Russian scientists in XIX century Fedor Erismann, Alexander Pogozhev, Alexander Nikitin, Vladimir Svatlovskiy, already at the early stages of Russian industry development began to think about improving working conditions. With the emergence of new high-tech industries during the XIX-XXI centuries the scientific priorities of OH research have also changed. By the end of the XIX century, with the transition of the main labour of workers from crafts to industry, new directions of these studies also arise. The division of industry into extractive, processing and smaller subspecies led to the emergence of such a concept as sectoral occupational health.

This was most vividly represented in the USSR: already 20 years after the victory of the Great October Revolution, 18 research institutes were active in the country. Due to the presence of various industries and agriculture in the regions, they specialised in studying local issues of OH.

The Leningrad and Gorky institutes were pioneers in the study of toxicology and vibration disease: in the northeast of Russia and Volga-region there are many heavy engineering and chemical industries. The Kiev and Saratov institutes have always been more focused on agricultural workers’ health. Donetsk, Krivoi Rog and Novokuznetsk institutes dealt with the problems of diseases of miners and workers in the mining industry. The Yerevan and Tbilisi institutes studied the issues of preserving the health of tea-growers, workers in the tobacco and food industries.

At the turn of the 20th and 21st centuries, special attention is paid to studying the impact of computer and new information technologies on worker’s health. The appearance in this regard of many new diseases adds them to the classification list of occupational diseases.

The development of new technologies and generates new risk factors and entails the development of new directions in the formation of the modern state of OH.
English from 1999 up to January 2017 were considered for inclusion based on a systematic search of PubMed.

**Results** In total 50 intervention studies have been included in this review including, but not limited to, studies in the metal industry (10), hospitals (4), bakeries (3), on welding (6) or dust in construction (4). Overall the interventions reviewed have succeeded at reducing exposure levels. However, a direct comparison of a specific RMM among different studies, even when focusing on one specific sector of industry, remains difficult due to the heterogeneity in assessment methods; in addition, the quantification of the impact of individual interventions on exposure remains difficult as the majority of studies assessed the implementation of a set of different RMMs.

**Conclusion** There is evidence that decreases in workplace exposure levels to hazardous substances followed a variety of workplace interventions in a variety of industries underlining the benefits of implementing RMMs at workplaces.

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**747** THE POLITICS OF DUST SUPPRESSION IN SPANISH COAL MINING, 1944–1975

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**Introduction** Historiography has revealed a complex combination of scientific, technical, socio-political, economic, and cultural factors affecting the identification of occupational risks and the adoption of corrective measures and compensation schemes. In the case of coal dust, the late recognition of pneumoconiosis as an occupational disease of coal workers in the 1940s was largely because the hazard of silica overshadowed that of coal dust. In the case of Spain, the coal mining industry had a period of expansion in the 1940s and 1950s, when its traditional lack of competitiveness with British coal was overcome by autarchic protectionism under Franco regime. This gave rise to an intensification of workloads and the worsening of working conditions, converting coal workers’ pneumoconiosis into the main industrial disease in Franco’s Spain. The preventive approach to coal dust problem has received scant attention from historians. Thus, the aim of this paper is to explore the politics of preventive approaches against coal dust diseases during the Franco regime.

**Methods** A historiographical analysis of the rich documentation kept in the archives of Spanish coal mining companies has been carried out.

**Results** Apart from medical monitoring, very little action was taken on dust suppression until the early 1960s. Despite the costs of compensation in this period, employers failed to take voluntary action to address the dust problem. Changing strategies developed after nationalisation of the sector in 1967.

**Discussion** The growing labour unrest and political concerns about rising pneumoconiosis rates in the late 1950s led to the updating of the Code of Mining Safety Regulations (1960), which for the first time included regular dust control measurements. After nationalisation, the new public corporation (HUNOSA) focused more on prevention than compensation, developing a more technical approach to dust suppression.

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**754** CARLO VALLARDI (1886–1962), AN ASSISTANT OF LUIGI DEVOTO DEPORTED TO MAUTHAUSEN CONCENTRATION CAMP

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**Introduction** Carlo Vallardi, assistant of Luigi Devoto (1864–1936) at the ‘Clinica del Lavoro’ in Milan, is an often-forgotten figure in the history of Occupational Health.

**Methods** The historical investigation was conducted on documents belonging to the Ravelli Archive of the ‘Fondazione Memoria della Deparzazione’ in Milan.

**Results** Vallardi was born in Milan on 2 March 1886; he belonged to a family of famous publishers. Graduated in Pavia in 1907, he began to attend as a volunteer at the Institute of Internal Medicine directed by Carlo Forlanini (1847–1918). After a short period of research in Berlin, Vallardi returned to Milan, where he began to attend the Clinica del Lavoro, focusing mainly on chronic phosphorus poisoning and lead intoxication. In 1913, he started to work at the Fatebenefratelli Hospital in Milan. During the years of World War I, he was called upon to be a medical officer at the front, where he conducted scientific studies on amoebic dysentery among troops. After the end of the war, he returned to Milan and continued his clinical work at the Fatebenefratelli Hospital. He openly contested Fascism. Arrested for his political ideas in March 1943, he was first transferred to the deportation camp in Fossoli, and then to the Mauthausen-Gusen concentration camp. Thanks to his knowledge of German language and his clinical skills, he was assigned to the camp hospital. As a result of this position, he managed to save the life of several prisoners, and avoid the gas chamber. Vallardi died in his hometown on 17 December 1962.

**Conclusion** The passion for the clinic and for scientific research – especially in occupational toxicology – and the acts of heroism in the years of deportation make Carlo Vallardi a model and an example to follow.