Socioeconomic position (SEP) to trends 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
Kim Kiely,1 Richard Tawiah,2 Carol Jagger,3 and Kaarin Anstey,4 1. University of New South Wales, Sydney, New South Wales, Australia, 2. University of New South Wales, Bankstown, New South Wales, Australia, 3. Newcastle University, Newcastle upon Tyne, England, United Kingdom, 4. University of New South Wales, Sydney, Australia

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 differ 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 gains in years lived with disability, whereas women in high occupation areas experienced gains in DFLE (1.7 years) and even more years with disability (2.7 years).

MULTIMORBIDITY, DISADVANTAGE, AND TRENDS IN DISABILITY-FREE LIFE EXPECTANCY: THE CFAS STUDIES
Andrew Kingston,1 Holly Bennett,1 Louise Robinson,1 Lynne Corner,1 Carol Brayne,2 Fiona Matthews,1 and Carol Jagger,1 1. Newcastle University, Newcastle upon Tyne, England, United Kingdom, 2. Cambridge Institute of Public Health, University of Cambridge, Cambridge, England, United Kingdom

The combined contribution of multi-morbidity and socioeconomic 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

Aging 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
Andrew Steptoe, University College London, London, England, United Kingdom

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
period of seventeen years (2002-2019). The multidisciplinary and longitudinal nature of the data allows the examination of complex relationships and causal processes. The survey data are designed to investigate a broad set of topics to help understand the ageing process. These include predictors of well-being, health trajectories, disability and healthy life expectancy, the determinants of economic position in older age, the links between socioeconomic status, physical health and functioning, cognition and mental health, the nature and timing of retirement and post-retirement labor market activity, household and family structure, social networks and social supports; patterns, determinants and consequences of social, civic and cultural participation.

BIOPSYCHOSOCIAL DETERMINANTS OF COGNITIVE HEALTH IN LATER LIFE: THE HARMONISED COGNITIVE ASSESSMENT PROTOCOL

Dorina Cadar,1 Jessica Abell,2 Carol Brayne,2 G. David Batty,1 David Llewellyn,1 and Andrew Steptoe,1
1. University College London, London, England, United Kingdom, 2. Cambridge Institute of Public Health, University of Cambridge, Cambridge, England, United Kingdom, 3. University of Exeter Medical School, Exeter, England, United Kingdom

Despite strong evidence for a socioeconomic gradient in many health outcomes, including cognition, substantial gaps remain in understanding these disparities. We investigated the biopsychosocial mechanisms underlying the associations between socioeconomic status (SES) and later-life cognitive health using the Harmonised Cognitive Assessment Protocol (HCAP), a sub-study of the English Longitudinal Study of Ageing (ELSA) which comprises of 1,273 ELSA participants aged ≥65. A latent g factor was derived using 12 tests covering a broad range of cognitive domains (memory, language, executive function, and psychomotor speed). We estimated direct and indirect pathways between SES indicators, Apolipoprotein E, inflammatory markers, chronic conditions, and depression. We found that higher education was associated with better cognition, while wealth was not. Increased depressive symptoms were linked with lower cognition, while prior inflammation was indirectly associated with cognition via depressive symptoms and chronic conditions, supporting evidence for a psychosocial role in the context of a socioeconomic gradient.

INTERPLAY BETWEEN SOCIOECONOMIC MARKERS AND GENETIC PREDISPOSITION TO THE TIME TO DEMENTIA ONSET

Olesya Ajnakina, Dorina Cadar, and Andrew Steptoe, University College London, London, England, United Kingdom

Identifying interplay between socio-economic markers (education and financial resources) and genetic factors influencing time of dementia and Alzheimer’s disease (AD) diagnosis is of central relevance for the development of preventative strategies. Using 7039 individuals aged ≥50 years from the English Longitudinal Study of Ageing, 320 (4.6%) of whom developed dementia over the 10-year follow-up, we investigated interactions between polygenic score for AD (AD-PGS) and socioeconomic markers on the timing of dementia or AD diagnosis. One standard deviation increase in AD-PGS was associated with an accelerated time to dementia onset by 4.8 months. Interactions between AD-PGS and lower wealth accelerated time to AD diagnosis by 24 months; an interaction between AD-PGS and years of schooling in decelerating time to AD by 3.0 months suggests education serves as protective mechanisms against AD diagnosis. Socioeconomic markers are important factors influencing time to dementia and AD, particularly in those with polygenic predisposition to AD.

LIVING ALONE TRANSITIONS AND MORTALITY IN OLDER MEN AND WOMEN

Jessica Abell, and Andrew Steptoe, University College London, London, England, United Kingdom

Living alone has been established as a risk factor for mortality, with biopsychosocial mechanisms suggested as plausible. However, it is unclear whether this is due to health selection. We analysed data from 4,888 individuals who participated in both wave 2 (2004-2005) and wave 4 (2008-2009) of the English Longitudinal Study of Ageing. Mortality status was ascertained from linked mortality register data. An association was found between living alone at wave four and mortality (HR: 1.20, 95% CI 1.04-1.38) in a model adjusted for a range of factors. We also found that participants who transitioned into a solo household due to divorce or bereavement had a higher risk of mortality (HR: 1.34, 95% CI 1.01-1.79). Transitioning into a solo household is also associated with mortality and the underlying reason for this transition was found to be important.

LONELINESS AND PATTERNS OF HEALTH SERVICE USAGE: EVIDENCE FROM HEALTHY AGEING IN SCOTLAND

Elaine Douglas, and David Bell, University of Stirling, Stirling, Scotland, United Kingdom

Loneliness is associated with poorer health status and health outcomes. Yet, little is known about how loneliness in ageing populations is associated with health service usage. Loneliness (UCLA-3) was measured in older people in Scotland (Healthy Ageing in Scotland, HAGIS, n = 1,057). We analysed socio-demographic, perceived health, and health behaviour characteristics using descriptive statistics and logistic regression. The survey data (HAGIS, 2016/17) were linked to retrospective administrative health data to investigate patterns of health service usage (from 2005), such as the number of hospital visits and mean length of stay, and their associated costs. Two-part models were used to highlight variation i) in those who had ever vs never been admitted to hospital, and ii) between those who had been admitted. Our results highlight the variation in hospital service usage in those experiencing loneliness and opens discussion on the implications for older people and hospital services.

LONELINESS AND SOCIAL ISOLATION AMONG OLDER PEOPLE IN NORTHERN IRELAND

Charlotte Neville,1 and Paula Devine,2 1. Centre for Public Health, Queen’s University Belfast, Belfast, Northern Ireland, United Kingdom, 2. Queen’s University Belfast, Belfast, Northern Ireland, United Kingdom

Loneliness and social isolation are increasingly recognised as being public health concerns particularly in older