plan for what to do when ageing firefighter fails to pass the cut-off values of the tests.

Discussion The FireFit method seems to act as a tool of co-operation between OHP and actors in RRS. It seems to make early interventions more appropriate for firefighters with decreasing work ability. High quality use of the method requires continuous education and training of its users.

1620b PREVENTIVE INTERVENTIONS TO ASSIST WORKERS TO STAY AT WORK: WORKERS' HEALTH SURVEILLANCE (WHS) AS EXAMPLE

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Introduction WHS is a preventive periodical strategy to monitor the work-relevant aspects of health in specific groups of workers. The idea is that occupational health professionals could signal individual problems that could lead to a decrease in work ability, and intervene timely on those aspects. In the Netherlands, specific guidelines exist for occupational physicians on this topic. Examples will be provided to give more insight in the relevance and effects of this strategy.

Methods For four specific jobs (doctors, nurses, construction workers, ambulance workers), job-specific WHS was developed and implemented in research and/or practice. The prevalence of signalled problems and workers' experiences with the WHS were researched, calculated and will be reported upon in detail.

Result The WHS for hospital doctors was developed, feasibility was tested and the doctors were satisfied with the process, would participate again and had the impression the WHS could improve their future work ability. In nurses, two strategies of WHS were studied in an RCT and effects on work-functioning was tested: the WHS performed by occupational physicians was cost-effective on work-functioning compared to an e-WHS. In construction workers, a controlled study compared a job-specific WHS with the classic form and it was shown that workers more often undertook action or sought for specific after the job-specific WHS. The WHS for ambulance workers was implemented on a national level and high prevalence of job-specific health problems were found.

Discussion The positive and negative experiences with job-specific WHS as preventive strategy will be shown.

1620c EFFECTS OF A BEHAVIOURAL INTERVENTION PROGRAM ON PERCEIVED WORK ABILITY AMONG MUNICIPAL EMPLOYEES

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Introduction Long-term sickness absence and early retirement are large problems in the municipal employment sector. Ways to support work ability and coping at work are therefore required. It is important that timely actions are targeted towards employees at risk to improve their health, promote work ability and prevent long-term sickness absence and early retirement. The aim was to evaluate effects of a cognitive

behavioural therapy in an early rehabilitation program to improve employees' work ability.

Methods Participants (mean age 49,9 years) in the intervention and in the control group were measured at base-line and after a 9 month follow-up to estimate the causal impact of the intervention in the study group (n=389), compared with a control group (n=100) that was not offered this intervention. The work ability of both groups was measured using the work ability index (WAI). Differences were analysed within and between groups with the analysis of variance for repeated measurements

Results Participants in the intervention group showed a significant increase in several WAI areas, resulting in an overall increase in the total WAI score (36,9–38,2; $p<0.001$) although there was a significant decrease in WAI in the control group (37,6–36,7; $p<0.05$).

Conclusions The results suggest that the early rehabilitation program was effective in increasing employees' work ability, as measured by the WAI.

1620d WORKSITE HEALTH PROMOTION PROGRAMS FOR AGEING WORKFORCE IN EUROPE. THE EXPERIENCE OF PROHEALTH65+

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Introduction The proportion of older workers has increased substantially in European countries. The study project Pro-Health65+, funded by EU-CHAFEA, collected experiences of workplace health promotion for older workers (WHPOW) conducted in 10 representative countries of Central

Europe, Eastern Europe and the Mediterranean.

Methods Research studies of WHPOW conducted from 2000, 1 st January, to 2015, 31 December, were identified through a comprehensive literature review and a search on the website of the major

European Agencies on worker health promotion. Researchers and companies were asked for additional documentation about WHPOW programmes in a survey conducted with Survey Monkey.

Results A total of 622 intervention studies performed or promoted in the workplace and targeted at older workers or at the ageing of the workforce were identified. Most of the programs were carried out in Central Europe (295, 47.4%), less in East Europe (193, 31.0%) and in Mediterranean countries (134, 21.6%).

Discussion Our study shows that there are only a limited number of WHPOW actions throughout the 10 selected European Countries. While in Central Europe widespread interest in issues of ageing workforce has resulted in national policies to encourage WHPOW, not all the countries of Eastern Europe are equally well equipped. Lastly, in Southern Europe health promotion activities are largely inadequate compared to needs.

1607 AGEING AND MUSCULOSKELETAL DISORDERS – THE IDENTIFICATION OF MUSCULOSKELETAL RISK FACTORS AND THE WORK ABILITY INDEX

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Introduction The world's population is ageing. This creates a need to work for longer, both for income and to provide an adequate labour force. For those employed in predominantly physically demanding jobs this means they are prolonging their exposure to risk factors known to increase the likelihood of a musculoskeletal injury when their work capacity may be declining. The work ability of older workers has been most frequently assessed using the Work Ability Index (WAI). Several studies have reported significant associations between low WAI scores and sickness absence and early retirement. Relatively fewer studies have examined associations between WAI scores and specific workplace risk factors. The purpose of this study was to investigate the association between a range of workplace risk factors and the WAI scores in a cohort of workers employed in physically demanding jobs.

Methods A cross-sectional survey of workers employed in physically demanding roles within a local government council was undertaken. The survey instruments included questions on demographic and employment characteristics, physical and psychosocial risk factors, pain and discomfort, and the Work Ability Index.

Result The survey was completed by 155/245 of eligible workers – a 63% response rate. Respondents had a mean age of 44 years. They were predominantly male (86%) with an average length of employment of 12 years. Bivariate regression analyses were undertaken to examine the relationship between WAI scores and age, pain/discomfort, levels of stress, irritation, job satisfaction, work-life balance, and 49 other work environment risk factors. Significant associations with WAI scores were seen for age, pain/discomfort and physical and psychosocial risk factors. The WAI score was reduced by more than 2.5 points for those who reported higher levels of exposure to a range of physical and psychosocial risk factors compared with those who reported lower levels of exposure.

Discussion It was found that the WAI provided a useful means to identify a range of workplace risk factors which, if addressed, could inform the development of interventions to maintain a healthy, older workforce. It is proposed that tailoring interventions using this approach should enhance their effectiveness.

1617 AGEING AND SHIFTWORK

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Aim of this special session Ageing and shiftwork is a rather new and 'hot topic' because of the intentions to prolong working lives in many countries. Because shiftwork could be very demanding for older employees it need more attention than earlier.

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1617a PERMANENT NIGHT WORK, AGE AND SICKNESS ABSENCE

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Introduction Night shift work is associated with adverse health effects. Yet, some persons prefer working permanent night shifts and it is speculated that they tolerate night work better than others. The aim of is to study associations between permanent night work, age and sickness absence. Due to self-selection out of night work over time by those who experience negative effects of night work, we hypothesised that older workers with permanent night work are 'healthy workers' with less sickness absence compared to other groups.

Methods Information on working hours, age (20–34 years, 35–49 years and >50 years) and sickness absence was obtained from the Danish Working Hour Database, which contains daily information on starting and ending time of working hours based on payroll data for all employees at Danish public hospitals (2008–2015). For each year with >50 workdays, individual schedules were classified as *permanent* day, evening or night (>88% of work days with night work), *2-shift* (day/evening, day/night or evening/day) or *3-shift* (day/evening/night). We applied linear regression with individual as random intercept (participants served as their own controls) for employees (n=5774) with at least one year of permanent night work.

Results Employees aged >50 years had 25.6 sickness days/year when working permanent night, which is more than in all other schedules. In comparison, employees had 9.0 (sd=1.0) fewer days when working permanent day, 7.3 (sd=2.4) for permanent evening, 6.3 (sd=0.9) for day/evening, 3.2 (sd=0.6) for day/night, 5.3 (sd=1.0) for evening/night, and 5.5 (sd=0.7) for day/evening/night. There was no interaction effect between schedule and age.

Discussion Employees had more sickness absence when working permanent night work compared to any other schedule. The association was not modified by age and did therefore not indicate that older employees with permanent night work tolerate night work better than others.

1617b PSYCHOSOCIAL AND HEALTH IMPLICATIONS OF AROUND THE CLOCK OPERATIONS FOR CORRECTIONS OFFICERS

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Introduction Corrections officers in state and federal prisons are faced with physical and psychosocial work demands that create challenges for maintaining high levels of workability, health and personal well-being. Furthermore, features of