190 PREDICTING THE FUTURE BURDEN OF OCCUPATIONAL CANCER

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10.1136/oemed-2011-100382.190

Objectives The aim of this project is to estimate the future burden of occupational cancer and to forecast the impact of alternative policy decisions as they affect future workplace exposure levels.

Methods The method builds on an approach using attributable fractions (AFs) developed to estimate the current burden of occupational cancer. Risk exposure periods (REPs) are projected forward in time, to estimate AFs for forecast target years up to 2060 to allow for cancer latency. The estimates take into account past and projected exposure trends and also targeted reduction scenarios, using adjustment factors for changes in exposed numbers and levels applied in estimation intervals within the REPs. Comparative estimates can be made even where exposure data are limited. The method has been applied to exposures that account for 86% of current occupational cancers. Scenarios tested include reducing numbers exposed or excess risk, and the introduction of exposure standards or of improving compliance to current standards.

Results Forecasts are presented of cancers attributable to occupational exposure to asbestos, ETS, radon, solar radiation, coal tars and pitches (PAHs), crystalline silica, arsenic, strong inorganic acid mists, tetrachloroethylene, DEE, TCDD, and employment as a painter, welder or on night shift work, plus estimates of cancers that could be avoided given appropriate interventions to reduce exposure.

Conclusions The method can be used to highlight carcinogens, industries and occupations where risk remains high, and to demonstrate the comparative effectiveness of the timing and nature of intervention and the importance of compliance to existing and proposed standards.