collected by a software, the Surveillance System for Nursing Workers Health -SIMOSTE in the period December 2012 to March 2013.

**Results** The Surveillance System for Nursing workers Health identified 1847 injuries in the period December 2012 to March 2013. There were prevalence of occurrence between nurses (80.94%) and musculoskeletal diseases were the most prevalent (34.70%), followed by diseases of the respiratory tract (13.05%). Regarding the consequences, observed 10.67% of accidents and 86.63% of medical licenses.

**Conclusions** The data point to the need for development of new shares surveillance focused on the notification of occupational accidents and work-related diseases, and prevention of diseases. The Surveillance system is a technology capable to operationalize institutional policies regarding occupational health and the valuing of human resources, considering that monitoring and analysing the workers’ health situation is an indispensable action for the planning of strategies to promote the improvement of their working conditions.

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**4050**

**AN INTERNATIONAL HISTORICAL COHORT STUDY OF WORKERS IN THE HARD-METAL INDUSTRY: EXPOSURE ASSESSMENT**

**Objectives** A multinational occupational epidemiological study is underway to investigate the total and cause-specific mortality of workers exposed to tungsten carbide with a cobalt binder (WCCo). The study includes 12 US and 9 European plants. The objective of the exposure assessment component, coordinated by the University of Illinois at Chicago, is to reconstruct agent-specific exposure estimates for use in the epidemiological analyses.

**Method** Quantitative occupational exposures are being generated through a process of modelling and validation using industrial hygiene data from study plants. Innovative semi-quantitative methods are being developed to extrapolate data for years in which it is missing, and are based on exposure changes due to manufacturing process changes over time (e.g., moving from manual to automated methods). Company work history information is being used to construct a job dictionary. The resulting exposure estimates and job dictionary will form the job-exposure matrix.

**Results** The agents of interest are WCCo, tungsten carbide, tungsten, cobalt, and carbon black. Current and past working environments are being characterised according to products manufactured and operations performed and in relation to potential exposures using sampling data, job descriptions, plant and process histories, and information provided by knowledgeable plant personnel.

**Conclusions** Exposure estimates will be generated for the study plants. The multinational aspect of the study provides the opportunity to pool data and produce exposure estimates for all 21 facilities with potential insight into similarities or differences among countries and/or plants involved in the same global industry. This presentation will detail the progress to date on the exposure assessment effort.

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**4053**

**LEPTIN, ADIPONECTIN, AND HEART RATE VARIABILITY AMONG POLICE OFFICERS**

**Objectives** To investigate the relationship of leptin and adiponectin with heart rate variability (HRV).