

Methods The history and current status of occupational health studies were assessed from the perspective of ODs surveillance and management. First, interpretative research was done through literature review on occupational health at national, regional and international level. Analyses were focused on countries' experiences on policy development and practice, roles and responsibilities of institutions and other actors, multidisciplinary and intersectoral collaboration practices. Second, ODs surveillance models of Turkey, Belgium and the Netherlands were examined in a comparative way through exchange visits. Face-to-face interviews were conducted to explore the peculiarities of legislative and institutional structures, the best and worst experiences, approach principles and important events.

Results Findings show that some countries are more focused on exploring ODs trends through effective and cost-efficient researches with particular attention to new and emerging diseases. While some countries try to reach every single case of ODs with an aim to redress the situation of victims through compensation and rehabilitation. Although each practice has different advantages and shortcomings, they are not mutually exclusive, and thus effective combination is possible.

Conclusion Effective surveillance and registry approach plays a key role in the prevention of ODs. Well-designed surveillance and registry system enables monitoring and assessment of ODs trends and adoption of appropriate preventive measures while improving the effectiveness of redressing and compensation. A robust surveillance model does not only provide protection to employee' health but also enables conversion of economic losses into increased productivity.

938 INSTITUTE AND MUSEUM OF HEALTH AT WORK IN HUNGARY BETWEEN 1901 AND 1945

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Introduction The idea of establishing a Museum of Health at Work in Budapest was first proposed in 1894 in the National Assembly of Industrial Safety Inspectors. The Institute and Museum of Health at Work in Hungary was founded in 1901, aimed at educating the working population, examining health and safety hazards, and promoting health and welfare. The Museum's founding collection was from the Hungarian pavilion at the Exposition Universelle of 1900 in Paris, France. The framework of relationship between the Museum and Safety Inspectors was prescribed by ministerial decree in 1908. Unfortunately, during the 2nd World War the Museum was completely destroyed.

Methods The research method was a holistic data gathering in which printed and online available archival, literature, legal sources and press-material between 1890 and 1950 were explored. Content analysis using bibliometric and historical research methods on available documentation sources.

Results The Museum played a central role in prevention campaigns in Hungary. It attracted approximately 20.000 visitors per year. The highest recorded number of visitors was over 32.500 in 1928, when the triennial (ICOH) World Congress on Occupational Health was held in Budapest, Hungary. The importance of accident prevention, early recognition of occupational diseases, and welfare of workers was addressed by

the Museum. The collection was divided into 14 sub-collections, for eg. Accident Prevention, Industrial Hygiene, First Aid, Tuberculosis, Welfare of Mothers, etc. The 1st European Occupational Health Nurse (Industrial Welfare Nurse) course was also held in the Museum in 1933.

Conclusion This historical work describes the four decades of this Institution through the activities, and contribute at the international history of occupational health and can deepen the historical knowledge also about occupational health nursing.

Indoor Air Quality

1204 OCCUPATIONAL EXPOSURE ASSESSMENT TO BIOAEROSOLS IN POULTRY FARMING ACTIVITIES

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Introduction Poultry farm workers are exposed to various hazardous biological agents in organic dust. Particulate dust, endotoxins and (1–3) β -d-glucans in poultry dust have been implicated in adverse respiratory effects including work-related asthma.

Method The study was conducted at various sites of a South African poultry farm consisting of broilers, rearing, laying, hatchery and catching processes. Personal inhalable samples were collected from 298 workers using filtration technique at a flow rate of 2 l/min for the entire work shift. Filter extracts were analysed for (1–3) β -d-glucan and endotoxin using the endpoint GlucateLL and Limulus amoebocyte lysate test (LAL) assays, respectively. Total inhalable dust concentration was also determined. Data were analysed using STATA 12.

Results Dust particulate levels had an overall geometric mean (GM) of 11.04 mg/m³ and differed by farm process. The mean dust particulate concentration was highest in the rearing department (GM=54.04 mg/m³, GSD=3.74) followed by hatchery (GM=36.25 mg/m³, GSD=3.46). The automated egg laying farms recorded elevated concentrations of dust particulate (GM=35.23 mg/m³), endotoxin (GM=880 EU/m³) and (1–3) β -d-glucan (GM=136 ng/m³) levels compared to the manual laying system (GM=3.95 mg/m³; GM=680 EU/m³; GM=97 ng/m³). Large broilers had relatively higher total dust particulate and endotoxin concentrations while small broilers had higher (1–3) β -d-glucan levels. The catching crew were found to have the highest concentrations of (1–3) β -d-glucan (GM=644 ng/m³, GSD=1.89) and endotoxin levels (GM=23902 EU/m³, GSD=9.64).

Discussion This exposure characterisation study revealed that total inhalable dust, endotoxin and (1–3) β -d-glucans were very high and significantly variable between the five main poultry farming processes. Workers in all processes were exposed to endotoxin levels above the recommended OEL of 90 EU/m³. Inhalable dust particulate was also above the 10 mg/m³ OEL for total inhalable dust in the hatchery, rearing and automated laying farms. Poultry catchers appear to be at greatest risk of developing adverse respiratory health effects due to endotoxins and (1–3) β -d-glucans.