

aged 15 to 17 years, and the majority (88%) were 18 years of age or older. In each age group, work-related mortality rates (per 100,000) were 1.5, 3.3 and 4.8 among males, and for girls 1.1, 0.3 and 0.3, respectively. The most common circumstance related to the injury involved transport. Farming predominates (89%) among occupations in the youngest group, falling to 48% and 18% in the older age ranges, respectively.

Conclusions Our findings reflect an unacceptable reality in Brazil, the 7th largest world economy. The agriculture industry needs to be targeted for actions to eliminating child labour and to enhancing compliance with protective standards against the worst forms and most hazardous occupations in the group of young workers

Oral Presentation

Other

0219 THE SYNERGY EXPOSURE ASSESSMENT STRATEGY

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Objective The use of measurement data in occupational exposure assessment allows more quantitative analyses of possible exposure–response relations. We describe a quantitative exposure assessment approach for the five lung carcinogens selected for the SYNERGY project, that is, asbestos, chromium-VI, nickel, polycyclic aromatic hydrocarbons (by its proxy benzo(a)pyrene (BaP)) and respirable crystalline silica. A quantitative job-exposure matrix (i.e. SYN-JEM) was developed based on statistical modelling of large quantities of personal measurements.

Methods Empirical linear models were developed using personal occupational exposure measurements from Europe and Canada, as well as auxiliary information like job (industry), year of sampling, region, an a priori exposure rating of each job (none, low, and high exposed) and sampling duration. The model outcomes were used to create SYN-JEM with a quantitative estimate of the level of exposure by job, year, and region.

Results Decreasing time trends were observed for all agents between the 1970s and 2009, ranging from –1.2% per year for personal BaP and nickel exposures to –10.7% for asbestos before a ban was implemented. Regional differences in exposure concentrations varied by agent, ranging from a factor 3.3 for chromium-VI up to a factor 10.5 for asbestos.

Conclusion We estimated time-, job-, and region-specific exposure levels for four (asbestos, chromium-VI, nickel, and RCS) out of the five considered lung carcinogens. Statistical modelling of large amounts of personal occupational exposure measurement data enabled the derivation of a quantitative general population JEM, which can be applied to the SYNERGY population.

Oral Presentation

Other

0220 ADVANCING THE PREVENTION OF LONG-TERM SICKNESS ABSENCE: CONSIDERING THE IMPACT OF THE CONTEXT OF LEGISLATION IN EFFECTIVE PREVENTIVE STRATEGIES

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Background Sickness absence is highly prevalent and has a complex multifactorial aetiology. A multitude of approaches exist aimed at health, personal, work related and cultural factors. But also the context of legislation has to be addressed when developing, evaluating or implementing preventive interventions.

Aims 1) To substantiate the role of legislation in research on the effect of strategies aimed at reducing long term sickness absence; 2) Elaborate on methodological prerequisites for advancing the evidence base of interventions, focussing on (legal) contextual factors.

Results Role of legislation can be threefold:

1. Direct, as (part of) intervention
2. Indirect, such as changing definitions of sickness absence, or (early) pensioning.
3. Facilitating/hindering factor in implementation of proven interventions

To address the context of legislation, ideally large multinational trials with large sample sizes are needed, requiring substantial resources. An alternative efficient approach might be to combine: 1) Address the impact of contextual (legal) factors by integrating contextual data from (new) trials on the effectiveness of preventive strategies by means of meta regression; 2) Use multi-regional or multi-national databases to compare intervention uptake, outcome and contextual factors in workers (registry data) testing prior hypotheses regarding the impact of legal differences on sickness absence indicators.

Conclusion Large potential gains by reducing long term sickness absence and work disability require innovative but methodologically sound approaches, and should consider the impact of the (legal) context. Enhanced access to multinational data-bases and better reporting of contextual and legal factors related to trials (extension of STROBE, CONSORT) are prerequisites.

Poster Presentation

Other

0223 OCCUPATIONAL HEAT EXPOSURES IN INDUSTRIES AND RENAL HEALTH – FINDINGS FROM INDIA

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