CVD biomarkers. We conducted a study in Russia to explore the association between levels of heavy alcohol consumption on biomarkers of cardiac damage.

Methods The Know Your Heart study recruited and medically examined a random sample of 2354 participants from the general population of Arkhangelsk city (NW Russia) plus 271 participants from the Regional Psychiatric hospital alcohol treatment facility with a primary diagnosis of alcohol problems. Measurements were made of (i) high sensitivity Troponin T (hsTroponinT), a marker of cardiac damage, (ii) N-terminal pro-B-type natriuretic peptide (NT-Pro-BNP), a marker cardiac wall stretch, and (iii) high sensitivity C-reactive protein (hsCRP), a marker of systemic inflammation. Their concentrations were compared between the patients from the alcohol treatment facility and the general population sample divided according to levels of harmful/hazardous drinking. The associations between heavy alcohol use and log-transformed biomarkers were estimated using multivariate linear regression models adjusted for directed acyclic graphs specified minimal sufficient set of confounders: age, sex, smoking and education.

Results Those in the alcohol treatment facility had the highest levels of all three biomarkers relative to non-hazardous drinkers in the general population: hsTroponinT was elevated by 10.3% (95%CI: 3.7%, 17.4%), NT-Pro-BNP - by 46.7% (95%CI: 26.8%, 69.8%), hsCRP - by 69.2% (95%CI: 43%, 100%). NT-Pro-BNP was also elevated, but to a smaller degree, for harmful drinkers in the general population - by 31.5% (95%CI: 3.4, 67.2). A trend test across categories of drinkers was significant for NT-Pro-BNP and hsCRP with concentration of biomarkers going up with higher levels of alcohol exposure ($p<0.001$).

Conclusion The key finding is that NT-Pro-BNP was raised in both patients in the alcohol treatment facility and among harmful drinkers in the general population. This biomarker of pathological wall stress is a predictor of CVD events. This consistent finding in the two groups supports the hypothesis that heavy alcohol drinking has an adverse effect on cardiac structure and function and may thus lead to increased risk of CVD. However, the importance for CVD of the marked elevation of hsCRP in the alcohol treatment group is less clear.

Ageing/Older People 1

OP21

COGNITIVE PERFORMANCE AND HISTORY OF MULTIPLE HEALTH CONDITIONS IN OLDER ADULTS

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Background Multimorbidity, defined as the coexistence of two or more health conditions, is becoming the norm in our ageing population. Research to date has highlighted that individuals with multiple health conditions are at greater risk of disability and mortality, but also of cognitive impairment and dementia. Most of research to date on multimorbidity and cognitive performance is cross-sectional or with limited history information of the health conditions. The present study aims to explore the association between cognitive performance and previous history of health conditions over 24 years.

Methods The sample consisted of 4858 respondents of the Health Retirement Study (HRS), which is a US nationally

representative survey that focus on adults aged 50 and over. Data was extracted from 12 consecutive waves from 1998 to 2014. Data from health conditions included self-reports for hypertension, diabetes, arthritis, stroke, cancer, lung and heart diseases and psychiatric problems. Duration of the health condition was categorized as more than 10 years, between 4 and 10 years, less than 4 years and no condition. Cognitive status was assessed using a summary index of cognitive functioning which includes measures of memory, working memory, speed of mental processing, knowledge, and language. ANOVA and post hoc tests were performed to explore the association between cognition and the duration of each health condition independently. Multiple linear regression analyses were performed to explore the association between multiple health conditions and cognitive performance.

Results The results showed significant independent associations between cognitive performance in 2014 and each health condition independently, except for cancer [$F(1,4)=2.60$; $p=0.51$]. When all the health conditions were considered together in the regression models, we found that cognitive performance is negatively associated with high blood pressure and stroke (independently of the duration of the condition), long-term diabetes and lung diseases (i.e., for more than 10 years) and recent cancer (i.e., in the last 4 years).

Conclusion Our results confirm that cognitive performance is significantly lower in older adults with multiple health conditions. Moreover, our findings highlight that considering the duration of the health condition is key for identifying patients at greater risk of cognitive impairment. Specifically, individuals at greater risk of cognitive impairment are those who have been diagnosed with hypertension or suffered a stroke at any given time, long-term diabetes or lung diseases, and recent cancer diagnoses. Public health makers should develop specific policies for cognitive screening in individuals with these health conditions.

OP22

SHOULD BALANCE SCREENING FOR FALL RISK BEGIN EARLIER IN LIFE? EVIDENCE FROM A BRITISH COHORT STUDY

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Background Falls in older adults precipitate hospitalisation, frailty and premature mortality and are a growing health concern. The standing balance test is a simple, cost effective tool used to screen for fall risk in adults aged 65+, however the association between standing balance and fall risk has not been examined in individuals younger than 65. To assess whether balance tests could be utilised to screen for fall risk at younger ages, we investigated if balance at ages 53 and 60–64 was associated with prevalence and frequency of subsequent falls.

Methods Data from the MRC National Survey of Health and Development, a British birth cohort study, were utilised ($n=2571$). Standing balance time (eyes closed) was assessed at ages 53 and 60–64 (max: 30 seconds). Fall history within the last year was self-reported at ages 60–64 and 68 and categorised to indicate fall prevalence (yes, no) and frequency (0, 1–2, 3+). Binary and multinomial logistic regressions were used to assess associations of balance time (per 1 second increase)