

Results The implementation of the intervention resulted in a benefit of € 3,906,000 (standard deviation €3,987,000) and 7,200 saved disability-adjusted life years (standard deviation 3,000). Including uncertainty and variation for cost elements and performing Monte Carlo simulations (1000 runs) gave insight in the variability in the output. For two stakeholders (employees, society) the output was surrounded with uncertainty but cost-effective. For the third stakeholder (employers), due to the uncertainty, it was not possible to indicate whether the intervention would be cost-effective. The analysis indicated that the most important source for variance was productivity.

Conclusions The described approach gives insight in costs and benefits for different stakeholders in a structured manner. Including a probabilistic approach gives valuable insight in uncertainty and sensitivity of the different cost elements resulting in a more certain outcome of the analysis.

402 DOES EARLY RETIREMENT REDUCE THE RISK OF MYOCARDIAL INFARCTION? A PROSPECTIVE REGISTRY LINKAGE STUDY OF 617,511 DANISH WORKERS

¹K O Olesen, ²Rugulies, ³Hulvej Rod, ¹Bonde. ¹Department of Occupational and Environmental Medicine, Bispebjerg Hospital, Copenhagen NV, Denmark; ²National Research Centre for the Working Environment, Copenhagen, Denmark; ³Section of Social Medicine, Department of Public Health, University of Copenhagen, Copenhagen, Denmark

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Objectives Demographic changes throughout the industrialised world will increase the proportions of retired individuals relative to the active workforce in the coming decades. This will put a substantial financial strain on the economy. Recent studies suggested that early retirement may have beneficial effects on health outcomes. In this study we examined if the risk of myocardial infarction (MI) was reduced following retirement in a Danish population sample.

Methods Participants were 617,511 Danish workers, born between 1932 and 1948 entering the study at the age of 60, without previous known incidents of MI or ischemic heart disease. Information on retirement and MI were obtained from Danish national registers. The participants were followed-up from the week they turned 60 years until event (incident MI) or censoring due to death to causes other than MI, migration, absence from the labour market of more than 26 weeks, or end of 8 years of follow up, whichever came first. We used Cox proportional hazard model to address the relation between retirement and onset of MI, while adjusting for age, sex, income, job-group, education, cohabitation and ethnicity.

Results Three per cent of the population was diagnosed with MI during follow up. Retirement was associated with a modestly increased risk of MI (OR = 1.11; 95% CI = 1.06 to 1.16) when comparing retired workers with active workers of the same age. Further analyses stratified by covariates yielded similar results.

Conclusions This study does not support the hypothesis that early retirement reduces risk of MI. On the contrary, we found that retirement was associated with a modestly increased risk of MI.

403 OCCUPATIONAL SAFETY AND HEALTH IMPACT ASSESSMENT; HEALTH, SOCIO-ECONOMIC AND COST EFFECTS OF EXCLUDING SMALL LOW RISK COMPANIES OF THE RIE-OBLIGATION

S G van den Heuvel, Geuskens, Vergeer, Treutlein, de Weerd, Dhondt. TNO, Hoofddorp, Nederland

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Objectives Policy makers have an urgent need for quantitative data to support their decision-making process. More and more quantitative data are available, but the main problem remains how to construct useful information from all this data. The TNO Occupational Safety and Health Impact Assessment (OSHIA) ex ante tool helps policy makers with ex ante impact assessment in the field of occupational safety and health. This paper applies this method on a case example, the abolishment of the obligation to carry out a RIE for companies (1–9 employees) in low risk sectors in the Netherlands.

Method A stepwise quantitative ex ante evaluation was carried out following the TNO OSHIA framework. To gain insight into the affected population, compliance with the current legislation, and the effect of (abolishment of) a RIE on work-related exposures, health (MSD, depressive symptoms), QALY's, and socio-economic effects (sick leave, productivity). Data were used from the Netherlands Working Conditions Survey (NWCS), the Employers' Labour Survey (WEA), and the literature (QALY, productivity). A cost-benefit analysis was carried out to estimate the change in costs for employees, employers and society if the RIE would be abolished. The analysis was based on several scenarios of the change in exposure. Within each scenario a sensitivity analysis was included.

Results The examined change in legislation would affect approximately 250,000 employees in approximately 65,000 companies. Of these companies, only 27% carried out a RIE in 2010. In most scenarios the health and socio-economic effects were small.

Conclusions The stepwise approach of the ex ante impact assessment proved to be useful to estimate the consequences of a policy change in OSH. In particular, the use of scenarios and the analysis of the uncertainty provides insight that facilitates policy decisions.

404 LONGITUDINAL ASSOCIATIONS BETWEEN FLIGHT SCHEDULES AND OCCUPATIONAL ACCIDENTS AMONG CABIN CREW

¹A van Drongelen, ¹Boot, ¹Pas, ²Penders, ³Hlobil, ¹van der Beek, ¹Smid. ¹VU University Medical Center/EMGO Institute for Health and Care Research, Amsterdam, Nederland; ²Health-Works, Naarden, Nederland; ³KLM Health Services, Schiphol Airport, Nederland

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Objectives Work schedules of cabin crew involve early starts, long working hours, night flights and the crossing of time zones. This can impose disturbed sleep, fatigue, lack of alertness, and possibly cause occupational accidents onboard. Although it has been shown that the risk for occupational accidents increases over successive shifts, it is unclear what kind of longitudinal flight schedule exposure affects their incidence. Therefore the objective of this study is to examine the associations between cumulative exposure to different flight schedules and the occurrence of occupational accidents among cabin crew.

Methods Data from the five-year historic MORE cohort was used. The study population consisted of 6311 cabin crew members from this cohort. For each employee, daily flight schedules from 2005 until 2008, and registered occupational accidents in 2009 were collected. The association between the cumulative exposure to different types of flight schedules and the