

**Qualitative Exposure Assessment in the Adjudication of Workers
Compensation Claims for Occupational Diseases**

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Problem

In 1999, the WSIB adjudicated approximately 100,000 lost-time claims. Only 4.4% of these claims were attributed to exposure to a harmful substance. However, the cost associated with these claims accounted for 20% of the total compensation cost. To adjudicate occupational disease claims 2 essential pieces of information are required, a medical diagnosis and the exposure profile for the worker. Prior to 2001 few occupational disease claims at the WSIB were adjudicated with the aid of dedicated occupational hygienists.

To provide exposure profiles the Hygienist must reconstruct the conditions and possible exposures for work processes that were in operation years and sometimes decades in the past. These exposure assessments can encounter a myriad of challenges such as: lack of access to the worker, changes to the work environment, lack of historical processes information and credibly sampling data and complex work histories.

Objective

To identify the possible airborne exposures for a group of claimants working for an inorganic chemical manufacturer during a 45 year period. All of the claimants died of cancer in the early 1990's. Each of the claimants spent the first few years on the site as general labourers and could have been anywhere on the work site. All of the workers eventually shifted to various trades including machinist, rigger, carpenter and electrician. The work site produced a variety of different products with limited exposure information for the majority of these work processes.

Method

Often traditional exposure assessment techniques such as sampling are not possible. Therefore, a qualitative approach is often utilized. The hygienist must describe in chronological terms, with a focus on exposures, changes to the work site, the production process, the job description and finally the work history of the worker. Some tools used to conduct these assessments include: interview of retired co-workers and family, union seniority lists, historical SOP, regulatory inspection reports and process and exposure information from sources such as NIOSH, the EPA and OSHA. The information is then summarized using hazard mapping techniques to identify potential exposures, in conjunction with the determinants of exposure information to estimate the intensity or the likelihood of exposure. A method of using these techniques is presented in this paper and is demonstrated by a case study.

Research Results

N/a

Conclusions

N/a