers and genetic factors influencing the time of dementia and Alzheimer's disease (AD) diagnosis in individuals from the English Longitudinal Study of Ageing, particularly in those with a polygenetic predisposition to AD (Ajnakina). Within the same cohort, we found that participants who transitioned into a single household due to divorce or bereavement had a higher risk of mortality (Abell). The adverse health outcomes associated with loneliness are well documented, but less is known in terms of hospitalization and accessing health care. In the Healthy Ageing in Scotland (HAGIS), we found an increased hospitalization for older individuals reporting higher loneliness (Douglas); and various loneliness patterns in relation to age, gender, marital status and socioeconomic status in participants from first wave of the Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA) (Neville). Our findings highlight the imperative need for policy interventions and tailored strategies.

#### **OVERVIEW OF THE ENGLISH LONGITUDINAL STUDY OF AGEING**

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The English Longitudinal Study of Ageing (ELSA) is a unique and rich resource of information on the health, social, wellbeing and economic circumstances of the English population aged 50 and older. The current sample contains data from up to nine waves of data collection covering a