

12 ESTIMATING THE GLOBAL BURDEN OF WORK-RELATED FATAL INJURY TAKING INTO ACCOUNT TEMPORAL CHANGES

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Background As part of the new Global Burden of Disease initiative, estimates are required of work-related fatal injury for the years 1990 and 2005. Point estimates of fatal injury in most countries were available from a separate study for 2001.

Aims/Objectives/Purpose This abstract describes the approach for estimating changes in fatality rate over time which could be applied to the 2001 data to provide the required estimates for 1990 and 2005.

Methods Changes in rates over time were estimated using available published cohort data on work-related fatality rates, modelled using Poisson regression. These Poisson estimates were applied to the 2001 numbers to provide estimates for 1990 and 2005. These estimates of the total number of injuries for each Region and both years were distributed by sex and age. The age and sex distribution information was based on a meta-analysis of all sex-specific information available from the literature.

Results/Outcome Virtually all regions for which there were data have shown a decline in fatality rates in the last two decades. The estimated decline in rates over time was 0.952 (95% CI 0.940 to 0.965) per year overall. This decline appeared smaller for developing regions (yearly decline=0.956 (95% CI 0.943 to 0.970)) compared to developed regions (yearly decline=0.935 (95% CI 0.904 to 0.96)) and differed considerably between some individual regions.

Significance/Contribution to the Field Declines in fatality rate over time can be usefully modelled using Poisson approaches and are important to take into account when estimating injury burden at different times.