diverse locations and indivdiuals anonymously. A modified Delphi method was utilised consisting of 2 rounds of self-adminstered questionnaires completed electronically and a third round of a meeting where paper questionnaires were distributed to infection control and influenza leads from the 36 London Trusts represented in the room. Round 1 was devised using generic open-ended questions and responses were categorised qualitatively into themes. These themes were converted into statements for Round 2 and respondents were asked to indicate their degree of agreement/disagreement on a Likert scale. Median and mode responses were reviewed to determine if there was a trend towards strong (dis)agreement or (dis)agreement for each item on the Likert scale. Round 3 was devised exploring areas of most uncertainty from Round 2. Consensus was defined as where ≥75% of responses showed strong (dis)agreement/(dis)agreement on a Likert scale.
Results There were 34, 33 and 24 responses to the rounds respectively. The most effective interventions in increasing uptake amongst HCWs across a wide-range of different Trusts across London were found to be:

1. The availability/accessibility of vaccination at work
2. Planned advertising/promotion/communications, including electronic communication
3. Peer vaccinators
4. Myth-busting; education and training
5. Strong, visible leadership and engagement.

Contrary to popular belief, update varied by teams rather than by health professional so targeting influencers in teams was deemed effective.
Conclusion The results of the delphi method were transformed into the '7 steps to success' campaign, which was implemented during winter 2019/20. The summative evaluation has shown that uptake amongst health care workers has increased significantly on last year.

Posters

P01   **POLYPHARMACY AS A RISK FACTOR FOR ALL-CAUSE MORTALITY AMONG OLDER PEOPLE IN ENGLAND**

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Background Polypharmacy is a prevalent phenomenon in older people. Both positive and negative outcomes of polypharmacy have been reported, making the role of polypharmacy somewhat uncertain. Most previous studies have found polypharmacy is associated with increased mortality in older people, but the definition of polypharmacy varies widely. Therefore, we tested this relationship by using the most common definition of polypharmacy. This study aims to investigate the association between polypharmacy and all-cause mortality among older people.
Methods Participants were from the English Longitudinal Study of Ageing (ELSA), a nationally representative sample of people aged 50 and older. In 2012/2013, 7729 people participated in the nurse visits, of these, 7727 were

followed up for mortality until March 2018. Complete data were available from 6757 people. Polypharmacy was defined as taking five to nine long-term medications a day for chronic diseases or chronic symptoms, while using ten or more medications was categorised as heightened polypharmacy. The presence of illness was defined as either self-reporting conditions or taking specific medications for the condition. Cox proportional hazards model was used in this study.
Results The age- and sex-adjusted hazard ratios of polypharmacy and heightened polypharmacy were 2.35 and 4.24, respectively, and these effects on all-cause mortality were primarily attenuated when adjusting for chronic conditions such as diabetes, coronary heart diseases, lung diseases and cancer. The effects of polypharmacy and heightened polypharmacy on mortality were further attenuated after adjusting for disability and health behaviours but remained significant. After adjusting for demographics, existing chronic diseases, disability, health behaviours, cognitive function and high-risk medications, people reporting polypharmacy (n=1357) had 1.51 times higher risk of death (95% CI 1.05, 2.19) compared with people not taking any medications (n=1924). People reporting heightened polypharmacy (n=162) also had 2.12 times higher risk of death (95% CI 1.29, 3.50), by contrast, people taking one to four drugs no longer showed a higher risk of death after adjustments.
Conclusion People reporting polypharmacy and heightened polypharmacy had a higher risk of mortality than people who did not take any medications. The results imply the presence of polypharmacy or heightened polypharmacy could be an indicator of mortality for older people, highlighting the need to ensure the appropriateness of multiple medications.

P02   **IMPROVING THE EXPERIENCE OF CARE FOR PEOPLE WITH DEMENTIA IN HOSPITAL: DEVELOPING THE DEMENTIA CARE POINTERS FOR SERVICE CHANGE**

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Background Being in hospital can be particularly confusing and challenging not only for people living with dementia, but also for their carers and the staff that care for them.
Methods We undertook three systematic reviews of quantitative and qualitative evidence according to best practice guidelines. The reviews explored: 1) experience of care in hospital; 2) experience of interventions to improve care in hospital; and 3) effectiveness and cost -effectiveness of interventions to improve the experience of care in hospital for people living with dementia, their carers and staff. Links between the findings from the three reviews were explicitly identified through the creation of a conceptual map. Working closely with key stakeholders we co-developed 12 institutional and environment practices and

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).