factors for changes in exposed numbers and levels are applied in estimation intervals within the REPs.

**Results** The methods are illustrated using a range of scenarios for reducing lung cancer due to occupational exposure to respirable crystalline silica (RCS). AFs for lung cancer due to RCS could potentially be reduced from 2.07% in 2010 to nearly zero by 2060, depending on the timing and success of interventions.

**Conclusion** The importance of focusing on achieving compliance with current exposure standards in small industries is highlighted and can be more effective than setting standards at a lower level. The method can be used to highlight high-risk carcinogens, industries and occupations and is designed to allow comparative estimates to be made even where exposure data are limited. It is adaptable for other countries and other exposure situations in the general environment and can be extended to include socio-economic impact assessment.

**REFERENCES**

**P1-176 DEPLOYMENT AND EVALUATION OF A FORECASTING MODEL FOR INFECTIOUS DISEASES IN JAPAN USING TIME-SERIES ANALYSIS**

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**Introduction** Bias occurs in particular when estimates are based on sparse or inadequate data. We have estimated the burden of cancer in Great Britain attributable to occupation using an attributable fraction (AF) methodology, and present an adaptation of Greenland’s Monte-Carlo sensitivity analysis (MCSA) to account for bias uncertainty.

**Methods** Sources of bias in burden estimation include using Levin’s estimator with adjusted RR, unknown cancer latency, unknown proportions exposed and inadequate estimates of employment turnover. Each source of bias operates on a component of the AF estimator, which is represented by a factor for which a prior distribution is estimated from independent sources. Monte-Carlo repeated sampling from these distributions is then used, recalculating the AF each time.

**Results** Results are presented graphically for a hierarchy of bias sources that contribute to an overall credibility interval for the AF. For sinonasal cancer and wood dust the intervals for bias due to the variables contributing to the proportions exposed are narrower than the interval for RR random error only, and bias from incorrect use of Levin’s estimator makes the least contribution.

**Conclusion** The method presented illustrates the use of credibility intervals to indicate important sources of uncertainty and facilitates identification of data gaps and future research needs.