and unintended outcomes depending on features of the health-care and income support system, as well as other contextual factors such as socioeconomic status and labour force composition.

Conclusion Income support systems impact the healthcare quality and functional capacity of people with work disability and LBP through context-dependent financial control, regulatory, and administrative mechanisms. Future policy design and research efforts should consider how income support systems may indirectly influence workers with LBP via the workplace.

04B.4 PREDICTORS OF RETURN TO WORK WITH READAPTATION IN PUBLIC WORKERS

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Objectives To identify factors associated with work readaptation after sick leaves in a group of public workers in Brazil.

Methods Case-control study of sick leaves in a university campus from 2010 to 2015. Logistic regression models were adjusted for two different response variables: readaptation and readaptation with limitations. A digital database was created and completed with data from manual sources.

Results Age at the beginning of the process, number of sick leaves, those of more than 16 days, average duration (total time of sick leaves/number of medical records), and mid-level healthcare positions were associated with work readaptation. In the model of readaptation with limitations, the age of hiring by the university, the number of sick leaves, those of more than 16 days, and mid-level healthcare positions, both rural work and operational positions were associated to the response variable.

Discussion A computerized database has been created, based on manual records, which has allowed us to identify labour and non-labour factors associated with the return to work after a sick leave and the possible functional readaptation, with or without limitation, in public workers. This has allowed proposing more efficient management of health measures to this population.

04B.5 MEASURING ASSOCIATION OF OCCUPATIONAL LIGHT VEHICLE DRIVING WITH LOW BACK PAIN: AN IRT APPROACH

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Low back pain (LBP) is a common problem for drivers but the analysis of associations of occupational exposures with LBP is hampered by the absence of a standardized clinical examination. Therefore, LBP is commonly assessed by a questionnaire in which useful information is scattered over many items. Many one-item-at-a-time analyses may not adequately evaluate these associations. We applied item response theory-like model (IRT) with one latent variable to

examine the association of occupational light vehicle driving with LBP in 406 workers in the mail and parcel delivery sector using a 14-items questionnaire on LBP in the last 12 months investigating the cumulative duration of LBP, pain intensity, level and radiation in the lower limbs, medical consultation, pain medication use and sick leaves. We normalized the latent variable by constraining its variance to one. The link between the latent variable and the LBP indicators was logistic for binary variables, ordered logistic for ordered categories and linear for quantitative variables. Ordinal variables and quantitative variables were ordered in ascending order of severity. The relationship between LBP and occupational exposure to driving was estimated by multiple linear regression models with the latent variable as dependent variable, adjusting for individual factors, other occupational physical constraints and psychosocial factors, separately in men and women. All the factor loadings between the latent variable and LBP indicators were positive ($p < 0.001$) indicating that the latent scale is consistent with health impairment on the low back. In men, driving time ($p = 0.007$) and high perceived driving-related physical constraints ($p = 0.024$) were associated to LBP whereas in women no driving-related constraints were associated to LBP. In the absence of a standardized clinical tool, studies about association between occupational exposures and LBP could benefit from methods that are able to retrieve diffuse information broken out into ad hoc questionnaire.

04B.6 DO WE NEED REPEATED MEASUREMENTS FOR RELIABLE CLASSIFICATION OF CASE STATUS REGARDING MUSCULOSKELETAL PAIN?

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Musculoskeletal disorders (MSDs) are major causes for disability, reduced work ability and early exit from the labour market. The aetiology is understood to be multifactorial and MSDs are known to have a recurrent course characterized by development, recovery, reoccurrence and chronic states. Studies classifying participants as suffering from e.g. low back pain based on self-reported symptoms solely at one time are therefore at risk of just capturing the point prevalence of pain and not a more representative state characterizing the participants.

In order to investigate how well a classification based on self-reported musculoskeletal complaints of the neck, shoulders and lower back in a baseline questionnaire represents the situation of the respondents' pain and functional status over a 12 month period, we analysed data collected in a study on 129 employees at selected Swedish home-care providers. The participants completed a baseline questionnaire on work environment and mental and physical health and responded to questions on the impact on work capacity of pain sent monthly to their phones by text messages.

The results show that classification into cases and non-cases based on reported musculoskeletal complaints at baseline was a statistically significant predictor of persistent differences between groups with regard to pain and work capacity

throughout the 12 months covered by text messages. The variation in work capacity over time seemed to be more pronounced in case groups.

In conclusion, classifying respondents as cases and non-cases based on self-reported musculoskeletal complaints of the neck, shoulders and lower back at baseline seems to be a good predictor of persistent differences in self-reported work capacity due to neck, shoulder and low back pain during the following year.

Precarious Employment/Migrant Workers

04C.1 FEMALE LANDFILL WASTE PICKERS AND THEIR HEALTH

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Informal waste pickers and employees working on a landfill site are exposed to multiple risks such as noise, toxic chemicals, metals, dust and ergonomic hazards. How these hazards affect the health of workers may differ by sex.

Methods A cross-sectional study was conducted among waste pickers aged 18 years or older, working in major landfill sites in Johannesburg. Information on health, work hazards and health care access were collected in interviews in the workers own language.

Results A third (27%) of the 363 waste-pickers interviewed in this study were female. These women were on average older and less educated than the men and a significantly larger proportion were born in neighbouring countries. Women waste pickers had a higher prevalence of hypertension (30.9% vs 18.4%) and HIV (24% vs 7.0%) than men. This is unlikely to be a reporting bias as women had higher BMI's ($p=0.0002$), glucose blood levels ($p=0.022$), cholesterol ($p=0.0014$) and diastolic blood pressure ($p=0.0081$).

Discussion The factors driving women to work as waste pickers appear different to men and women's health is worse than that of the men in terms of lifestyle diseases and HIV. Although in general waste pickers have a lower prevalence than the general population. This follows the pattern of the South African Demographic and Health Survey 2016.

04C.2 IMPACT OF PRECARIOUS WORK ON THE WELLBEING OF WOMEN AND MIGRANTS IN AUSTRALIA

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Introduction Women and migrants are more likely to be in precarious work than men and native-born workers. Precarious work impacts adversely on work-related injuries, fatalities and health but little is known about how it affects the wellbeing of women and migrant workers. The aims of this study are; (1) to examine whether precarious work differs by migration status and sex and 2) to determine whether the impact of

precarious work on the wellbeing of women and migrants differs to that of males and native-born workers.

Methods In 2016/17 a national telephone survey examined psychosocial workplace hazards among 1630 migrant and 1051 Australian-born workers. Precarious work (vulnerability and job insecurity) and wellbeing were collected with sociodemographic and employment variables. Higher scores indicate greater vulnerability/insecurity/less wellbeing. Univariate statistics examined the association between precarious work and wellbeing by sex and country of birth. Stratified linear regression modelled the relationship between precarious work and wellbeing by sex.

Results Independent of country of birth, females had higher vulnerability ($\mu=6.5$, $\sigma=3.4$) than males ($\mu=5.5$, $\sigma=3.6$), in contrast to job insecurity (Women $\mu=8.2$, $\sigma=4.0$; Men $\mu=8.2$, $\sigma=3.9$). Workers born in the Philippines had higher vulnerability compared with other migrant workers ($\mu=6.6$, $\sigma=3.4$ vs $\mu=5.9$, $\sigma=3.6$) whereas workers born in India had higher employment insecurity compared with other migrant workers ($\mu=8.8$, $\sigma=4.1$ vs $\mu=8.1$, $\sigma=3.9$). Increasing vulnerability and insecurity adversely impacted wellbeing most in Australian workers. Compared with men, vulnerability had a greater adverse impact on the wellbeing of women.

Discussion Two dimensions of precarious work impact the wellbeing of men and women differently. Vulnerability impacts women most whereas work insecurity impacts men. For Australian born, the impact of either dimension on wellbeing is greater than for migrant workers.

04C.3 JOB STRAIN, EXPOSURE TO CARCINOGENS AND THE WELLBEING OF MIGRANT WORKERS

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Introduction Job strain adversely affects wellbeing. It is unclear if job strain increases the risk of exposure to carcinogens. The aim of this study is to examine how high strain jobs influence exposure to carcinogens and wellbeing and whether this varies by migration status.

Methods A national telephone survey conducted in 2016/17 examined exposure to workplace hazards among 1630 migrant workers (born in India, New Zealand and the Philippines). Exposure to carcinogens was assessed an online platform that automates exposure assessment. High job strain and wellbeing was measured using standardised questionnaires. Univariate statistics examined high job strain and exposure to carcinogens by country of birth. Models were developed to explore these associations.

Results There were no differences in prevalence of job strain by country of birth with percents ranging from 23.8% [95% CI 18.6,30.0] for India-born workers to 26.5% [95% CI 21.7,31.8] for New Zealand-born. A lower percent of migrants born in India or the Philippines were exposed to any carcinogens at work 55.2% [95% CI 51.2,59.0] compared New Zealand workers (68.8% [95% CI 63.9,73.4] vs 55.2% [95% CI 51.2,59.0]). Wellness means ranged from 13.6 [95% CI 13.1,14.1] for Philippines-born workers to 14.3 [95% CI 13.9,14.7] for New Zealand-born. Wellbeing was adversely impacted by high job strain (Coef=2.1 95% CI 1.7,2.6). There was no difference by country of birth. Job strain was not associated with exposure to carcinogens but country of birth was