admission and cause of death records. We performed Cox Proportional Hazards models to estimate the risk of MCVE among participants with depression compared to those without depression. Fully adjusted models included measures of age, sex, ethnicity, education, income, area-based deprivation, body mass index, alcohol intake, physical activity, smoking, home-ownership, fruit and vegetable consumption, oily fish intake, and family history of stroke, heart disease, hypertension and/or depression.

Results We identified a total of 21 842 (7.9%) participants with depression at baseline. During a median of 6.7 years of follow-up, an incident MCVE occurred among 326 participants with depression and 3718 participants without depression. In fully adjusted models, hazard ratios (95% confidence intervals) for MCVE were 1.13 (1.01–1.27) for participants with any indication of depression, 1.14 (1.00–1.31) for participants with self-reported depression, 1.60 (1.18–2.17) for participants with history of a hospital admission with depression, and 1.12 (0.99–1.27) for participants reporting antidepressant use. Similar patterns were observed when stroke and myocardial infarction were used separately as outcomes.

Conclusion All measures of depression remained independent risk factors for MCVE after adjustment for a variety of potential confounding factors and effect estimates were similar for all sub-categories of depression. The adjusted hazard ratios should only be interpreted causally if one assumes that the covariates are common sources of depression and MCVE. This assumption remains controversial. Future studies should apply more advanced statistical methods in order to determine the effect of lifestyle factors as potential mediators and explore potential for interactions.

RF12 ADULT HEIGHT AND RISK OF INCIDENT ATRIAL FIBRILLATION AND OF INCIDENT HEART FAILURE IN OLDER MEN: THE BRITISH REGIONAL HEART STUDY

¹SG Wannamethee*, ¹OA Papacosta, ¹LT Lennon, ²PH Whincup. ¹Primary Care and Population Health, UCL, London, UK; ²Population Health Research Institute, St George's University of London, London, UK

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Background Heart failure (HF) is one of the leading causes of mortality, morbidity and hospitalisation in older adults. Although short stature has been associated with increased risk of coronary heart disease previous studies have consistently shown tall stature to be associated with increased risk of atrial fibrillation (AF) a known major risk factor for the development of HF. Relatively few studies have investigated the association between height and incident HF. We have therefore examined prospectively the association between adult height and incident AF and incident HF in a population based cohort of older men.

Methods Prospective study of 3530 men aged 60–79 years with no diagnosed HF, myocardial infarction or stroke at baseline (1998–2000) followed up for a mean period of 15 years, in which there were 212 incident HF cases. Incident AF was based on a subgroup of men (n=1348) who attended re-examination in 2010–2012. Men were divided into 5 height groups: <168.2, 168.2–172.9, 173.0–176.9, 177.0–183.0 and >183.0 cms based on the quartile distribution of height with the top 5 percent separated out.

Results CVD risk factors tended to decrease with increasing height but a positive association was seen between height and

prevalent AF. Tall stature was prospectively associated with increased risk of incident AF. Both short stature (<168.2 cms) and tall stature (>183.0 cms) were associated with significantly increased risk of HF in age-adjusted analysis compared to those in the second height quartile [HR (95% CI) 1.58 (1.07,3.02) and 1.90 (1.04,3.50) respectively]. The increased risk seen in short men was attenuated after adjustment for lifestyle characteristics, established CHD risk factors, inflammation (CRP) and prevalent AF [adjusted HR=1.37 (0.92,2.02)]. Since tall men had the most favourable CHD risk factors, adjustment increased the risk further (adjusted HR (95% CI) 1.97 (1.05,3.68). However further adjustment for incident AF attenuated the increased risk seen in tall men (HR=1.76 (0.93,3.31)).

Conclusion Both short stature and tall stature are associated with increased HF risk but the pathways underlying these associations are different. The increased risk of HF in short adults appear to be largely explained by adverse CVD risk factors associated with short stature; in tall men the association was partially explained by their increased risk of developing AF. Average body height has increased worldwide over the decades and if this trend continues, the prevalence of tall older adults is likely to increase which may contribute to an increasing burden of AF and HF.

RF13 THE IMPACT OF LIFE EVENTS ON LATER LIFE: A LATENT CLASS ANALYSIS OF THE ENGLISH LONGITUDINAL STUDY OF AGEING

OO Enwo*, J Ford, E Player, N Steel. Norwich Medical School, University of East Anglia, Norwich, UK

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Background Events over an individual's life course can positively or negatively affect their health and wellbeing in older age. We aimed to identify associations between groups of older people with similar life events and their health, behaviours and social interactions in older age.

Methods We undertook a latent class analysis of the English Longitudinal Study of Ageing wave 3. Groups of participants with similar life events were generated based on eight life events; maternal and paternal closeness, educational opportunities in childhood, financial hardship, bereavement due to war, involvement in conflict, violence, and experiencing a natural disaster. The number of groups was determined based on model fit and team discussion. Linear and logistic regression were used to explore associations between these groups and pre-specified health and wellbeing factors, adjusted for age, gender, ethnicity and socioeconomic class and weighted for group probability.

Results 7555 participants were allocated to one of four groups: Group A 'few life events' (n=6,250), Group B 'emotionally cold mother' (n=724), Group C 'violence in combat' (n=274) and Group D 'many life events' (n=307). Participants in Group D were statistically significantly more likely than those in Group A to experience disability (coefficient 0.35, 95% CI 0.20 to 0.50), reduced quality of life (coefficient -5.33, 95% CI -6.61 to -4.05), psychological disorders (OR 3.01, 95% CI 2.18 to 4.17) and social detachment (OR 2.60, 95% CI 1.36 to 4.97). Group C membership compared to Group A was associated with reduced quality of life (coefficient -1.95, 95% CI -3.08 to -0.82) and a life-threatening

illness or accident (OR 1.98, 95% CI 1.52 to 2.59). Group B membership, compared to Group A, was associated with reduced quality of life (coefficient -1.89, 95% CI -2.62 to -1.15), psychological disorders (OR 1.73, 95% CI 1.34 to 2.23), social detachment (OR 2.60, 95% CI 1.68 to 4.04) and the perceived long-term effect of ill health (OR 1.42, 95% CI 1.10 to 1.84).

Conclusion We have identified four broad groups of older people; those with few life events, those with many life events, those with an emotionally cold mother and those who have experienced violence in combat. Compared to the group with few life events, all other groups had adverse health and wellbeing in later life, especially those with an emotionally cold mother or many life events. Policies to improve health and wellbeing in later life should have a life course perspective focusing on at risk groups.

RF14 A SYSTEMATIC REVIEW OF 30-DAY READMISSIONS IN ADULTS HOSPITALISED WITH COMMUNITY-ACQUIRED PNEUMONIA

¹AM Klukowska*, ²WS Lim, ¹T McKeever, ^{1,2}H Pick, ²D Ashton. ¹Division of Epidemiology and Public Health, University of Nottingham, Nottingham, UK; ²Division of Respiratory Medicine, University of Nottingham, Nottingham, UK

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Background Community-acquired pneumonia (CAP) is one of the most common communicable diseases worldwide associated with significant levels of morbidity and mortality causing a substantial economic burden. 30-day hospital readmission rate is often used as a secondary outcome in studies of CAP. This data can be used to define the burden of disease and the reasons for readmissions potentially amenable to intervention.

A systematic review and random meta-analysis were conducted to estimate the pooled 30-day readmission rate of adult patients with CAP and 30-day pneumonia-related/non-pneumonia-related and cardiovascular-related readmission rates of such patients.

Methods MEDLINE, EMBASE, AMED (until October 2017) and reference lists of papers were searched to identify studies of CAP including 30-day hospital readmission rate of adult patients. Each step of the study selection process was conducted by two independent reviewers. The quality was assessed using a pre-tested form based on the Newcastle-Ottawa Scale. Pooled proportions of patients readmitted within 30 days with 95% confidence intervals (CI), were estimated. Additional subgroup analyses were conducted.

Results A total of 63 studies were included in the statistical analysis, covering the period from 1994 to 2017. The pooled 30-day readmission rate estimate was 0.10 (CI 0.08–0.11). High levels of heterogeneity were identified, $I^2=98.95\%$. Only two subgroups analysis reported statistically significant differences (p -value <0.05). Retrospective studies had a higher readmission rate of 0.12 (95% CI 0.10 to 0.14, $I^2=99.39\%$) compared to prospective studies, 0.07 (95% CI 0.06 to 0.09, $I^2=93.35\%$). Europe had significantly lower 30-day readmission rate, 0.08 (95% CI 0.07 to 0.10, $I^2=94.98\%$) than North America, which reported 0.11 (95% CI 0.09 to 0.14, $I^2=99.50\%$). Non-pneumonia-related readmissions accounted for 0.60 (95% CI 0.48 to 0.72, $I^2=89.00\%$) of all 30-day readmissions. Additionally, 0.31 (95% CI 0.25 to 0.37, $I^2=79.74\%$) of 30-day readmissions were pneumonia-related,

while 0.20 (95% CI 0.14 to 0.26, $I^2=33.55\%$) were cardiovascular-related. The studied populations were mostly composed of elderly patients. High levels of heterogeneity may have been due to different selection criteria of included studies and variations among health-care systems and treatment practices.

Conclusion Among all adult patients with CAP, 10% are readmitted to the hospital within 30 days. The majority of all-cause readmissions are non-pneumonia-related, specifically 20% are cardiovascular related. Only one third of 30-day readmissions are due to pneumonia.

RF15 PARTICIPANTS' PERSPECTIVES AND PREFERENCES ON CLINICAL TRIAL RESULT DISSEMINATION: THE TRUST THYROID TRIAL EXPERIENCE

¹E Racine*, ¹C Hurley, ¹A Cheung, ²C Sinnott, ¹K Matvienko-Sikar, ³WH Smithson, ¹PM Kearney. ¹School of Public Health, University College Cork, Cork, Ireland; ²The Healthcare Improvement Studies (THIS) Institute, University of Cambridge, Cambridge, UK; ³Department of General Practice, University College Cork, Cork, Ireland

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Background While there is an increasing consensus that clinical trial results should be shared with trial participants, there is a lack of evidence on the most appropriate methods. The aim of this study is to use a patient and public involvement (PPI) approach to identify, develop and evaluate a patient-preferred method of receiving results of the Thyroid Hormone Replacement for Subclinical Hypo-Thyroidism Trial (TRUST).

Methods This is a mixed methods study with three consecutive phases. Phase 1 iteratively developed a patient-preferred result method using semi-structured focus groups and a consensus-orientated-decision model to achieve consensus, a PPI group to refine the method and adult literacy review for plain English assessment. Phase 2 was a single-blind parallel group trial. Irish TRUST participants were randomised to the intervention (patient-preferred method) and control group (standard dissemination method as developed by lead study site in Glasgow, Scotland). Phase 3 used a patient understanding questionnaire to compare patient understanding of results between the two dissemination methods.

Results Patients want to receive results of clinical trials, with qualitative findings of perspectives and preferences indicating three key themes including 'acknowledgement of individual contribution', 'contributing for a collective benefit' and 'receiving accessible and easy to understand results'. Building on these findings, a patient-preferred method of receiving results was developed by researchers, trial participants and adult literacy experts. One hundred and one TRUST participants were then randomised to receive the patient-preferred result method or the standard dissemination method. The questionnaire response rate was 74% for the intervention group and 62% for the control group. There were no differences in patient understanding between the two dissemination methods.

Conclusion Patient and Public Involvement (PPI) is advocated for every step of the trial process. We have demonstrated that it is feasible to do this with regard to the dissemination of results. The study identified and developed a patient-preferred method of receiving clinical trial results for older adults over 65 years. Although, in this study PPI did not influence patients' final understanding of results, it provides a record of the process of conducting PPI within the clinical trial setting.