Scand J Work Environ Health 14 (1988): suppl 1, 5—6

Leading work-related diseases and injuries

by J Donald Millar, MD[1]

In 1983, the National Institute for Occupational Safety and Health (NIOSH) published the following suggested list of the 10 leading work-related diseases and injuries: (i) occupational lung diseases, (ii) musculoskeletal injuries, (iii) occupational cancers, (iv) severe occupational traumatic injuries, (v) occupational cardiovascular diseases, (vi) disorders of reproduction, (vii) neurotoxic disorders, (viii) noise-induced hearing loss, (ix) dermatological conditions, and (x) psychological disorders. Scientists at the Institute used three criteria to develop the list, ie, frequency of occurrence of the disease or injury, severity of the disease or injury in individual cases, and amenability of the disease or injury to prevention. Their purpose in drawing up such a list was (i) to encourage deliberation and debate among professionals about the major problems in this field of public health, (ii) to assist in setting national priorities for efforts to prevent health problems related to work, and (iii) to convey to a diverse audience the concerns of the leadership of NIOSH and the focus of the Institute's activities. The list was intended to be dynamic; it will be reviewed periodically for necessary updating as knowledge increases and as conditions change and are brought under better control.

NIOSH then undertook the preparation of proposed national strategies for the prevention of each condition on the list. In May 1985, and again in October 1986, NIOSH co-sponsored national symposia on occupational health and safety, in conjunction with the Association of Schools of Public Health and the Association of University Programs in Occupational Health and Safety. At each symposium, five of the proposed prevention strategies were submitted for in-depth evaluation by the participants. Under the direction of 51 expert panelists, the more than 450 persons attending each symposium—representing academia, management, organized labor, professional associations, and voluntary organizations—discussed, revised, elaborated, and further developed the strategies. The first five strategies have now been published, and the second five are being readied for publication.

The first five conditions on the list represent traditional occupational problems that have been part of human conditions for a long time. The second five have more a flavor of the future. Except for noise, they represent a newer dimension in occupational health. Intense interest is being focused on these conditions, as evidenced by the emphasis in everyday conversations on reproductive effects, job stress, and drugs and alcohol in the workplace.

Historically, health care has been concerned with curing disease and repairing injury. As a result, and because of the long latency period for many of the first five conditions, a large reservoir of chronically ill people has accumulated from workplace exposures. This vast amount of human suffering might have been prevented had measures been taken earlier. Now the concept of prevention is becoming an important part of health care. The US Occupational Safety and Health Act of 1970 issued a charge to assure "safe and healthful working conditions for working men and women."

A new national vision was introduced at the symposia — the vision that unsafe work conditions are no longer tolerable and that clear and understandable steps can be taken to prevent the leading occupational diseases and injuries.

An important component in each proposed prevention strategy is surveillance. Surveillance is needed to estimate accurately the prevalence of the disorder, to identify the population at risk, to direct the most effective preventive measures where they are needed, and to measure the impact of intervention.

The strategies also focus on scientific research. Research is needed to develop the specific knowledge and understanding on which prevention depends.

Another integral component is training. Effective communication through education, technology transfer, the dissemination of information, and training is required to reach the full potential of prevention. Well-trained workers, knowledgeable managers, and fully informed occupational safety and health professionals are essential elements in any prevention program.

Finally, the strategies emphasize the importance of applying and adapting existing knowledge to prevent occupational diseases and injuries. Research results are only effective in preventing such conditions if they are applied in the workplace. Much useful information is already available, and ways must be found to target and apply it where it will do the most good.

Influence from the symposia has already been felt in many quarters. Research programs at NIOSH have been modified to focus more directly on the elements contained in the strategies. Feedback from around the country has shown that other institutions, agencies, organizations, and individuals are tailoring their pre-

[1] National Institute for Occupational Safety and Health, Atlanta, Georgia, USA.

vention and education activities to include relevant portions of the strategies. New tools are available now, new science, new skills, new expertise, new technology, and the concept of prevention as a new focus. Society has the unique opportunity to look ahead in its approach to occupational safety and health. What happened with the first group of five conditions must not be allowed to happen with the second five. None of these conditions must be allowed to become number one on the list.

Most of the illnesses and injuries that occur today result from a failure to apply knowledge already available. The responsibility is everyone's. Each group and individual must look carefully at its own situation, analyze the needs, search for the solutions, and then apply the proved remedies. Working together, sharing knowledge, and cooperating in this all-important undertaking, the needless suffering that besets working men and women throughout the world can, and will, be prevented.