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National System for Recording and Notification of Occupational Diseases

Practical guide



Programme on Safety and Health at Work and the Environment
(SafeWork)

National System for Recording and Notification of Occupational Diseases

Practical guide

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Preface

No country in the world records or compensates all occupational injuries or work-related diseases; injuries are better recorded than diseases, but still not satisfactorily. Reported accident and disease statistics are often incomplete, since under-reporting is common, and official reporting requirements frequently do not cover all categories of workers – those in the informal economy, for example. The collection, recording and notification of data on occupational accidents and diseases are instrumental in their prevention, and it is important to identify and study their causes in order to develop preventive measures.

This publication elaborates elements that are important components of the national systems for recording and notification of occupational diseases. It provides suggestions for the effective operation of occupational disease data collection systems. Practical recommendations are given on how to establish an occupational injury and illness surveillance system, or improve an existing one. The national occupational disease reporting systems in several countries are briefly described as examples in the annexes to this publication.

I hope that this publication will serve as a useful source of information on experiences and good practice in developing national systems for recording and notification of occupational diseases. Our intention is not to promote a single or specific system in all countries. I hope that any system for the recording and notification of occupational diseases will be proportionate to the scale of the problems, will be sufficiently flexible to address prevention strategies and compensation arrangements, and will be sustainable.

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1. Preamble

More than half of the world's population is engaged in work, and so the socio-economic development of each country relies on its workers' health, safety, work ability and well-being. Healthy workers are productive workers. Absenteeism due to work-related disease and disability disrupts the operation of enterprises and tarnishes their reputation, adds costs such as the recruiting and training of replacement workers, and increases social and health-care costs. Thus safety and health at work are important not only for individual workers, but also for enterprises, communities and countries. The safety and health of workers affect the overall quality of life of working people, and the harmony of society. Safety and health at work also contribute positively to enterprise profitability and national economies through improved productivity, product quality, work ability and job satisfaction.

Data on diseases caused by work and their effects on workers' health are essential for national policy-makers and organizations responsible for workplace safety and health to formulate evidence-based occupational safety and health policies, and to set priorities and targets for action.

High-quality data on occupational diseases are also essential for employers, occupational safety and health (OSH) regulators, social security institutions, OSH professionals and other stakeholders to fulfil their obligations for the prevention and control of work-related diseases. They are also important in setting priorities and targets for safety and health at work, in designing relevant training and education programmes, in improving rehabilitation, and for the compensation process in cases of occupational disease.

National occupational disease data are also important for international comparisons, to fit the national OSH profile into the international picture, and can be used to calculate regional and global estimates of the burden of occupational diseases.

Only a few countries have comprehensive systems for collecting data on occupational diseases. High-quality data from the recording and notification of such diseases facilitate the identification of causal agents and the population distribution of occupational diseases, and allow time trends to be followed. This information also contributes to determining the efficacy of preventive measures for other potentially exposed workers. Improved recognition and understanding of the causation of occupational disease may lead to more effective treatment and interventions for workers.

Failure to report occupational diseases is a major problem in many countries, but especially so in developing countries. Without a comprehensive picture of the full burden and distribution of occupational diseases, it will be difficult to meet the goal of occupational safety and health for all at the enterprise and national levels. Therefore it is essential to establish and improve a national system for the recording and notification of occupational diseases (NSRNOD).

The key principles and requirements in the relevant international instruments provide a good basis for establishing a national system for occupational disease surveillance. These instruments include the Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155), the List of Occupational Diseases Recommendation, 2002 (No. 194), and the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases, 1996.

This practical guide has been prepared to help member States to establish and improve their national systems for recording and notification of occupational diseases. It is aimed at relevant people in the responsible authorities, such as the ministries of labour, health, and social security; at those in occupational safety and health inspection, occupational safety and health services, national social security institutions, and compensation boards; and at employers, workers and their organizations. It also includes practical and detailed guidance on compiling and analysing data collected through national disease surveillance systems.

2. Key elements and objectives of the national system for recording and notification of occupational diseases (NSRNOD)

Key elements

An NSRNOD is a system that should collect accurate, comprehensive and reliable data on occupational diseases, compile and analyse these data, and publish statistics and reports. A good NSRNOD should be able to utilize data and information from workers' health surveillance and working environment monitoring for the control and prevention of occupational diseases.

The Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155), and the List of Occupational Diseases Recommendation, 2002 (No. 194) provide a legal basis for national authorities to develop national policies, laws and regulations on the recording and notification of occupational diseases. The ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases, 1996, provides concrete, practical guidelines for establishing and operating a national system for recording and notification of occupational diseases.

An NSRNOD includes:

- a national policy for recording and notification of occupational diseases, for inspecting and investigating cases of occupational disease, and for compiling, analysing and publishing statistics on occupational diseases;
- a responsible competent authority or authorities, and mechanisms to coordinate the relevant authorities and bodies;
- a national list of occupational diseases;
- diagnostic criteria for occupational diseases, and procedures for recognizing diseases as occupational;
- a classification system for occupational hazards;
- requirements and procedures for reporting, recording, notifying, investigating, compiling and analysing occupational diseases, and for publishing statistics and reports;
- standard forms and uniform coding for recording occupational diseases;
- clearly defined duties and responsibilities for the relevant competent authorities, for employers and workers and their organizations, for occupational health services, for social security institutions, and for others involved in the recording and notification of occupational diseases;

- an employer-based record-keeping and notification system that covers all workers for whom they are responsible;
- notifications by other parties, such as occupational physicians, dentists, and social security institutions;
- a centre responsible for the national collection, compilation, analysis and dissemination of occupational disease data;
- compliance mechanisms, including OSH inspection;
- measures to expand the coverage to all branches of economic activity, all enterprises and all workers, regardless of their employment status, and including workers in the informal economy.

A national computerized system for submitting notifications of occupational diseases, and for storing and processing the collected data, will facilitate the compilation and analysis of data, and the publication of national statistics. An Internet-based national data collection system can significantly improve the effective notification of occupational diseases, the analysis of notified data, and the computation of national statistics. Priority should be given to establishing a uniform, manageable and secure national notification system via the Internet.

Objectives

The main objective of an NSRNOD is to provide comprehensive, reliable data on diseases caused by work, so that OSH activities can be organized to prevent occupational diseases, protect workers' health, and enhance workers' work ability and productivity, and to help in planning strategies and programmes for social security schemes, and for compensating the victims of occupational disease.

Key points

Key elements of an NSRNOD:

- National policy for recording and notification of occupational diseases.
- Duties and responsibilities of the competent authority, employers and workers and their organizations, occupational safety and health services, social security institutions and others.
- Uniform requirements and procedures for reporting, recording and notification.
- A national list of occupational diseases.

Objectives:

- To provide comprehensive and reliable national data on the incidence of occupational disease.
- To publish comparative national statistics and reports, and contribute to international data.
- To inform measures for the primary prevention of occupational diseases.
- To ensure appropriate and effective workers' compensation schemes.

3. Health surveillance and identification of occupational diseases



Assessment of workers' health

Diseases caused by work should be identified and treated, and their victims compensated. Action needs to be taken at the workplace to prevent the recurrence of the same diseases among other workers. The need for a medical approach is obvious. Health screening of workers is often conducted in the form of medical examinations for certain categories of workers exposed to specific occupational hazards. Such health screening needs to be linked to the surveillance of occupational hazards in the workplace to establish a causal relationship between workplace exposure and the contracted disease. This is especially so when the diseases in question can also be caused by hazards outside work. Such a linkage is also important for preventive and protective measures in the workplace.

Many countries have legal requirements for the health surveillance of workers exposed to recognized workplace hazards that can cause occupational diseases. The ILO Technical and Ethical Guidelines for Workers' Health Surveillance provide useful and practical recommendations for establishing a national system for workers' health surveillance.

Employers have a duty to arrange health surveillance for workers exposed to workplace hazards. Such surveillance may be carried out at the enterprise level by occupational health services, or by the health facilities available in the community where the enterprise is located. Medical examinations and consultations, either as part of screening programmes or on an as-needed basis, can contribute to the detection of pre-clinical abnormalities and occupational diseases. This is important both for protecting and treating diseased workers, and for evaluating the effectiveness of control measures in the workplace.

Procedures for medical examinations

The procedures for medical examinations comprise a personal history and a clinical examination. They may include questionnaires, diagnostic tests, function measurements and biological tests of exposure levels to environmental agents in the workplace. The contents of these examinations should be relevant to the nature of the hazards and the availability of testing. Occupational health physicians and medical practitioners engaged in occupational health services should retain overall responsibility for biological tests and other medical investigations, and for the interpretation of results, although the actual tests may be performed by nurses, technicians and other trained personnel under their supervision.

Medical examinations should take place, where appropriate, before or shortly after employment or assignment, in order to collect information and act as a baseline for future health surveillance.

Medical examinations for workers exposed to hazards that cause occupational diseases should take place at regular intervals during employment, and should be appropriate to the occupational risks of the enterprise. These examinations may also be conducted: (a) on the resumption of work after a prolonged absence due to health reasons, in order to determine possible occupational causes, recommend appropriate action to protect workers, and determine suitability for the job or the need for reassignment and rehabilitation; (b) at the request of the worker – for example when a worker is sick as a result of exposure to workplace hazards, and needs a change of work.

When workers are exposed to hazards that can cause occupational diseases with a long latency period, medical examinations will also be needed both on and after their assignment or employment ceases, in order to assess the potential effects of job assignments and workplace exposure on their health. This type of medical examination is necessary in order to ensure the early diagnosis and treatment of diseases such as occupational cancer.

The results of medical examinations, in combination with information on workplace exposure levels, are important in determining whether a disease is caused by work. They can also be used to verify the level of protection provided by the exposure limits, and to contribute to their revision. In addition, such examinations may often be used to identify the possible health effects of changes in working methods, work organization, working conditions, new technology, or materials used in the work process.

Specific exposure-related examinations target the organ systems affected by hazardous agents. When a worker is exposed to a particular health hazard at work, specially designed health examinations are needed, to observe the possible health effects of the exposure or condition of concern. Special regulations, codes of practice or guidelines for such examinations or tests are available in some countries.

The competent authority should ensure that appropriate handbooks and manuals are prepared to guide the tests and methods for such examinations. The examiner should always use the best technology and best practices available. In some developing countries, practices may be limited by local conditions. The absence of sophisticated laboratory or other facilities should not prejudice the health examination procedure, but should lead to appropriate modifications of its content. For example, if audiometry technology is not reasonably available, hearing can be tested with a very simple “6 metre hearing test”. The absence of spirometric tests for asthma can be partly compensated for by information gained from interviewing workers using a validated questionnaire. Sometimes the examiner may need to rely on interviews with and physical examinations of workers, and on his or her own observations of working conditions.

Establishing a national system for health surveillance of workers

The competent authority should develop a national policy for health surveillance of workers. Requirements for such surveillance – reporting of occupational diseases and injuries – should be established in accordance with the nature of the occupational hazards in the workplace, the health requirements of the work, and the health status of the working population concerned. Campaigns need to be organized to increase awareness among employers and workers of the need for such surveillance. The level or levels of surveillance, and the tests and methods used in the medical examinations, should be appropriate to the type and nature of the hazards in the

enterprise concerned, and should be based on a thorough evaluation of all the work-related factors that may affect workers' health.

Assessment of exposure at work

As some diseases can be caused by both work- and non-work-related factors, the causal linkage between workplace exposure and a disease contracted by a worker needs to be verified via a walk-through of the workplace, or even by systematic observation of the hazards and exposure conditions at the workplace. The evaluation of exposure at work should be based on the following factors:

- trauma hazards posed by the workroom, machines and work environment;
- physical hazards, such as noise, vibration, lighting conditions, poor air quality, thermal conditions and radiation;
- chemical hazards, such as chemicals in use, their storage and disposal, protection measures, sources of vapours, gases, fumes, and dusts such as silica particles and asbestos fibres;
- biological hazards, such as bacteria, viruses, fungi, and proteins of animal or plant origin;
- ergonomic hazards, such as physical and psychological load, work in particularly awkward postures with heavy dynamic or static workloads, and the pace of work.

Key points

Assessment of workers' health:

- Legal requirements for health surveillance of workers exposed to recognized workplace hazards.
- Employers' duty to arrange health screening for workers exposed to workplace hazards.

Procedures for medical examinations:

- Medical examinations, in combination with information on workplace hazards, are important for determining the occupational origin of a disease.
- Exposure-related examinations (health surveillance) assess the health impact of exposure to specific workplace hazards.

Assessment of exposure at work:

- Assessment of the working environment, with a focus on the targeted hazards and the potential for exposure at work.

4. *Diagnosis and recognition of occupational diseases*

Definitions of occupational disease

The starting point for recording and notification of occupational diseases is a clear definition of what an occupational disease is. The ILO Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155), defines occupational disease as any disease contracted as a result of an exposure to risk factors arising from work activity.

The ILO Employment Injury Benefits Recommendation, 1964 (No. 121), Paragraph 6(1), defines occupational diseases as follows: “Each Member should, under prescribed conditions, regard diseases known to arise out of the exposure to substances and dangerous conditions in processes, trades or occupations as occupational diseases.”

The ILO Occupational Safety and Health Series No. 74, *Identification and recognition of occupational diseases: Criteria for incorporating diseases in the ILO list of occupational diseases*, indicates two key elements that are used to determine the occupational origin of a disease: first, there is a causal relationship between exposure in a specific working environment or work activity and a specific disease; and second, the disease occurs among a group of exposed persons with a frequency significantly above the average morbidity of the rest of the population.

Diagnosis of occupational diseases

In most cases it is straightforward to determine whether an accident or injury is occupational, but the causal relationship between a chemical, biological, physical or psychosocial hazard and a disease is often more complicated. There are various reasons for this:

- Diseases may be multifactorial in causation, with contributions from hazardous exposures both at work and at home.
- A single occupational hazard may cause adverse health effects in more than one organ system, leading to a variety of symptoms that may not seem connected.
- Untrained health care providers may not be aware of the connection between a hazard and a disease.
- Workers may not recognize that their symptoms are work-related.
- Some diseases, such as cancer, may occur many years after exposure.

At the individual level, a causal relationship needs to be established between a disease and the occupational exposure. This is normally based on clinical and pathological data, occupational

history (anamnesis) and job analysis, identification and evaluation of occupational hazards, and exposure verification. Once this information is available, there needs to be an assessment of:

- biological plausibility, associating the exposure and the disease of concern;
- the appropriate latency (the time between exposure and the development of disease);
- the temporal relationship (whether exposure comes before the disease);
- the level of exposure (whether the intensity and duration of exposure are high enough to cause the effect);
- the differential diagnosis (non-occupational conditions characterized by similar clinical features are considered, and ruled out);
- the role of other risk factors and other diseases.

Occasionally, environmental monitoring data are also available.

Epidemiological and toxicological data are useful for determining the causal relationship between a specific occupational disease and the corresponding exposure in a specific work environment or work activity.

In general, symptoms are not sufficiently characteristic to enable an occupational disease to be diagnosed as such without knowledge of the specific health risks of pathological changes engendered by the various physical, chemical, biological or other occupational hazards encountered at work.

The determination of a disease as being occupational is a combination of clinical diagnosis, exposure verification and applied occupational epidemiology. Improvements in knowledge, measurements, analytical and diagnostic techniques are enabling a broader recognition of diseases that are occupational in origin.

Criteria for identifying and recognizing an individual disease

The exposure–effect relationship (the relation between the level of exposure and the severity of impairment in the worker) and the exposure–response relationship (the connection between exposure and the number of workers affected) are important elements in determining a causal relationship. Research and epidemiological studies have often been used to determine new causal agents of occupational diseases.

The decision to determine a specific disease as occupational in origin needs to take the following general criteria into account:

- There is a causal relationship with exposure to a specific agent or work process.
- The disease occurs in connection with a particular working environment, or in specific occupations.
- It occurs among the group of exposed persons with a frequency that significantly exceeds the average incidence within the unexposed population.
- There is scientific evidence of a clearly defined pattern of disease following exposure, of the plausibility of the occupational cause, and of exclusion of the more common, non-occupational causes of the disease.

The strength of the causal relationship between exposure and disease accepted at the national level may differ from country to country. In some countries it is generally accepted that, for a disease to be clinically diagnosed as occupational, there must be a greater than 50 per cent probability of causation (OR risk factor >2) for the causative agent to be the main cause of the disease. In other words, the exposure has to increase the morbidity to the extent that the attributable fraction among the exposed population is more than 50 per cent. When this population level probability is applied to the individual, a general standard used in some countries is that the disease would be unlikely to have occurred without the exposure.

When a causal relationship has been determined between an exposure at work and a disease, the disease is considered to be occupational. Thus the diagnostic criteria for an occupational disease need two key elements: clinical manifestation and exposure history (quantity × time of exposure).

Implications of recognition of occupational diseases

When a disease is clinically diagnosed, and a causal link is established with the exposure history at the workplace, the disease is then recognized as occupational. This means that:

- the employer needs to improve working conditions to control the causal agents at work and protect workers against further exposure, to prevent deterioration in the affected worker and occurrence of the same disease among other workers; and
- the affected worker may be entitled to compensation (treatment, rehabilitation, return to work, transfer to another post, or early retirement due to disability caused by the disease).

The recognition of occupational diseases has financial implications for enterprises, and imposes legal obligations on them. Legal provisions for the recognition of occupational diseases vary from country to country. Many countries have established lists of occupational diseases, but some countries have only a generic definition of occupational disease, and recognize diseases as occupational if they meet the requirements of the definition. Article 8 of the Employment Injury Benefits Convention, 1964 (No. 121), requires member States that have adopted the Convention to recognize occupational diseases in one of the following three ways:

- (i) prescribe a list of diseases, comprising at least the diseases enumerated in Schedule I to the Convention, which shall be regarded as occupational diseases under prescribed conditions; or
- (ii) include in its legislation a general definition of occupational diseases that is broad enough to cover at least the diseases enumerated in Schedule I to the Convention; or
- (iii) prescribe a list of diseases in conformity with clause (i), complemented by a general definition of occupational diseases or by other provisions for establishing the occupational origin of diseases not so listed or manifesting themselves under conditions different from those prescribed.

Approaches (i) and (ii) are often called the “list system” and the “general definition system”, respectively. Approach (iii) is generally referred to as the “mixed system”.

The list system has the advantage of listing diseases for which there is a presumption that they are occupational in origin. This simplifies things for all parties, since it is frequently very difficult, if not impossible, in individual cases to prove or disprove that a disease is directly or exclusively attributable to the worker’s occupation. It also has the important advantage of

indicating clearly where prevention should focus. The disadvantage is that such a list normally covers only a limited number of occupational diseases.

The general definition system, in theory, covers all occupational diseases. It affords the widest and most flexible protection, but leaves it to the affected worker to prove the occupational origin of the disease. In practice, it often also implies that arbitration on individual cases is necessary. Furthermore, no emphasis is placed on specific preventive measures.

A mixed system has the advantages of both the list and general definition systems without their disadvantages, and member States are encouraged to adopt a mixed system for the recognition of occupational diseases.

Lists of occupational diseases

Among the countries that have a national list of occupational diseases, many recognize only a limited number of such diseases. If a disease suffered by a worker is not included in the national list, it is normally very difficult for it to be recognized as occupational. To help member States, the ILO has established international lists of occupational diseases. For example, Schedule I to the ILO Employment Injury Benefits Convention, 1964 (No. 121), provides a list of occupational diseases, which was amended in 1980. The ILO adopted a new list of occupational diseases in 2002, which is annexed to the List of Occupational Diseases Recommendation, 2002 (No. 194). This list was updated in 2010.

The ILO lists of occupational diseases are designed to help countries in preventing, reporting, recording, notification of and compensation for diseases caused by occupational hazards.

The ILO list of occupational diseases annexed to Recommendation No. 194, revised in 2010, includes a range of internationally recognized occupational diseases, including illnesses caused both by chemical, physical and biological agents and by ergonomic, work organization and psychosocial factors. It also has open-ended items in all its sections that allow the occupational origin of diseases not specified in the list to be recognized, if a link can be established between exposure to occupational hazards arising from work activities and the disorder contracted by the worker.

This list is based on the latest worldwide developments in the identification and recognition of occupational diseases, and represents the international consensus among governments, employers' and workers' organizations on the most commonly seen and most hazardous diseases due to work that should be recorded, reported, prevented and, if applicable, compensated for. It provides a very useful source of reference for countries that are in the process of reviewing or revising their national lists of occupational diseases.

Key points

- Definitions of occupational diseases in national regulations.
- List of occupational diseases.
- Criteria for diagnosis of occupational diseases based on the exposure–effect relationship and the exposure–response relationship.
- Recognition of occupational diseases.

5. *Establishing an NSRNOD*

National competent authority and national policy

At the national level it is very important for the government to designate or establish an authority responsible for collecting reports and information on occupational diseases. This might be, for example, the OSH inspectorate in the ministry of labour or ministry of health. This authority should develop a national policy for reporting, recording, notifying and investigating occupational diseases. The policy should also cover the compilation, analysis and publication of statistics on occupational diseases.

It is important to involve representatives of employers' and workers' organizations, social security institutions, and occupational health professionals, both in establishing such a policy, and in its implementation.

The starting point, and a major goal, for the national policy is a consistent system for collecting reliable information on occupational diseases. General rules and uniform procedures for reporting, recording and notification of occupational diseases in all branches of economic activity, and in all enterprises, have to be formulated and vigorously applied.

Institutional arrangements

Once a national policy has been formulated for recording and notification of occupational diseases, the following institutional arrangements need to be established:

- Clearly defined functions and responsibilities for collecting and analysing data on occupational diseases need to be assigned to the competent authority.
- Duties and responsibilities for recording and notification of occupational diseases need to be allocated to employers and workers and their organizations, occupational health services, social security institutions and others.
- A mechanism needs to be set up to coordinate the collection of occupational disease data by the various authorities and institutions, such as the OSH inspectorate, social security institutions, OSH services, hospitals and health care centres.
- A national system needs to be established for collecting data on occupational diseases.

An advisory body in line with national conditions and practice is very useful for ensuring that the national system for recording and notification of occupational diseases operates effectively. This body should comprise representatives of the competent authority, workers' and employers' organizations, social security institutions, and OSH services.

Mechanisms for reporting, recording and notification of occupational diseases

It is not uncommon for the competent authority, OSH inspectorate, social security institutions or other bodies to require different information on occupational diseases. Standardization of the

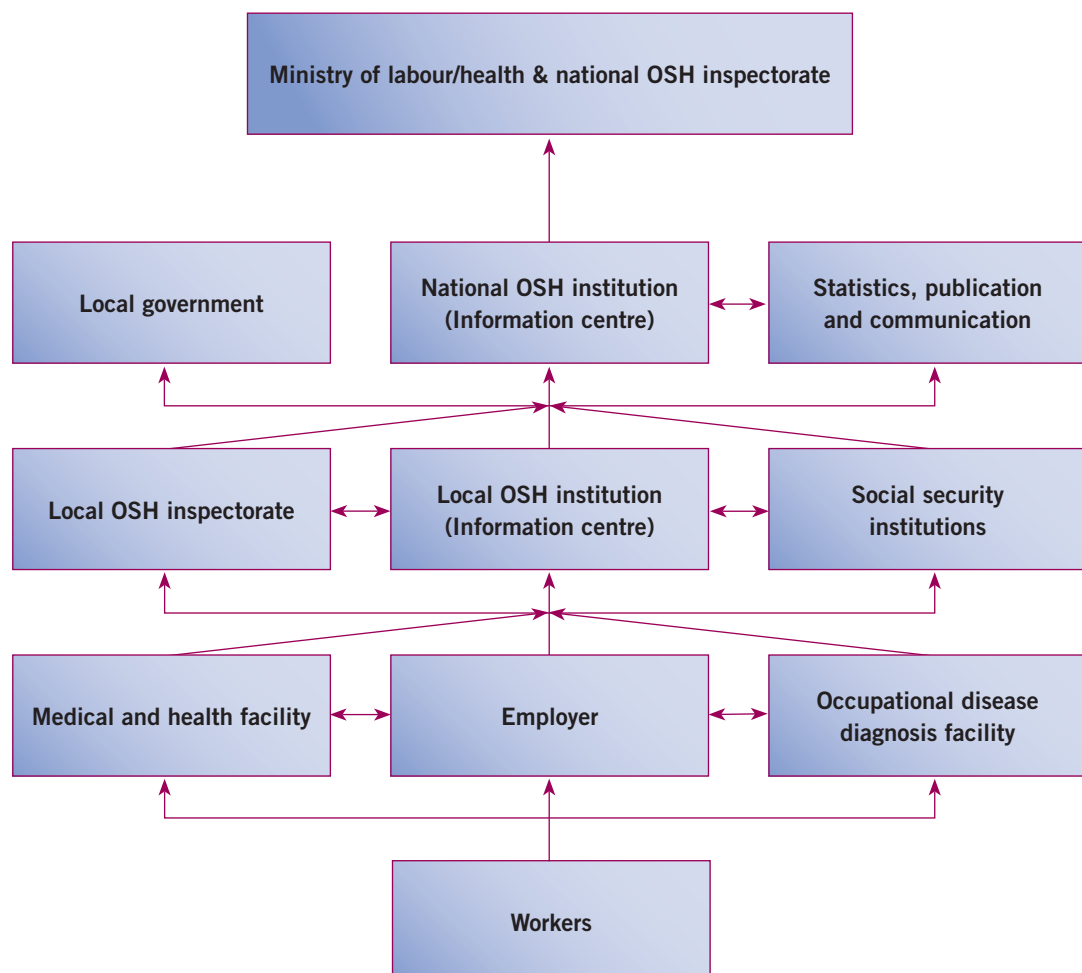
information to be submitted to these bodies would help address under-reporting and reluctance to report. It is also important to use standardized coding for the information that is common in the forms submitted to these various bodies: this is useful for validation, and to avoid counting the same cases of occupational diseases more than once.

The forms used for notification of occupational diseases to the competent authority, OSH inspectorate, social security institutions or other bodies should be standardized, and a computer network can increase the reliability and efficiency of notification, as well as the analysis and sharing of appropriate information.

Extension of the NSRNOD to cover self-employed persons and informal workers should be considered in the design of the national notification system.

A system for reporting, recording and notification of occupational diseases is illustrated in Figure 1.

Figure 1: A model mechanism for recording and notification of occupational diseases



More detailed guidance on employer-based record keeping and notification is given in the next section.

Information on occupational diseases could be collected from various sources. For example, social security institutions receive reports of occupational diseases for compensation from employers, workers and occupational physicians. The regulatory authorities may receive reports from employers, OSH services, physicians and dentists. Reports of investigations by OSH services and by researchers may also include useful information.

General health surveys of workers also provide useful information on occupational diseases. These surveys are normally designed to be statistically robust, and representative of the working population, but their contents are not always medically validated.

General health data collected by the public health departments can help in identifying some occupational hazards, and are useful for validating the data collected in the NSRNOD.

Schemes for reporting significant incidents are used in some countries to identify hazards rapidly, and thereby ensure timely preventive measures. This “sentinel events” approach can help in identifying high-risk jobs and activities for occupational diseases, and provide clues to the aetiology of diseases. Sentinel surveillance can also help address some of the limitations that arise from under-reporting and under-estimation of occupational diseases.

Data sources such as death certificates, hospital discharge records and disease registries represent another source of information for occupational disease surveillance. Exposure registries, such as those for carcinogenic agents, are useful in providing information on possible occurrences of occupational diseases with a long latency period.

Caution is needed in the use of these data, to ensure that due consideration is paid to the ethics of using what may be regarded as sensitive personal information. In addition, information on the occupation of the deceased is often incomplete or unverified.

Use and application of data on occupational diseases

Accurate, good-quality data on occupational diseases are needed for good OSH practice. Such data are important in identifying the causes of occupational diseases in the working environment. Comprehensive recording and notification of occupational diseases are not only essential for affected workers to be compensated, such as for the cost of treatment, rehabilitation and disability; they are also critically important for taking targeted measures at the workplace to control the hazards and prevent a recurrence of the same disease among fellow workers. Thus the data that the NSRNOD collects and produces should be used for the primary prevention of occupational diseases, for evaluating the effectiveness of the preventive measures, and for improving the compensation process.

In particular, an effective NSRNOD should be able to:

- describe the health status of the working population by industry and socio-economic group (frequency, severity, and trends in mortality and morbidity);
- stimulate occupational epidemiological studies, explore the causes of occupational diseases, and identify the physical, chemical, biological, ergonomic, organizational and psychosocial hazards at the workplace;

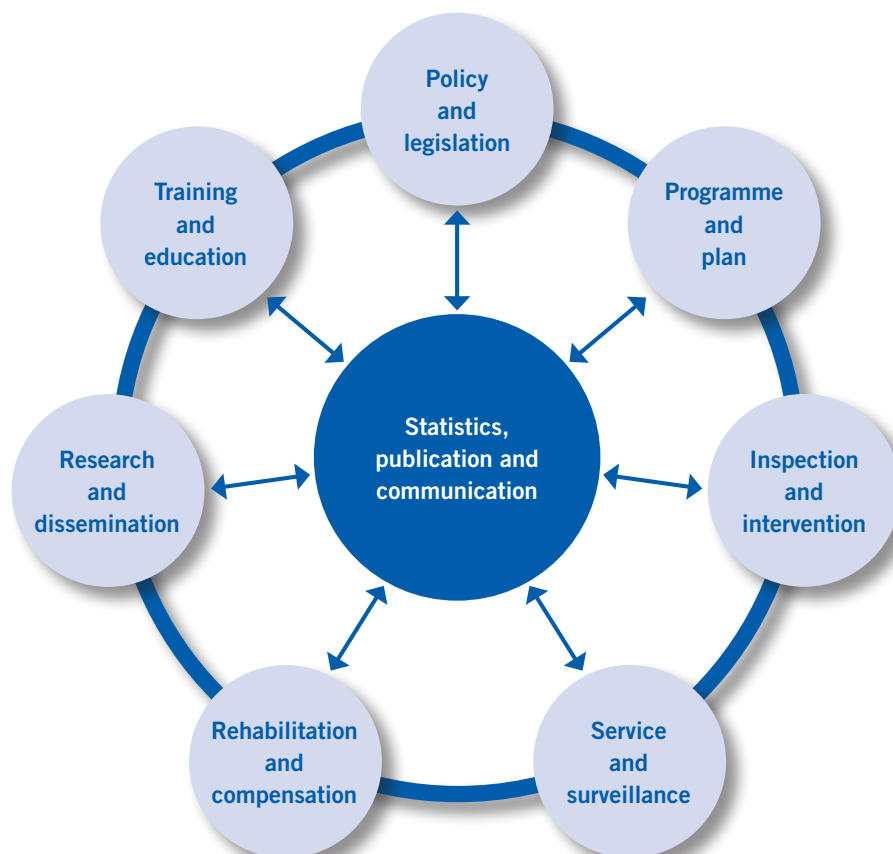
- predict the occurrence of occupational diseases and their distributions, which can be used in setting priorities for preventive and protective actions, and in assessing their effectiveness.

If the data collected by the NSRNOD are used in conjunction with data from other sources, such as surveys, workers' health surveillance and working environment surveillance, workplace risk assessment and risk management, they can provide a solid evidence basis for:

- making sound OSH decisions;
- identifying priority areas for OSH policies and strategies;
- implementing prevention and control measures at the enterprise, industry and national levels;
- planning social security schemes and compensation programmes.

The main purposes for the use of data collected from the NSRNOD are summarized in Figure 2, and are elaborated in the following paragraphs.

Figure 2: Use and application of occupational disease data



Sound policy and legislation on occupational diseases need to be based on good scientific and technical evidence. A good NSRNOD provides reliable information on the scale, pattern, distribution and development of occupational diseases. It also provides solid data that can be used to assess the impacts of occupational diseases on the national economy, and on the productivity, competitiveness and well-being of society and the community.

Reliable and complete data on occupational diseases can be used as evidence in assessing the effectiveness of OSH policies, although changes in the incidence of disease have to be measured before and after the change in policy. Caution is needed in using data on occupational diseases with long latency periods, as it may take a long time for such a disease to develop, during which time workplace exposures may have changed, and may no longer be identifiable as being linked to the disease.

Occupational disease data provide the basis for developing OSH strategies and programmes at both national and enterprise levels. Baseline data on occupational diseases are often used for sectoral, regional, national and international comparisons. Good data are indispensable for analysing occupational disease trends, selecting priority sectors and industries, and assessing the effectiveness of preventive programmes and measures.

OSH inspection uses occupational disease data to identify the scope of occupational health problems, to focus regulatory interventions on the most hazardous and inadequately controlled worksites, and to provide tailor-made and targeted compliance assistance.

Good systems for reporting and recording occupational diseases at the enterprise level help employers to take measures to control hazards in the workplace, and improve working conditions.

Workers, through the enterprise reporting and recording system, can identify the hazards that exist at their workplaces. This will encourage them to follow good work practices and safety and health instructions, and will help them in reporting workplace accidents and occupational diseases. The active participation of workers in identifying and controlling workplace hazards is essential to the success of any safety and health programme.

OSH services and occupational health surveillance use reports on occupational diseases to carry out workplace investigations, and to determine the intensity (level) and magnitude (severity) of occupational hazards. Analysis of the exposure–effect relationship and the exposure–response relationship between the workplace hazards (including types and routes of exposure), and of their impact on workers, could help in developing threshold limit values to prevent adverse health effects for new and emerging hazards.

The analysis of reported occupational diseases cases can show which workers or groups of workers are exposed to specific hazards, or which individuals and groups may have special vulnerabilities to the workplace hazards. Such information is critical for determining the key areas where priority should be given for the control of risks. The change in the incidence of occupational disease cases over time is a robust indicator of the effectiveness of prevention and control measures in the workplace.

Information on occupational diseases is essential in planning rehabilitation strategies and programmes. With precise and prompt information on the disabilities of occupationally affected persons, targeted occupational rehabilitation and special vocational and job-related rehabilitation can be effectively organized.

Accurate and comprehensive information on occupational diseases is crucial for compensation schemes to calculate the insurance premiums to be paid by enterprises, and to ensure that sufficient funds are available to cover the costs in relation to treatment, rehabilitation and payments for disability and loss of work capacity. Many compensation schemes use data on cases of occupational disease as a basis for strategies on financing compensation schemes. These data are also used to plan workplace prevention activities, and to promote good OSH practices at the workplace.

Data on occupational diseases are needed for the design of targeted training and education programmes for safety specialists, industrial hygienists, occupational physicians, and other occupational health professionals. The data are also used to assess the effectiveness and impact of training and educational activities on specific workplace hazards, interventions and preventive measures.

Accurate and reliable statistics and reports on occupational diseases provide strong tools for raising society's awareness of OSH, and to draw the attention of the media and the public to the key challenges in OSH.

Establishing an employer-based record-keeping and notification system

Many countries have legal requirements for employers to report diseases caused by work to the competent authority, if these diseases occur among their workers. Employers have a duty to maintain appropriate records for the occupational diseases prescribed by law. Some countries also have laws requiring employers to report diseases that are not in the prescribed list of occupational diseases, but which occur under special circumstances or are suspected to be caused by work: for example, if the disease results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. If the same disease occurs among a group of workers in the same undertaking, then even if it does not result in any of these outcomes, and a linkage to the workplace has not been established, the employer normally has an obligation to notify the competent authority immediately through the quickest channel of communication.

An employer-based recording and notification system normally includes:

- standard forms for recording and notification;
- rules on record-keeping;
- procedures for notification;
- requirements for the validation and verification of recorded and reported cases;
- the designation of responsible persons;
- the use of computers and telecommunications technology for record-keeping and notification;
- training and education.

The quality of the records kept by employers is crucially important for anyone who uses the resulting data. Problems with completeness, accuracy or consistency can compromise the usefulness of the recorded data, and reduce the quality of the decisions made on the basis

of those data. There are many reasons why recording and notification may be inaccurate. For example:

- Employers may intentionally fail to record occupational diseases, or record only some cases, for fear of such records affecting their reputation, inviting punishment by the competent authority, or provoking increases in insurance premiums.
- Employers may unintentionally fail to keep records, or under-record diseases occurring at the workplace, because they have no knowledge of occupational diseases, or do not understand the requirements of the law on recording and notification of diseases due to work.
- Employers may give low priority to the recording and notification of occupational diseases.
- Employers may not have the technical expertise or capacity to establish and integrate an efficient enterprise reporting and recording system.
- The obligations for reporting and codifying information are not easy to align with established management and computer systems.
- The reporting system is not covered by the OSH inspectorate.
- The reporter has no access to qualified occupational health services, which results in no or under-diagnosis of occupational diseases.

A sustainable employer-based recording and notification system needs to be safeguarded by adequate laws, regulations, enforcement mechanisms and procedures. Adequate occupational health services are necessary for the diagnosis and recognition of occupational diseases. Important measures for establishing a sustainable system are as follows:

- The forms and procedures for reporting and recording occupational diseases need to be simple, standardized by the competent authority, and downloadable from the Internet. They should be written in local languages, and should avoid the use of technical jargon, which cannot be easily understood by workers and employers. The important terms in the forms, such as “occupational hazard”, “occupational injury”, “occupational disease”, “first aid” and “restricted work”, should be defined and explained to help reduce recording errors.
- A guide to help users complete the form for reporting and notification of occupational diseases should be developed and attached to the form, or be available when needed.
- Incentive measures need to be adopted to encourage workers to report and employers to record and notify occupational diseases, or diseases that are suspected to be caused by work.
- Work-related or suspected occupational diseases may be included in the reporting system. If they are included, there should be a way to notify them as such until this is confirmed by adequate investigation and diagnosis.
- Workers should have the right to access records of reports of their illness, and to correct any mistakes and errors in those records.
- Procedures should be established for validating the reports.
- The notification form should have a provision to the effect that notifying the relevant authorities and bodies of occupational diseases that occurred in their enterprises is a legal obligation. It should also contain a disclaimer to clarify that if an employer records an accident, injury or disease, this is not an admission of fault, negligence, or liability

for workers' compensation or insurance purposes. This is very important in encouraging employers to report occupational diseases to the relevant authorities and bodies.

- A procedure should be set up for workers to report diseases due to work. This should include rules to protect workers' privacy, and to explicitly prohibit discrimination against workers who make such reports. This procedure should be made known to all workers.
- Information, outreach and training activities should be organized so that workers are well aware of the legal requirements for reporting, recording and notification of occupational diseases, and of their duties and rights in reporting such diseases. This will improve their compliance with these requirements.
- The competent authority needs to establish enforcement mechanisms to ensure that employers comply with the relevant legal requirements.

Measures to improve the employer-based recording and notification system could include:

- the option to seek help from the occupational health services and the OSH inspectorate whenever a difficulty arises in ascertaining whether a disease requires recording and notification;
- the development of criteria to verify the quality of the data collected by the system;
- surveys to identify whether there is an under-reporting problem;
- a programme for workers' health surveillance, including the collection of data on exposure to workplace hazards;
- linkages between the enterprise reporting and recording system and preventive actions in the workplace;
- periodic evaluation of the enterprise reporting, recording and notification system and continuous improvement, with involvement of workers and their representatives in these activities.

Key points

- Establishing a national policy for recording and notification of occupational diseases, aimed at preventing such diseases.
- Developing a system for recording and notification of occupational diseases that will cover all workers.
- Establishing uniform requirements and procedures for recording, notification, investigation, compilation and analysis of occupational disease data.
- Institutional arrangements for the effective operation of a national system for recording and notification of occupational diseases.
- Legal requirements for employers to record and make notifications of prescribed occupational diseases.
- Establishing an employer-based record-keeping and notification system.
- Developing standardized, uniform coding systems for recording and notification of occupational diseases.
- Collecting data on occupational and work-related diseases from multiple sources.
- Publishing statistics and reports on occupational diseases.

6. Roles of the relevant parties

Competent authority

Establishing a national system for recording and notification of occupational diseases

To collect national data on occupational diseases, a national system for recording, notification and investigation of occupational diseases needs to be established. This system should cover all workers in all enterprises, regardless of their employment status. A national competent authority should be responsible for developing, operating and improving this system.

The competent authority should work with occupational health professionals, representatives of employers' and workers' organizations, and social security institutions to determine the procedures and methodologies for collecting data on occupational diseases, and to define the concepts and terminology to be used in their recording and notification. The competent authority should issue detailed requirements for:

- which information is to be recorded and notified, normally in unified and standard forms;
- the record systems that will be used to capture information (e.g., medical records, employment records, or a separate system);
- the method for notifying and investigating occupational diseases;
- the period of time within which information on occupational diseases is to be introduced in the records;
- the period of time for which records of occupational diseases are to be retained;
- the conditions under which data and information on occupational diseases are to be recorded, maintained and communicated to another party, with proper attention paid to personal and medical confidentiality;
- the period of time within which cases of occupational disease must be notified to the competent authority;
- cooperation in recording procedures where workers at a single worksite have more than one employer (e.g., on a construction site).

This last point is particularly relevant in cases of acute occupational disease that require urgent action. In such cases, arrangements should be made for workers, their representatives, or their contracting employer to report to the employer who owns the workplace, and who has a duty to notify the competent authority promptly.

Establishing a national list of occupational diseases

A national list of occupational diseases should be established and given legal status, so that employers have a legal obligation to report, if any of their workers have contracted any of the

diseases in the list. The diseases specified in the list should be the minimum of diseases that require recording and notification. The competent authority, in consultation with the representatives of workers' and employers' organizations, occupational health professionals and social security institutions for occupational diseases, should develop a list of suspected diseases, and encourage their prevention and reporting at the workplace. This list needs to be periodically reviewed and extended as improved diagnostic technology is developed, and scientific findings on new occupational diseases are reported.

The competent authority should publicize the national list of occupational diseases. In particular, they should make it known and available to occupational health physicians, health services, social security institutions, employers, workers, and their representative organizations.

National lists of occupational diseases should include all the diseases indicated in Schedule I of the Employment Injury Benefits Convention, 1964 (No. 121), and, as far as possible, the diseases included in the list of occupational diseases (revised in 2010) annexed to the List of Occupational Diseases Recommendation, 2002 (No. 194).

It is very important for the recording and notification of occupational diseases, and for preventing these diseases in the workplace, that a classification system for workplace hazards be established that covers all factors that could affect workers' health, including physical, chemical, biological, ergonomic, organizational and psychosocial hazards in the working environment. A standard coding system is needed for occupations, industries, hazards, diseases, and other key elements in the recording and notification.

Requirements for recording and notification

The competent authority should specify, by national laws or regulations, which occupational diseases are subject to the requirements for recording and notification, who should report them, where they should be reported, and under what conditions. The competent authority should establish the responsibilities, rights and duties of employers, workers, occupational health physicians, health services and other bodies, as appropriate, for recording and notification of occupational diseases.

Uniform requirements and procedures should be established for the notification of occupational diseases to the competent authority and, as appropriate, to social security institutions, OSH inspectorates, occupational health services or other authorities and bodies. The requirements should specify the information to be included in the notification, and its timing. The form used for notification should be standardized.

The competent authority should make the necessary arrangements for coordination and cooperation between the various authorities and bodies.

Guidance and manuals should be prepared to help employers, workers and others in complying with their legal obligations to record and notify occupational diseases.

An enforcement mechanism is essential to ensure compliance with the requirements in the relevant national laws and regulations concerning the recording and notification of occupational diseases. An adequate and appropriate system of OSH inspection is indispensable. The system of enforcement should provide for adequate penalties for violations, and should have the resources and technical capacity to provide guidance to help workers and employers to perform their duties in the reporting, recording and notification of occupational diseases.

The competent authority should, at appropriate intervals, review the national system for recording and notification of occupational diseases, with the participation of representatives of workers' and employers' organizations. When major problems are identified, prompt corrective measures should be introduced. Regular reviews of the system are essential for its continuous improvement, and for focusing on priorities. The system should allow employers to notify occupational diseases promptly when they are identified, and should then allow them to provide more information as facts become known.

Compiling, analysing and publishing statistics on occupational diseases

National coding systems for the prescribed occupational diseases, and standardized classification of the information to be put in the records at the enterprise level and included in the notification forms, will greatly facilitate the compilation and analysis of data collected at the national level. The classification to be used should as far as possible be consistent with the most recent versions of internationally adopted classifications.

The forms used for recording occupational diseases at the enterprise level, and for notification to the competent authority, should be carefully designed so that the data collected from the notifications will be sufficient for compiling national statistics on occupational diseases without additional communication or clarification with the entity that submitted the report.

The competent authority should compile and publish national statistics on occupational disease at least once a year.

Arrangements for investigating occupational diseases

Investigation of occupational diseases is important not only for disease control and prevention, but also in validating the information collected through notifications, and in obtaining information on cases of occupational disease that are not reported, or are under-reported. The competent authority should arrange for investigations if there are indications of incompleteness in the notification of occupational diseases.

A well-designed strategy and well-arranged investigations can also be used to verify the effectiveness of the national system for recording and notification of occupational diseases, and to identify areas for further improvement. Proactive investigations of suspected cases can play a major role in identifying new occupational diseases.

Occupational diseases are normally investigated by OSH inspectors, occupational physicians and occupational health researchers. Employers have a duty to be cooperative, and to allow entry of the investigator into their premises, if the investigation is requested and authorized by the competent authority. Representatives of the employers, and of the workers in the enterprise, should have the opportunity to accompany the investigators, unless the latter consider, in the light of the general instructions from the competent authority, that this may be prejudicial to the performance of their duties.

The competent authority should also have the power to require employers to carry out investigations of specific occupational diseases and to report on the action taken to prevent a recurrence of the same diseases among other workers.

The competent authority should have the power to request assistance from employers in its investigations and inquiries into occupational diseases. It is also the competent authority's duty to publish reports on investigations and inquiries into cases of occupational disease or situations that pose an actual or potential serious threat or risk to workers or the public.

Employers

The employer has a duty to provide a safe and healthy workplace for all employees. If preventive and protective measures fail, workers exposed to occupational hazards could develop occupational diseases. Laws and regulations in many countries require that the employer record and notify occupational diseases within a time limit prescribed by the competent authority. Thus employers have an obligation to establish and maintain records on occupational diseases that occur among their employees, and to notify the competent authority of cases of occupational diseases included in the national list of such diseases, or as determined by the national law or regulations. In collecting reports on occupational diseases, employers need to identify the workplace hazards that caused the disease, and to know where OSH measures were inadequate.

Representatives of employers' organizations should participate in formulating and implementing the national policy for recording, notification and investigation of occupational diseases, and in establishing and operating the national system to implement this policy.

Arrangements for workers to report occupational diseases

Employers should encourage workers in their establishments to report occupational diseases. Through such reporting, the workers will also be made aware of the harmful impacts of occupational hazards, and the need to comply with OSH requirements or best practices when doing their work.

A good enterprise recording system will allow and encourage workers to report diseases caused by work; this often leads to hidden safety and health hazards being identified.

Effective arrangements for recording occupational diseases at the enterprise level normally include the following actions:

- Establish a policy for recording occupational diseases within the enterprise; this should be part of the enterprise's overall OSH policy. Workers and their representatives should be involved in developing and reviewing the policies on OSH, and on recording occupational diseases.
- Provide training and information for the workers and their representatives to report occupational diseases.
- Designate a "responsible person" to receive, on the employer's behalf, reports from the workers on occupational diseases, and to arrange for the reports received in the enterprise to be properly recorded, and notified to the competent authority in accordance with the requirements of the relevant laws and regulations. This responsible person will also need to verify the information included in the workers' reports and, when necessary, to request that the causes and actions be investigated, in order to control the identified workplace hazards.

- Establish procedures and implement measures to protect the privacy of the workers affected, and to safeguard the confidentiality of personal and medical data in the recording system for occupational diseases, in accordance with the relevant national laws and practice.

A clearly delineated reporting line will facilitate reporting of occupational diseases by the workers. Measures should be taken to protect workers who report occupational diseases. Properly designed internal reporting forms are easy for workers to complete, and help the responsible person in the company to transfer the information to the official notification form for the employer to inform the authorities. The reporting forms should be designed so that workers can understand and complete them. If there are illiterate workers, or migrant workers who do not understand the language in the reporting forms, arrangements should be made to help them in reporting occupational diseases.

Workers are often asked to submit a report to their immediate supervisor for compensation and insurance purposes, but they should be made aware that they can also report direct to the designated responsible person for recording occupational diseases, to occupational health services, to OSH inspectors, or even to the competent authority, if they are worried that their reporting could result in unfair treatment or detrimental consequences for themselves.

Recording occupational diseases

Recording at the enterprise level should preferably be based on a computerized system. The information included in the reports needs to be categorized, and be entered in the system using a standardized coding system. The people responsible for entering data in the system should be properly trained, and there should be a back-up system to prevent loss of data due to system failures.

The records of occupational diseases should be properly maintained, and be readily retrievable in a reasonable timeframe. The original paper copies of reports should be properly archived. Rules for the restriction of access to the data should be established to protect the privacy and confidentiality of personal and medical information. Data fields that contain personal identifiers should be suppressed when making data available, or when reporting it. Arrangements should be made for information technology support to ensure that the computerized recording system is properly maintained, and so that it can be restored in case of adverse events.

Where two or more enterprises operate simultaneously at one workplace, the employer to whom the workplace belongs has a duty to notify the competent authority of occupational diseases that have occurred at his or her workplace. This duty should not release the obligations of the subcontracted employers to notify occupational diseases among their own workers.

The recording system at the enterprise level should be able to collect information needed for filing claims for compensation and benefits for occupational diseases among workers, and for meeting the requirement to make notifications of occupational diseases to the competent authority. The most efficient way to capture this information is to merge or link data systems for insurance purposes and for disease surveillance.

Reports on occupational diseases should be prepared and entered in the records within a specified period of time – preferably within six days, or a time to be determined by the competent authority

after the reports have been received. This is important for inspection purposes, and for investigations or inquiries by the occupational health service when requested by the competent authority.

The information recorded at the enterprise level often includes more data than are needed for making the obligatory notifications. Additional information recorded by employers is useful for targeted preventive activities at the workplace. This might include a detailed description of hazards, a history of exposures at the workplace, records of working environment surveillance, a history of employment/occupations, and accident investigations.

The employer should provide appropriate information on all occupational diseases reported in the enterprise to workers or their representatives, and on measures taken to control hazards at the workplace and prevent a recurrence of the same diseases among other workers.

The employer should involve workers and their representatives in making arrangements for recording occupational diseases, and should inform all workers of the procedures. The person responsible for recording occupational diseases should be trained in the procedures for recording required data, correcting erroneous information in the records, and obtaining missing information in the reports through investigations.

Notification to the competent authority

Employers should make arrangements within the enterprise recording system for occupational diseases to fulfil their obligations to notify the authority of the legally reportable occupational diseases.

Such arrangements should include:

- designating a person within the enterprise responsible for preparing the appropriate notification forms;
- submitting reports of notifiable diseases to the competent authority within the time period determined by the relevant laws and regulations;
- notifying the competent authority immediately when there is an outbreak or a cluster of the same occupational disease among several workers within a short period of time (there should be a 24 hour limit for reporting from remote locations with limited communications capability);
- keeping records of all notifications, and informing the workers concerned and their representatives of the results of the notification;
- cooperating in providing additional information if, after reviewing the notification, the competent authority requests it for taking further action;
- coordinating with other employers where their workers engage in activities simultaneously at one worksite.

Self-employed persons also have a duty to notify the competent authority of any occupational diseases they suffer. If the self-employed person is incapable of submitting notification, because of death or incapacity, the notification may be submitted by the person in control of the establishment, or by co-workers or family members. In other cases, the self-employed persons themselves should submit the notification when they are able to do so.

Investigating all reported occupational diseases

The fundamental purpose of the enterprise recording system for occupational diseases is to protect workers, by preventing a recurrence of the same diseases among co-workers, and for compensating the victims of occupational disease. All reported cases of occupational disease should be thoroughly investigated, and appropriate control and preventive measures should be taken to improve the working environment and conditions.

The employer should arrange an immediate investigation when receiving a report of occupational disease. The main purposes of such investigations are to establish what has happened, determine its causes, and identify measures necessary to prevent a recurrence. The employer should make the results of such investigations available to the workers and their representatives, with a view to obtaining their support for and collaboration in measures to be taken to control workplace hazards, and to prevent the recurrence of the same disease among other workers.

Employers must take full responsibility for investigating all occupational diseases in their enterprises. If an employer lacks the necessary expertise within the enterprise to carry out a thorough investigation, he or she should call on the assistance of a person with appropriate expertise, if necessary from outside the enterprise. Such a person should be competent, and have qualifications recognized by the competent authority. In unusual situations, or where advice is not reasonably available, the competent authority should be able to advise, and may in some circumstances undertake investigations, for example where new diseases or hazards are suspected.

The site where an occupational disease has affected individuals worked should be left undisturbed before the start of the investigation, apart from requirements for first aid, or to prevent immediate risk to other persons. If it is necessary to disturb the site before the investigation starts for reasons of first aid, or to prevent further risk to other persons, arrangements should be made to record the site properly prior to any intervention, including photographs, drawings, and the identities of eyewitnesses.

Workers

The representatives of workers' organizations should cooperate with the competent authority, and participate in formulating and implementing the national policy for recording, notification and investigation of occupational diseases, and in establishing and operating the national system to implement this policy. They should participate in designing and revising the key concepts, definitions and methodology used in compiling and publishing national statistics on occupational diseases.

Workers and their representatives have a duty to be cooperative in enabling employers to fulfil their obligations on OSH and on recording and notification of occupational diseases. This duty includes cooperating with employers in reporting any occupational accident, injury, disease or suspected case of occupational disease.

Workers and their representatives should participate in formulating, implementing and periodically reviewing the enterprise's policies on OSH and on recording occupational diseases. They should be consulted as appropriate in formulating and applying the procedures for notification of occupational diseases. The participation of workers and their representatives in

the employer's arrangements at the enterprise level should involve no cost to them, and should take place during working hours. For effective participation, workers and their representatives should be provided with adequate information on measures that the employer takes to implement the enterprise policy on recording occupational diseases. They should be able to consult the occupational health service if needed, and to get help from external sources when necessary.

Workers and their representatives should be provided with opportunities for training in the key concepts and terminology, and in the methods used in reporting occupational diseases, so that they are able to perform their duties in implementing the enterprise's policy on recording occupational diseases.

It is important to train workers and their representatives in the classification of workplace hazards, so that they can cooperate and participate in implementing workplace control measures. A knowledge of the physical, chemical, biological, ergonomic, organizational and psychosocial hazards in the workplace, and of their occupational exposures, is a strong incentive for workers and their representatives to collaborate with employers in applying OSH measures at the workplace.

Workers have a duty to report – preferably through their immediate supervisors – any situation that they have reasonable justification to believe presents a threat to their health or that of their fellow workers, or an imminent and serious danger to life. They also have a right to evacuate from such a situation, without undue consequences, until remedial measures are taken.

Workers' representatives should have the right, the facilities and the necessary time, without loss of pay, to participate in investigations of occupational diseases. They also have a duty to assist the employer and persons acting on their behalf in such investigations.

Workers' representatives in the enterprise should have the opportunity to accompany the OSH inspectors in their investigation of occupational diseases, unless the inspectors consider, in the light of the competent authority's general instructions, that this may be prejudicial to the performance of their duties.

Workers with occupational diseases have a right of access to their personal health and medical files kept by the enterprise recording system. This right should preferably be exercised through a medical professional of their choice. Special attention should be devoted to the need to maintain accurate and up-to-date records, with due regard to confidentiality. Measures should be taken to facilitate the exercise of each worker's right to have any erroneous data corrected.

Workers and their representatives have the right to be informed of the results of workplace investigations. This is beneficial for the workers to assist the employers in implementing OSH measures with a view to preventing similar occurrences.

OSH inspectors

OSH inspections carried out by the OSH inspectorate play a critical role in ensuring that the requirements of the laws and regulations governing the recording and notification of occupational diseases are properly complied with.

OSH inspectors should have the power of access to the worksite for inspection, in order to verify compliance with the laws and regulations on recording and notification. They provide guidance

and advice to employers and workers, so as to reduce the risks of occupational diseases at the workplace, and to help employers to fulfil their obligations in the recording and notification of occupational diseases. This advice and guidance can be verbal or written, and can take the form of information, outreach or training.

In fulfilling their inspection duties, OSH inspectors should cooperate, as far as possible, with OSH professionals, including safety engineers, occupational physicians, nurses, hygienists and ergonomists engaged in OSH practice. OSH inspectors play a particularly important role in liaison between OSH services, research institutions, universities, public health services, and the institutions responsible for safety, treatment, rehabilitation and compensation.

The enforcement action of OSH inspectors depends on the type of violation. If a violation is observed during an inspection, the inspector may issue an order for compliance. Depending on the severity of the violation, the employer may be requested to take corrective measures and achieve compliance within a time frame determined by the inspector, in consultation with the employer and workers' representatives in the enterprise, or to take immediate action to comply with the legal requirements before the inspector leaves the worksite.

During an inspection, if the inspector finds that a violation is an immediate danger or hazard to the health or safety of the workers, he or she can issue an order to stop work until remedial measures are taken and full compliance is achieved.

The lack of reporting of occupational diseases by workers may be linked to a fear of discrimination. OSH inspectors need to pay particular attention in their inspections to this issue, and require employers to put a policy in place that explicitly prohibits discrimination against workers who report accidents, injuries and diseases, and which protects the privacy of the reporting workers, if this has not already been done.

Occupational health professionals and general health practitioners

Occupational health services are entrusted by law or practice with a mandate to protect and promote workers' health, and to improve working conditions and the working environment. Their activities, as specified by the Occupational Health Services Convention, 1985 (No. 161), include:

- identifying and assessing the risks from health hazards at the workplace;
- surveying factors in the working environment and work practices that affect the health of the workers;
- advising on the planning and organization of work, including the design of the workplace, the choice, maintenance and conditions of machinery, and substances used in the work;
- participating in developing programmes for improving working practices, and evaluating the health aspects of new equipment;
- advising on workplace OSH measures;
- surveying workers' health in relation to work;
- participating in analysing occupational diseases.

To fulfil the mandate of occupational health services, after occupational health professionals have informed the employers, workers and their representatives, they should where appropriate

have free access to all work areas, and to information concerning the processes, performance standards, products, materials and substances used. This is subject to their preserving the confidentiality of any commercially sensitive information they may learn that does not affect the health of workers. They can take samples for analysis of any products, materials and substances used or handled at the workplace.

Occupational health professionals have specialized expertise in and knowledge of both occupational diseases and workplace hazards. They play an important role in formulating and applying policies, procedures and programmes for recording and notification of occupational diseases, and diagnostic and exposure criteria, and in establishing a national list of occupational diseases.

Occupational health nurses and physicians are often the first contact for workers who have a health problem that they suspect is caused by their work. Occupational health physicians are trained to link a disease to its occupational origin. They are usually also the ones entrusted by the competent authority to determine whether a disease is indeed caused by work. It is natural that they should notify the competent authority of the occupational diseases they have detected during their occupational health practice, if this is required by national law and regulations. They should have a duty to inform the employers concerned and the affected workers and, as appropriate, to notify workers' representatives in the enterprises and the joint health and safety committees, where they exist. They should behave in conformity with professional ethics on medical confidentiality, and general OSH principles. This is important so that a recurrence of similar cases can be prevented and remedial action taken.

Occupational health professionals can, in particular, contribute to the prevention and control of occupational diseases by providing:

- feedback to the NSRNOD, to ensure an improved match between the notification by the employers and their findings;
- early warnings to the competent authority, employers, workers and their representatives and social security institutions on OSH problems that they have identified during their practice of occupational health services;
- the results of their assessments of the effectiveness of workplace preventive actions and measures to control hazards and improve the working conditions and working environment.

Workers' health surveillance is a major function of the occupational health services. During occupational physicians' examinations and consultations on workers' health, they can obtain valuable information on the hazards to which the workers are exposed, and on the control measures taken at the workplace. In so doing, they can help workers by informing them of the working conditions and exposures that are medically contra-indicated, and help the employer to place workers in occupations that take their capacity for particular work into account.

Provided appropriate safeguards are in place for sensitive personal medical data, information collected by the occupational health service in the diagnostic and therapeutic care of workers is a valuable resource for the NSRNOD. Therefore the data collection system in the occupational health service should use standardized coding and classification of occupational diseases and hazards.

Occupational health professionals should share the information they collect on the causal agents of occupational diseases and workplace hazards with other services, such as safety, hygiene and ergonomics, to foster a multidisciplinary approach in controlling occupational risks in the workplace.

Information from the enterprise recording and notification system will help the occupational health services to plan better for comprehensive OSH care (prevention, protection, treatment, rehabilitation, return to work and compensation) for the workers who are most in need.

Occupational health professionals play an important role in researching new occupational hazards and new occupational diseases. They have a duty to report objectively to the scientific community on new findings from their practice in surveying workers' health and assessing the risks from health hazards in the workplace.

When workers fall ill, they often go to see the family doctor or dentist, or physicians in clinics or hospitals. Thus hospitals and health care centres also have a role to play in notifying the competent authority, OSH services and the employers concerned when they suspect that the diseases they diagnose are caused by work.

As part of a national alert system, the competent authority should be notified immediately if, in the practice of occupational health or general health care, an outbreak or cluster of the same occupational disease is observed among several workers, either from the same enterprise or from several enterprises of the same type, within a short period of time. The occupational health and health care practitioners should also alert the employers concerned. This is important for prompt control and protective actions to be taken at the workplace to prevent the spread of the same diseases to other workers.

Key points

Role of the competent authority:

- Developing a national policy and national system for recording and notification of occupational diseases.
- Prescribing the legally notifiable occupational diseases, and establishing a national list of occupational diseases.
- Determining the roles, responsibilities, rights and duties of employers, workers, OSH inspectors, occupational health professionals and others.
- Establishing arrangements for coordination and cooperation between the various authorities and bodies.
- Establishing enforcement mechanisms, and applying adequate penalties for violations.
- Arranging for investigations and inquiries, and requirements for the cooperation of employers.
- Publishing annual statistics on occupational diseases.

Responsibility and duties of employers:

- Establishing an employer-based record-keeping system for occupational diseases within the enterprise.
- Arranging for notifications to the competent authority of diseases that are in the list of legally notifiable occupational diseases.
- Investigating reported occupational diseases within the enterprise.

Rights and duties of workers:

- Complying with the requirements for reporting of occupational diseases.
- Participating in investigations of occupational diseases.
- The right of access to their personal health and medical files.

Role of OSH inspectors:

- Inspections to ensure compliance by employers.
- Guidance and advice to help employers to fulfil their obligations.
- Enforcement action, and punitive measures for violation.

Role of occupational health and health care professionals:

- Surveying workers' health, and the working environment.
- Identifying occupational diseases.
- Advising on prevention and control of occupational diseases.
- Researching new occupational hazards, and new occupational diseases.

7. Information to be recorded and notified

Minimum information required for recording and notification

The information included in the recording of occupational diseases is determined by the purpose of the programme, such as compensation for the victims of occupational diseases, control measures for workplace health hazards, compliance with requirements for notification to the competent authority, planning and organization of occupational health services, or epidemiological and occupational health studies. Some information is essential, and common to all these purposes. Some countries have legal requirements that specify the minimum information to be included in notifications of occupational diseases.

The essential, common information that is often used for recording occupational diseases includes the following.

- Basic information on the person affected by the occupational disease:
 - name, address, sex, date of birth, national insurance/social security number;
 - employment status;
 - occupation at the time the disease was diagnosed, and previous occupations;
 - length of service with the current employer;
 - length of employment in the current occupation.
- Basic information on the occupational disease:
 - name and nature of the disease;
 - hazardous agents, processes or conditions to which the disease is attributable;
 - description of the work that gave rise to the condition;
 - length of exposure to occupational hazards and processes;
 - date of diagnosis of the disease, and name of the medical practitioner, with place of work.

The notification of occupational diseases should include the above information, together with the following basic information about the enterprise, the establishment and the employer:

- the employer's name, address, telephone and fax numbers, and email address;
- the enterprise's name and address;
- the number of workers in the enterprise;
- the enterprise's economic activity;
- the name and address of the worksite where the worker with the occupational disease works (if different);
- the type of work activities that caused the occupational disease;
- the number of workers at the worksite.

The key terms, and the methods used for recording, notifying and compiling occupational diseases, should be clearly defined in the relevant national laws and regulations. The statistics should be published for individual branches of economic activity.

In designing an NSRNOD, the information to be collected should, as far as possible, be coded and classified by using the standards and guidelines established by the ILO or other relevant international organizations.

Developing national classification systems

When the competent authority is establishing, reviewing and applying systems for the classification of occupational diseases, it should take account of the 1996 Code of Practice on Recording and Notification of Occupational Accidents and Diseases, the International Classifications of Diseases (ICD) of the WHO, and other international classifications if applicable.

International classifications established by the International Conferences of Labour Statisticians should be referred to or followed, when appropriate, in developing national classification systems on employment and occupations to be used by the NSRNOD. Such international classifications include:

- the International Standard Industrial Classification of all Economic Activities (ISIC);
- the International Standard Classification of Occupations (ISCO);
- the International Classification of Status in Employment (ICSE);
- classification of industrial accidents according to the nature of the injury;
- classification of industrial accidents according to the bodily location of the injury;
- classification of industrial accidents according to type of accident;
- classification of industrial accidents according to agency.

The competent authority should establish a national list of occupational diseases for the purposes of prevention, recording, notification and compensation in accordance with the requirements in the Employment Injury Benefits Convention, 1964 (No. 121), and the List of Occupational Diseases Recommendation, 2002 (No. 194). Representatives of employers' and workers' organizations, social security institutions for occupational injury and diseases, and occupational health services should be consulted in the development, reviewing and updating of the list of occupational diseases.

The national competent authority should formulate a list of suspected occupational diseases for the purposes of prevention, and preparation for future updating of the national list of occupational diseases.

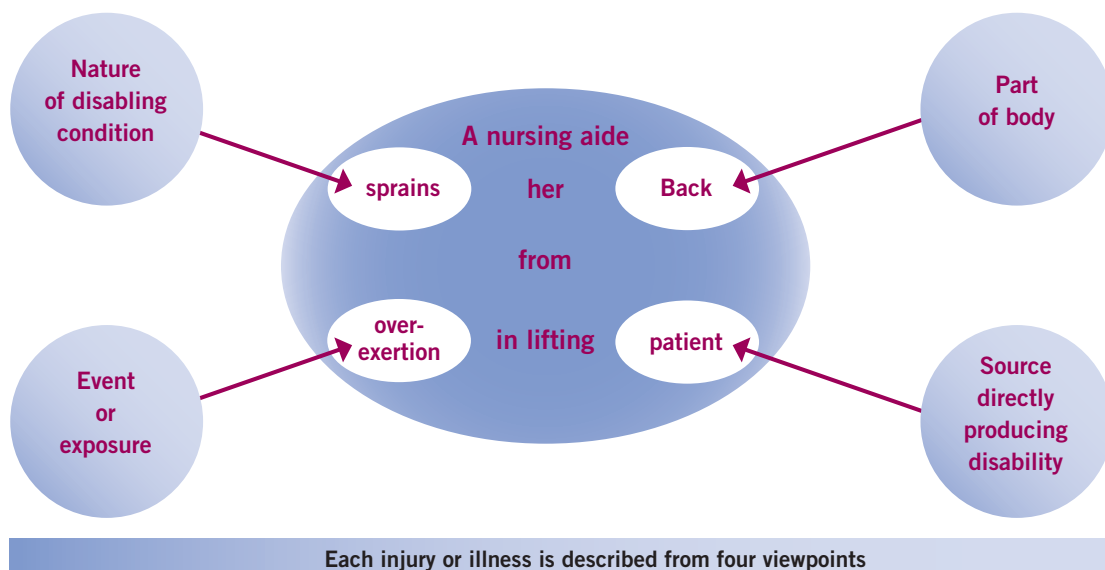
The experiences of countries that have a long history of developing and applying standard classification systems of occupational diseases could be very useful for countries that are establishing or reviewing their national lists of occupational diseases. Learning from examples and lessons identified in other countries on the classification of occupational diseases can help to increase the efficiency of data collection, and avoid pitfalls in operating the recording and notification systems. In this connection, the Occupational Injury and Illness Classification System (OIICS) in the USA provides a useful example.

Example: Occupational Injury and Illness Classification System in the USA

The Occupational Injury and Illness Classification System (OIICS) was developed by the US Bureau of Labor Statistics (BLS) to provide a consistent set of procedures for recording the characteristics associated with workplace injuries, diseases and fatalities. The circumstances of each case are classified based on the BLS OIICS manual. The Survey of Occupational Injuries and Illnesses (SOII) uses four case characteristics to describe each incident that led to an injury or disease that involved one or more days away from work (see Figure 3 below), and the Census of Fatal Occupational Injuries (CFOI) also captures a fifth characteristic (secondary source) to describe a fatal workplace injury. These characteristics are as follows:

- **Nature** – the physical characteristics of the disabling injury or disease, such as cuts/lacerations, fractures, sprains/strains, or electrocution.
- **Part of body affected** – the part of body directly linked to the nature of the injury or disease cited, such as finger, arm, back, or body systems.
- **Event or exposure** – the manner in which the injury or diseases was produced or inflicted, such as being caught in running equipment; slips, trips, or falls; overexertion; or contact with electric current.
- **Source** – the object, substance, exposure or bodily motion that directly produced or inflicted the disabling condition, such as machinery, ground, patient, or electrical wiring.
- **Secondary source** – the object, substance or person that generated the source of injury or disease, or which contributed to the event or exposure, such as ice or water.

Figure 3: Injury and illness characteristics



Source: Bureau of Labour Statistics, USA.

Occupational injuries and disease surveys

Surveys of occupational illness and injury are often conducted to fill the information gap caused by under-reporting. Sampling design is a complex technical process, and should consider all the enterprises to be covered by the surveys. A two-stage process is often used to select a sample. Calculation of the sample size depends on the characteristics for which estimates are needed, the industries for which estimates are desired, the characteristics of the population to be sampled, the target reliability of the estimates, the survey design employed, and the calculation of the sample weights.

Data must be accurate and complete, and be collected in a timely manner using modern technologies, including the Internet, emails, fax, telephone and postal mails.

Estimation procedures should include weighting for summary (industry-level) estimates, for case and demographic estimates, and for calculating incidence rates. More detailed guidance on weighting in estimation procedures for surveying occupational injuries and diseases is given in Annex 2.

It is essential to prepare and publish guidelines for a survey of occupational diseases and injuries, to ensure the quality of the data to be collected and the results of the survey. The people who participate in the surveys should be properly trained to reduce four critical survey errors: sampling error, measurement error, coverage error and non-response error. Charts and figures can reinforce the key messages in the texts of the survey publications. Tables presenting detailed information collected from the survey on case characteristics, worker demographics, numbers of workers and occupational diseases in individual industries and sectors, as well as appendices presenting the scope and methodology, can facilitate their use in other studies, and widen the scope of their application.

Other data sources

Multiple data sources, such as death certificates, workers' compensation records, disease registers and hospital discharge records, hold information that could be used to complement the data collected through the recording and notification system on occupational diseases. The potential of these sources should be explored and used to help in identifying work-related and occupational diseases.

Key points

- Collect the minimum information required for notification on the enterprise, the employer, the worker affected and the occupational disease.
- Use classification schemes for occupational diseases, industries, status of employment and occupations.
- Use surveys of occupational injuries and illnesses to obtain information to supplement the data from the main notification system.

8. Data analysis and publication of annual statistics

Main issues to be considered

The robustness of data analysis is determined by the quality of the information obtained in recording and notification. The collected data on occupational diseases need to be checked for accuracy. Mistakes or missing data should be identified, and the persons who submitted the report or notifications should be able to be contacted for clarification. A computerized mechanism for verification should be included in the data processing and analysis systems; this should be able to detect reporting errors automatically, such as misclassification, miscoding, mismatch of data between the relevant sections (e.g. the length of exposure period is longer than the length of employment, or greater than the age of the worker concerned), incorrect or incomplete data, and duplication of data. The verification system should be designed for notification through electronically submitted and machine-readable forms.

Once the data from the report have been verified, they can be processed further for analysis and statistical compilation.

The data analysis system, and the statistics for occupational diseases, should be designed to avoid double or multiple counting of the same occupational disease for the same worker reported from several sources (such as from the notifications of workers, occupational health services, social security institutions and OSH inspectors). When the same worker has suffered more than one occupational disease during the period covered by the statistics, the case should be counted separately with respect to each disease.

Ideally, the period covered by reporting the statistics in a usable format should not exceed one calendar year; it could be three months or six months, depending on the number of occupational disease cases, the severity of the diseases, and their impacts on the workers. When certain occupational diseases affect specific sectors or industries, the statistics for these individual sectors and industries should be compiled and published more frequently. With the assistance of computer systems and powerful statistical software, it is not technically difficult to compile and publish statistics for any period of time.

The sources of the statistics should be shown: for example, notifications from employers, or other bodies such as labour inspectorates, occupational health services and social security institutions. Other information should also be indicated in publication of the national statistics, such as the scope or coverage of the statistics, particularly in respect to categories of persons, branches of economic activity, occupations, size of the enterprise, or the state or region where the enterprise is located.

Definitions of the key terms, methods used for recording and notifying occupational diseases and for compiling the statistics, and quality control parameters in the processing of the collected data should all be clearly explained in the publication. Statistics of previous periods should also be included so that trends can be revealed.

The publication of the statistics and reports may use charts, texts and tables to present an overall summary of the national situation on occupational diseases, such as figures for the total numbers of cases reported for each of the diseases included in the national list of occupational diseases, specific cases, and frequency rate by industry, demographics of the affected workers, and appendices presenting the scope of coverage and the methodology used. The statistical data should be arranged to present the incidence, prevalence and severity rate for each major branch of economic activity, occupation, age group, sex, and other categories to be specified. Such information can help readers to carry out further analyses to target preventive action or conduct further studies.

The statistics for occupational diseases in individual branches of economic activity should be presented according to the significant characteristics both of the workers, such as employment status, sex, age or age group, and of the enterprises concerned.

It is necessary to produce annual statistics on occupational diseases and comparative analysis to determine trends, and for setting priorities in the control and prevention of occupational diseases.

The weakest part of the national statistics on occupational diseases is usually information on occupational diseases relating to self-employed persons. Chapter 9 of this manual is devoted to data collection from this segment of the workforce, and includes practical guidance for expanding the NSRNOD to cover the self-employed. Providing a separate section in the publication of national statistics on occupational diseases among the self-employed persons could help to bring the problems of non-reporting and under-reporting in this sector to the attention of society, the OSH inspectorate and OSH professionals.

Caution is needed when calculating the incidence and prevalence of occupational diseases among the self-employed, as the total number of self-employed workers is often an estimate. Thus if information on this segment of the workforce is shown separately in the national statistics on occupational diseases, it may provide policy-makers, OSH practitioners and other users with a better understanding of the nature and scale of occupational disease problems with an appropriate perspective, and help them to avoid making out-of-context comparisons with other segments of the economy.

Standardized classifications of data in the publication of statistics

Standardized classifications of industries and occupations are very important for collecting and analysing data from the notifications of occupational diseases. A national system for classifying and coding industries, occupations and occupational diseases is an essential component in the development of a national system.

The national standard classification and coding of industries, occupations and occupational diseases should be comprehensive, and be periodically reviewed and updated to reflect changes in economic and social development.

The classification and coding should be based on production activities; industries engaged primarily in similar productive and economic activities should be put in the same group. Enterprises using similar raw materials, similar production machinery and equipment, and producing similar products, are normally classified under the same industry. In other words, enterprises that do similar things in similar ways are classified together.

The classification should use a digital, hierarchical coding system to classify economic activities, and provide easy access by all users. Occupations are normally classified at five levels: major group, minor group, broad occupation, detailed occupation, and occupations with similar skills or work activities. Occupational diseases are often grouped according to their causal agents, or based on the target organ systems.

National classification schemes should, as far as possible, be consistent with the relevant international standard classifications as mentioned in the previous section; this will facilitate international comparisons.

Key points

- Quality of the data, source of information, methods of calculation of statistics, coverage of the statistics.
- Annual publication of statistics and industry-specific statistics.
- Statistics for self-employed persons.
- Classification of data according to industry, occupation and occupational disease.

9. Information on occupational diseases among self-employed persons

Extending the recording and notification system to self-employed persons

In view of the informal nature of employment of many self-employed persons, and the difficulties in collecting data from them, special efforts are needed to expand the NSRNOD to include this segment of workforce. National policy needs to specify the importance of, the need and commitment to collecting data on occupational diseases from them. Adequate resources should be allocated to the national system to capture data on the self-employed.

The system should be designed so that the specific features of and difficulties in submitting occupational disease reports by self-employed persons are considered, and proactive data collection measures are implemented. The national policy should state clearly that a self-employed person has the responsibilities and duties of both a worker and an employer to notify the competent authority on his or her own occupational disease contracted during work. If the self-employed person is not in a position to do so, he or she should make suitable alternative arrangements.

The national policy for recording and notification of occupational diseases should include elements to encourage and facilitate co-workers and family members to submit notifications. Thus tailor-made training and information should be organized by the competent authority, OSH inspectors and the occupational health services for both self-employed persons and family members. The public health authority and institutions, schools, NGOs and the local community should be involved in this.

At the enterprise level, employers who own establishments where self-employed persons are contracted to work should make arrangements for the recording and notification of occupational diseases that can be applied to these persons. A self-employed person has a duty to cooperate with the employer who owns the establishment where he or she is contracted to work, to enable the employer to notify occupational diseases.

Extending the NSRNOD through Basic Occupational Health Services

Basic Occupational Health Services (BOHS) exist in several countries. The objective of BOHS is to ensure that essential occupational health services are provided for all workers in all workplaces, irrespective of the sector of the economy, the size of the company, the geographical area, or the nature of the employment contract. BOHS are designed to provide a minimum level of occupational services that are essential to meet the legal requirements for the prevention of occupational diseases at the workplace, the protection of workers' health, well-being and work ability, and workplace health promotion. The approaches that BOHS use complement primary health care activities, and can be promoted and applied both by the public health department and by the occupational health authority. BOHS are organized on the following principles:

accessibility by all working people, a focus on local problems, adaptation to local conditions, and affordability by local clients. BOHS for workers in small and micro enterprises, and in the informal sector, are provided by the public sector and supported by the community health services.

The universal accessibility of BOHS makes them a particularly useful means for extending the NSRNOD to the informal sector. Records collected through BOHS on workers' health status, including the occupational diseases they have contracted and their occupational exposures to health hazards at the workplace, can fill the gap in data collection on occupational diseases among self-employed persons in the informal sector.

The records of workers' health and workplace exposures collected through BOHS commonly include:

- information on the general health of workers through occupational health examinations;
- records of the basic treatment of workers affected by occupational disease;
- data on occupational exposures and risk assessment if a disease is recognized as occupational;
- records of preventive and control measures at the workplace;
- demographic data on workers;
- information on the enterprises covered by the local BOHS.

Key points

- Duty of self-employed persons to record and notify occupational diseases, both as employers and as workers.
- Obligation of the employer to make notifications for self-employed persons working in his or her establishment.
- Use of Basic Occupational Health Services (BOHS) as an important means to extend the recording and notification system to workers in the informal sector.

10. Conclusions and summary

There are many factors that affect the recording and notification of occupational diseases. This guide has presented the key elements that need to be considered when countries are developing or improving a comprehensive national system for the prevention of occupational diseases.

A national policy for recording and notification of occupational diseases is critical, and should be part of the national policy on occupational safety and health. A national system should be established to cover all workers in all sectors and industries. This system should cover reporting by workers and recording by employers of occupational diseases, as well as notification by employers to a competent authority on the occupational diseases prescribed by the relevant national laws and regulations. The system should include the conduct of investigations to provide better understanding of inaccuracy or non-reporting, and to compile, analyse and publish data and statistics on occupational diseases.

The participation of workers, employers and representatives of their organizations is essential for effective implementation of the national policy on recording and notification of occupational diseases.

An operational system for recording and notification of occupational diseases comprises general rules, uniform procedures, institutional arrangements, obligations, responsibilities, rights and duties for the relevant parties, such as the competent national authority, employers and workers and their representatives, the OSH inspectorate, occupational health services, and social security institutions.

A national list of occupational diseases and criteria for diagnosis and recognition of such diseases should be established, so that cases of diseases caused by work can be identified, recorded and reported to the national competent authority. Accurate and comprehensive information collected through the recording and notification system is essential for compensation of diseased workers, and for control and prevention measures at the workplace.

Requirements for recording and notification of occupational diseases should be developed, and prescribed by law as a mandatory responsibility of employers. The responsibilities, rights and duties of other parties, such as the competent authority, OSH inspectors, workers, occupational health professionals and general health practitioners, should also be formulated in the form of law, or of regulations with a legal status.

The competent authority should be in charge of the overall supervision of the national system and programme for collecting, compiling and analysing occupational disease data, and for publishing national statistics on occupational diseases.

Technical guidance for employers and workers to comply with their legal obligations and duties to record and notify occupational diseases should be developed, and proper training and education should be organized.

Standardized and uniform coding should be established for occupational diseases, together with procedures for reporting and recording them at the enterprise level, and for notifications to the

national competent authority. The national standardized coding should take the relevant international standards into consideration. National systems for coding and classifying economic activities, occupations and employment status, and occupational accidents according to the nature and bodily location of the injury, the type of accident and occupational diseases can facilitate the collection and analysis of data on occupational diseases. Bringing the national coding and classification system into line with international standards will help international comparison.

Mechanisms for cooperation with other relevant authorities and organizations, such as health, social security, education, safety and research, can help to expand the coverage of the NSRNOD, and facilitate action at the workplace to protect workers' health and control the risks from health hazards.

An employer-based recording and notification system is the key to effective collection of occupational disease data, and should be established in all undertakings, including those owned by self-employed persons.

The OSH inspectorate plays an important role in enforcing the legal requirements for recording and notification of occupational diseases. It also has a major function in providing guidance to employers and enabling them to fulfil their obligations. Occupational health physicians have specialized expertise in and knowledge of both occupational diseases and workplace hazards. They are also entrusted by the competent authority to determine whether a particular disease is indeed caused by work. It is natural that they should notify the competent authority of the occupational diseases that they detect during their occupational health practice, if required by the relevant national laws and regulations.

Family doctors, dentists, and physicians in clinics and hospitals also have an important role in notification when they suspect that the diseases they diagnose are caused by work. Reports from general health practitioners represent an important mechanism for improving the coverage of national occupational disease data collection.

Campaigns on the importance of recording and notification of occupational diseases will help to increase the awareness of the relevant parties regarding their obligations, responsibilities, rights and duties. A clear statement in the national policy that recording and notification of occupational diseases by an employer is not an autonomous admission of fault, negligence or liability for workers' compensation will be beneficial in ensuring the employers' full cooperation.

A clear prohibition against discriminating against workers who report their injuries or diseases should be part of the national policy. There should be a provision to enable workers to make their reports during work hours, and at no cost to them. These protections are essential in obtaining the collaboration of workers in reporting occupational diseases. Measures should be in place to guarantee the protection of workers' privacy, and the confidentiality of their health and medical data.

The collection of data on occupational diseases in the informal sector through the Basic Occupational Health Services approaches, where they exist, is a practical way to expand the coverage of self-employed persons in the national system. The use of primary health care facilities, or other ways to address the problem of collecting data on occupational diseases in the informal economy, need to be explored.

Information on occupational diseases is essential in formulating evidence-based policies and programmes for prevention and compensation. Statistics computed from the data collected

from the NSRNOD should be published at least once a year. At a minimum, the published statistics should include the total number of cases, the number of cases of each type of occupational disease, their frequencies, incidence rates and severity, and their distribution by economic activity, occupation, age group, sex, and other data elements to be specified by the competent authority. These statistics should be publicly available, and easy for interested parties to access.

Glossary

Competent authority:

A minister, government department or other public authority with the power to issue regulations, orders, or other instructions having the force of law. Under national laws or regulations, the competent authority may be appointed with responsibilities for specific activities, such as implementing national policy, and procedures for reporting, recording and notification, worker's compensation, and the elaboration of statistics.

Employer:

Any physical or legal person who employs one or more workers.

Enterprise:

An institutional unit or the smallest combination of institutional units that encloses and directly or indirectly controls all necessary functions to carry out its own production activities.

Incidence rate:

The incidence estimate (restricted to individuals working in a 12-month period) divided by the population at risk of experiencing a new case of work-related illness during the reference period.

Incidence rate of deaths:

The incidence rate of deaths due to occupational diseases is the number of deaths due to occupational disease per 100,000 persons employed during the reference year, per 100 FTE (full-time equivalent), or per 200,000 worker-hours.

Notification:

Procedure specified in national laws and regulations that establishes the ways in which the employer or self-employed person, the insurance institution or other directly concerned entities submit information concerning occupational diseases as appropriate, and as prescribed by the competent authority.

Occupational disease:

Any disease contracted as a result of an exposure to risk factors arising from work activity.

Prevalence rate:

The prevalence estimate divided by the population at risk (of having a work-related illness).

Recording:

Procedure specified in national laws and regulations that establishes the means by which the employer or self-employed person ensures that information is maintained on occupational diseases.

Annexes



Annex 1

Checklist for NSRNOD

Component	Actions	Key points	Yes ✓
National policy	Designate or establish a competent authority to formulate, implement and review a national policy on NSRNOD	■ Aim at preventing occupational diseases	<input type="checkbox"/>
		■ Apply to all branches of economic activities, all enterprises and all workers	<input type="checkbox"/>
		■ Cover reporting, recording, notification, investigation, compilation, analysis and publication of occupational disease data	<input type="checkbox"/>
		■ Consult with representatives of employers' and workers' organizations	<input type="checkbox"/>
		■ Develop requirements for establishing and improving an NSRNOD	<input type="checkbox"/>
		■ Establish general rules and uniform procedures	<input type="checkbox"/>
		■ Publish annual statistics on occupational diseases	<input type="checkbox"/>
		■ Periodically review the national policy	<input type="checkbox"/>
Competent authority	Establish policy, concepts and methodology	■ Consult with representatives of employers' and workers' organizations	<input type="checkbox"/>
	Prescribe a national list of occupational diseases	■ Consult with representatives of employers' and workers' organizations	<input type="checkbox"/>
		■ Periodically review and revise	<input type="checkbox"/>
		■ Apply list in recording, notification and prevention of and compensation for occupational diseases	<input type="checkbox"/>
		■ Establish diagnostic and exposure criteria and a mechanism for recognition of occupational diseases	<input type="checkbox"/>
	Select a classification system for occupational hazards	■ Establish a classification scheme for physical, chemical, biological, ergonomic, organizational and psychosocial hazards	<input type="checkbox"/>
	Establish requirements for recording and notification	■ Prescribe occupational diseases subject to recording, reporting and notification	<input type="checkbox"/>
		■ Require employers to notify occupational diseases	<input type="checkbox"/>
		■ Designate responsibilities of employers, workers, occupational health physicians and others	<input type="checkbox"/>
		■ Establish procedures for the notification of occupational diseases, including specifying the relevant information to be notified, and the timing of notification	<input type="checkbox"/>
		■ Standardize forms for notification of occupational diseases	<input type="checkbox"/>
		■ Establish mechanisms for coordination and cooperation between the various authorities and bodies	<input type="checkbox"/>
■ Provide guidance to facilitate compliance by employers and workers		<input type="checkbox"/>	
■ Establish enforcement mechanisms		<input type="checkbox"/>	

Component	Actions	Key points	Yes ✓
		<ul style="list-style-type: none"> Review and improve the NSRNOD 	<input type="checkbox"/>
	Compile, analyse and publish statistics on occupational diseases	<ul style="list-style-type: none"> Incorporate standard classifications and coding of economic activities, occupations, status of employment and occupational diseases Periodically publish statistics (at least once a year) 	<input type="checkbox"/>
	Arrange investigation of occupational diseases	<ul style="list-style-type: none"> Conduct verification of the notifications Investigate the causes of occupational diseases Publish findings of the investigations and enquiries 	<input type="checkbox"/>
Employer	Arrange reporting and recording of occupational diseases at the enterprise level	<ul style="list-style-type: none"> Establish a system for reporting, recording and notification of occupational diseases at the enterprise level Solicit participation of workers and their representatives Designate a competent person to receive, process and keep records Inform workers and their representatives about workplace hazards and risks Develop encouragement mechanisms for workers to report hazards and risks at the workplace Develop encouragement mechanisms for workers to report occupational diseases Provide feedback to workers who make reports, and provide workers with information on prevention and protection Notify the competent authorities or occupational health services, or any other institutions as determined by the relevant law and regulations Protect the confidentiality of personal and medical data in the records 	<input type="checkbox"/>
	Arrange for notification of occupational diseases to the competent authority	<ul style="list-style-type: none"> Designate a responsible person to notify the competent authority on cases of occupational disease as determined by national laws and regulations Comply with requirements prescribed by law and regulations on notification of occupational diseases 	<input type="checkbox"/>
	Investigate all reported occupational diseases	<ul style="list-style-type: none"> Investigate the causes of reported occupational diseases Implement protective measures to prevent the recurrence of similar occupational diseases Inform workers and their representatives of the results of investigations 	<input type="checkbox"/>

Annex 2

Weighting in estimation procedures for surveys of occupational injuries and diseases (SOID)¹

A 2.1 Weighting for summary estimates

Original summary weight. By means of a weighting procedure, sample units represent all units in their state, industry, employment size class, and ownership (private sector, state government, or local government), also referred to as a sampling cell. An original summary weight for each sample unit is determined by the inverse of the sampling ratio (the number of units selected, relative to the number of frame units available for selection) for the sampling cell from which the unit was selected.

Final summary weight. Before summary estimates are tabulated, the original summary weight for a sample unit is adjusted by numerical factors to account for non-response from some sample units, benchmarking the sampling frame to the current survey year, and the occasional inability of some sample units to report data for the unit as it was sampled. A final summary weight used in the tabulation of estimates is determined by applying factors to the original weight, as follows:

- *Unit non-response.* Because a small proportion of SOID forms are not returned, the weights of responding employers in a sampling cell are adjusted to account for non-respondents by applying a non-response adjustment factor (NRAF).
- *Outlier.* An outlier adjustment factor (OAF) is applied when an establishment experiences a rare circumstance that makes its case count or hours worked unrepresentative of its sampling cell. Including such data with the original sampling weight would have an undue influence on the estimates. For example, an establishment might report an unusually high number of illness cases that have occurred as a result of an uncommonly severe outbreak of scabies. The OAF adjusts the unit's weight to 1, to avoid an over-representation of this uncommon occurrence. An adjustment factor to distribute the remaining weighted employment of the outlier unit is also applied to each of the remaining usable units in the sampling cell.
- *Benchmarking.* The sample for a particular survey year must be drawn prior to that year, so that selected establishments can be pre-notified of their obligation to maintain logs throughout the year. As a result, the universe file from which the sampling frame was developed is not current to the reference year of the survey, making it necessary to adjust

¹ Based on the practice in the USA. Who gets included in the BLS counts of workplace injuries and illnesses? USA: BLS. www.bls.gov

the data before publication to reflect current employment levels. This procedure is known as benchmarking. For the SOID, all estimates of totals are adjusted by the benchmark factor (BMF) at the state, industry, and ownership level, and at the national, industry, and ownership level as well. The benchmarking procedure requires a source of accurate employment data that can be converted into annual average employment figures at the industry level for which separate estimates are desired. The SOID uses employment data derived primarily from the BLS Quarterly Census of Employment and Wages.

- *Reaggregation.* Because a sample unit may occasionally be unable to report data for the unit as it was sampled, adjustments are made to account for these situations by applying a reaggregation factor (REAG) to the unit's original summary weight. For example, a sample unit that was involved in a merger may report data covering both the original sample unit and the unit or units with which it merged, requiring an adjustment to the weight to account for the additional unit included in the reported data.

The final summary weight for a sample unit is therefore determined by the product of the original summary weight and these four factors: Final summary weight = Original summary weight × NRAF × OAF × BMF × REAG.

A 2.2 Weighting for case and demographic estimates

Days away from work cases. Each case involving days away from work is weighted by the respective sample unit's final summary weight with which it is associated. The final summary weight that is applied to each case is also adjusted for several factors to ensure that the numbers of usable cases that have been submitted are equal to the days away from work cases used in tabulating summary estimates. These factors are used to adjust for case subsampling and case non-response for those establishments that did not provide information on all cases involving days away from work that occurred in their establishment in the survey year.

- *Case subsampling factor (CSSF).* CSSF is applied at the establishment level to adjust for instances in which the number of usable days away from work (DAFW) case forms that are submitted differ from the number of DAFW cases that are reported on the summary: for example, if 15 case forms are submitted and are usable, but 39 DAFW cases are reported on the sample unit's summary. This CSSF is designed to weight the number of DAFW cases for which usable data were reported to equal the total number of DAFW cases indicated on the summary (that is, the number of DAFW cases that the establishment experienced). A maximum threshold is applied to this factor, beyond which further adjustments are accomplished through other factors, described below. The CSSF is the ratio of DAFW cases reported on the summary to the number of DAFW cases for which data were submitted, or

$$\text{CSSF} = \frac{\text{DAFW cases (summary)}}{\text{DAFW cases (submitted)}}$$

- *Case non-response adjustment factor (CNRAF).* The CNRAF is applied at the sampling cell level. It is applied after the CSSF in instances where the CSSF failed to adequately adjust reported summary DAFW cases to equal the submitted usable DAFW cases. The

CNRAF is designed to adjust for cases that were not reported as a result of non-response within the sampling cell. A maximum threshold is applied to this factor, beyond which further adjustments are accomplished through the CRAF, discussed below. The CNRAF is calculated as:

$$\text{CNRAF} = \frac{\sum \left(\frac{\text{FSW}}{\text{BMF}} \right) \times \text{DAFW cases (summary)}}{\left(\frac{\text{FSW}}{\text{BMF}} \right) \times \text{CSSF} \times \text{DAFW cases (usable)}}$$

where:

FSW = final summary weight

BMF = benchmark factor

CSSF = case subsampling factor.

- *Case ratio adjustment factor (CRAF)*. The CRAF is applied after both the CSSF and CNRAF factors have been applied but have failed to adjust for missing cases. The CRAF is applied at the estimation cell level (target estimation industry and size class). The CRAF is calculated as:

$$\text{CRAF} = \frac{\text{FSW} \times \text{DAFW cases (summary)}}{\text{FSW} \times \text{CSSF} \times \text{CNRAF} \times \text{DAFW cases (submitted)}}$$

where:

FSW = final summary weight

CSSF = case subsampling factor

CNRAF = case non-response adjustment factor.

A 2.3 Incidence rate calculation

Incidence rates are calculated using the total case counts obtained through the weighting and benchmarking procedures described above. The adjusted estimates for a particular characteristic, such as injury and illness cases involving days away from work, are aggregated to the appropriate level of industry detail. The total is multiplied by 200,000 for injuries and illnesses combined, and for injuries only (that is, 40 hours per week multiplied by 50 weeks – the base of hours commonly regarded as worked by 100 full-time workers during a calendar year). The product is then divided by the weighted and benchmarked estimate of hours worked as reported in the SOID for the industry segment.

The formula for calculating the incidence rate at the lowest level of industry detail is:

$$\text{Incidence rate} = \frac{(\text{Sum of characteristics reported}) \times 20,000}{\text{Sum of number of hours worked}}$$

Incidence rates for higher levels of industry detail are produced using aggregated weighted and benchmarked totals. Incidence rates may be computed by industry, employment size, state, various case circumstances, and select worker characteristics. Incidence rates for illnesses, and for case and worker characteristic categories, are published per 10,000 full-time workers, using 20,000,000 hours instead of 200,000 hours in the formula shown above. (The 20,000,000 hours refers to 10,000 full-time workers working 40 hours per week, 50 weeks per year.) Incidence rates per 10,000 workers can be converted to rates per 100 workers by moving the decimal point left two places and rounding the resulting rate to the nearest tenth.

Annex 3

Measures of the survey of occupational injuries and illnesses (SOII)

The number and incidence rate of non-fatal workplace injuries and illnesses are reported nationwide by industry for the following types of case:

- total recordable cases;
- days-away-from-work, job transfer, or restriction cases;
- days-away-from-work cases;
- days of job transfer or restriction cases;
- other recordable cases.

Days-away-from-work cases, which may also involve job transfer or restricted workdays, are a subset of days away from work, job transfer, or restriction cases. For cases involving days away from work, the SOII presents the following:

- case counts;
- incidence rates;
- percentage distributions.

The SOII also includes two measures of severity for days-away-from-work cases:

- median number of days away from work;
- number of days away from work, and percentage distribution.

These severity measures are presented nationwide by industry, by occupation, by the circumstance (nature, part, source, and event), and for select worker characteristics (including gender, age group, length of service, and race or ethnic origin).

For cases involving days away from work, the median number of workdays lost, and the number and percentage distribution of days-away-from-work cases by duration, are provided (i.e., half of the cases involved more days away from work and half of the cases involved fewer days away from work than the median). The median number of days away from work provides the middle observation of the number of days missed associated with the particular characteristic that is being measured. The percentage distribution measures are presented nationwide, by industry, and for the aforementioned case circumstances and worker characteristics for cases involving:

- 1 day away from work;
- 2 days away from work;
- 3–5 days away from work;
- 6–10 days away from work;
- 11–20 days away from work;
- 21–30 days away from work;
- 31 or more days away from work.

Incidence rates permit comparison among industries and establishments of varying sizes. They express various measures of injuries and illnesses in terms of a constant reflecting exposure hours in the work environment – for example, 200,000 worker hours, or the equivalent of 100 full-time workers working for 1 year – and thus allow for a common statistical base, regardless of the number of workers. In this way, a firm with five cases recorded for 70 workers can compare its injury and illness experience with that of an entire industry with 12,000 cases for 150,000 workers.

Incidence rates are also useful in evaluating the safety performance of a particular industry over time, or in comparing state-to-state variations in an industry's safety record. Such comparisons are possible using the total recordable case incidence rate or the incidence rate for cases involving days away from work, job transfer, or restriction, or other recordable cases. Incidence rates are available for injuries and illnesses combined by the aforementioned case types, and for total recordable cases of injuries only. For illnesses, incidence rates are available for total illness cases and separately for the five illness categories. Incidence rates for injury and illness cases involving days away from work are also available for specific case circumstances: for example, the incidence rates associated with carpal tunnel syndrome, back injury cases, injuries suffered by health care patients, or disabling falls to a lower level.

Date of diagnosis for Phase One Pneumoconiosis Year Month Day	Complication of TB <input type="checkbox"/> yes <input type="checkbox"/> no	Category of notification 1 New case <input type="checkbox"/> 2 Death case <input type="checkbox"/> 3 Case progressed to a higher phase <input type="checkbox"/> 4 Case working outside the Province <input type="checkbox"/> 5 Case from another province <input type="checkbox"/> Source province of case
Date of diagnosis for Phase Two Pneumoconiosis Year Month Day	Complication of TB <input type="checkbox"/> yes <input type="checkbox"/> no	
Date of diagnosis for Phase Three Pneumoconiosis Year Month Day	Complication of TB <input type="checkbox"/> yes <input type="checkbox"/> no	
Date of death Year Month Day	Death cause	
Name of diagnostic institution:		

Notification institution: Manager of institution:
Notified by: (name) Date of notification:.....

Explanatory notes

1. The notification card should be filled in only by the designated medical and health institutions authorized for diagnosis of occupational disease and for surveillance of occupational hazards.
2. Notification covers all cases under the following conditions: (a) the worker has worked in an undertaking that involves dust during the work process; and (2) it is a newly diagnosed case (the worker is diagnosed as a pneumoconiosis case for the first time) or a case who has progressed to a higher phase of pneumoconiosis in the diagnosis and/or has died, or a case who has newly moved into/out of the province where the notification is made.
3. The authorized diagnostic institutions, after diagnosis of a new case or progress to a higher phase of an existing case, should fill in the card and submit it directly to the designated health authority through the Internet notification system within 15 days. When the death of a worker with pneumoconiosis has occurred, or a worker with pneumoconiosis has moved into an undertaking from another province or has left the undertaking and moved to another province, the employer of the undertaking should fill in the card and notify the local institutions responsible for occupational health surveillance. Notifications on difficult and serious cases transferred from a lower-level diagnostic institution to a higher-level one through the referral system should be made only by the higher-level diagnostic institution. For cases of pneumoconiosis moving into and out of the province, notification should be made every six months. Notification for the first half of the year should be made before 10 July and for the second half of the year before 10 January the following year.

Notification Card for Occupational Diseases in China

Form No: WS 33-2

Developed by the Ministry of Health

Approved by the National Bureau of Statistics

Approval document No.: GS[2010]5

Valid until: 2012

ID number of case:

Card series no.:	Address (Province/autonomous region/municipality, prefecture/city, county, township) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Employer Information	Name <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Postcode
	Address		Phone no.:
	Contact person		Code
	Type of economic activity		Code
	Type of sector		Code
Size of undertaking: 1 Large <input type="checkbox"/> 2 Medium <input type="checkbox"/> 3 Small <input type="checkbox"/> 4 Unclear <input type="checkbox"/>			
Type of notification New case <input type="checkbox"/> Death case <input type="checkbox"/>		Notification made by: Health examination facility <input type="checkbox"/> Diagnostic facility <input type="checkbox"/> Employer <input type="checkbox"/>	
Name of worker	Sex 1 Male <input type="checkbox"/> 2 Female <input type="checkbox"/>	Date of birth Year Month Day	
Type of occupational disease		Name of disease (ICD code)	
If it is poisoning, code of accidents		No. of poisoned cases in same accident:	
Type of occupation		Actual exposure duration Year Month	
Exposure time (Only for acute occupational disease case whose exposure period is less than one month) Year Month Day			
Date of occurrence (for accident) Year Month Day		Date of diagnosis (for occupational diseases) Year Month Day	
Date of death Year Month Day		Death cause Occupational disease <input type="checkbox"/> Other reasons <input type="checkbox"/> Unclear <input type="checkbox"/>	
Name of diagnostic institution:			

Notification institution: Manager of institution:

Notified by: (name) Date of notification:

Explanatory notes:

1. The notification card should be filled in only by the designated medical and health institutions authorized for diagnosis of occupational disease and for surveillance of occupational hazards.
2. The scope of the notification covers all employers whose undertaking has occupational hazards.
3. Notification should be made every half year. Chronic occupational disease cases that include chronic occupational poisoning should be notified by the authorized diagnostic facilities within 15 days after diagnosis, or via a real-time Internet notification system. Cases of death due to occupational disease should be notified to the local institutions responsible for occupational health surveillance by the employer concerned, and the notification card should be submitted directly through the Internet notification system before 10 July of the current year for deaths in the first half of the year and before 10 January of the following year for the deaths in the second half of the year.

OSHA's Form 301 Injury and Illness Incident Report

This *Injury and Illness Incident Report* is one of the first forms you must fill out when a recordable work-related injury or illness has occurred. Together with the *Log of Work-Related Injuries and Illnesses* and the accompanying *Summary*, these forms help the employer and OSHA develop a picture of the extent and severity of work-related incidents.

Within 7 calendar days after you receive information that a recordable work-related injury or illness has occurred, you must fill out this form or an equivalent. Some state workers' compensation, insurance, or other reports may be acceptable substitutes. To be considered an equivalent form, any substitute must contain all the information asked for on this form.

According to Public Law 91-596 and 29 CFR 1904, OSHA's recordkeeping rule, you must keep this form on file for 5 years following the year to which it pertains.

If you need additional copies of this form, you may photocopy and use as many as you need.

Completed by _____
Title _____
Phone (____) _____ Date ____/____/____

Public reporting burden for this collection of information is estimated to average 39 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Persons are not required to respond to the collection of information unless it displays a current valid OMB control number. If you have any comments about this estimate or any other aspect of this data collection, including suggestions for reducing this burden, contact US Department of Labor, OSHA Office of Statistical Analysis, Room N-5864, 900 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.



U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

Information about the employee

- 1) Full name _____
- 2) Street _____
City _____ State _____ ZIP _____
- 3) Date of birth ____/____/____
- 4) Date hired ____/____/____
- 5) Male Female

Information about the physician or other health care professional

- 6) Name of physician or other health care professional _____

- 7) If treatment was given away from the worksite, where was it given?
Facility _____
Street _____
City _____ State _____ ZIP _____
- 8) Was employee treated in an emergency room?
 Yes No
- 9) Was employee hospitalized overnight as an in-patient?
 Yes No

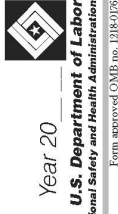
Information about the case

- 10) Case number from the Log _____
(Transfer the case number from the Log after you record the case.)
- 11) Date of injury or illness ____/____/____ AM/ PM
- 12) Time employee began work _____ AM/ PM
- 13) Time of event _____ Check, if time cannot be determined
- 14) **What was the employee doing just before the incident occurred?** Describe the activity, as well as the tools, equipment, or material the employee was using. Be specific. *Examples:* "climbing a ladder while carrying roofing materials"; "spraying chlorine from hand sprayer"; "daily computer key-entry."
- 15) **What happened?** Tell us how the injury occurred. *Examples:* "When ladder slipped on wet floor, worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time."

16) **What was the injury or illness?** Tell us the part of the body that was affected and how it was affected; be more specific than "hurt," "pain," or "sore." *Examples:* "strained back"; "chemical burn, hand"; "carpal tunnel syndrome."

17) **What object or substance directly harmed the employee?** *Examples:* "concrete floor"; "chlorine"; "radial arm saw." *If this question does not apply to the incident, leave it blank.*

18) **If the employee died, when did death occur?** Date of death ____/____/____



OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write 0.

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35. In OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths _____ Total number of cases with days away from work _____ Total number of cases with job transfer or restriction _____ Total number of other recordable cases _____

(G) _____ (H) _____ (I) _____ (J) _____

Number of Days

Total number of days away from work _____ Total number of days of job transfer or restriction _____

(K) _____ (L) _____

Injury and Illness Types

Total number of . . . _____

(M) _____

(1) Injuries _____ (4) Poisonings _____

(2) Skin disorders _____ (5) Hearing loss _____

(3) Respiratory conditions _____ (6) All other illnesses _____

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspect of this data collection, contact: US Department of Labor, OSHA, Office of Statistical Analysis, Room N-3644, 300 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name _____

Street _____ City _____ State _____ ZIP _____

Industry description (e.g., *Manufacture of motor truck trailers*) _____

Standard Industrial Classification (SIC), if known (e.g., 3715) _____

OR _____

North American Industrial Classification (NAICS), if known (e.g., 356212) _____

Employment information (If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees _____

Total hours worked by all employees last year _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company signature _____ TITLE _____

(Please print name) _____ / /

Year _____

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.



Year 20

U.S. Department of Labor Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Fill in the case no. for a single case. If you need to, you must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name City State

Table with columns: Identify the person, Describe the case, Classify the case, Enter the number of days the injured or ill worker was: (K) Away from work, (L) On job transfer or restriction, (M) Injury, and (N) Illness. Includes checkboxes for death, days away, job transfer, and various injury types.

Page totals Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Annex 5

Summary of current data collection system for occupational diseases in various countries

Country	System	Data reporter	Mandatory/ voluntary	Characteristics
Austria	The Main Association of Austrian Social Security Institutions	Doctor/employer	Mandatory	The Main Association of Austrian Social Security Institutions collects data on accidents, occupational diseases and other data, based on legal requirements. Occupational diseases reported by doctors who have made the diagnosis have to be acknowledged by a doctor of the insurance institution.
China	National Online Occupational Disease Notification System; National Major Occupational Disease Sentinel Surveillance Programme	Occupational health physician	Mandatory	Through the National Online Occupational Disease Notification System, occupational diseases are notified by occupational disease diagnostic physicians through centres for disease control and prevention at city, county, provincial and national levels to the Ministry of Health. The Ministry of Health publishes statistics of occupational diseases annually.
Denmark	Danish Register of Accidents and Diseases/National Board of Industrial Injuries/ National Working Environment Authority	Physician/ dentist	Mandatory	The Danish Register of Accidents and Diseases covers all work accidents and diseases reported either to the National Board of Industrial Injuries or to the National Working Environment Authority. The National Working Environment Authority has set up a register to create a basis for identifying the causes of occupational diseases. The reporting of diagnosed or suspected occupational diseases is made through a mandatory notification procedure (the electronic system EASY) by physicians and dentists. More than 90 per cent of the registered diseases are reported by physicians.
EU	European Occupational Diseases Statistics (EODS) project	Representatives of member States of the project	Voluntary	EODS collects statistical data on the incidence of new cases of occupational disease recognized for compensation purposes. Data were provided by six countries on fatal occupational diseases (deaths). Because recognition practices and social security arrangements for occupational disease differ between the member States, the core database includes only 68 occupational disease items that are covered by all national systems.

Country	System	Data reporter	Mandatory/ voluntary	Characteristics
Finland	Finnish Register of Occupational Diseases (FROD).	Physician/ employer	Mandatory	Data on occupational diseases from both physicians and employers are forwarded to the Finnish Institute of Occupational Health (FIOH), which maintains the FROD. The system also collects data from insurance companies that cover self-employed persons. The Farmers' Social Insurance Institution provides data to FROD on occupational diseases of farmers. The Federation of Accident Insurance Institutions (FAII) collects data from the insurance companies and maintains statistics on occupational accidents and occupational diseases. FAII publishes occupational accident statistics and FIOH publishes occupational disease statistics.
Germany	Insurance system	Doctor/Worker/ Employer/Health insurer/ Dependant	Voluntary/ mandatory	Suspected cases of occupational disease can be reported to the public accident insurance system by doctors, workers, employers, health insurers or dependants. Occupational diseases are reported to the accident insurance institution or the federal-state bodies responsible for occupational health. These institutions and bodies inform each other immediately of diseases reported to them. Doctors, health insurance companies and employers are obliged by law to report cases in which there is a well-founded suspicion or evidence of an occupational disease. Insured persons, their relatives and other parties may also report suspected cases of an occupational disease. Employers and physicians are obliged by law to report occupational diseases.
Hungary	NIOH (National Institute of Occupational Health) of the "Fodor József" National Centre for Public Health	Physician	Mandatory	Physicians report occupational diseases that they diagnose to the local institutions of the National Public Health and Medical Officers' Service for investigation and verification. These institutions report verified cases to the NIOH.
Ireland	Occupational Injuries Benefit Scheme, or the Disablement Benefit Scheme of the Department of Social and Family Affairs	Physician	Voluntary	The main sources of information on occupational disease are the Labour Force Survey and the physicians' voluntary reporting schemes through the Health and Occupation Reporting network (THOR), such as the Surveillance of Work-Related and Occupational Respiratory Disease (SWORD), EPI-DERM, which is the reporting of occupational skin disease by consultant dermatologists, and the Occupational Physicians Reporting Activity (OPRA).
Mongolia	The registry of the National Research Centre of Occupational Diseases/Ministry of Social Welfare and Labour (MSWL)	Employer	Mandatory	Employers are responsible for registration of industrial cases according to the government's OSH legislation. The registration database is regularly maintained by the National Research Centre of Workplace Conditions and Occupational Diseases (NRCWOD). This database contains demographic data and clinical records, including the patient's name, date of birth, gender, citizenship, place of work, occupation, diagnosis, date of death, degree of disability, and last known address. Every diagnosis of occupational disease is first made by a medical doctor, which must later be reviewed and certified, based on the consensus of a committee in the NRCWOD.

Country	System	Data reporter	Mandatory/ voluntary	Characteristics
The Netherlands	Netherlands Center for Occupational Diseases (NCbV), an academic centre that is part of the University of Amsterdam.	Physician	Mandatory	NCbV collects data from various sources. The primary source is the mandatory reports from occupational physicians. Another source is voluntary schemes for occupational respiratory disease and dermatological disease, which collect reports from specialist consultants. Special projects, such as targeted schemes for farmers or performing arts workers, can also make a report.
New Zealand	Notifiable Occupational Disease System (NODS)	Health professional/ Worker or his/her family	Voluntary	The Department of Labour operates NODS. Health professionals and workers or their families can report any health-related condition that is suspected to arise from work. The system assesses and verifies the reported cases. Cases of serious harm as a result of work are legally required to be reported to the Department of Labour; this includes diseases, but the system collects mainly accident data.
South Africa	South African Mining Occupational Diseases database/Department of Minerals and Energy.	Worker/Employer	Mandatory	A worker, or someone on his or her behalf, must report a disease, in writing, to the employer as soon as possible after a doctor's diagnosis. Compensation benefits will not be paid if the worker reports the disease to the employer more than 12 months after it was diagnosed. Employers must fill in the required forms and submit them to the Compensation Commissioner within 14 days. Once the Commissioner receives the forms, a claim will be registered, and the decision to accept liability or not will be made. The South African Mining Occupational Diseases database was initiated in 1998, which is managed by the Department of Minerals and Energy, to record morbidity and mortality of occupational diseases in the South African mining industry. The Pathology Automation System (PATHAUT), an electronic database of approximately 100,000 autopsies of deceased miners, has been developed since 1975 by the South African Medical Research Council (National Centre for Occupational Health, NCOH), which provides a rich source of data for researching and monitoring disease trends.
United Kingdom	Self-Reported Work-Related Illness Survey (SWI)	Household	Voluntary	SWI data are collected through the UK Labour Force Survey (LFS). Estimates of the incidence and prevalence of occupational disease are made based on survey data collected from 5,000 households each quarter. Questions on occupational injury and illness are asked in the winter quarter each year. The Health and Safety Executive publishes results of this survey annually.
	Workplace Health and Safety Surveys (WHASS)	Employer/ Worker	Voluntary	WHASS was developed by the Health and Safety Executive, and comprises employer surveys and British workplaces, as perceived by workers and employers.
	The Health and Occupation Reporting (THOR) network	Physician	Voluntary	THOR is a system for reporting of cases of occupational disease by the physicians who diagnose them as work-related. Voluntary reporting of occupational disease diagnosed by medical specialists was initiated in the UK in the 1980s. THOR is a form of sentinel scheme, which relies on the willing participation of panels of specialist doctors as well as specially trained general practitioners, who report cases of work-related ill-health anonymously.

Country	System	Data reporter	Mandatory/ voluntary	Characteristics
	Industrial Injuries Disablement Benefit (IIDB) Scheme	Worker	Voluntary	New cases of prescribed disease with an established occupational cause are eligible for benefit under the IIDB scheme. Workers have to apply to the scheme if they believe they are eligible, and diagnosis is subsequently confirmed. IIDB statistics are produced. A disease is considered prescribed if the risk to workers in certain occupations is substantially greater than the risk to the general population, and if the link between the disease and the occupation can be established in each individual case, or be presumed with reasonable certainty.
	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)	Employer	Mandatory	Diseases are reportable by the employer only if he or she has received notification in writing from a medical practitioner that a worker is suffering from one of the diseases listed in the regulations.
USA	OSHA Occupational Injury and Illness Recording and Reporting System	Employer	Mandatory	Employers must keep a record of every work-related death and every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. Employers must also record significant work-related injuries and illness that are diagnosed by a physician or licensed health care professional. They must also record work-related injuries and illness that meet any of the specific recording criteria listed in 29 CFR Parts 1904.8 through 1904.12. Employers must complete an Injury and Illness Incident Report (OSHA's Form 301). Each year, OSHA collects summary data through this form from approximately 80,000 establishments, and uses them to schedule targeted inspections in high-hazard industries.
	BLS annual Survey of Occupational Injuries and Illness (SOII)	Employer	Mandatory	The largest occupational injury and illness surveillance system in the country, providing injury and illness counts and rates for a variety of employers, workers and case characteristics, based on a sample of over 230,000 establishments. Figures are calculated nationally and for 44 participating states and territories, allowing for detailed analyses of the magnitude, patterns and trends in occupational injuries and illnesses.
	Coal Workers' Health Surveillance Program (CWHSP)/National Institute for Occupational Safety and Health (NIOSH)	NIOSH B Reader (Physicians should take the NIOSH B Reader examination)	Voluntary	The Federal Coal Mine Health and Safety Act of 1969 (as amended by the Federal Mine Safety and Health Act of 1977) directs NIOSH to study the causes and consequences of coal mining-related respiratory diseases, and in cooperation with the Mine Safety and Health Administration (MSHA) to carry out a program for early detection and prevention of coal worker's pneumoconiosis. These activities are administered through the Coal Workers' Health Surveillance Program (CWHSP) which consists of the Coal Workers' X-ray Surveillance Program (CWXP), the National Coal Workers' Autopsy Program, and the NIOSH B Reader Program.

Annex 6

List of useful ILO instruments

- Occupational Safety and Health Convention, 1981 (No. 155) and Recommendation (No. 164).
- Occupational Health Services Convention, 1985 (No. 161) and Recommendation (No. 171).
- Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155).
- List of Occupational Diseases Recommendation, 2002 (No. 194).
- Recording and Notification of Occupational Accidents and Diseases (an ILO Code of Practice).
- International Classification of Radiographs of Pneumoconiosis and Guidelines (Occupational Safety and Health Series No. 22).
- Technical and Ethical Guidelines for Workers' Health Surveillance (Occupational Safety and Health Series No. 72).
- Identification and Recognition of Occupational Diseases: Criteria for incorporating diseases in the ILO list of occupational diseases (Occupational Safety and Health Series No. 74).

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