183 OCCUPATIONAL SAFETY AND HEALTH IMPACT ASSESSMENT (OSHIA): HOW TO ESTIMATE THE EFFECTS OF CHANGES IN OCCUPATIONAL EXPOSURE ON HEALTH OUTCOMES

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Objectives Policy makers have an urgent need for quantitative data to support their decision-making process. This study examines how policy-induced changes in occupational exposure on health could be modelled, using the example of exposure to 'awkward postures'.

Methods Data of almost 8000 persons participating in the Netherlands Working Conditions Cohort Study were used. Exposure to awkward postures (no, sometimes, regularly) and confounding factors were assessed in 2008, while the outcome variables back pain and sickness absence were assessed in 2009, all by questionnaire. The parameters of the relation between awkward postures and both outcomes were derived from logistic regression analyses. In our final prototype estimation model, a parameter was included representing the hypothetical effect of a policy intervention on exposure that could be varied from 0% (current level) to 100% (no exposure to awkward postures).

Results The prototype estimation model was able to estimate effects of variation in exposure to awkward postures due to the impact of a policy intervention on back pain and sickness absence. In the present example a decrease of workers exposed to awkward postures from one third to 20% of the population resulted in a decrease in the occurrence of back pain from 27.2% to 25.8% and a decrease in the occurrence of sickness absence from 48.6% to 48.5%.

Conclusions The prototype application has proven to be a useful tool to estimate changes in health and sickness absence due to a change in exposure to an occupational risk factor.