06C.2 DIFFERENCES IN CARDIOVASCULAR RISK FACTOR PROFILES ACROSS OCCUPATIONAL GROUPS

¹Lucy A Barnes*, ¹Marine Corbin, ¹Hayley J Denison, ¹Amanda Eng, ¹Andrea 't Mannetje, ^{2,3}Stephen Haslett, ¹David McLean, ¹Lis Ellison-Loschmann, ⁴Rod Jackson, ¹Jeroen Douwes. ¹Centre for Public Health Research, Massey University, Wellington, New Zealand; ²Institute of Fundamental Sciences – Statistics, College of Sciences, Massey University, Palmerston North, New Zealand; ³Statistical Consulting Unit, The Australian National University, Acton, Australia; ⁴Section of Epidemiology and Biostatistics, School of Population Health, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand

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Background Differences in cardiovascular disease (CVD) risk between occupations have been observed, but what specific risk factors underlie these patterns remains unclear. This study assessed how established CVD risk factors differ across occupational groups in New Zealand, and whether patterns differ by gender and ethnicity.

Methods Two probability-based sample surveys of the general New Zealand adult population (2004–2006; n=3003) and of the indigenous peoples of New Zealand (Māori; 2009–2010; n=2107), for which occupational histories and lifestyle factors were collected, were linked with routinely collected health data. For males and females in each cohort, smoking, body mass index, diabetes, hypertension and high cholesterol were dichotomised and compared between occupational groups using age-adjusted logistic regression. In addition, two way tables and chi-squared tests were used to compare the distribution of risk factors between white and blue-collar workers.

Results The prevalence of ever smoking was greater in blue-collar compared to white-collar workers of both cohorts, i.e. general population male (56%; 47%), general population female (62%; 47%), Māori male (68%; 55%) and Māori female (84%; 64%). For diabetes and high cholesterol, differences were statistically significant only for general population females (11%; 6% and 26%; 16% respectively). Hypertension prevalence was higher in blue versus white-collar workers for general population females (36%; 29%), Māori males (43%; 36%) and Māori females (44%; 37%), but not for general population males (35%; 34%). Results by occupational group revealed the same patterns with some noteworthy exceptions. In both cohorts, clerks had an increased risk of hypertension, particularly among males. Male agricultural workers in the general population cohort had a reduced risk of hypertension, diabetes and high cholesterol, but this pattern was not observed for females or among Māori.

Conclusion This study showed differences in profiles of known CVD risk factors across occupations, with some notable ethnic and gender differences.

06C.3 THE ASSOCIATION BETWEEN LONG-TERM EXPOSURE FROM HEAVY PHYSICAL WORK LOAD AND CORONARY HEART DISEASE IN MIDDLE AGED MEN

^{1,2}Tomas Hemmingsson*, ²Jenny Selander, ²Katarina Kjellberg. ¹Stockholm University, Stockholm, Sweden; ²Karolinska Institutet, Stockholm, Sweden

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Objectives Previous studies have shown conflicting results concerning the association between heavy physical work load and risk of coronary heart disease (CHD). The aim of this study was to investigate the association between long-term exposure

to heavy physical work load in middle age and risk of CHD among Swedish men during almost 20 years of follow-up.

Methods The study is based on a cohort of around 40 000 Swedish males, born 1949–51, with census information on occupation in 1985 and 1990 (at ages 34–41). Aspects of physical workload was estimated from job exposure matrices based on questions concerning heavy lifting, strenuous work postures, and physically strenuous work from the Swedish Work Environment Surveys 1989–97. Mean values for each physical exposure variable were assigned to over 300 occupational titles from the censuses conducted in 1985 and 1990. Only those 29 530 subjects who were in the same quintile of exposure both years were included in the analyses. Information on smoking behavior and body mass index (BMI) was collected at compulsory conscription for military training in 1969/70 (at 18–20 years of age), and follow up data on CHD (1457 cases) between the years 1991–2009.

Results An increased relative risk of CHD were found among workers in the quintiles with medium low (HR=1.36 CI95%=1.14–1.62), medium (HR=1.46 CI95%=1.23–1.74), medium-high (HR=1.62 CI95%=1.36–1.91), and high (HR=1.45 CI95%=1.22–1.71) exposure to heavy lifting at work compared with those in the quintile with low exposure to heavy lifting. After adjustment for smoking and BMI the risk estimates were somewhat lower but still significantly increased. Risk estimates of the same magnitude were seen for a number of other aspects of the physical work environment.

Conclusion There was an association between long-term exposure from heavy physical work load and CHD even after adjustment for smoking and BMI.

06C.4 THE RELATIONSHIP BETWEEN THE DEMAND-CONTROL MODEL AND INCIDENT CARDIOVASCULAR DISEASE IN ONTARIO CANADA. A LINKED ANALYSIS OF 12,358 WORKERS

Peter Smith*. Institute for Work and Health, Toronto, Canada

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Dimensions of the demand-control psychosocial work environment model have previously been linked increased incidence of both diabetes and hypertension in Canada. However, few investigations in Canada have examined the relationship between the demand-control model and cardiovascular disease.

We linked Ontario respondents to the 2000, 2002 and 2003 cycles of the Canadian Community Health Survey, to administrative health care and hospitalisation databases to identify incident cases of cardiovascular disease over a 15 years follow-up period. Our sample included employed labour market respondents, aged 35 and older, working 15 or more hours per week, with information on the psychosocial work environment, and who were free of heart disease at baseline (n=12,358). The demand-control model was defined based on median splits (active, passive, low strain and high strain), although models using the mid-population approach and the ratio of control to demands were also examined.

Over the study period 507 incident cardiovascular events occurred. The incidence was higher among men (5.5%) compared to women (2.6%). No statistically significant differences