

Elimination of silicosis from the world

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The WHO/ILO Joint Committee on Occupational Health launched in 1995 a Global Programme on Elimination of Silicosis, the aim of which was to eliminate silicosis from the world. This decision was based on the fact that too many workers in the world are still exposed to silica dust, and develop silicosis during their work career. The ILO, WHO and several individual countries started numerous projects aiming to implement this objective. It has not been, however, easy to launch national programmes to eliminate silicosis in various countries where the use of silica is common at work. There are good examples of successful programmes at the national level though.

More focus on prevention of silicosis

The Fifth Meeting of the Network of WHO Collaborating Centres in Occupational Health was held on 13– 15 November 2001 in Chiang Mai, Thailand. It gathered together close to 60 participants from 39 Collaborating Centres, WHO Headquarters and Regions, ILO, as well as from NGOs. The number of countries represented was 24.

One of the sessions described the impact of WHO/ILO Global Strategy activities, with special emphasis on the Programme for Elimination of Silicosis. The aim was to find out what kind of efforts have already been taken to eliminate silicosis from the countries. Reports were received from 5 countries, namely, Thailand, China, Vietnam, USA and India.

Dr. Kamjad Ramakul, Ministry of Public Health, Thailand, presented data on the number of silicosis cases in Thailand, the industries involved, and a brief review of patient characteristics by types of occupational lung disease. The surveillance of workers was started in 1995, and a national elimination programme was initiated in 2001, with a ten-year plan, in co-operation with the international ILO-WHO initiative.

Progress is indicated by a coverage of 25% of the high-risk workplaces; improvement of dust control, so that in 50% of the workplaces dust levels are within the normal limit. About 60% of the workers now use personal protective equipment. The problems of the programme were under-diagnosing, and poor co-operation on the part of employers and employees. In the future, additional high-risk industries must be covered, such as the ceramic industry.

Professor You-xin Liang, Fudan University School of Public Health, Shanghai, China, reported on the economic consequences of silicosis in China. He noted that there was uncertainty in the economic analysis of diseases. China today is undergoing a unique transitional period of economic development. The challenges facing occupational health and safety resemble a "doubleedged sword", arising on the one

hand from traditional production, and on the other hand from modern economic development. For example, silicosis, one of the most ancient occupational lung diseases, has long been the most serious and prevalent occupational health problem in China.

The majority of the pneumoconioses occur in the mining industry, particularly coal mines, resulting in numerous cases of anthracosilicosis, which accounted for about 40% of the diseases. Moreover, a nation-wide survey conducted in 1986 found that an even greater number of around 600,000 workers exposed to dusts were classified as suspected cases of silicosis.

The preliminary conclusion drawn from both the National and Shanghai surveys showed that in China the estimated economic losses arising from silicosis accounted for 0.4– 0.5% of the total Chinese GNP in the late 1990s. However, the benefits of reducing the occurrence of silicosis through preventive measures were estimated to be ten times higher than the costs invested, so the investment in the prevention of silicosis has been very rewarding.

Professor Le Van Trung, National Institute of Occupational and Environmental Health, Vietnam, reported on the prevention and control of silicosis in Vietnam. A review of high-risk occupations included coal mining, foundry work, quarrying, etc. The number of exposed cases amounts to half a million. Silicosis has the highest prevalence among 21 compensated diseases.

A national action plan has been established for the prevention and control of silicosis; it has comprehensive objectives. A risk survey is now underway, together with activities for dust control. Many national partners and institutes have been involved, and technical guidelines for medical surveillance have been established. The ILO International Classification of Radiographs of Pneumoconioses has been adopted as the standard for diagnosis.

Dr. Marilyn Fingerhut reported on behalf of Dr. Kathleen Rest, NIOSH, USA, on the Silicosis Campaign in the United States. Silicosis is a persistent problem in occupational safety and health, leading to the death and disability of workers, despite sufficient knowledge to prevent the disease. The US National Institute for Occupational Safety and Health (NIOSH) has been engaged in several activities to reduce the mortality and morbidity from exposure to crystalline quartz. NIOSH has embraced the goal of silicosis elimination and recognized the need for a campaign to raise awareness of the silicosis problem and to inform workers, employers, and health professionals in support of that goal. To that end NIOSH joined with the Mine Safety and Health Administration, Occupational Safety and Health Administration, and the American Lung Association to launch a national public education campaign, If It's Silica, It's Not Just Dust. This campaign has sought to raise public awareness of silicosis as a preventable disease and to highlight the importance of continued vigilance. Many operations in industry still use silica sand. More than 100,000 workers are currently exposed to twice the recommended levels of silica dust. The most frequently recorded industries on death certificates are: construction, metal mining, coal mining, and blast furnaces.

Dr. H.N. Saiyed, National Institute of Occupational Health, Ahmedabad, India, reported on the prevention and control of silicosis in a small-scale industry in India. In India, there are about 3 million workers in mines and industries exposing workers to the potential risk of silicosis. Various studies have shown a very high prevalence of silicosis and silicotuberculosis, particularly in small-scale and cottage industries in India. The Government of India has decided to start a National Programme on Prevention and Control of Occupational Diseases, and has also allocated funds for the silicosis elimination programme. The National Institute of Occupational Health (NIOH), Ahmedabad, is the focal point for this programme. The following five industries entailing a high exposure to silica have been selected: the agate industry, stone quarries, stone crushing industry, the slate pencil industry, and slate stone mines.

Surveys in the above industries have shown that:

1. The prevalence of silicosis varies from 9% in stone quarries to about 54% in the slate pencil industry.
2. High levels of dust containing free silica have been found in the work environment, as well as in the surrounding community.
3. Cases of silicosis were found among people who had no occupational exposure, but who lived in the surroundings of the agate industry.
4. There is a very high prevalence of tuberculosis among workers as well as people (including children) living in the surroundings of the agate industry.
5. A follow-up examination of workers showed rapid progression of the disease, resulting in high morbidity and mortality rates.

The programme is ongoing and raising awareness of silicosis and tuberculosis, including dust control measures amongst workers and in the surrounding community.

Task force on elimination of silicosis

The joint work plan of the WHO Headquarters, Regions, and the Collaborating Centres, to implement the WHO Global Strategy on Occupational Health for All was discussed in three working groups. The contributions, commitments and interests of the Collaborating Centres and discussions in the three working groups were integrated into one work plan. One of the Task Forces established was the Elimination of Silicosis.

ILO is also strongly involved in the implementation of this Task Force.

The objective of the Task Force is to update the developments on this topic, to promote every country to develop its own national silicosis elimination programme, to organize their efforts in a more systematic way, and to provide a knowledge base for countries that wish to launch their own national programme. As occupational exposure to different kinds of dusts is widespread throughout the world, it was agreed that in the actual activities related to the elimination of silicosis, the prevention of all kinds of pneumoconioses can be included in the programmes at the regional and country levels.

Additional information concerning the WHO Collaborating Centre Network's Silicosis Task Force can be received from WHO (see below).

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