processes (Pointers for Service Change) that warrant consideration for those aiming to improve the experience of care in hospital for people living with dementia, their carers and staff.

An advisory group of dementia specialists, hospital staff, commissioners and family carers advised us throughout the project. PROSPERO registration CRD42018086013.

**Results** Our reviews show that the experience of care in hospital for people living with dementia is a dynamic process, being impacted at any one time by a complex range of personal, institutional and environmental factors. Despite the intent to deliver person centered care, and armed with the knowledge of how important this is particularly for people living with dementia, this is still not happening consistently across hospital care. The effect of this is not only a poorer experience of care for people living with dementia and their carers, but also has a detrimental effect on staff emotional well-being as a result of not being able to give the care they strive to provide.

Working closely with evidence end-users enabled us to transform these findings into easily-accessible, practical suggestions to improve the experience of care: Dementia Understanding, Education and Training, Modelling Person Centred Care, Environment, Not Alone, Time, Information Sharing, Access to Resources, Communication, Ask Family, Raise the Profile and Engage Volunteers.

**Conclusion** Evidence suggests that although people living with dementia can have a good experience of care in hospital, this is still not happening for many. When staff cannot provide the care they would like to give, this has a negative effect on people living with dementia, their carers and the staff themselves. Future research should identify how best to change ward cultures, and how to maintain these changes in the long-term.

### P03 ALCOHOL CONSUMPTION AND COGNITIVE FUNCTION IN OLDER POPULATION IN CHINA

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**Background** With economic development and associated multidimensional social changes, the past three decades have witnessed striking increase in alcohol consumption in China compared to other countries. Cognitive impairment is a serious threat to the health of the elderly in the context of demographic aging process. Previous cross-sectional studies and clinical trials have documented inconsistent conclusions on whether drinking alcohol has dose-response association with cognitive function in the literature. Using a nationally representative and longitudinal dataset, this research intends to examine the relationship between alcohol consumption and cognitive performance in elderly population in China.

**Methods** We used 2011–2013 longitudinal data from the China Health and Retirement Longitudinal Study (CHARLS) comprising 17314 participants with an average age of 59 years. Alcohol consumption was measured by drinking status (never, former, moderate, excessive drinkers) based on number of standard drinks per week. We studied mental intactness and episodic memory function as measures of cognitive functioning. Lagged dependent variable models were used to examine independent

associations between alcohol consumption and cognitive functioning. Our models controlled for demographic factors, socioeconomic factors, baseline cognitive functioning and indicator for lifestyle. We also tested for an inverted J shaped relationship between drinking alcohol and cognitive functioning.

**Results** A total of 10404 nondrinkers (60.09%), 2450 former drinkers (14.15%), 1599 moderate drinkers (9.24%) and 1525 excessive drinkers (8.81%) were included. Compared to never drinkers, there were no statistically significant associations between this group and moderate drinking group. While, excessive drinkers were consistently associated with on average 0.13-point decrease in episodic memory scores fully adjusted model (P=0.031). For mental intactness, there were no statistically significant differences between never drinkers and other groups. Furthermore, we did not find evidence to support a J-shaped association between standard drinks per week and measures of cognitive functioning.

**Conclusion** Excessively drinking alcohol was associated with greater decline in episodic memory function, but not mental intactness. There is no association between moderate drinking group and cognitive functioning measures in elder Chinese population.

### P04 CHILDHOOD GROWTH AND DEVELOPMENT AND DNA METHYLATION AGE IN MID-LIFE

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**Background** Biomarkers of ageing based on DNA methylation (DNAm) have recently been developed. The first (Hannum and Horvath) and second generation (Levine and GrimAge) DNAm biomarkers predict survival, age-related disease and functional capabilities better than chronological age alone; with second generation biomarkers showing more consistent and stronger associations. In the first study of its kind, we examine the association between growth in early life, pubertal timing and DNAm age biomarkers in mid-life.

**Methods** Participants from the Medical Research Council (MRC) National Survey of Health and Development who had information on DNAm were analysed (NSHD, n=1,376). Four DNAm age acceleration (AgeAccel) biomarkers were calculated when participants were aged 53 years: AgeAccelHannum, AgeAccelHorvath, AgeAccelLevine and AgeAccelGrim. Birthweight and weight and height across infancy, childhood and adolescence were measured. Pubertal timing was established using age at menarche (girls) and pubertal stage at 14–15 years (boys). The relationship between weight and height change in infancy (2–4), childhood (4–7) and adolescence (7–15) and AgeAccel was investigated using regression with conditional growth measures; sex-specific residuals from a regression of current size on previous size. Linear regression models examined associations between pubertal timing and AgeAccel. We replicated analyses using height and weight from late childhood (7 y) to adolescence (16 y) and pubertal timing among 240 participants at 45 years from The National Child and Development Study (NCDS).