A Review of the Occupational Diseases Reporting System in the Republic of Ireland

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EXECUTIVE SUMMARY

Data on occupational disease are collected for a) preventive, and b) administrative, legal and/or compensatory purposes. The need for quality data and statistics to drive a national preventive policy combined with recent and pending changes in national and international legislation precipitated this review of national and international systems.

There are many practical and political difficulties associated with estimating the true extent of the problem of occupational disease and a variety of issues that continue to cause uncertainty, lack of agreement and debate. The classification of 'occupational' relates to the cause and not the nature of the disease, and most countries have drawn up a list of 'prescribed diseases', for which compensation or benefits are payable. However there are also illnesses that arise that are related to, even if they cannot be wholly attributed to, work, and for prevention purposes, it is important that there is a source of information on these conditions, and that their incidence is monitored.

Global and European agencies have an influence on legal collection requirements and on how the data are collected. The European legal instrument currently in place is a Recommendation and therefore not binding on member states. More recently, the European Commission has proposed a Regulation that will require member states to provide data on a wider range of conditions that are work-related. Recent changes to Irish legislation raise a question over what must be reported as the definition of personal injury has been widened, and accidents that result in personal injury (and absence) must be reported, which suggests that accidents resulting in disease or illness must be reported also.

An examination of some of the systems used internationally indicates that there are many commonalities and some differences. The commonalities include the use of multiple data sources, and the elusiveness of the 'ideal' system. Systems in use abroad all have strengths and weaknesses but some important lesions can be learned from their experience, such as: use multiple sources, motivate reporters, mandatory reporting to an enforcement authority results in poor returns, and a pragmatic approach is needed.

The occupational disease data collection capacity and data needs in Ireland were reviewed by assessing current and potential data sources, current and potential data collectors and taking into account the views of the end-users of the data. Primary data collection is carried out by the CSO and the physicians voluntary reporting scheme; secondary data are available from a variety of other sources, including the Department of Social and Family Affairs, agencies that collect health statistics and agencies that collect insurance and claims-based data.

The main issues raised during this review were:

1. The difference between an occupational disease and a work-related illness and the implications of the difference.
2. Different occupational and work-related illness data reporting / collection systems.
3. The characteristics of a 'good' occupational disease surveillance system.
4. The optimum system of data collection for prevention purposes in Ireland.
5. The optimum system of data collection for Ireland to address national and international legislative requirements.

The OIB system captures prescribed occupational diseases with a three day severity for the PAYE sector only; the THOR system has the potential to capture occupational diseases and work-related illnesses from within and outside of the PAYE sector and goes outside of areas that do not have an existing occupational health provision; and the CSO will be providing much more information than previously because of the move to core reporting. Subtle and proposed changes to the existing system will improve data collection for prevention purposes and between them the requirements of European legislation should be met. Diseases or illnesses caused by single incident events (accidents) can be reported using the Accident Notification system, but there is no evidence to suggest that statutory reporting of occupational diseases by employers will generate statistics of sufficient quality to aid prevention or be of any benefit in meeting statistical requirements.

The recommendations are:

1. Retain, promote and resource the THOR scheme and extend it to include THOR-GP.
2. Continue work with the Central Statistics Office in carrying out analysis of relevant labour-related data.
3. The working arrangement with the Department of Social and Family Affairs should be formalised and roles clarified.
4. Formal working arrangements with the Department of Health and Children (and if necessary the ESRI) re HIPE, with the Health Services Executive re Health Protection Surveillance Centre and the National Cancer Registry, and the Coroner's system, should be established.
5. Work with relevant organisations to ensure that all reporting systems move towards the use of international standard classifications should be a priority.
6. Review the requirements of the Notification of Accidents Regulations to require that employers report accidents resulting in personal injury (including disease and illness) or death, and record occupational diseases and work-related illnesses contracted as a result of an exposure over a period of time to risk factors arising from work activity, and report to the HSA when requested.
7. Establish an advisory committee/expert group to advise the Board of the HSA on Occupational Disease Data Collection issues and on inter-stakeholder relationships.

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CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

This introductory chapter provides the background and context for this project and outlines the methodology used to inform the review.

1.2 BACKGROUND

In general, data on occupational disease are collected for two reasons: 1) for preventive purposes, i.e. to inform national, and international, authorities of the extent of the problem and to enable the development of statistics that can identify trends and allow prioritised prevention strategy to be developed, and 2) for administrative, legal and/or compensatory purposes. In either case, legal instruments can be used to govern the collection of such data.

The Health and Safety Authority (HSA) is seeking to develop a national system for securing reliable and useful data on the incidence, prevalence and nature of occupational disease. The current lack of data limits the Authority's ability to develop priorities and preventive strategies in Irish workplaces.

From a national legal perspective, the definition of 'accident', following the enactment of the Safety Health and Welfare at Work Act 2005, now includes 'personal injury', which is defined as 'any injury, disease, disability, occupational illness or any impairment of physical or mental condition', a much wider scope than data are currently available for, and there is currently no guidance or single mechanism for the reporting of such a wide spectrum of conditions.

From an international legal perspective, a proposed Regulation by the European Commission may create a legal requirement for member states to make annual submissions of injury and illness data. At present, injury, not illness, data are provided to Eurostat by the Authority.

The aim of this research project is to assess a range of means for improving the level of information on occupational disease, and to recommend the most appropriate method for use in the Irish context.

1.3 METHODOLOGY

The information included in, and used to inform, this review was gathered through national and international literature sources and through formal contact with stakeholders, including individuals representing relevant national and international agencies and organisations.

Peer-reviewed research literature was identified through a range of online search engines and databases. In addition, internet sites of national and international organisations, deemed to be relevant, were explored for grey literature, i.e. once-off reports, and particularly for reviews of the occupational disease surveillance systems in use in other countries. Literature sources were limited to publications in the English language.

The stakeholder agencies and organisations consulted were chosen to represent current and potential data sources, data collectors, and data users. These included Government Departments and agencies, such as the Department of Enterprise Trade and Employment, the Department of Social and Family Affairs, the Department of Health and Children, the Health and Safety Authority, and the Central Statistics Office; organisations representing employer and employee interests, and bodies representing the professions involved in occupational disease prevention. Stakeholders were asked, as appropriate, about their data collection system, their information needs, their perception of the strengths and

weaknesses of the current system, and their views on an optimum system, that would yield quality data.

In order to gain a deeper insight into the systems used in other countries, an overview of systems used abroad is provided to illustrate the range and variety of systems in use, and to learn from the experience of system developers. Information for the overview was taken from information provided in the relevant state's published paper and electronic documentation and in the peer reviewed literature and grey literature. In addition, meetings were arranged with data collection agencies in the United Kingdom (Health and Safety Executive, and the University of Manchester), the Netherlands (Netherlands Centre for Occupational Diseases, University of Amsterdam), Finland (Finnish Institute of Occupational Health), the European Statistics Agency (Eurostat), and with Dr. Jukka Takala (Head of the European Agency for Safety and Health at Work and formerly of the ILO) in order to develop more detailed case studies, not with the aim of reviewing these systems, but with the aim of learning lessons from experiences abroad.

CHAPTER 2 OCCUPATIONAL DISEASE: THE EXTENT OF THE PROBLEM

2.1 INTRODUCTION

Occupational diseases are diseases that are caused or made worse by occupation. The International Labour Office (ILO) labour statistics division defines an occupational disease as "*...a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity*" (Laborsta Internet, 2007). This might seem straightforward, but it requires agreement on the diagnosis of the disease, the conditions of exposure and its association with work, the risk factors, and the essential connection of the exposure to the risk at work with development of the disease. The borderline between acute occupational diseases and injuries can cause debate (WHO, 1998) and Leprince (2007) suggests that 'occupational disease' is a legal rather than a medical term.

It is estimated that there are 160 million victims of work-related illness in any one year (ILO, 2005a). This chapter will outline the challenges to defining occupational diseases and to estimating the extent of the problem, and introduce the classification systems and types of disease lists that are in current use.

2.2 CHALLENGES TO ESTIMATING THE EXTENT OF THE PROBLEM

It is known that occupational factors contribute to the overall burden of disease globally, but it is difficult to assess the extent of the problem for a variety of reasons. The foremost reason is that most occupational diseases are multifactorial in nature, with workplace exposure representing one risk factor; this makes developing a system for collecting data and reporting cases a challenge from the start, as cases are difficult to define. Leigh et al (1999) report that even advanced established market economies have fragmented reporting systems. In most countries, a range of data sources is used to estimate the burden of occupational disease, such as death records, hospital records, workers' compensation claims, cancer registries, workplace records, surveys and sentinel reports (Leigh et al, 1999; Driscoll et al, 2005). While experts agree that enhanced data collection for occupational diseases should be a public health priority, it is generally agreed that no single data source, or even solution, has been identified that can provide an accurate picture of the extent of the problem in any country.

The challenges to case identification for occupational disease, and consequently data collation and classification, are well documented (Leigh et al, 1999, Herbert and Landrigan, 2000; ILO, 2002; Driscoll et al, 2005; Kendall, 2005) and are summarised here:

- Definitional issues: agreement on the meaning of occupational or work-relatedness is not always straightforward. It requires agreement on what is meant by work and work exposure and the required connection between the exposure and the disease in question. Distinctions can be made between whether work caused a disease, contributed to its development or exacerbated a pre-existing condition.
- Exposure: The mere presence of a hazardous substance or activity in the workplace does not mean that workers were necessarily exposed. There is no risk unless the worker is actually exposed to the agent.
- Latency period: exposure to agents that can cause chronic occupational diseases, such as cancer, may occur years or decades before the disease manifests and is diagnosed. Exposure may not have been recognised, acknowledged or recorded.
- Record keeping: while modern legislation requires keeping detailed records of many hazardous agents, exposed personnel, health surveillance and monitoring, this is a relatively recent development in the context of the

typically long delay between exposure and manifestation of many diseases. Even where records exist, they can be incomplete and/or inaccurate.

- Multi-causation: It is well accepted that a single factor or agent does not necessarily cause most occupational diseases. A person exposed to hazards in the workplace may also be exposed to hazards in other environments, and this may be related to lifestyle.
- Medical history: medical history taking does not always include a detailed occupational history. Unless the physician has knowledge of both the agents that can cause occupational disease and of the nature of work that can expose employees to the risk, vital information or links can be missed. The histology and clinical presentation of a work-related disease are no different to the disease due to another cause.
- Data collection issues: different systems collect data for different purposes and with all occupational diseases there are difficulties with primary reporting, collating and classifying.
- Establishing a case of occupational disease in an individual can be difficult.
- Liability and responsibility for the disease can be difficult to establish.

The distinction between occupational diseases and work-related ill-health is a subject of much debate and ILO differentiates as follows:

> *"Occupational diseases are those that are included in international or national lists, and are usually compensable by national workers' compensation schemes and are recordable under reporting systems (for example, silicosis and diseases caused by many chemical agents). For occupational diseases, work is considered the main cause of the disease.*
> *Work-related diseases are those where work is one of several components contributing to the disease. Such diseases are compensated only in very few cases and in very few countries."* (ILO, 2005a, p.11).

In the context of occupational disease data collection, Coggins (2001) and Spence et al (2001) debate the difficulties with defining what is meant by work-related ill-health, and agree on three particular challenges:

> "*the difficulty of meaningfully attributing individual cases to work, and the fact that such attribution will be done differently by … the people themselves, their doctors and their employers;*
> *the effect of cultural or psychosocial factors on reporting of symptoms …;*
> *the latent interval after exposure*." (Coggins, 2001, p. 693).

Most countries have a system for recording occupational disease; few have records of work-related disease. Thus, at international level, because of the difficulties with definition, identification and recording and the subsequent difficulty ascertaining exactly how many cases of occupational disease occur, attempts are made to estimate the global and national burden. These estimates take an epidemiological approach, in which the attributable fraction is estimated. The attributable fraction is the fraction of all cases of a particular condition that is due to a particular exposure (or exposures), in other words, the fraction of the disease that would not have occurred if the risk factor was non-existent in the exposed population (ILO, 2005a). Thus the attributable fraction permits estimation of the proportion of cases of disease which would not have occurred in the absence of exposure. This method is considered valid because the human response is likely to be similar in all countries; technical and technological processes are global, and best production methods are quickly adopted in developing countries (ILO, 2005a). This is based on using studies undertaken on large populations, to estimate that, for example, 8% of cancer deaths are due to occupation, 7.5% of Cardiovascular and cerebro-vascular disease, 10% of chronic respiratory disease, 100% of pneumoconiosis, etc. and then applying this percentage to the total number of deaths elsewhere, to estimate the work-

related proportion of all deaths in that place (Takala, 2000). In this way, the ILO estimates that there are 1,224 deaths from work-related diseases in Ireland. Most estimates indicate that occupational diseases account for far more fatalities than occupational injuries, but enumeration and estimation is limited by under-diagnosis and inadequate surveillance systems (Herbert and Landrigan, 2000). The statistics that are of interest in occupational disease are: the incidence (number of new cases), prevalence (number of cases including new and long-standing cases), and the rates (the incidence/prevalence divided by the population at risk – usually all workers).

2.3 OCCUPATIONAL HEALTH SURVEILLANCE SYSTEMS

Occupational health surveillance is much more than identification and reporting of occupational diseases; it is the ongoing systematic collection, analysis, interpretation and dissemination of data for the purpose of prevention (ILO, 1998) and includes epidemiological surveillance, worker health surveillance including health monitoring and screening, and work environment and exposure surveillance. In this review, only issues related to occupational disease reporting systems are addressed, although it is important to remember that reporting fits into the wider context of occupational health surveillance and is not a stand-alone activity. The reporting and incidence of occupational disease is influenced by many factors, such as legislation, changes in legislation, compensation systems, unemployment rates, diagnostic and reporting practice, and may also be affected by awareness raising campaigns and changes in the willingness of workers to report (FIOH, 2004). Collection of occupational disease data is a reactive measure, i.e. workers must already been exposed before they can develop the disease.

2.3.1 Occupational Accident Reporting Systems

Two main types of accident reporting systems are used in European member states: insurance based systems and systems that require employers to report diseases to a national authority (Eurostat, 2001). The latter system is in place in Ireland. In member states using an insurance-based system, data are collected by public or private insurers, depending on the national arrangements, but because of the economic incentive to report, reporting levels are nearly 100%. In contrast, where employers are legally obliged to report, the reporting level is much lower, and is considered to range from 30 – 50%. Eurostat reported the average reporting level for Ireland in 1998 as 38%. At European level, the project that is attempting to develop a harmonised system for collecting occupational accident data is called the European Statistics on Accidents at Work (ESAW) project (EC, 2001). Accident reporting systems and disease reporting systems can be similar, however, accidents are much easier to identify and cause and effect (injury) are normally closely related in time, whereas this is not the case for most occupational diseases, where multiple exposures over a long period of time are more likely to be the cause, and the effect (disease) may be slow to manifest and may not be immediately attributed to the exposure. This has major implications for data capture. Accidents are normally reported to the employer, and in this way injury data are captured. Most countries have a statutory requirement for employers to report accidents, but under-reporting is an issue. Occupational disease reporting is a different matter, because it is the case of disease or illness that is unit of data capture, not the causal event (as in the case of accidents).

2.3.2 Occupational Disease Reporting Systems

As with accidents, the primary reporting systems used in European member states for occupational diseases are also dependent on whether the state uses an

insurance based system or not. The economic incentive to report to such schemes facilitates collection of data. Some reporting systems are based on prevention (the Netherlands) and work outside of the social security system. Most countries use multiple sources to inform their national needs, but tend to rely on social insurance system data for providing data to international agencies.

The European Forum of Insurances against Accidents at Work provides a venue for exchanging information and experiences between the national organisations which are responsible for the statutory insurance against occupational accidents and occupational diseases, so it deals exclusively with benefit scheme sources of data – in Ireland this is the Department of Social and Family Affairs. The Forum has coordinated much research compiling comparative information on occupational diseases at European level (Eurogip, 2000, 2002a, 2002b, 2204, 2005). A survey on the extent and causes of under-reporting of diseases in 15 countries in Europe found that it exists in most countries and is not a new phenomenon; the main reasons proposed by most member states were: lack of awareness on the part of employees on both the system for claiming, and their possible exposure; lack of training of GPs on occupational disease; and employee fears of losing their jobs (Eurogip, 2002a). Other reasons cited by a smaller number of countries were: reluctance of victims to come out of anonymity, and doctors' reluctance to report to non-doctors (Eurogip, 2002b). Strategies used in different countries for improving reporting included setting up working groups, training of doctors, guides for employees, legislative measures to allow examination of medical files, simplifying of reporting procedures.

Despite the fact that, in this survey, Ireland reported that under-reporting had not been established but that the phenomenon could not be ruled out, an examination of figures from national organisations on claims and new cases of recognised occupational diseases covering the years 1990 to 2000, showed that Ireland's rates do not exceed 12 per 100,000 insured persons (claims 4.4 – 11.8 per 100,000; new cases 2.3 – 7.4 per 100,000). This is in contrast to most other countries producing rates in double and treble digits, and while it is noted that differences between countries reflect legal conditions for compensation in different countries, in the case of Ireland, this is put down to unreliability of the data, and the provider of the data (Social Welfare) estimate that the correct claims figures could be 50-80% higher (Eurogip, 2002a). No explanation is provided for this anomaly. It should be borne in mind, however, that the schemes in place in different countries can be radically different in terms of the scope of the insured population, and some include private insurance schemes – in Italy, insured housewives who are injured at home can claim from the Italian system (European Forum, 2007).

A number of reporting systems is used, mostly based on compensation/benefits, but occasionally for prevention purposes (e.g. the Netherlands), and further information on the variety of systems is provided in chapter 4.

2.4 CLASSIFYING OCCUPATIONAL DISEASES

Classifications of occupational diseases have been developed mainly for surveillance, notification and compensation purposes. Leigh et al (1999) suggest that one approach to establishing some consistency is to focus on agreed compensable diseases, however even here there are differences.

Karjalainen (WHO, 1999) explains the classifications of occupational disease and the difficulties associated with standardising them. An occupational disease is characterised by the disease itself, and by an exposure, and an association between these two. The majority of occupational disease classification systems

have the hierarchy of diseases caused by agents (chemical, physical and biological) and then diseases by target organ, but a single disease may fall into more than one category. Because there are different systems used in different countries, compatibility and comparability of national statistics on occupational diseases is a huge challenge and should be done with caution. When piloting the European Occupational Disease Statistics Project, Karjalainen (EC, 2000) found that among 15 European countries, only 31 (of 68) diseases were common to all countries.

2.4.1 Occupational Disease Lists

A number of types of lists of occupational diseases exist. In all countries, a list of diseases is agreed at national level for compensation purposes (prescribed diseases). Walters (2007) summarises the system in Europe, with the two extremes of Sweden, which has an open list, and France, which specifies the symptoms, the type of work and the time limit; other countries fall between these two extremes. In most countries, to be recognised as occupational, a disease must be on the list.

Lists of diseases devised for compensation/benefit purposes are generally shorter than lists compiled for prevention purposes; the latter will necessarily include diseases that may or may not yet be formally recognised officially as diseases, and may include new and emerging diseases.

The lists of occupational diseases that currently exist, relevant to the Irish system are: prescribed diseases, ILO list of occupational diseases, the European schedule of occupational diseases and the list associated with the European Occupational Diseases Statistics project.

2.4.1.1 Prescribed Diseases

In most countries, there is an agreed list of diseases, for which compensation or benefit is payable through the social insurance system, and these are referred to as 'prescribed diseases'. The diseases on this list are agreed at national level and are normally restricted (within the list) to an association with an occupation or work activity. In Ireland, the Prescribed Diseases system is managed by the Department of Social and Family Affairs (DSFA), under the Occupational Injuries and Disablement Benefit Schemes. If a PAYE employee is diagnosed with one of the diseases on the list and works in the area listed, he/she may apply for benefit under either the Occupational Injuries Benefit Scheme or the Disablement Benefit Scheme of the Department of Social and Family Affairs, and the case will be assessed for eligibility for compensation, and extent of disability. As eligibility does not commence until the person has been absent from work for more than three days, disease cases that present to the system tend to be the more severe cases of the disease.

In Ireland the definition of a prescribed disease is

" … *each disease or injury set out in … (*a particular column of the Regulations*)… is prescribed in relation to all insured persons who have been employed on or after 1 May 1967 in insurable (occupational injuries) employment in any occupation set against such disease or injury in …* (another column of the Regulations)" (Social Welfare (Consolidated Occupational Injuries) Regulations, 2007).

Prescribed diseases are listed in DSFA document SW33, and are governed by Social Welfare legislation. The full list of prescribed diseases (Appendix 3) categorises occupational disease into diseases caused by physical, chemical, biological agents or other causes, and the content is similar, but not identical, to the list used in the UK and many other member states. The list is updated from

time to time, and a review group was established in 2000 (Eurogip, 2002a); the results of the review were not published.

2.4.1.2 ILO list of Occupational Diseases

The ILO's Employment Injury Benefits Convention, 1964 (No. 121), provides for national competent authorities to define occupational accidents and diseases for which certain compensation benefits shall be provided, and include income maintenance for the injured workers and their dependants during the period of temporary and permanent disability or in the case of death. The ILO recognises that, compared to injury, the identification of occupational diseases can be very complicated. They have thus developed a list of those diseases that are common and well recognised and the risk factors usually involved. It does not include all occupational diseases, and the ILO acknowledges that the list needs to be periodically updated. It is intended to indicate those diseases that are most common in the industries of many countries and where prevention can have the greatest impact on the health of workers. The intention is that a ratifying State can use a general definition of occupational disease in preference to the ILO list, providing that this definition covers at least all of the diseases comprised in the schedule. This Convention has been ratified by Ireland (ILO, 2002), and the Irish list of prescribed diseases appears to be based on the ILO list. The ILO advocate building flexibility into national systems for disease reporting that will allow states to respond to developments in our understanding of disease causation, and disease classification for statistical purposes. The remit of the ILO is worldwide and no relationship is alluded to between the ILO list of diseases and the European Schedule, which is an instrument of the European Union. ILO supports the use of ICD-10 for diagnoses (section 2.5.1).

The outcome of a meeting of an expert group of the ILO held in December 2005 illustrates the complexities of agreeing occupational disease lists; representatives of governments, international organisations, employers and workers met to update the list of occupational diseases. Amid much debate about whether the list was primarily for preventive or compensation purposes, the meeting failed to reach consensus, when employers wanted to include, at the beginning of the list, a catch-all phrase:

"*All diseases listed below and any other diseases suspected of being occupational in origin need to meet general criteria for identification as an occupational disease as follows:*

- *they are in a causal relationship with a specific exposure or agent;*
- *they occur in connection with a specific work environment and in specific occupations;*
- *they occur among the groups of persons concerned with a frequency which exceeds the average morbidity of the rest of the population; and*
- *there is scientific evidence, including the strength of association with exposure to the risk, consistency in the laboratory and epidemiological data and the establishment of a clearly defined pattern of disease following exposure and plausibility of cause."*

(ILO, 2005, p.15)

Government and worker experts wanted to include a less stringent catch-all phrase, at the end of certain disease categories:

> *"Any other occupational diseases and/or disorders not mentioned in these categories where a link is established between exposure to the agent and/or risk factor arising from work activities and the diseases and/or disorders contracted by the workers."*
>
> (ILO, 2005, p.17)

In the end, there was no agreement, and there are now two lists: one approved by Government and Workers, and the other approved by Employers. There has been no further progress on this issue since 2005.

2.4.1.3 European Schedule of Occupational Diseases

The European Schedule of Occupational Diseases (ESOD) is a list of conditions that relate to occupational diseases that the European Commission recommends member states introduce into their national legislation, and report to Eurostat (EC, 2003). The schedule was first devised in 1962, but has been amended since, and it presents the list of diseases in two annexes:

- Annex I is a list of diseases, which must be linked directly to occupation. This annex lists 'diseases caused by chemical agents' and lists causative agents, and also lists diseases classified by the bodily system, infectious and parasitic diseases and then by causative physical agent.
- Annex II is an additional list of diseases (using the above categories) suspected of being occupational in origin which should be subject to notification and which may be considered at a later stage for inclusion in Annex I.

The list is not identical, but not dissimilar in content to the Irish list of prescribed diseases. The full list is provided in Appendix 4.

2.4.1.4 European Occupational Disease Statistics

The European Occupational Disease Statistics (EODS) project, includes diagnosis as a required variable, and provides a list of the diseases with ICD-10 codes. As part of this project, member states are required to provide a code that links the diagnosis with a reference code on the European Schedule of Occupational Diseases (Annex I and II).

2.5 CODING SYSTEMS

There are a number of fields (or areas of information) on which data should be collected in relation to occupational diseases. The ILO has defined the minimum information to be included:

"(a) enterprise, establishment and employer
- (i) name and address of the employer
- (ii) name and address of the enterprise
- (iii) name and address of the establishment
- (iv) economic activity of the establishment
- (v) number of workers (size of the establishment)

(b) person affected by the occupational disease
- (i) name, address, sex and date of birth
- (ii) employment status
- (iii) occupation at the time when the disease was diagnosed
- (iv) length of service with the present employer

(c) occupational disease
- (i) name and nature of the occupational disease
- (ii) harmful agents, processes or exposure to which the occupational disease is attributable
- (iii) description of work which gave rise to the condition
- (iv) length of exposure to harmful agents and processes
- (v) date of diagnosis of the occupational disease."

(WHO, 1999, p. 2)

The European Occupational Statistics Disease Project seeks the following variables: country; age; sex; severity of disease; occupation; employer's economic activity; European Schedule reference number; diagnosis; exposure data; year of first recognition; severity at first recognition.

A classification and coding system assigns items to categories according to shared characteristics and it provides a framework for the description and

comparison of statistics. In an ideal world of data collection, everyone would use the same lists and categorise items in the same manner, and this would facilitate comparisons. Attempts to harmonise statistics in the health and safety domain has resulted in the development of the European Statistics on Accidents at Work methodology (ESAW) (EC, 2001). Where possible, general standard international classifications should be used, and examples used in health and safety statistics include:

- NACE codes represent the statistical classification of economic activities, and assign a unique industry code to each sector.
- ISCO is the International Standard Classification of Occupations.
- NUTS is the Nomenclature of Territorial Units for Statistics, and it is used in subdividing national territory into regions.

2.5.1 ICD-10 list of Occupational Diseases

The coding and classification system for accidents at work (ESAW) does not contain a classification system for diagnosis of disease, or for the agents and exposures that are relevant for occupational diseases (WHO, 1999). The World Health Organisation produced a guidance document in 1999, which aligns occupational disease diagnoses with the coding in the ICD (International Statistical Classification of Diseases and Related Health Problems) system. The document is designed to act as a guideline for countries that do not have a well defined notification system and are starting to build one, and for countries that already have a notification system. The document also provides typical examples of the causative agents/risk factors and risk industries/occupations for each occupational disease. When setting up the ICD-10 Occupational Disease project, WHO (1998) noted that although most countries use some version of ICD in the general health care system, few used ICD codes in their national systems for recording occupational diseases; most used national occupational disease codes, unique for each country. The European Occupational Disease Statistics project methodology lists the diseases and provides ICD-10 codes, and the ILO advocate the use of ICD-10. The Netherlands (Netherlands Centre for Occupational Diseases, personal contact, 2007) has recently introduced ICD-10 codes to its notification system, subsidised by a Eurostat grant.

2.6 SUMMARY

This chapter has highlighted the difficulties associated with gauging the problem of occupational disease at national and international level and the issues that continue to cause uncertainty, lack of agreement and debate. The classification of 'occupational' relates to the cause and not the nature of the disease, and this raises larger political issues because it raises the questions of responsibility, liability and compensation. There are a number of diseases that are surely due to occupation, i.e. individuals would not have contracted the disease if it was not for their work, and most countries have drawn up a list of 'prescribed diseases', for which compensation or benefits are payable, and international agencies, such as the ILO and the European Commission provide some guidance on these diseases. However there are also illnesses that arise that are related to, even if they cannot be wholly attributed to, work, and for prevention purposes, it is important that we have a source of information on these conditions, and monitor their incidence. In order to develop statistics, which are comparable over time, and are comparable to statistics from other countries, international classification and coding systems have been developed, and they are slowly being introduced into national systems. The next chapter looks at the legislative framework in which these classifications are being developed and the national legislative framework for occupational disease data collection.

CHAPTER 3 LEGAL FRAMEWORK AND STATUTORY INSTRUMENTS

3.1 INTRODUCTION

This chapter outlines the legal requirements, and the rationale, for the dedicated collection and analysis of occupational disease data in Ireland. In most countries, this type of legislation exists for a variety of reasons, and when required by legislation, the data are generally collected for administrative reasons (such as the payment of benefit). There are a number of legal instruments, which prescribe the collection of data on occupational diseases and these are discussed based on the requirements at international and at national levels.

3.2 INTERNATIONAL LEGAL INSTRUMENTS

International instruments for collection of occupational disease data include recommendations from global agencies, such as the ILO and WHO, and from the European Commission.

3.2.1 Initiatives from Global Agencies

The main global agencies interested in occupational disease data collection are the World Health Organisation and the International Labour Organisation. Both have a clear agenda on occupational health and on the prevention of occupational disease, and they work closely together on a number of issues. The ILO has been instrumental at a high level in progressing the debate, and the decisions, on which diseases are occupational, and has played a role in setting standards and making recommendations for individual countries to ratify and implement. The ILO requests statistics from member states in order to inform its estimates on the global burden of occupational diseases.

3.2.2 Initiatives from the European Commission

European initiatives on this issue are not new. The first Commission Recommendation to member states concerning the adoption of a European Schedule (List) of Occupational Diseases was issued in 1962 (31962H0831(02)), although it was not published in English.

In 1990, an updated version was published in English, and Commission Recommendation 90/326/EEC recommended that member states:

> "*… introduce as soon as possible into national law, regulations or administrative provisions concerning scientifically recognised occupational diseases liable for compensation…*" and "*…ensure that all cases of occupational diseases are reported and progressively make their statistics on occupational diseases compatible with the European Schedule…*".

In 2002, the Commission published its strategy on Health and Safety for the period 2002-2006, which attached great importance to the prevention of occupational diseases. It recommended the involvement of all players in developing measures for the effective prevention of occupational illnesses and recognised that, in order for quantified national objectives to be adopted with a view to reducing the rates of recognised occupational illness, more precise and more comparable data must be collected and that the Commission itself needed to step up work on harmonisation (EC, 2002).

In 2003, Commission Recommendation 2003/670/EC replaced the 1990 Recommendation. This new Recommendation advocated that the system in place in member states be in accordance with the work being done on harmonising European statistics (the European Occupational Disease Statistics project –

EODS – is not mentioned by name) and that statistics and epidemiological data be made available to the Commission, and indeed other interested parties.

In the most recent Community Strategy on Health and Safety at Work, the Commission continues to acknowledge the need to consolidate the EODS project, and plans to step up the collection of health and safety statistics in population surveys. It also encourages the analysis of data drawn from health surveillance in order to improve prevention, but cautions against inflating the formal requirements to which companies are subject (EC, 2007a).

In 2007, the Commission proposed a Regulation concerning Community statistics on public health and health and safety at work (EC, 2007b). The Commission noted the importance of a high standard of statistical data in order to achieve its policies in the areas of public health and occupational health and safety, but acknowledged that to date, statistical data collections have been carried out on the basis of 'Gentleman's Agreements' and argued the need for a more formal legal requirement. Consultation took place with major stakeholder groups in 2005 and there were mixed opinions on the benefits of a legal framework as opposed to the flexibility of the existing gentleman's agreement system, however there was general support for the proposed Regulation, and an impact assessment was requested (this is currently being prepared by Eurostat). The proposal advocates addressing public health and health and safety domains together. The rationale for moving to a Regulation as the proposed legal instrument is explained:

> "*Gentlemen agreement procedures do not allow achieving sufficient comparability, coverage and timeliness. They will not give sufficient priority and resources for the preparation and implementation of statistical data collections on health and safety. In particular financing will not be ensured. This is why a European legal framework is necessary. A Regulation of the European Parliament and Council is the legal instrument most appropriate for statistical actions which require detailed and uniformed application throughout the Community*."
>
> (EC, 2007b, p.7).

The proposal acknowledges the progress made to date and the value of the existing systems, however, it argues that "*...greater accuracy and reliability, coherence and comparability, coverage, timeliness and punctuality of the existing statistical data collections are still needed*" (EC, 2007b, p.11).

The proposed Regulation will require that European member states provide Eurostat with statistics on the domains of 'accidents at work' and 'occupational diseases and other work-related health problems and illnesses'. The data sources can be from existing or planned surveys, or from existing or planned administrative or reporting structures. The Regulation does not specify that the diseases should be reported using the European Schedule of Occupational Diseases (the list in the annex of the Recommendation), and Eurostat could not comment on that possibility, but common sense suggests that this will be the case. The Regulation will come into force 20 days after it is published in the Official Journal of the European Union.

It should be emphasised that the legal instruments used until now by the Commission in this domain (1990 and 2003) were Recommendations. Recommendations are non-binding instruments and are only of persuasive value. The most recent proposal is for a Regulation. Regulations are binding in their entirety and are directly applicable – they do not need to be transposed into national legislation and member states have no power to apply them incompletely (http://ec.europa.eu/ireland/ accessed 18/07/2007). The proposed Regulation proposes data collection in a number of domains, and it is likely that

implementing Regulations will be required providing more detail for each domain and that even when a decision is made, the implementing Regulation will take time to develop (Eurostat, personal contact, 2007).

3.2.2.1 Current Status of the Proposed Regulation

The proposed Regulation is still just that, a proposed Regulation, and in addition to a decision pending, the wording and the exact requirements have the potential to change as part of the discussion process.

Dr. Antti Karjalainen, of Eurostat, summarised the most up-to-date position in an email on 26 October 2007:

> *"The Proposal for Regulation is currently in the European Parliament and Council. In the European Parliament, the Committee on Environment, Public Health and Food Safety adopted a favourable report on it on October 2nd. It will go to the plenary of the European Parliament in November or December depending on their internal agendas.*
>
> *In the Council, the Working Party on Statistics is still working on an opinion. Once they have completed their work it will go to the plenary of the Council. This might be very late this year (Portuguese presidency) or only early next year (Slovenian presidency).*
>
> *If the European Parliament and Council can agree on a common position, then it might go quickly. If they can't agree, then it goes to a second reading in both institutions. There is no absolute deadline on the completion of an eventual second reading, so it is difficult to estimate.*
>
> *The Council also asked an opinion of the European Economic and Social Committee (EESC). The opinion of EESC is not binding, nevertheless the EESC adopted a favourable opinion on the Proposal on 25/10" (Karjalainen, 2007).*

The proposal has not been received favourably in all jurisdictions: in the UK, the proposed Regulation has been raised in Parliament (March 2007) under the Select Committee on European Scrutiny. They consider that the initial requirements for data collection are unlikely to exceed existing arrangements, but express concern about the potential of the Commission to specify new requirements in the future, and the possibility that the draft Regulation gives excessively wide power to specify new statistical requirements that could lead to additional administrative burden on business and regulatory bodies. They express a particular concern in the domain of health and safety statistics, and the risk of pressure in the future to change the UK Regulations on reporting occupational accidents and diseases (RIDDOR) beyond what is collected at present. The UK Government is negotiating to amend the proposal so that data collection requirements will not be allowed to exceed what is already in place (UK Parliament, 2007). The UK is not the only member state to submit objections.

It looks likely that the proposed Regulation will become an actual Regulation, but until that is published, there is the possibility of negotiation on the wording and the exact requirements, and until the final Regulation is published it is difficult to predict exactly what will be required. One of the arguments for having a Regulation is that new member states need a legislative framework, but states that already have a system in place, seem to be keen not to allow too much change to their existing arrangements.

3.3 NATIONAL LEGAL INSTRUMENTS

The national requirements for data collection for diseases specifically related to occupation include social welfare legislation and occupational safety and health legislation.

3.3.1 Social Welfare Legislation

The main legislation governing the reporting of prescribed diseases is Chapter 13 of Part II of the Social Welfare (Consolidation) Act, 2005, and associated Regulations. In 2007, the Social Welfare (Consolidated Occupational Injuries) Regulations 2007 (S.I. No. 102 of 2007) consolidated all previous OIB Statutory Instruments into one Regulation.

This legislation permits insured employees in certain occupations to claim for benefit in the event of their being diagnosed with an occupational disease that is on the list of prescribed diseases, and there is some flexibility for individual proof, where the occupation does not match an occupation on the list. The claim is validated by administrative, employer and physician checking systems. The Social Welfare (Consolidated Occupational Injuries) Regulations 2007 provide detail of the conditions for claims, types of claims permitted, and the procedures that must be followed by all parties.

3.3.2 Occupational Safety and Health Legislation

The requirement to notify occurrences and circumstances of accidents and of diseases associated with work is not new. The Factories Act, 1955, required notification of any accident that: " *disables any such person for more than three days from earning full wages at the work at which he was employed*." Notification of industrial diseases by medical practitioners was also required (Part VI, Section 76):

> *"Every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, arsenical or mercurial poisoning, or anthrax, contracted in any factory, shall (unless such a notice has been previously sent) forthwith send to the Minister a notice stating the name and full postal address of the patient and the disease from which, in the opinion of the medical practitioner, the patient is suffering, and the name and address of the factory in which he is or was last employed, and shall be entitled in respect of every notice sent in pursuance of this section to a fee of two shillings and sixpence, to be paid by the Minister."*

The Safety in Industry Act, 1980 made no change to the requirements for notification of industrial diseases. In the early 1980s, the Commission of Inquiry into Safety, Health and Welfare at Work reviewed the arrangements for notification of accidents and industrial diseases and called for a system that could produce an annual national report that could set out accident and illness rates and trends and costs, and pointed out the serious shortcomings of the data available at that time (Barrington, 1983). The Commission was of the view that the Occupational Injuries Benefit data was insufficient, and it did not consider that pleas to either employers or physicians to report would add any value; it pointed out that a system designed to capture accident data simply does not work for occupational diseases. Barrington recommended a system of data linkage, of medical records and occupational history, however the report did not specify in how this could be achieved.

The Safety, Health and Welfare at Work Act, 1989 brought all workplaces under the auspices of occupational safety and health legislation and thus hugely widened the scope of workplaces which were now required to report occurrences. The requirements of the Safety, Health and Welfare at Work Act, 1989, were

applicable to all workplaces. The terms disease, illness, or accident were not defined in the Act. Personal injury was defined (Part1, Section 2(1) to include…*"… any disease and any impairment of a person's physical or mental condition."*

Part X of the Safety, Health and Welfare at Work (General Application) Regulations, 1993, require that:

Where

> *"…any accident occurs at a place of work as a result of which any person carrying out work at that place of work dies or is prevented from performing his normal work for more than three consecutive days, excluding the day of the accident but including any days which would not have been working days."*

The responsible person (usually the employer) is required to:

> *"...as soon as practicable send a written report in the approved form to the Authority of the death, injury, condition, accident, …"*

Under this legislation, all employers, and self-employed have been legally obliged, since 1993, to report accidents as above. This requirement was not extended to diseases.

The Safety, Health and Welfare at Work (General Application) Regulations, 2007, revoke and replace most of the provisions of the 1993 Regulations, with the exception of Part X and the Twelfth Schedule (both relating to the notification of accidents and dangerous occurrences), which still apply.

The Safety, Health and Welfare at Work Act, 2005, Part 1, Section 2 (1), introduced the following definitions:

> *"…"accident" means an accident arising out of or in the course of employment which, in the case of a person carrying out work, results in personal injury."*
>
> *"…"personal injury" includes— (a) any injury, disease, disability, occupational illness or any impairment of physical or mental condition, or (b) any death, that is attributable to work."*

Thus it has been argued that the legislation requiring employers to notify the Authority of an accident that results in personal injury, now includes any accident that causes absence, or inability to perform normal duties, for more than three consecutive days due to any injury, disease, disability, occupational illness or any impairment of physical or mental condition, that is attributable to work. This would raise some challenges: most diseases and occupational illnesses do not result from the common perception of an accident – which is that it is a single event – they result from multiple exposures over a long period of time. A considerably wider duty than the duty to report injuries that result from accidents, would pose a challenge to employers, because of a huge lack of clarity around case definition, lack of guidance in this area, no system for such reporting, and in the event of an occupational illness or disease, the ability to link it to an 'accident', which is the unit of reporting. Occupational diseases have been described as "accidents in slow motion" (Kitt, 1998), but there is no system in place, nor are there guidelines available for employers on how, to report diseases, or on what conditions are classified as disease, disability, occupational illness or any impairment of physical or mental condition in this context.

In the United Kingdom, RIDDOR, which is the equivalent accident notification legislation that includes disease reporting, requires employers to report occupational diseases, however, employers are provided with a list of diseases to report (that is very similar to the UK list of prescribed diseases), to the Health

and Safety Executive, or the local authority, when they have been informed by a medical practitioner that the employee is suffering from a reportable disease. There is no absence criterion; if the employer is notified by a doctor that an employee is suffering from a relevant disease, the employer must report it (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations, 1995).

The ILO Labour Statisticians collect official statistics from relevant national agencies to the ILO Bureau of Statistics, for publication in the ILO Yearbook of Labour Statistics, and their definitions (Appendix 7) provide some clarification:

> *"occupational injury: any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity".*
>
> (http://laborsta.ilo.org/)

This definition differentiates between a disease or illness caused by a single incident (for example an infection contracted following a biological spill, or an extreme allergic reaction caused by a single exposure) from an occupational disease contracted following multiple exposures, and allows for different systems for data collection for illness as a result of single exposure incidents (treated as accidents) and diseases that develop over time.

3.4 SUMMARY

There are legal requirements for the dedicated collection and analysis of occupational injury data in Ireland. As with much Irish legislation, global, particularly European, agencies have an influence on what is required and how associated data are collected. The ILO is instrumental in setting standards on how labour systems should include a system for compensating workers who are injured or made ill by their work, and has developed lists of diseases which facilitate individual states to develop national lists of prescribed diseases: in Ireland this is implemented by social welfare legislation and the Occupational Injuries Benefit Scheme. Data are generated that can be used to provide Eurostat with the statistics that it requests on diseases that are liable for compensation, but, to date, Ireland has not routinely provided it, nor is it required to do so, as the European legal instrument in place is a Recommendation and therefore not binding. More recently, the European Commission has proposed a Regulation that will require (as opposed to request) member states to provide data on a wider range of conditions that are work-related; Eurostat recognises that not all such data will be available from notification systems, and the proposal allows that much of the data be derived from national surveys.

In Irish occupational safety and health legislation, the legal requirements for notification of accidents has, to date, required only notification of accidents resulting in injury, which then results in absence from work. Recent changes to Irish legislation raise a question over what must be reported as the definition of personal injury has been widened, and accidents that result in personal injury (and absence) must be reported, which suggests that accidents resulting in disease or illness must be reported also. This poses a conundrum because few accidents (generally perceived to be single events) with the exception perhaps of acute exposure situations, result in disease or illness, however it is possible to differentiate between illness that results from a single accident event and from multiple exposures, and to capture the data in both accident and disease recording systems.

Developing a notification or reporting system that captures accurately the incidence and prevalence of occupational disease and work-related illness is a problem that faces every country, and is not unique to Ireland. In the next chapter, arrangements in place outside of Ireland are examined, in order to develop some understanding of disease reporting challenges and solutions abroad.

CHAPTER 4 INTERNATIONAL SYSTEMS AND CASE STUDIES

4.1 INTRODUCTION

The challenges to collecting data on occupational disease are not unique to Ireland. This chapter looks at evidence from other countries to identify the problems, and solutions, associated with capturing occupational ill-health and disease data. It provides a summary description of the systems in place in some international settings and then provides more detailed case studies of systems in three other European countries.

4.2 INTERNATIONAL SYSTEMS

This section introduces the system that is slowly being put in place in the European Union, in order to achieve harmonisation of data collection, and provides a brief description of the systems in use in a small number of individual member states for information. This section was also informed by interviews with Dr. Antti Karjalainen, from Eurostat, and Dr. Jukka Takala, from the European Agency for Safety and Health at Work, and formerly of the ILO.

4.2.1 European Union

In Europe, prevention of occupational disease is a priority and is evident in EC Health and Safety strategies. One of the challenges, however, to meeting the objective of reducing the incidence and prevalence of occupational disease is the difficulty of monitoring occupational disease when there is a lack of Europe-wide comparable data. The EC is working towards developing a harmonised system in the European Occupational Disease Statistics project.

4.2.1.1 European Occupational Diseases Statistics Project

Eurostat launched a pilot project (European Occupational Disease Statistics – EODS) for collecting occupational disease data in 1995, and subsequently collected the first statistical data for the reference year 2001. EODS collects statistical data on new cases (incidence) of occupational diseases recognised for compensation purposes. Data were provided, in 2001, by twelve member states (including Ireland) on incident, non-fatal cases and by six countries on fatal occupational diseases (deaths). Because recognition practices and social security arrangements for occupational diseases differed between the member states, the core data included only 68 occupational disease items that were covered by all national systems (Karjalainen and Niederlaender, 2004). EODS data are now collected annually from member states participating in the project, and all follow the EODS methodology, a document that sets out classifications and categories for data collection, similar to the European Statistics on Accidents at Work (ESAW) methodology document for accident data collection.

4.2.1.2 National Systems used in EU Member States

The European Agency for Safety and Health at Work website has part of its Risk Observatory site dedicated to providing an overview of the systems used in member states to monitor occupational safety and health. The systems used to monitor disease include:

- Worker surveys
- Exposure databases
- Registers of diseases
- Registers of sickness leave or absenteeism
- Multi-source/policy-directed systems.

(http://riskobservatory.osha.europa.eu/osm/system.stm). The majority of member states use multiple sources and many note the limitations associated with their disease collection system. Much data are collected by insurance

schemes, and most of the reporting is done by physicians. A selection of systems is summarised below to illustrate the diversity of systems in use.

Austria: Austria uses a combination of surveys, multi-source systems and disease registers. The Main Association of Austrian Social Security Institutions is the umbrella organisation of public health insurance boards, accident insurance boards and the pension insurance boards. These insurance institutions have records on accidents, occupational diseases and other data, covering 99 % of the Austrian population. The collection of data is based on legal requirements and is strictly regulated. Occupational diseases are reported by those doctors who have a special contract with the accident insurance company. Cases of sickness leave are reported by the employers. Occupational diseases have to be acknowledged by a doctor of the insurance institution.

Denmark: Denmark used multiple data sources, including surveys and health administrative systems. The Denmark Register of Accidents and Diseases collects Common Statistics on Recognised and Reported Accidents and Diseases. The register covers all work accidents and diseases from 1997-2001 reported to either the National Board on Industrial Injuries (around 20.000 cases) or National Working Environment Authority (around 50.000 cases). The latter is a register to create a basis to identify the causes of occupational diseases. The duty of reporting is through a mandatory notification procedure by physicians and dentists and more than 90% of the registered diseases are reported by physicians.

Germany: Suspected cases of occupational disease can be reported to the public accident insurance carrier by doctors, employees, employers, or health insurers or dependents. Employers and physicians are obliged by law to report.

Hungary: In Hungary, all physicians may diagnose occupational diseases, which have to be reported to the local institution of National Public Health and Medical Officer's Service (NPHMOS). After investigation and verification, the cases are reported to the National Institute of Occupational Health.

Aspects of the systems used in the United Kingdom, Finland, and the Netherlands are described in more detail below.

4.2.3 New Zealand

In New Zealand, as in other countries, multiple data sources are used: national mortality and morbidity data, cancer registry, and surveys. The main labour-related systems in use are two schemes under the Department of Labour Workbench and the Notifiable Occupational Disease System (NODS), and the Accident Compensation Corporation.

New Zealand is included here because a major review of the entire Occupational Disease Surveillance System was carried out in recent years. Its scope was much wider than reviewing reporting systems for occupational diseases as it reviewed the wider concept of occupational health surveillance, but the information provided on occupational disease reporting provides some new insights, not found in other literature (Kendall, 2005; Pearce et al, 2005).

Employers are legally required to notify the Department of Labour about workers who suffer serious harm as a result of their work; this includes diseases, but the system collects mainly accident data. Under-reporting is a big problem, and the review considered that the system contributes more to the prevention of recurrences of individual harm than to trend identification (Pearce et al, 2005).

The Department of Labour also operates a voluntary reporting scheme – Notifiable Occupational Disease System (NODS), whereby employers, health professionals and other individuals (including employees or their families) can

report a health-related condition that is suspected to arise from work (Department of Labour, 2006). The system has four stages: notification, assessment, verification and entry to the database. Assessment is usually carried out by an Occupational Health Nurse (from the Department) who usually looks for more information from the notifier, and may include involving other specialists and a workplace inspection. Verification involves a decision of acceptance of the case by a Department medical practitioner, and the case is only entered onto the database if causation is established. The system records between 700 and 1,000 confirmed cases per year, but the report does not include information on the number of unconfirmed reports, or a breakdown of reporters. An earlier report for the period 1998-200 states that just under one third of notified cases were confirmed. The population of New Zealand is just over 4 million, with an employee base of about 1.3 million.

The NODS system has been criticised in the review for having poor diagnosis and under-reporting; poor system design; and poor potential for data integration. The system is also considered to contribute more to prevention of recurrence in individual cases rather than as a data source.

The national Accident Compensation Scheme is operated on a prescribed disease system, and while there is a financial incentive to report, the review found it unclear how comprehensively the database reflected the true incidence of diseases.

4.2.3.1 Concept-driven Systems

The New Zealand review argues that the most of the systems in current use are data driven, i.e. they make opportunistic use of data collected for a purpose other than occupational disease surveillance, such as enforcement and compensation, and that this is why they do not address the information need. The authors propose the use of a concept-driven system, i.e. a system that has occupational disease and injury surveillance as its primary responsibility, rather than collecting data from other systems (Kendall, 2005; Pearce et al, 2005). They cite Finland as having the nearest to the 'ideal' system.

4.3 CASE STUDIES

In order to gain a deeper understanding of the workings, including the challenges and the lessons to be learned from other jurisdictions, key stakeholders in selected European countries were visited and interviewed. The organisations visited were:

- The Statistics Branch of the Health and Safety Executive in the UK;
- The Centre for Occupational Medicine in the University of Manchester in the UK;
- The Centre for Occupational Diseases in the University of Amsterdam, the Netherlands;
- The Finnish Institute of Occupational Health in Helsinki, Finland.

The UK and the Netherlands were chosen because they are two of the five (Ireland, Denmark and Sweden are the other three) countries who, because of the social insurance system in the country, cannot capture the majority of accidents and diseases through insurance sources. The UK was also chosen because, despite many subtle differences, its system is very similar to that in Ireland. It is also of particular interest because of its recent review of its legislative disease reporting requirements, and because the THOR scheme (used in Ireland) is managed from the UK. Finland was chosen because it is reputed to have the most advanced system in Europe, which is a system that uses statutory reporting by physicians.

It is well established in all guidance and publications that international comparison of occupational fatality statistics should be treated with caution, but so too must international comparison of the systems in place to collect the data; what works for one country will not necessarily work for another, and this can be as much due to cultural factors as to legislative and administrative arrangements. The purpose of the overview of systems in this chapter is not to review the systems, or to compare them to the Irish system, rather to observe, and to use the experience of other states to inform the Irish situation.

4.3.1 United Kingdom

In the United Kingdom (UK), the data collection system is similar, but not identical, to that in Ireland, and a combination of data sources is used to build a national picture (HSE, 2007a):

a) Data are collected through specialist modules of the Labour Force Survey;
b) Workplace Health and Safety Surveys
c) Data collected from hospital specialist and occupational physicians (THOR schemes);
d) Data collected through the Industrial Injuries Disablement Benefit (IIDB);
e) Diseases reported by employers through the RIDDOR Regulations;
f) Other sources, such as deaths certification.

4.3.1.1 Self-Reported Work-Related Illness Survey

Self-Reported Work-Related Illness (SWI) is collected through the UK Labour Force Survey. Estimates of incidence and prevalence of occupational disease is made based on survey data collected from 50,000 households each quarter. Questions on occupational injury and illness are asked in the winter quarter each year, and this is known as the Self-Reported Work-Related Illness Survey (SWI). The Health and Safety Executive (HSE) has published headline results of this survey annually, and in 2007 published a detailed analysis that provides estimated incidence and prevalence rates for disease. While HSE acknowledge that the results depend on lay persons perception of medical matters, they consider such perceptions of interest in their own right, and taken with other data sources, such as THOR and the Industrial Injuries Benefit Scheme, considers that a picture of the overall scale of the problem can be developed (HSE, 2006). This is the equivalent of the Irish module on the QNHS.

4.3.1.2 Workplace Health and Safety Surveys

To complement the Labour Force Survey data, in 2005, the HSE developed the Workplace Health and Safety Surveys (WHASS). The surveys comprised an employer survey, which questioned 1,000 health and safety managers (a 63% response rate) and a worker survey, based on responses from 10,016 workers (26% response rate). The HSE is planning to conduct a series of such large-scale workplace surveys during the period 2005-2015, in order to study the state of health and safety in Britain's workplaces, as part of its strategy to assess the progress towards government targets set for health and safety at work. (http://www.hse.gov.uk/statistics/sources.htm).

4.3.1.3 THOR Scheme

The Health and Occupation Reporting network (THOR) is a system for reporting of cases of occupational disease by the physicians who diagnose them as work-related, and this system has been extended to the Republic of Ireland in recent years. Voluntary reporting of occupational disease diagnosed by medical specialists was initiated in the UK in the 1980s. In 2002 the Health and Safety Executive (HSE) commenced funding the schemes, referred to as 'The Health and Occupation Reporting Network' (THOR), and they estimate the incidence of work-related disease in the UK using sampled reporting from medical specialists. The THOR scheme is a form of sentinel scheme, which relies on the willing

participation of panels of specialist doctors who report cases of work-related ill health anonymously (Rogers et al, 2004). It is managed by the Centre for Occupational and Enviornmental Health, School of Medicine in the University of Manchester.

THOR has generated much published information for Health and Safety Executive statistics, and in peer reviewed journals. It comprises a number of surveillance schemes, of which the first three are currently in use in Ireland:

- Surveillance of Work-Related and Occupational Respiratory Disease (SWORD). Reporting of occupational respiratory disease by respiratory physicians;
- EPI-DERM. Reporting of occupational skin disease by consultant dermatologists;
- Occupational Physicians Reporting Activity (OPRA). Information reported to OPRA gives a very broad picture of occupational disease and work-related conditions in the UK since it incorporates all of the categories covered by the other THOR component schemes, as well as conditions not included in other schemes;
- THOR-GP. A scheme where GPs, who have received training in occupational medicine, report cases of occupational disease;
- Occupational Surveillance of Otorhinolaryngological Disease (THOR-ENT);
- Musculoskeletal Occupational Surveillance Scheme for rheumatologists (MOSS);
- Occupational Surveillance Scheme for Audiological physicians (OSSA);
- Surveillance of Occupational Stress and Mental Illness (SOSMI);
- Surveillance of Infectious Diseases At Work (SIDAW).

In all of the schemes, physicians are provided with guidelines for deciding whether a case is work-related, and are asked to report new cases of disease seen in the last month which, in their opinion, are work-related. A two-tier reporting system is used with core-reporters reporting monthly and sample reporters reporting only one month a year, with the reporting month being chosen randomly each year (McNamee et al, 2006). A move from paper-based to electronic reporting was made following assessment of the views of reporters (Rogers et al, 2004).

THOR takes a practical and pragmatic approach to the challenge of data collection on occupational diseases, with Prof. Raymond Agius citing Last's (1998) definition of epidemiologic surveillance as "*The systematic collection of data generally using methods distinguished by their practicality, uniformity and rapidity, rather than by accuracy or completeness*" (Agius, personal contact, 2007).

There are limitations to the THOR scheme. There is a varying degree of occupational physician cover in different industries, and this places limitations on the industry comparisons. Because of the voluntary nature of reporting, variations in the numbers reporting over time can influence the number of cases reported (reporter fatigue), although this is taken account of by the THOR team in recent times as they are able to carry out more sophisticated statistics (http://www.hse.gov.uk/statistics/sources.htm).

The advantages are noted by McDonald (2000): the scheme is national and confidential, it has high participation and response (in the UK), it permits estimation of the incidence rates, provides clues to aetiology and identifies previously unknown problems. Because of the high numbers of reporters and cases and the length of time the scheme has been in existence, it is possible to carry out multilevel analyses, looking at reporting patterns, such as variation between and within reporters over time. Because of the breadth of physicians

used, not simply occupational physicians, the scheme reaches patients who are no longer in the working population, and who do not have access to an occupational health service. A strength of this system is that the organisers are quick to point out its limitations, and are keen to subject the system to peer review by publishing widely in international peer reviewed journals (selected publications are: Meyer et al, 2001; Cherry and McDonald, 2002; Rogers et al, 2002).

Agius (Personal contact, 2007) stresses the importance of physician buy-in: they must have a stake in running it, it must be high profile, they must see the value in participating for themselves (research interest, opportunities for continuing professional development, etc., information feedback) and must see the value in it for their patients (identification of trends and feedback to prevention policy), and finally they must get credit for their input and have peer approval.

The Health and Safety Executive in the UK, in full knowledge of its limitations, relies heavily on THOR for its information on Occupational Diseases, and, in terms of estimates, still cautions that figures from the THOR scheme should be regarded as minimal estimates. This is in recognition that many workers will not have access to an occupational physician at their place of work and so their cases of work-related disease fall outside the catchment of the OPRA scheme; and specialists such as respiratory physicians, dermatologists, etc. largely see only the more serious cases that are referred to them. HSE acknowledges that the specialist physicians see retired patients, and so see a wider age range than the occupational physicians, who only see patients who are still at work (http://www.hse.gov.uk/statistics/sources.htm). The THOR-GP scheme is designed to bridge that gap.

While THOR was designed as a scheme to address surveillance and data needs in the UK, it is transferable, and subsequent to its introduction, the Netherlands has introduced a similar scheme to supplement its occupational physician reporting system, and it has been applied in the Irish context. It also fits within the New Zealand criteria for the ideal system: the concept-driven system.

4.3.1.4 Industrial Injuries Disablement Benefit

The UK Industrial Injuries Disablement Benefit Scheme (IIDB) is very similar to the Occupational Injuries Benefit Scheme in Ireland. There is currently a consultation process in progress with a view to reforming the system (Department for Work and Pensions, 2007a and 2007b), which has been in place since 1948. As in the Irish scheme, new cases of 'prescribed diseases', with an established occupational cause are eligible for benefit under the IIDB scheme, and IIDB statistics are produced. A disease is considered 'prescribed' if the risk to workers in a certain occupation is substantially greater than the risk to the general population, and the link between the disease and the occupation can be established in each individual case or presumed with reasonable certainty. The list of prescribed diseases is very similar to the Irish list of prescribed diseases.

The Industrial Injuries Advisory Council (IIAC) is a statutory body that provides independent advice on matters relating to the Industrial Injury Disablement Benefit scheme, and are asked to review whether new diseases should be prescribed, and IIAC carries out a review (literature review and verbal and written advice) and publishes a position paper on the topics. Topics on which position papers have been produced include: back and neck pain, stress at work, and occupational voice loss (http://www.iiac.org.uk/papers/index.asp). The position taken on back and neck pain was that these are symptoms and not diseases, and prescription was not recommended; in relation to stress at work, IIAC noted that stress was a leading cause of work-related sickness absence, but

in view of the difficulties in definition, diagnosis, exposure assessment and attribution, prescription was not recommended (IIAC, 2004; IIAC, 2007).

The HSE cautions that IIDB statistics are probably an underestimate of the size of the problem because it may be difficult both to identify and prove occupational causes, especially where there is a long delay (latency) between the cause of a disease and its appearance. In addition, individuals may be unaware of the possible occupational origin of their disease or the availability of compensation (http://www.hse.gov.uk/statistics/sources.htm).

The Industrial Injuries Disablement Benefit scheme provides disease statistics to Eurostat, and the HSE Statistics Branch plays no role in relation to providing occupational disease statistics to Europe (HSE, personal contact, 2007).

4.3.1.5 RIDDOR

RIDDOR is an acronym for the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations of 1995 (http://www.hse.gov.uk/riddor/riddor.htm). These Regulations require employers and self-employed persons to report occupational diseases, in addition to work-related deaths, injuries and occurrences (in Ireland the corresponding Regulations have not in the past required the reporting of diseases – Safety, Health and Welfare at Work (General Application) Regulations, 1993, Part X). A Schedule to the RIDDOR Regulations lists diseases and includes the types of work activity for which each disease is considered to be a recognised risk; this Schedule is very similar, but not identical, to the list of diseases prescribed by the Industrial Injuries Benefit Scheme in the UK, and has the major headings:

- Conditions due to physical agents and physical demands at work;
- Infections due to biological agents; and
- Conditions due to substances.

This provides information to employers on which diseases they should report to the authorities. There is no absence criterion; if the employer is notified by a doctor that an employee is suffering from a relevant disease, the employer must report it.

In the RIDDOR Regulations, reporting of cases of diseases is required where:

> *"… a person at work suffers from any of the occupational diseases specified in column 1 of Part I of Schedule 3 and his work involves one of the activities specified in the corresponding entry in column 2 of that Part."*

and only if:

> *" (a) in the case of an employee, the responsible person has received a written statement prepared by a registered medical practitioner diagnosing the disease as one of those specified in Schedule 3; or*
> *(b) in the case of a self-employed person, that person has been informed, by a registered medical practitioner, that he is suffering from a disease so specified."*

Thus, diseases are only reportable by the employer if he/she has received notification in writing from a medical practitioner that the employee is suffering from one of the diseases listed in the Regulations.

A major review of RIDDOR was undertaken in 2006-7, following general acceptance of a need for change to both injury and illness requirements (HSE, 2005a, 2005b). One argument for the review included an admission by the HSE that the disease data was not, and could not, be used for statistical and programme purposes because of poor compliance (less than 5%). Levels of reporting varied by sector and size of undertaking, with compliance found to be

generally good among larger firms, but getting worse with decreasing size of firm, and accompanied by concerns that reporters are disadvantaged by being targeted for enforcement. Other criticisms of the system were that it was based on an outdated list of diseases linked to entitlement of industrial injury benefit, and that it did not cover more recent concerns and causes of absence such as stress or most musculoskeletal disorders (Health and Safety Commission, 2006a; Occupational Health Review, 2006).

The HSE argued that collection of statistical information on occupational diseases was being carried out using other more valid mechanisms: the Labour Force Survey and the voluntary physicians reporting scheme, THOR. In addition, they argued that they now use the Workplace Health and Safety Survey (WHASS), which has been carried out once, designed to complement data collected through the Labour Force Survey, and, pending funding, the plan is to use this every five years.

The HSE also recommended using the Incident Contact Centre as a facility for GPs, workers and Safety Representatives to notify health issues. This web-based reporting forum provides an easy way to report diseases for employers (http://www.riddor.gov.uk/eaview/info.html).

The review progress report to the Health and Safety Commission noted that while there was support for change, there was no agreement for change, indeed there were divergent views (mainly in the area of injury reporting). The options presented were:

1. Abolish the Regulations,
2. Simplify the Regulations, by a) streamlining or b) radical overhaul (a and b included dropping the occupational disease-reporting requirement, as it was considered largely ineffective, and its removal would have little or no impact on the statistical picture), or
3. No change to the Regulations.

In the end, the simplification option was rejected, partly because of the risk of loss of historic comparative data, and the Commission decided on no change (HSC, 2006b). The Commission noted that other data sources provided enough intelligence, and suggested that consideration should be given to including occupational health nurses in THOR (HSC, 2006c). Thus, while acknowledging that the reporting of occupational diseases serves no purpose, it was decided to retain it as a requirement, but only because it was too much trouble to change. There have been no further discussions or developments on the disease reporting requirements; the website was simplified and launched in March 2007, the Incident Contact Centre has been promoted, but still remains a forum for reporting for employers only.

The HSE statistics branch considers the disease reporting requirements to be of no value for statistical purposes; it has some value for intervention purposes for the Employment Medical Advisory Service (EMAS). EMAS is part of the HSE's Field Operations Directorate; it supports all HSE's front-line activities and provides occupational health advice directly to employers and employees.

4.3.1.6 Northern Ireland

The system used in Northern Ireland reflects the system in the rest of the United Kingdom, but is mentioned here to show the value of sector-based surveys. The Northern Ireland Civil Service Workforce Health and Safety Survey 05 (Addley et al, 2006) reports on a survey of health and wellbeing among over 33,000 civil servants, with a 51% response rate. This follows a survey undertaken in 2000, and the plan is to follow up with another survey in the future (5-yearly

intervals). Of particular interest, stress and work-related illness were two themes that were investigated by the survey, and the results provide a valuable insight into the perception of employees in these two domains.

4.3.2 Finland

In Finland, a combination of systems is used for collecting occupational disease data: physicians are legally obliged to notify the Labour Inspectorate and Insurance Companies of cases of occupational disease, and data from both of these sources is forwarded to the Finnish Institute of Occupational Health (FIOH), which maintains the Finnish Register of Occupational Diseases (FROD), which was established in 1964. In addition to cases diagnosed in salaried employees, the system also covers (insured) farmers and self-employed, because it collects data through insurance companies. Most farmers are insured and their insurance company provides data to FROD; the proportion of self-employed that are insured is not known. The objective of FROD is to serve as a source of statistics on occupational disease and to promote research on occupational health.

Information from the two sources is combined and checked to prevent duplication of cases (FIOH, 2004). The system is not involved with compensation, and therefore does not have to wait for compensation decisions, but receives a lot of its data through the insurance companies, which are part of the national compensation system.

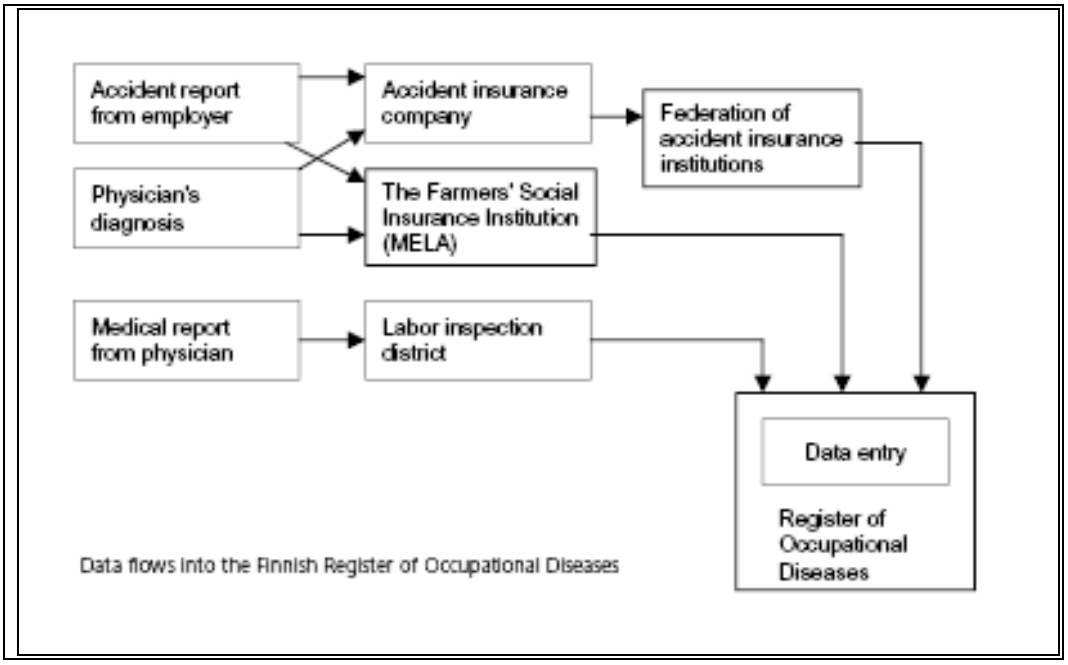

Figure 4.1. Data flow into FROD. (FIOH, 2004, p.50)

The Institute recognises that there are challenges to drawing a complete profile of occupational diseases: cases are missed because a) many physicians are not trained in occupational medicine and fail to make the occupational connection, and b) despite the legislative requirement to do so many physicians neglect to report. Several studies on under-reporting have been carried out but it remains an issue. Despite the obligation on occupational physicians to report also to the labour inspectorate, Dr. Timo Kaupinnen notes that FIOH receives more notifications from physicians through the insurance companies than through the

inspectorate (FIOH, personal contact, 2007) and suggests that this is because physicians are prepared to provide information for research purposes but not for enforcement purposes. Any data provided to FIOH is treated confidentially, and follow-up to individuals or to organisations does not occur from the Institute; the data are collected for statistical purposes only.

FIOH operates from an example list of diseases (categorised as diseases caused by physical, chemical, biological and other factors), however they have an 'open system', i.e. the physician or employer notifying the case can report any disease that they consider occupational, and they are not confined to the prescribed list. ICD-10 codes are used. The same form is used for all purposes, i.e. physicians and employers use the same form, and the same form is used for reporting diseases as for reporting accidents.

There have been two recent changes that are likely to have an influence on the system.
1. Public Health Centres are now permitted to charge the insurance companies (and therefore notify them) for all cases of suspected occupational diseases, which was not previously possible; this has led to an increase in cases reported through the insurance companies (from 5,000 to 7,000 in 2006), even though many of the additional cases may not ultimately be accepted as occupational. Physicians can specify on the form whether or not they think the case is recognised or suspected, however this distinction is not recorded at insurance company level, and at this time is not information available to FROD.
2. A change to electronic reporting has compromised the reliability of the data for 2003-4 and data from 2005 cannot be compared with pre-2003 data.

4.3.3 Netherlands

The Netherlands disability compensation system does not differentiate between occupational and non-occupational disease so the compensation system cannot be used as a source of statistics in this domain. In the Netherlands, for the past 10 years, collection of occupational disease data has been carried out by the Netherlands Centre for Occupational Diseases (NCbV), an academic centre, which is part of the University of Amsterdam. At the time the Netherlands became aware of the need to report statistics on occupational disease to Eurostat, and became involved in the European Occupational Disease Statistics (EODS) statistics project. The NCbV was commissioned by the Dutch Government to gather the data on the 30 occupational diseases (then) required by the project over one year.

NCbV commenced the project by inviting 100 occupational physicians, who agreed to report for one year, to a 1.5 day event, which included an evening event, with international speakers, a meal, overnight accommodation, and a day of occupational medicine workshops, with the opportunity to meet and speak with experts. The event concluded with information and an encouraging talk about the pilot scheme and encouragement to participate. By the end of the year, the project was sufficiently successful that as a result the Government created legislation requiring all Occupational Health Services to report occupational diseases (this has recently changed to a requirement for occupational physicians to report), and NCbV was commissioned by the Government to set up and manage the system, and receives an annual budget to do so. The population of the Netherlands is in the region of 16 million and there are approximately 2,000 practicing occupational physicians.

Most employees in the Netherlands have access to an employer funded occupational health service, whether paid directly by the employer, or through an employer body, as in the case of construction workers, although the quality of

occupational health services is considered to be variable. Self-employed and farmers are not part of this scheme.

NCvB has a number of data sources: the primary source is occupational physicians and the system operates in a manner very similar to the OPRA scheme in the UK, except that it is mandatory, not voluntary. Having been introduced to the SWORD and EPI-DERM schemes in the UK, the Netherlands set up their own voluntary schemes for respiratory diseases and dermatological diseases, with specialist consultants; and secondary data sources and special projects are also arranged periodically (e.g. targeted schemes with farmers, or performing arts workers).

Occupational Physicians Reporting Scheme: Occupational physicians report cases of occupational disease via an internet-based system (used by 95% of reporters) or by paper (used by 5%) of reporters. Despite the legal obligation for physicians to report, under-reporting is still a problem, but there is no punitive follow-up by regulators for non-reporters, and this is considered appropriate. Staff of the centre does not engage in chasing non-reporters, however, much of the work of the Centre is associated with devising and implementing strategies to motivate and to encourage participants to continue reporting. Such strategies include a regular newsletter (4 times a year), a helpline, bi-annual symposia, information website, and an annual report. The help-line, in particular, which is managed by email or by telephone (email preferred) works effectively as a two-way communication, which keeps the centre in touch with their participants, provides a service to users, responding to queries within 48 hours, and provides a resource for the staff of the centre in terms of knowing the issues facing occupational physicians in practice, developing a database of frequently addressed issues, and providing a bank of questions and answers, which are kept electronically in an easily accessed password controlled database. The bi-annual symposia are attended by 200-300 occupational physicians, and are attractive because they always include international speakers, an opportunity to network and to meet with experts, and counts towards credit for continuing professional development points for professional practice. The annual report carries a list of the occupational health services that did the best reporting in the previous year.

Reporting from Dermatologists and Respiratory Physicians is a mainly paper-based voluntary reporting system and as there is no legal obligation to report to this system, it is a voluntary system. This system suffers from reporter fatigue, and some attempts are made to remind non-reporters, however, because of the wide occupational health service coverage, the overall system seems to rely more on the occupational physicians reporting system.

The Netherlands was involved in the pilot project of EODS and has participated ever since. In the recent past NCbV has received funding from a Eurostat grant to convert to ICD-10 coding for diseases. It should be borne in mind that Eurostat requires only data on the diseases on the ESOD list; NCbV collects much more data than that through their system, therefore the system meets, and exceeds, the European legislative requirements.

The Netherlands Centre for Occupational Disease is currently carrying out an audit of occupational disease registries in a number of different European countries, and developing an audit tool in the process, and results are expected in 2008 (NCvB, personal contact, 2007).

4.4 SUMMARY

An examination of some of the systems used internationally indicates that there are many commonalities and some differences. The commonalities include the use of multiple data sources, and the elusiveness of the 'ideal' system. The stakeholder representatives interviewed were open and frank about the deficiencies in their systems, but all agreed that multiple data sources were essential. In most countries the combination of systems includes notification systems, sentinel systems, secondary data, and surveys.

The notification systems vary in whether the data is collected on a mandatory (legal) basis or on a voluntary basis, and on who does the reporting; reporters are mostly physicians or employer, and sometimes both groups report. In either case there can be under-reporting. Where employers report, it tends to be to an administrative, compensatory system, but if they are required to report to an enforcement body, then underreporting becomes more than an issue, the system becomes useless for statistical purposes, as can be seen in the case of the UK, where compliance is less than 5%, and in Finland, where the labour inspectorate receives less reports than the surveillance system, despite the physician having a duty to report to both, and despite the report being submitted on a duplicate form.

The overall Finnish System (accident and diseases), including FROD, was cited as a template for how a system should be run during the recent review of surveillance systems undertaken in New Zealand (Pearce et al, 2005) due to it being concept-driven (see section 4.2.3.1); it is an independent surveillance unit, staffed by qualified and experienced personnel, is adequately resourced, collects data from a variety of sources, and has the ability to match that data to avoid duplication of cases. The lesson to be learned from the Finnish system is the value placed by physicians, as reporters, on an objective independent body collecting data for statistical and research purposes, but also, that even in a country where the system seems to have it all, under-reporting because of lack of awareness is still an issue.

The system used in the Netherlands works well; it delivers quality data, identifies trends and patterns and provides information for Government, employers, unions and other policy makers for prevention policies, as well as meeting Eurostat requirements. There is some under-reporting, and as occupational physicians are required to report continuously, not just once a month, reporter fatigue can be an issue. The real lessons to be learned from the Netherlands are that a) the importance and value of the motivators and support provided to physicians in return for reporting, and b) the necessity for a simple reporting process cannot be underestimated, and the Centre believes that removal of such supports would result in a reduction in reporting. Finally, the Netherlands also believes that one of the reasons why its scheme is successful is because it is an objective independent body, albeit funded by the government.

The system used in the UK is the most similar to Ireland; the similarities are that the main sources of information on occupational disease are the Labour Force Survey and the physicians' voluntary reporting scheme, THOR. The main differences lie in the fact that the UK accident reporting legislation is wider than that in Ireland and has included disease reporting since its inception, that the THOR scheme is well established and is producing good quality data, that the Labour Force data are subjected to a more detailed analysis and complemented by worker and employer surveys, and that the HSE employs doctors and nurses in the Employment Medical Advisory Service, who can follow up reports of illness for advisory and prevention purposes. Lessons to be learned from the UK system are that multiple data sources are needed in order to develop a profile,

that if illness is reported to the national authority then medical and health advice should be available, and that employer reporting has not worked, both because of the narrow restrictions of the diseases that can be reported and non-compliance, for a range of reasons including lack of awareness and fear of punitive follow-up. The UK uses data collected by IIDB to report occupational diseases to Eurostat, under the EODS methodology.

This chapter has provided an overview of some of the systems in use outside of Ireland, has highlighted some of the strengths and weaknesses of these systems, and attempted to draw lessons from the experience of other states. The next chapter looks at the situation in Ireland and identifies the major stakeholders in occupational disease data collection and discusses the current and potential role of a number of different groups.

CHAPTER 5 DATA SOURCES, DATA COLLECTORS AND DATA USERS IN IRELAND

5.1 INTRODUCTION

This chapter identifies the major stakeholders in occupational disease data collection in Ireland, and discusses the current and potential role of each. The groups and organisations are categorised as:

- Data sources - suppliers of data or data sources (employees, physicians and employers);
- Data collectors – organisations that collect data on occupational disease as one of their primary functions, and organisations that collect occupational disease data inadvertently, as a by-product of data-collection for other purposes;
- Data users – organisations that need information about occupational disease.

5.2 DATA SOURCES

This section follows the possible course of an occupational illness from first symptom to the time it could potentially come to the attention of an official authority, in order to identify potential sources of data and the challenges to getting it. Along this route there are a number of individuals and organisations that play a role. While this section describes current sources of data, potential sources of data are identified where relevant.

5.2.1 Employees

The employee is normally the first person to become aware that they have symptoms, although there may or may not be any awareness of an occupational component to the illness at that time. In some cases, where diseases have a long latent period, it may be a retired employee that presents with symptoms, and for the purposes of this report, the term employee can be taken to include retired employees where relevant.

The first step in the diagnosis of an occupational disease is when the employee either presents to a physician with symptoms, or, where an occupational health service exists, when a deviation from normal health status comes to the attention of an occupational physician through routine occupational health surveillance (e.g. screening), although the purpose of such health surveillance is to identify the deviation, before it becomes a disease or illness. In any event, at the stage when the employee presents with symptoms, the level of awareness about occupational disease (on the part of both the employee and the physician) becomes relevant. The physician (general practitioner, specialist physician or occupational physician) as a potential data source is discussed below.

If an occupational disease is diagnosed by the physician, the employee may inform his or her employer of the illness, or not. He/she may inform the employer:

a) if the illness is relevant to that employment,
b) if the illness necessitates absence from work, and
c) if the employee plans to seek financial benefits as a result of absence from work.

The employee has some control about the level of detail that the employer receives about his or her condition from the physician. Normally the employer is simply notified that the employee is unfit for work, or unfit for normal duties, or the employer may receive more detailed notification of the nature of the illness through medical certification (may be illegible). Many of the stakeholders consulted were of the view that many employees do not want their employer to

know the nature and extent of their illness, even if there is an occupational link, and preservation of confidentiality in this context was a concern.

In some way though, the affected employee could be in a position to report his/her own disease, once the occupational or work-related diagnosis is made. In New Zealand, under the Notifiable Occupational Diseases System (NODS) notification of occupational diseases can be carried out by the employee, and this is then subject to verification of the notification by the Department of Labour, which may then proceed to medical assessment of the notifier and follow-up inspection in the workplace (Department of Labour, 2006). The NODS information encourages workers to report and advises that a notification:

> "*...alerts your workplace that a workplace activity may have caused harm; ensures other employees receive medical screening and if necessary treatment; and helps to prevent other employees being harmed.*"
> (http://www.osh.govt.nz/services/notification/nods.shtml).

The report form itself also allows health professionals to report using the system, so essentially anyone can notify the disease. About a third of notified cases are confirmed. This system, while it provides data to the Labour Inspectorate, also requires resources, administrative, medical and inspectorate, to investigate and to follow-up the notifications. As already noted, the review of the New Zealand system (Kendal, 2005, Pearce et al, 2005) did not consider the NODS system to be effective as a surveillance system. The NODS system is discussed again in section 5.3.4.

5.2.1.1 Survey data

Employees are the data source in some other contexts: a wide range of, national and international, working conditions surveys use employees as the data source (European Foundation on the Improvement of Living and Working Conditions, 2007b). Employees (or in some cases, their proxy) provide the data in the Irish Quarterly National Household Survey (QNHS). Self-reported work-related illness modules are included in the survey on a planned basis. This data on occupational disease is based on the perceptions of individuals of their illness, and if they have not had their illness certified, their perception of its relatedness to work. The QNHS survey, in the context of the CSO as a data collector, is discussed in more detail in section 5.3.4.1.

Employees are also the source of data in other surveys, national, such as the Changing Workplace Survey, carried out by the National Centre for Partnership and Performance, and international, such as the European Working Conditions Survey (EWCS), carried out every five years by the European Foundation for the Improvement of Working and Living Conditions. The Changing Workplace Survey (O'Connell et al, 2006) provides insight into the levels of stress and pressure that Irish workers experience. The sample of the European Working Conditions Survey is representative of the persons in employment (employees and self-employed, according to the Eurostat definition) during the fieldwork period in each of the countries covered. In Ireland, over 1,000 interviews were carried out. The survey provides an overview of working conditions throughout Europe, as well as indicating the changes affecting the workforce and quality of work, and allows cross-European comparisons, as well as identifying trends over time. It specifically asks workers about their perception of the effects of work on health (European Foundation for the Improvement of Working and Living Conditions, 2007a).

Self-reporting can be a limitation of the employee as a data source in surveys. While many questions are factual, responses to health-related questions in the

surveys require a subjective evaluation and also rely on lay persons' perceptions of medical matters. The European Foundation points this out as a caution in interpreting results, but argues that this is not necessarily a weakness, as it is the perceived reality that has social effects, (if a worker perceives – correctly or not – that his/her job has a negative impact on her health, he/she may change jobs or take frequent sick leave). In the UK, the Health and Safety Executive (HSE) cautions against necessarily taking the results of surveys directly as an indicator of the 'true' extent of work-related illness, because: "*…People's beliefs may be mistaken: they may ascribe the cause of illness to their work when there is no such link; and they may fail to recognise a link with working conditions when there is one*" (Health and Safety Executive, 2007b, p.5). Research in the UK has found that lay and expert perceptions of occupational disease differ, however, this can work both ways, with experts sometimes over-emphasising the work characteristics of illness (Ferguson et al, 2006).

5.2.1.2 Employees as a Potential Data Source

The strengths of using the employee as a data source are that they are probably motivated to report, and they make the decision on confidentiality about their own case. The weaknesses are the validity of the source, in cases where a diagnosis of occupational had not been formally made. Clear guidelines on what diseases were to be reported would have to be provided in any employee reporting system, and a decision on where on the spectrum from 'occupational disease' to 'suspected work-related illness' could be difficult to manage.

The ideal format for employees providing data on their own disease is where the disease has been formally diagnosed as occupational. However, if employees were to report their own disease (as in New Zealand), the expectation that this could create would have to be managed if not fulfilled; for example, many employees would expect that local follow-up and investigation would be an automatic outcome of such reporting, and the data would have limited usefulness for statistical purposes, as the reporters would be entirely self-selected.

Reporting by employees in nationally representative periodically collected surveys is a valid and reliable means of collecting data on employees' perception of the work-related health issues that affect them. The value of employees-based surveys as a source of information is in the extent to which the survey results represent the population of workers and in the consistency of approach over time, allowing trends to be identified and assessment to be made of progress. While the health-related data were self-reported, the survey results in combination with other sources remains a valuable source of information, because it informs us of employees' perceptions of the extent to which work is making them unwell, and this is very useful in identifying emerging risks.

5.2.2 Physicians

An employee presents to a physician with symptoms. In some cases, if the workplace provides an occupational health service, the employee will present to an occupational physician. In this case, an occupational link is likely be made relatively easily, because of the medical and local expertise of the physician, including their knowledge of risk of exposure. In many cases, the patient attends their general practitioner, who may refer them to a specialist physician, especially if the condition is severe. In this case, the physician plays an important role in the diagnosis of the occupational disease. Not all occupational diseases are 100% occupational in origin; many diseases have more than one cause or precipitating factor, and the symptoms of a disease that has been caused by occupation manifest in exactly the same manner as that which has another cause (e.g. asthma and occupational asthma, dermatitis and

occupational dermatitis). Occupational diseases have no extraordinary symptoms in medical terms; it is the causation that defines them as occupational. In some cases the employee will make an occupational link, but if not, then attribution falls to the physician. The problem is further compounded by work-related conditions whose name describes symptoms, rather than a medical condition internationally recognised as a disease, such as stress or back pain.

5.2.2.1 General Practitioners

If an employee presents at their GP surgery with symptoms, it is necessary that the GP is attentive to the potential for an occupational link. This relies on the GP's awareness of diseases that may be caused or exacerbated by occupation, and of the GP asking the right questions about the patient's work, and the employee volunteering informative answers. It is likely that GPs probably see many cases of occupational disease, but unless the GP asks detailed questions about the patient's job, including the nature of employment and potential for exposure, then the link may not be established. If the GP has not undertaken training in occupational medicine, this link may not be identified.

Research undertaken by the Health and Safety Executive in the UK has shown that GPs knowledge of diseases that are linked to occupations is low (Sen and Osborne, 1995) and that GPs and practice nurses lack of occupational health knowledge leaves them poorly equipped to deal with some of the occupational issues that arise (O'Hara et al, 2004). In Spain, a study found that a significant proportion of diseases attended in the primary care setting was not recognised as occupational and therefore not reflected in official statistics (Benavides et al, 2005).

Once a diagnosis is made, depending on the nature and severity of the illness, the GP may provide and manage treatment, or the patient may be referred to a specialist, for example a dermatologist or a respiratory physician.

5.2.2.2 Specialist Physicians

In this context, the term specialist physician refers to a spectrum of physicians, from consultant respiratory and dermatology physicians to rheumatologists and opthalmologists, to whom workers present with their symptoms, perhaps with no suspicion that their ailment has a work-related origin. Once again, establishment of an occupational link is dependent on the training, knowledge and experience of the physician, the information about their work and work history provided by the patient, and the time available to the physician to probe into the patient's occupational history.

5.2.2.3 Occupational Physicians

Occupational physicians are the front-line physicians in making occupational diagnoses; by virtue of their training and experience they are experts in the area of occupational medicine, but more importantly, they are very familiar with the exposure conditions and the detailed risk profile of the environment in which their client employees work.

5.2.2.4 Role of Physicians in Data Collection

Physicians (any of the above) currently have two roles in terms of data generation / collection in this context: a) through certifying that the patient is/was ill, and b) participating in a voluntary reporting scheme for physicians. In general, occupational physicians provide feedback to employers either that a) the patient is fit or unfit for work, or for normal work, or b) that health surveillance is showing a trend and that this has implications for review of the

health and safety control system. It is not usual for an occupational physician to provide the actual diagnosis for an individual employee to the employer.

a) Medical Certification: Once diagnosed, if absence is a factor, an employee will require medical certification for the employer, and, if an employee seeks social welfare benefits for an occupational disease through the state scheme for PAYE workers (occupational illness benefit or disablement benefit schemes), then the physician will be asked to sign the appropriate form verifying that the patient required time off work – they are not required to verify that the disease is occupational in origin, merely that the patient was off work. If the patient did not require time off work, or did not seek compensation or is not a PAYE worker within certain classes, then the physician has no role in data generation.
b) Voluntary Reporting Scheme: Some occupational and specialist physicians participate in a voluntary reporting system designed to estimate the incidence of occupational disease. The Health and Occupation Reporting network (THOR) scheme in the UK captures occupational disease data from core and random samples of specialist physicians throughout the UK. The THOR system has been in use in Ireland since 2005 and is described in more detail in section 5.3.5. THOR-GP is a similar scheme for GPs, which is in use in the UK for a number of years, but which has not been extended to Ireland to date.

Training in occupational medicine is provided in traditional lecture format by University College Dublin (UCD), and by distance education through the Irish College of General Practitioners (ICGP). Some physicians undertake a multidisciplinary training programme or they may train in occupational medicine abroad and / or subsequently seek Membership (Licentiate) of the Faculty of Occupational Medicine (LFOM). A Specialist Registrar scheme is available for doctors who wish to become specialists in occupational medicine, and six places are available on this scheme. All doctors receive lectures on occupational medicine as part of their public health education and as part of their general training in context (e.g. learning about occupational respiratory diseases in the context of respiratory diseases), but few doctors get experience in the area, or see sufficient cases to build up an expertise. The numbers undertaking occupational medicine courses in Ireland are small, relative to the number of doctors, and probably do not exceed 30 per year. Many Irish organisations use the services of a local GP to provide an occupational health service, and while ideally GPs providing such services should be trained in occupational medicine, in practice not all of them are. Eakins and Addley (2003) carried out a survey of physicians in Ireland sending questionnaires to all doctors who were registered with the Faculty of Occupational Medicine, the Irish Society of Occupational Medicine, and the Irish College of GPs (ICGP), and received 177 replies: GP returns accounted for 6% of all GPs affiliated to the ICGP. Eighty percent of respondents carried out their occupational role on a part time basis, normally less than 10 hours per week.

Physicians are required to notify the authorities of a number of diseases of a communicable nature: infectious diseases, etc, but there are very limited requirements for them to report occupational disease. The Safety, Health and Welfare at Work (Carcinogens) Regulations, 2001, require any registered medical practitioner who diagnoses a case of occupational cancer to notify the HSA. Under the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006, Registered Medical Practitioners who become aware of a case of either asbestosis or mesothelioma are required to report it to the Authority, so that it may be included in the Asbestosis and Mesothelioma Register. The Authority is rarely notified of such cases by this route, and this is likely to be

because the very physicians that would be aware of the legislation (trained occupational physicians) are unlikely to diagnose either disease in practice, because of the long latency periods associated with development of the diseases.

The Health and Safety Executive in the UK has investigated the feasibility of using GP morbidity records to assemble information nationally, on the frequencies and distribution of ill-health presenting to general practitioners, in relation to occupation, and concluded that, while occupation was not routinely recorded, it could be and the possibility to collect data in this manner is possible (Soutar, 2001).

There is a concern among employers that some physicians are overcautious and can lean towards labeling an illness as occupational on a medical certificate if the patient says it was so; this is a particular concern in relation to diseases such as back pain and stress-related illness. In such cases the physician, often the GP, may have no specialised occupational medical training, and also may have no knowledge of the patient's work conditions or exposure.

5.2.2.5 Physicians as a potential data source

The primary strength of using physicians as a data source is their clinical expert status; they are the single group that can recognise and diagnose occupational disease. The support of the relevant medical communities in Ireland for the THOR and OPRA schemes is a very positive factor, as is its success to date in the UK. The weakness lies in a track record of low compliance for physician reporting in other domains and in other countries, but reporting to an independent research oriented body appears to increase reporting.

Pearce (2005) argues that there are differing perceptions among physicians on what the data are being collected for and what use it will be put to. Physicians are reluctant to report names and are concerned with issues of patient confidentiality. They are more comfortable with anonymised systems and are more inclined to report if data collection is for research purposes.

5.2.3 Other Healthcare Workers

Few other healthcare workers have a role in reporting occupational disease; laboratories may report infectious diseases. Occupational Health Nurses at present have a minimal role in collecting or reporting such data, although they should be considered, and the RIDDOR review in the UK included a suggestion that nurses become involved – many occupational health services in Ireland are nurse-led. Other specialist nurses, such as clinical nurse specialists and practice nurses, may also be able to play a role, as they work closely with specialist physicians in the hospital setting, and with GPs in the community setting.

5.2.4 Employers

The current Irish system for collecting data on injuries in the workplace relies on reporting of accidents, resulting in injuries that require more than three days off work, by employers to the Health and Safety Authority (Safety, Health and Welfare (General Application) Regulations, 1993, Part X). While under-reporting is an acknowledged problem (Mulligan, 2007b; Eurostat 2001), it is reasonable to expect employers to recognise that an injury has been sustained, as injuries are closely associated in time with an accident event and employers are likely to be informed that an accident has taken place. To date there has been no requirement for employers to report occupational disease in Ireland, and while employers are required to report disease under equivalent legislation in the UK, under-reporting is a serious issue and that the data collected is and cannot be used for statistical purposes because of its poor quality and poor return (HSE,

personal contact 2007). There are a number of reasons why this might be so: the employee may not reveal to the employer that he/she has an occupational disease – it may or may not have any relevance to the employee's current job, and medical certification can provide minimal data, as physicians tend to preserve confidentiality in respect of patients' medical condition. In examining data on thousands of medical certificates as part of his research into sickness absence among construction workers, Dr. Harold Brenner found that many medical certificates do not give a clear diagnosis (Construction Workers Health Trust, 2000; Brenner, personal contact, 2007).

Pearce et al (2005) suggest that an employer-reporting system may not work as well for disease reporting (as for injury reporting), as a) disease may not be recognised by employers, and even if brought to their attention, they do not have the clinical skills to make the occupational link, and b) as with injury reporting, there is a risk that employers will perceive reporting of occupational disease as having punitive results, likely to be followed up by a visit from an inspector, and the potential for legal sanction. This is a real concern to employers, as currently injury reporting can be followed by a visit from the HSA.

Larger organisations have a low compliance rate for reporting, with small and medium firms having a lower rate, and the self-employed have a lower rate again (Kendall, 2005). The Small Firms Association (SFA), which represents the needs of small enterprises in Ireland, reports that it receives calls from members who are concerned that signing the employer section of the Occupational Injuries Benefit (OIB) form will be an admission of liability. Smaller firms are concerned that if employers were required to report that the administration involved would be a huge job for small companies; they are already subjected to a volume of surveys, and find form filling to be a large administrative burden.

In the UK, where employers are obliged to report occupational disease (from a list of diseases), they are required to do so only when notified of the occupational disease, in one of their employees, by a medical practitioner. This reflects the difficulties for employers in attributing illness to occupation.

5.2.4.1 Employers as a potential data source

The strength of employer reporting lies in the employer's knowledge of the risks to the health of workers in their workplace, and the ability to control exposure. The weaknesses lie in non-recognition of diseases by non-clinicians, potential for lack of awareness about the illness of individual employees, lack of incentive to report, fear of follow-up to reporting in the form of a HSA inspection and fear of punitive consequences, including prosecution.

5.3 DATA COLLECTORS

Nationally and internationally, there are a number of organisations that collect data in relation to occupational disease. In general, international agencies, such as Eurostat and the International Labour Office (ILO) use secondary data that is provided by national data collectors – these agencies are therefore discussed in the data users section (section 5.4) below.

Two types of reporting systems are in use in European countries for occupational accidents and illness: insurance based (commonest) and non-insurance-based, where there is a legal obligation on physicians or on the employer to report. Data collection in insurance and no-fault benefit and compensation schemes tends not to suffer from under-reporting because the schemes are economically linked – there is no payment if the notification does not come in. In relation to

accidents at work, reporting under insurance schemes is considered to be about 100%, while reporting by a legal obligation on employers or physicians range from 30 – 50% (EC, 2001).

In Ireland the state-run benefits scheme, which came into effect in 1967, is offered through the Department of Social and Family Affairs (DSFA) and includes benefit for prescribed diseases, through Occupational Injuries (including illness) Benefit and Disablement Benefit. Those who are not eligible for the DSFA scheme may take out insurance through a private insurance company. The aim of the DSFA scheme is to provide compulsory insurance against personal injury caused by an accident arising out of and in the course of employment and against prescribed diseases caused by the nature of the employment (Department of Social and Family Affairs, 2003). In addition to benefits schemes, an affected employee may go through the legal system for compensation claims, in which an employee has to prove that there they have an occupational disease, contracted in the course of work and there is negligence on the part of the employer. In both public and private sector, the employer has a system for managing claims: for the public sector, this goes through the state claims agency, and in the private sector, and in some parts of the public sector, this is managed by insurance companies.

Thus, in Ireland, the main national collectors, or potential collectors, of occupational disease data are: the Health and Safety Authority, state and private insurance and benefit and compensation schemes such as the Occupational Injuries Benefit Scheme and Disablement Benefit Scheme, the State Claims Agency and private insurance companies. The Central Statistics Office (CSO) is another important collector of data, in the form of survey data, collected in the Quarterly National Household Survey (QNHS). In addition a number of data collection schemes, designed for other purposes, can yield data that helps to inform the occupational disease profile of the nation; these include the National Cancer Registry of Ireland (NCRI), the Hospital In-Patient Enquiry system (HIPE), the Health Protection Surveillance Centre (HPSC) and the Deaths Registration Service. All of these latter systems are administrative systems, which collect data on a routine continuous basis, providing information on occupational diseases as a small component of a much bigger different picture. Finally, there are a small number of sector-specific schemes that provide valuable information; this information is derived from data collected by the Construction Workers Health Trust (CWHT) in the construction industry and surveys carried out in the agriculture sector.

5.3.1 Department of Social and Family Affairs

Occupational Injury Benefit (OIB) and Disablement Benefit are payments, paid by DSFA to PAYE employees, injured or, of more relevance to this report, suffering from a disease contracted at work (prescribed occupational disease).

OIB is paid weekly for 26 weeks; Disablement Benefit is a compensatory benefit paid as a weekly or four-weekly benefit, or sometimes as a lump-sum benefit, for persons transferring from the OIB scheme at the end of 26 weeks, or from the start of incapacity in respect of four diseases: Byssinosis, Pneumoconiosis, Occupational Deafness and Occupational Asthma. Between the two schemes, it should be possible to identify any person who has been considered eligible for state benefit because they are suffering from one of the prescribed diseases on the Department's list of prescribed diseases.

The prescribed diseases covered by the scheme, and the types of employment in respect of which they are prescribed, are described in detail in the Department's publication SW33 (Department of Social and Family Affairs, 2004), and include

conditions due to physical agents, biological agents, chemical agents, and miscellaneous conditions. The list of prescribed diseases is reviewed from time to time and new diseases have been added, using Regulations (Statutory Instruments) to amend the legislation, however, Illnesses more recently thought of as work-related, such as depression or anxiety, are not covered by the prescribed diseases scheme, but may be covered by occupational injuries benefit if they arise as a result of a single incident. The main legislation is Chapter 13 of Part II of the Social Welfare (Consolidation) Act, 2005, and associated Regulations. In 2007, the Social Welfare (Consolidated Occupational Injuries) Regulations 2007 (S.I. No. 102 of 2007) consolidated all previous OIB Statutory Instruments into one Regulation.

Under these schemes, employers are required to confirm that the employee worked for them at a particular time, whether they have returned to work or not, the nature of the industry or business, and the types of duties the employee carried out; this is because the disease must have occurred in the course of insurable employment and due to the nature of that employment, where there is a reasonable presumption that the disease was work-related. Medical practitioners are required to certify that the patient was absent from work due to illness. In neither case is there any attempt at attribution of the cause or liability.

A similar scheme is in place in the UK, the Industrial Injuries Disablement Benefit Scheme (IIDB), and a recently published consultation paper (Department for Work and Pensions, 2007a) seeks to review the system, raising issues based on radical changes in the worlds of work and welfare since the scheme was introduced in 1948. The consultation paper highlights that the scheme needs to be updated to reflect the fact that it does not encourage rehabilitation or support joint Department of Work and Pensions / Health and Safety Executive (HSE) strategies. Responses to the consultation included the views from unions that the system does not address prevention and others (source unspecified) were of the view that the scheme should be linked to the RIDDOR scheme (notification to HSE) so that unreported [accidents] could be followed up and lead to sanctions against employers (Department for Work and Pensions, 2007b)

In relation to identifying deaths from occupational disease, payment, on either scheme, is discontinued when a claimant stops sending in Medical Certificates, but this may not be because they have died – they may have recovered. In order to ensure that payment of a benefit or pension is discontinued upon the death of a recipient, the DSFA receives death certification information via the Death Event Publication Service. Theoretically, the Department can quantify the number of deaths of OIB/Disability recipients, who are receiving the benefit for an occupational disease diagnosis, but they will not know whether the person actually died from this disease, as the cause of death is not shared (and many occupational diseases are not fatal, e.g. occupational deafness).

5.3.1.1.Occupational Disease Data collected by DSFA

While additional information may be requested and received as part of the full investigation into a claim, DSFA routinely collects the following variables: Name, address by county, PPS number, gender, marital status, age, nationality, start and end date (duration of claim), illness, occupation, payment details, qualified adult dependent rate, number of children as dependents, method of payment, and employer details.

The number of OIB and Disablement Benefit claims in recent years is approximately 50 new cases per annum, and new Disablement Benefit cases may include some transfers from OIB. There are between 11 and 14 cases

approved under OIB each year. Once a claim is submitted it is checked administratively for the extent to which it meets the legal conditions, and if so accepted the case is referred to the Medical Assessor, who decides whether there is loss of faculty, and the extent of disablement. In respect of OIB claims, DSFA receives between 200- 300 claims for prescribed diseases under OIB per year, which means that less than 5% are accepted (DSFA, personal contact, 2007).

The DSFA Medical Advisor allocates a medical code to the diagnosis; this code is taken from the internal departmental incapacity coding system and the ICD code for diseases or occupational diseases is not currently used.

Annual published statistics on OIB and Disablement Benefit do not differentiate between injury and illness-based claims, however, DSFA notifies the HSA of new claims for prescribed disease benefit, and therefore more detailed data are available, but the numbers are too low for any significant analysis. The system of data sharing is to send a completed sheet for each case by mail to the HSA, in batches every three months, however the intervals between receipt of forms can be longer than that, and there can be some discrepancies on the data received.

The main strength of this system as a data source for occupational disease is that the information collected has remained consistent over time in terms of the criteria applied, it is subjected to a series of administrative checks to ensure that it is correct, and as it is economically linked and verified by both employer and by a doctor, it is likely to be valid.

One weakness of this scheme is that any list of prescribed diseases, agreed by a Government to be eligible for compensation, tends to be shorter than a list of occupational diseases that one would draw up for prevention purposes, and because only diseases that cause absence from work for more than three days are eligible, only serious cases can be identified by this route. Occupational disease does not necessarily result in the employee being absent from work and/or disabled by the illness. However, the main weakness of this scheme is that it does not cover the full population of workers; it only covers salaried PAYE workers in employment insurable at PRSI classes A, D, J or M, and some B, and it excludes self-employed persons (including many farmers) the defence forces and public service employees paying certain classes of PRSI. This excludes a large section of the workforce as the self-employed account for over 16% (CSO, 2007a), and particularly misses out data in the small business sector (<50): CSO statistics from the second quarter of 2006, show that just over 8% of all persons working in small businesses were classified as self employed with paid employees, while nearly 17% were self employed without any paid employees (CSO, 2007b). In addition, employers have discretion to decide policy on sick pay and sick leave, subject to the employee's contract or terms of employment, and it is possible in large organisations provide sick pay to their employees for short periods of time, because of the administrative resources required to monitor whether the employee has claimed benefit, so that it is not always necessary for employees to claim social welfare benefits.

5.3.1.2. DSFA Renaissance Project

The Renaissance Project set out to identify, in a pilot study, whether early intervention would decrease the incidence of progression to chronic disability from low back pain. Between January and June 2003, new Disability and Injury Benefit claimants, aged 20 – 50 years, having been certified by their GP as suffering from low back pain, were targeted for early intervention (3,300 in total). More than half returned to work within 4 weeks; the rest were invited to attend an assessment 4 – 6 weeks into the claim. On receipt of the invitation to attend for assessment 62.5% came off benefit and returned to work. The

remaining claimants were assessed using a triage system. The project resulted in a reduction in the incidence of progression from simple low back pain to chronic disability and there was a reduction in claims progressing to long duration, and there was a resulting reduction in benefit expenditure (Leech, 2004). The scheme was considered by the Department to be a success and has since been rolled out beyond the pilot group, and at this stage nearly 20,000 claims have been processed in this way, with ongoing successful outcomes. The claimants were not claiming under occupational injuries benefit, however data collection includes occupational variables, and Dr. Leech estimates that about 30% of cases of low back pain were work-related. Because of the success of the scheme there are plans to extend it to mental health illness (anxiety and depression) (Leech, personal contact, 2007). The low back pain data are available in DSFA and they, and the mental health illness data, if the scheme proceeds, have the potential to be a valuable data source for estimating the extent of two work-related illnesses that do not appear on any list of prescribed diseases.

5.3.2 Compensation Claim Systems

This section looks at the role of organisations that are involved at different levels in the process of processing compensation claims for those who can show that they have suffered injury or illness as a result of their work and who is effectively 'suing' their employer: the Personal Injuries Assessment Board, which processes claims, and the State Claims Agency and Irish Public Bodies, and Insurance Companies. Looking at claims for compensation is very far removed from effective health surveillance, because it is totally reactive, a sign of system failure, and very much after the fact – this is true for accidents, but much more so for illnesses, which take time to develop and where latency is an issue. In both systems, the case may have already been included in either the OIB or the voluntary physicians reporting scheme for reporting purposes.

5.3.2.1 The Personal Injuries Assessment Board

The Personal Injuries Assessment Board (PIAB) is an independent statutory body which assesses the amount of compensation due to a person who has suffered a personal injury (http://www.piab.ie/). It provides independent assessment of personal injury compensation for victims of workplace liability accidents, in addition to motor and public liability accidents. Under the PIAB Act 2003 all claims for personal injury must be submitted to the PIAB in the first instance.

Under the Personal Injuries Assessment Board Act, 2003, ''personal injury'' has the same meaning as it has in the Civil Liability Act of 1961, and in this Act "personal injury" is defined to "*…include[s] any disease and any impairment of a person's physical or mental condition, and "injured" shall be construed accordingly*." (Civil Liability Act, 1961, S2). While this implies that diseases come under the definition of personal injury in this context, the Book of Quantum, used in deciding compensation in case of personal injury claims, exclusively lists injuries and not diseases (PIAB, 2004), although it is noted that compensation may be payable for injury types other than those that appear in the Book. The application form for PIAB claims refers only to injury associated with accidents. PIAB state that the PIAB Act does not exclude occupational injury disease claims. All personal injury claims must come to PIAB except certain categories such as medical negligence cases. The Act requires PIAB to assess claims within a specific timeframe. If a final medical prognosis is not available within the timeframe allowed then they must release such cases to the Courts. It has been the case to date that the assessment of occupational injury disease (OID) cases has not been possible due to this reason or due to the fact that there is insufficient case law on which they can base their assessments

(PIAB, personal contact, 2007). The PIAB, therefore, has no role in collecting data for occupational disease.

5.3.2.2 The State Claims Agency and Irish Public Bodies

The management of personal injury claims against the State and of the underlying risks was delegated to the National Treasury Management Agency (NTMA) under the National Treasury Management Agency (Amendment) Act, 2000. When performing these functions, the NTMA is known as the State Claims Agency (SCA) (http://www.stateclaims.ie/home.html).

The SCA manages personal injury claims against certain State authorities, including the State itself, Ministers, the Attorney General, the Commissioner of the Garda Síochána, prison governors, community and comprehensive schools and various other bodies listed in the Schedule to the Act.

The SCA website summarises the claims' portfolio, which shows that about 61% of claims are from State employees. Of these, a third is by prison officers, another third by civil servants, 22% by members or ex-members of the Defence Forces and 12% by members of the Garda Síochána. Almost one-third of claims are from employees or ex-employees of the State who allege that they were exposed to asbestos in the course of their employment. The basis for these claims is the so-called 'worried well' syndrome i.e. alleged psychological trauma associated with potential rather than actual ill-health (http://www.stateclaims.ie/home.html).

In this system the employee seeks compensation for harm that they perceive has occurred as a result of personal injury, including illness. It is the equivalent of a non-state employee taking his or her employer to court and is an adversarial system if liability is in question or attribution in doubt. Compensation, if awarded, is in the form of a lump sum payment, for pain and suffering, loss of earnings, etc. A claimant may have already claimed OIB, if eligible, and if so this would be taken into account when deciding on the settlement.

The State Claims Agency is effectively the insurance company for the state in this context. In the event of an accident or exposure resulting in an injury or illness, employees of state agencies can claim from the State Claims Agency. For State employees this system works in the same manner as claims that go to either the PIAB and/or the courts. An employee makes a claim to the PIAB, which initiates the PIAB process. The State Claims agency plays the employer/insurance company role in either process.

The data collection function is largely associated with its insurance role and as it processes the claims, so it collects data in this regard. The majority of its claims in this context are associated with accidents, however illness and disease, that the employee claims is associated with their work, are also managed by the system. As with any other insurance system, managers within the State sector are encouraged to report accidents and incidents (including illness) that might in the future give rise to a claim. The extent of reporting depends on the level of knowledge of management on the ground, and as in any such system, there is probably a level of underreporting. The types of illness-related data that may be reported includes exposure to hazardous substances such as dust, molds, poisons and radon, in addition to infectious conditions such as legionnaires disease and salmonella. Because of the nature of the disease process, there tends to be a time lag in relation to reporting of illness.

While the title of the State Claims Agency suggests that it is a reactive system, dealing only with claims, in fact its role is both proactive and reactive, and it

uses the principles of risk management to proactively identify risks, to put preventive measures in place, and to give good risk management advice to organisations that come under its remit, which include some Schools, the Irish Prison Service, the Department of Defence, Agriculture, Education, Office of Public Works, the Courts, and the Gardai. The Agency publishes statistics in its annual report, and can share generic information if it is in the public interest. As an organisation that handles claims from one of the largest employers in Ireland, i.e. the State itself, knowledge of the occupational disease trends within the sectors is valuable information; however, the Agency cautions that it needs to be taken in context – their claims profile cannot be taken to be representative of industry in general, a) because some of its constituents are so specialised in their activities, and b) because the nature of the business is not production-related, i.e. manufacturing does not take place. Nevertheless, the HSA is concerned with the health at work of all of the working population and this is a potential data source that could add to the picture. The State Claims Agency would not be adverse to an approach from the HSA to discuss what generic data could be made available to the Authority (SCA, personal contact, 2007).

Irish Public Bodies underwrites the insurances of local authorities, the health service, vocational education committees, higher education institutions, regional fisheries boards, harbour authorities, county enterprise boards, regional authorities, state sponsored bodies and related organisations, and works in a similar manner to the State Claims Agency. Occupational disease is obviously a risk area, but it comes very low on the list in terms of frequency of claims, and while some statistics are available, the numbers are so low that collecting them on an annual basis could yield no data (Irish Public Bodies, personal contact, 2007).

Private insurance companies' employers' liability claims can yield data on occupational illness. Claims are made when an employee claims that they are due compensation for an injury (illness) that they have sustained and, in this context, that is due to their work. In this case the employee must prove negligence on the part of the employer, and the PIAB and the courts become involved if there is dispute. A couple of insurance companies were spoken to in the course of this review, and agree that while they do deal with cases, they are rare. One of the companies consulted, carried out a search in October 2007 that revealed two such claims in the past three years under employers' liability. Insurance companies do have codes set up in their system for occupational illness or ill health, but there are so few claims in this domain, that it is impossible to provide statistics.

5.3.3 The Private Insurance Industry

The Irish Insurance Federation (IIF) is the representative body for insurance companies in Ireland representing 62 member companies, which employ over 14,000 people. The IIF annual publication, Factfile, provides key facts and figures on the insurance industry in Ireland. The most recent publication, Factfile 2007, published in September 2007, focuses on statistics for 2006 and for the period 2002-2006, and is based on data derived from data collected by members. In 2006, 7,476 new employers liability, and 12, 909 public liability claims were notified, however it is not possible to break down the statistics to identify the extent or the nature of occupational disease claims. These statistics are high level and give a sense of the number of claims, but not the nature of the claims.

Private insurance companies provide two types of service that may yield data on occupational illness: personal injury and income protection policies. Personal injury insurance cover may be taken out by the self-employed, and this may

cover work-related illness, depending on the policy. There are a number of reasons why self-employed, including many construction workers and farmers, may not claim in respect of illness. Many insurance policies do not apply until the person has been off sick for 5-7 days, depending on the policy. The self-employed tend not to take time off sick as they do not always have someone to cover their work, and it is possible to continue to work while sick, because they have more control over their work programme and schedule than employees do.

Income protection policies are designed to supplement an employee's social welfare benefits while they are ill or injured, in the event of disability. Income protection claims data can provide information on causes of absence from work. Such schemes may not become applicable until the employee has been out of work for more than three months, and so tend to relate to serious illness. Mulligan (2007a) cites an Insurance Company, for which 31% of all income continuance claims arose because of mental health illness, including anxiety and stress cases, and 12.5% of claims for back pain. There is no suggestion that these illnesses are occupationally induced, but it is likely that a proportion of them are work-related, as they are among the diseases most frequently cited as associated with work by employees (Addley et al, 2005, European Foundation, 2007a; O'Connell et al, 2007). One provider of income protection policies noted that they do get (a relatively low number of) claims for occupational disease and that it is identifiable as an entity within the system, but it is not possible to provide accurate statistics at this time. They saw no reason, however, why statistics could not be provided in the future, and would not be adverse to an approach from the HSA to discuss information needs.

The insurance industry is a major source of data in this context in other European countries, but this is because the social system in these countries is structured differently, funded differently, and many countries have a no fault benefits scheme in place for all employees, to which employers often subscribe. The insurance industry in Ireland has some potential as a source for summary secondary statistics on occupational illness, which may be used as a part of the picture, but it is not likely to contribute as a data collector.

5.3.4 The Central Statistics Office

The Central Statistics Office (CSO) is the national specialist statistics agency that is responsible for the collection, compilation and dissemination, for statistical purposes, of information relating to economic, social and general activities of the state. The main surveys that yields data relating to occupational illness are collected from the Quarterly National Household Survey (QNHS) and to a limited extent the Deaths Registration Survey.

5.3.4.1 Quarterly National Household Survey

The QNHS survey (formerly known as the Labour Force Survey [LFS]) is a large-scale nationwide survey carried out by the CSO, on 3,000 households weekly. It produces quarterly data on the overall number of workers, and special modules, included in the first quarter of each year, include information on the number of workers with occupational injuries or ill health. This permits analysis of illness and injury rates in relation to the number of workers at a given time, and it gives a sector breakdown for the data.

In carrying out their survey, the CSO uses a methodology agreed by all the member states, and this facilitates comparison of data, and Eurostat experts in the area of OSH provide guidance on answering the questions in the accidents and illness modules (Eurostat, 2006b; Eurostat, 2007). The survey results are weighted to agree with population estimates broken down by age, sex and region.

The questions that were asked in the 'Accidents and Illness' module of the QNHS since 2003, in regard to occupational ill-health, are as follows:

Have you worked in the past 12 months?

How many, if any, illnesses or disabilities have you experienced during the past 12 months, that you believe were caused or made worse by your work (either the work that you are doing at the moment or work that you have done in the past)?

How many working days were lost as a result of your most recent illness which was work-related?

You indicated that you have not worked in the last 12 months. Have you been employed, but on long term leave during that time?

What was your most recent work-related illness?
1. Bone, joint or muscle problem;
2. Breathing or lung problem;
3. Skin problem;
4. Hearing problem;
5. Stress, depression or anxiety;
6. Headache and/or eyestrain;
7. Heart disease or attack, or other problems in the circulatory system;
8. Disease (virus, bacteria, cancer or another type of disease);
9. Other types of complaint;
10. Not applicable.

Provided by CSO, 2007

Thus, this survey provides information, published in the HSA annual statistics publication (HSA, 2007), on the following:

- Number and rate, per 1000 workers, of people suffering illness
- Rate of illness requiring more than three days absence
- Numbers employed in each economic sector
- Numbers and rates of illness (total and > 3 days) in each economic sector
- Number and rate of illness by economic sector and gender
- Rates of illness by age group
- Illness by occupation.

These questions were asked in the first quarter of every year in recent years, but from 2008, will be asked in every quarter of the year, i.e. three monthly, and will be part of the core questions in the QNHS. This has the advantage that there will be continuous surveying (of 3,000 households each week) on this topic so that the results reflect the average situation over the course of three months. In addition, now that this data has been collected for a number of years in this domain, using exactly the same questions, the CSO is in the process of pulling together all of this information and plans to publish in the near future (CSO, personal contact, 2007). The questions that are asked are agreed between the HSA and the CSO, and while there is some flexibility in this regard, the ability to identify trends is dependent on comparability of data, so changes to the wording of questions needs to be weighed up carefully in terms of benefit. The CSO has not previously published on this topic, mainly because the numbers are relatively small for statistical purposes, but it provides data, in spreadsheet format, to the HSA annually, and the HSA carries out an analysis of the data, which is published in the annual statistical report. The level of analysis carried out by the HSA has increased in recent years and this has been welcomed by health and safety professionals and data users; the increased amount of data published has also allowed commentators to probe the results and carry out further analysis

(Mulligan, 2007b). Very similar questions are used in the UK, and their recent analyses include estimates of overall prevalence, incidence, and of annual working days lost, in addition to a more detailed analysis by a range of demographic and employment-related variables (HSE, 2007b). It should be noted that the higher number of cases, that one would expect with a larger sample (50,000 households in UK as opposed to 30,000 households in Ireland) permits more detailed statistical analyses.

In addition to the nationally agreed questions, in 2007, Eurostat required member states to include a module on accidents at work and work-related health problems in their Labour Force Survey (EC, 2006). These questions were asked in quarter 2 of 2007 in Ireland, (the routine questions were asked in quarter 1), and included questions (health-related as opposed to accidents) on the following, which were prescribed by Commission Regulation (EC) No 341/2006. The first suite of questions is similar, but not identical to those used in the 'usual' QNHS:

Have you ever worked?

How many, if any, illnesses, disabilities or other health complaints have you experienced in the past 12 months, that you believe were caused or made worse by your work (Either the work that you are doing at the moment or work that you have done in the past)?

How would you describe your most serious work related Illness suffered in the last 12 months?

1. Bone, joint or muscle problem
2. Breathing or lung problem
3. Skin problem
4. Hearing problem
5. Stress, depression or anxiety
6. Headache and/or eyestrain
7. Heart disease or attack, or other problems in the circulatory system
8. Infectious disease (virus, bacteria or other type of infection)
9. Other types of complaint

If Respondent has/had a bone, joint or muscle problem, they are asked

Would you describe your bone, joint or muscle problem as mainly affecting your …?

1. Neck, shoulders, arms or hands
2. Hips, legs or feet
3. Back

If respondents suffered a work related illness in the previous 12 months

Does this illness (most serious work-related past 12 months) limit your ability to carry out normal daily activities either at work or in your personal life? (Yes/No response choices)

If Yes

To what extent (are you limited by your most serious work related illness in carrying out your daily activities)?

1. some
2. considerably

If respondent has suffered a work related health complaint and <u>has worked</u> in the previous 12 months

Was the job that caused this illness……..? (your most serious work related illness in the last 12 months)

1. Your current main job
2. Your current second job
3. Your previous employment/last job (Person not in employment)
4. Your job from one year ago
5. Some other job

Number of days off work during the last 12 months due to the most serious complaint caused or made worse by work

If respondent has suffered a work related illness and has not worked in the previous 12 months but has worked in their lifetime

Was the job that caused this illness……..? (your most serious work related illness in the last 12 months)

1. Your previous employment/last job (Person not in employment)
2. Your job from one year ago (Person not in employment)
3. Some other job

If respondents have worked in their lifetime but not in the last 12 months and suffered a work related illness

Is the most serious work related illness suffered by you over the last 12 months the reason you have not worked in the past 12 months? (Yes/No response choices)

If respondent has suffered a work related illness and has not worked in the last 12 months due to it

Do you expect to return to work some time in the future? (Yes/No response choices)

If respondent has suffered an illness and has worked in the last 12 months or was off work in the last 12 months due to illness

How many days, if any, did you take off from work due to your most serious work related illness in the past 12 months?

Questions provided by CSO, Oct 2007

In addition questions were asked about factors at work that can adversely affect mental well-being or physical health, as follows:

Would you say that, at your workplace you have particular exposure to the following factors that could adversely affect your physical health? (Yes/No response choice)
1. Chemicals, dust, fumes, smoke or gases,
2. Noise or vibration
3. Difficult work postures, work movements or handling of heavy loads
4. Risk of an accident

What in your opinion is the main factor at your workplace that could affect your physical health?
1. Chemicals, dust, fumes, smoke or gases
2. Noise or vibration
3. Difficult work postures, work movements or handling of heavy loads
4. Risk of an accident

Would you say that, at your workplace you have particular exposure to the following factors that could adversely affect your mental well being?
1. Harassment or bullying
2. Violence or threat of violence
3. Time pressure or overload of work

What in your opinion is the main factor in your workplace that could affect your mental well being?
1. Harassment or bullying
2. Violence or threat of violence
3. Time pressure or overload of work

Questions provided by CSO, Oct 2007

These additional questions will provide information, not previously available on employees' perceptions of their mental well-being at work, and on their perception of risk of exposure in their workplace.

The most recent QNHS results show that 22,900 consider that they have suffered a work-related illness that required them to take more than 3 days off in the last 12 months. While it can be argued that this is based on self-reports, the fact remains that whatever the true figure, the rate per 1,000, who perceive themselves to be in this category (and the questions have not changed over time) has been on an upwards trend from 8.6 to 11.5 since 2000.

The QNHS, and the ad hoc modules in this domain, has the limitation, mentioned above, that they are self-reported, illness diagnoses are not validated and sometimes that the data are derived from a proxy, i.e. the person in the house when the data collector called. These limitations are fully acknowledged, and once the analysis is interpreted with this in mind, this is a very valuable source of occupational illness data, because it shows what employees think about their work-related health, and their perceptions of risk in that environment.

The strengths of the QNHS (based on the Labour Force Survey) are the comparability of this source and the possibility for establishing more detailed information on the national labour forces. There are also well-documented limitations already listed above. Changes in the methodology (e.g. the use, and wording, of questions), from time to time, makes comparison difficult (Eurostat, 2001).

5.3.4.2 Vital Statistics: Deaths Registration Survey

The Central Statistics Office collects data on deaths from their deaths registration survey, and this is discussed in more detail in section 5.3.6.2.

5.3.5 Occupational Physicians: Voluntary Reporting

In Ireland, the HSA initiated a voluntary, reporting system by physicians for occupational skin diseases, termed Reporting of Occupational Dermatological Diseases (RODD) in the mid-1990s, based loosely on the UK THOR system (see section 4.3.1.3), and at this time reporting was required six monthly (Donnelly, 1997). This scheme was a limited success, possibly due to lack of resources, and poor take-up and follow-up by dermatologists (Donnelly, 1997). Following setting up the skin surveillance system, a similar system was initiated for respiratory physicians, named Reporting of Occupational Respiratory Illnesses (RORI), again loosely based on the UK SWORD system (Donnelly, 1997). Over time, logistical arrangements were worked out with the organisers of the SWORD scheme in the UK and ultimately, Irish physicians started reporting voluntarily to the UK.

THOR Ireland now includes a number of surveillance schemes:

- Surveillance of Work-Related and Occupational Respiratory Disease by consultant respitatory physicians (SWORD).
- EPI-DERM. Reporting of work-related skin diseases by consultant dermatologists.
- Occupational Physicians Reporting Activity (OPRA). Information reported by Occupational Physicians.

Following formal approaches and funding from the HSA, in 2005, pilots of EPI-DERM and of SWORD in the Republic of Ireland were launched electronically using monthly reporting through online webforms. Reporting from Ireland is exclusively on-line, and the original paper based system is not in use here.

Initially 14 dermatologists and 12 respiratory physicians agreed to participate in the pilot study in Ireland, and over the first year (commencing January 2005) 77 cases of occupationally related skin disease (mainly contact dermatitis), and 28 cases of occupationally related respiratory disease, were reported.
http://www.medicine.manchester.ac.uk/coeh/thor/schemes/ireland.

Reporting to the schemes by physicians has approval of the ethics committee from the Royal College of Physicians in Ireland (Turner et al, 2007). Precise case criteria and definitions are not imposed, but guidance is provided. While reporting via THOR is relatively new in Ireland, it has been very successful in the UK, and has provided valuable statisitcs, incidence estimates and disease trends (Rogers et al, 2004, McNamee et al, 2006).

In 2007, the managers produced a report on the incidence of occupational and skin disease in Ireland for the period 2005-6 (Turner et al, 2007). In this period, 136 cases of occupational skin disease and 32 cases of occupational respiratory disease were reported. Diagnostic information is coded using ICD-10, occupational information coded using Standard Occupational Classification (SOC) and the Standard Industry Classification (SIC) for industry. Coding of agents is based on an internal UK Health and Safety Executive coding system. The report contains a detailed analysis of the data, based on diagnostic sub-groups, suspected agents, industry sector, gender and age.

In this period, 6 of the 14 dermatologists and 4 of the 12 respiratory physicians were active reporters. The authors note that there are eligible reporters who are not participating in the scheme, and some of those who signed up are not active reporters, and this is a limitation. The authors also point out the important role of the physicians' clinical experience and their ability to consider occupational causes when making a diagnosis; the role of the patient, in terms of the information that they provide to the physician; and the role of GPs who make the decision to refer to a consultant or not (Turner et al, 2007). In the UK, the scheme has been extended to GPs who are trained in occupational medicine to address this gap.

The Occupational Physicians Reporting Activity (OPRA) scheme, which also has RCPI ethics committee approval, and is activley encouraged among members by the Faculty of Occupational Medicine, was extended to Ireland in early 2007, funded by the HSA.

Up to early August 2007, 31 cases of skin disease were reported through EPI-DERM, 3 cases of respiratory diseases were reported through SWORD, and 38 cases were reported through OPRA, of which 13 were musculo-skeletal disorders, and 18 were mental illness (University of Manchester, 2007). There are currently 14 EPI-DERM, 12 SWORD (although as seen above, not all are active) and 18 OPRA reporters (all of whom are active). There are 35 dermatology specialists and 62 respiratory medicine specialists on the Specialist Register of the Irish Medical Council, and there are approximately 42 respiratory consultants in the Republic of Ireland (Irish Thoracic Society, personal contact, 2007), and 110 dermatology consultants on the island of Ireland (Irish Association of Dermatologists, personal contact, 2007) While many of these might be specialised within their area, e.g. childrens, there is scope for recruiting more reporters. There are 79 occupational medicine specialists on the Irish Medical Council specialist register, and Noone (2007) reports that the 18 OPRA reporters represent 22% of the potential reporters, and while this leaves scope for recruitment, it is very encouraging that the reporting rate is 100%.

It would be important that if participation in this scheme was to continue, that a concerted effort be put into a campaign to motivate reporters to commence and to continue to report cases to the system, and to consider encouraging GPs, qualified in occupational medicine, to paricipate also.

	England and Wales	Scotland	Northern Ireland	ROI
OPRA	346	49	19	18
EPIDERM	170	17	7	14
SWORD	445	40	10	12

Table 5.1 Numbers of physicians participating in THOR, August 2007

The strengths of the THOR schemes are that they were set up specifically to collect data in this context (they are concept-driven), and are managed by experts in the field, including epidemiologists and occupational medicine specialists, in contrast to most other data collection systems, which have administrative or wider social and labour reasons for being undertaken. It has the support of the relevant medical bodies in Ireland, and appears to have the support on the ground from physicians in practice, for a variety of reasons; anonymous reporting, contributing to reasearch, feedback on results. It does not have a severity limitation, i.e. employees do not have to be absent from work for a minimum period before being included, and so it picks up all cases (known to reporters), including diseases not included on the list of prescribed diseases. This is evidenced in that the number of cases reported to date exceeds the numbers approved by OIB. It has the potential to produce good quality data, but this is dependent on it receiving sufficient reports, from a good number of reporters in order to receive sufficient cases for statistical analysis. The scheme would require support and promotion in addition to paying attention to motivators for reporters.

The weaknesses lie in the need for a critical mass of reports before meaningful analyses can be made, and in the fact that as reporters are effectively self-selected, the sample is neither random nor representative, however, the scheme can provide estimates of incidence and, over time, can show trends.

5.3.6 Other Relevant Agencies

There are a number of health-related agencies that collect data on particular groups of diseases that can include occupational manifestations of the relevant disease. In this way it is known that other agencies are inadvertently collecting data on occupational disease. Such agencies include the National Cancer Registry of Ireland, the Department of Health and Children's Hospital In-Patient Enquiry system, the National Poisons Information Centre, the Health Protection Surveillance Centre of the Health Services Executive. There are also some sector-based agencies that collect data, such as the Construction Workers Health Trust, for the construction sector, and Teagasc, for the agriculture sector.

5.3.6.1 The National Cancer Registry of Ireland

The National Cancer Registry of Ireland (NCRI) was set up in 1991 as a publicly appointed body for monitoring the incidence and prevalence of cancer and related tumours in the Republic of Ireland. It has collected data on cancers since 1994 (http://www.ncri.ie).

The NCRI data are of limited use in identifying cases of occupational cancer, for reasons identified in a report investigating occupational cancer data capture in Ireland (Drummond, 2007), mainly because occupational cancer manifests in exactly the same manner as cancer from any other cause, and unless the cancer is unlikely to have a non-occupational cause, such as in the case of mesothelima which is due to asbestos exposure, attribution of cancer to an occupational cause is difficult. Data are collected by the Registry, from hospital records, and, even if complete, it can be difficult to establish the patient's occupation, because the occupation listed may date from any, often the first, hospital admission, and may provide insufficient information (e.g. engineer, civil servant, or retired), or have no relevance to the cancer diagnosis. The Registry provides information on the number of new cases of mesothelioma to the HSA each year, but apart from that, based on current data set (which collects occupation and occupation status, and is subject to the limitations above), its usefulness is limited as a source of information on occupational cancer.

The NCRI held a workshop in June 2007, to identify a minimum dataset for cancer in Ireland. The HSA was represented at the workshop and the difficulty of collecting data that would be of use in identifying and monitoring occupational cancer was evident (Health Services Executive, 2007). Proposals associated with occupational cancer data collection included adding 'Lifetime occupational data' as a data item, or as a minimum the 'main lifetime occupation'.

5.3.6.2 Death Certificates and Coroner's Files

Approximately 30,000 deaths occur in Ireland each year (CSO, 2006); there were 27,479 in 2006 (http://www.cso.ie/statistics/bthsdthsmarriages.htm). The Civil Registration Act, 2004 requires defined particulars to be entered in the Register of Deaths, including:

- Date and place of death.
- Sex of deceased.
- Forename(s), surname, birth surname and address of deceased.
- Personal public service (PPS) number of deceased.
- Date of birth or age last birthday of deceased.
- Profession or occupation of deceased.
- Certificated cause of death, duration of illness and date of certificate*.
- If an inquest in relation to the death or a post-mortem examination of the body of deceased was held, the forename, surname and place of business of the Coroner concerned.

While death registration data requires the occupation and the PPS number, these are not always available, as the data collected is dependent on the knowledge of the person registering the death (Drummond, 2007). Even where occupation is available, the limitations to its usefulness in the context of occupational cancer have already been highlighted, and this applies to other diseases also. As part of research on deaths among construction workers, carried out by the Construction Workers Health Trust, Dr. Harold Brenner examined data on 'cause of death' from over 1,500 death certificates, but noted that the likelihood of ascertaining an occupational cause of death, based on the cause of death field, was low (Brenner, 2003; Brenner, personal contact, 2007).

The Death Event Publication Service (DEPS) became available to Government Departments as part of the Inter-Agency Messaging Service. DEPS was developed so that notification of all registered deaths could be made available automatically, electronically, to all relevant public sector agencies, allowing subscribing agencies to identify those persons on their registers who are deceased. Limited death information (including data such as name, PPS no. and

date of birth) is made available to the National Cancer Registry of Ireland for research purposes (Department of Social and Family Affairs, 2004).

The Deaths Registration and the Death Events Publication Service may be of theoretical use in identifying deaths that may be associated with occupation; it is unlikely that it is of any practical use as attribution is simply not possible, except in the case of occupational diseases that are almost definitely related to work-place exposure, such as mesothelioma. Furthermore, the majority of occupational diseases are rarely a cause of death (employees do not die of occupational dermatitis or noise induced hearing loss), and the use of this system would be of benefit only for diseases such as mesothelioma. It is likely that for deaths data, the coroners system is the most probably source of data.

5.3.6.3 Department of Health and Children

The Department of Health and Children's information unit coordinates data from a variety of sources to provide health statistics, which give a profile of health status in Ireland on a number of indicators. The Department is resistant to the development of any new registries as the purpose of recent health reforms was to reduce the number of bodies and agencies, and Health Information legislation is currently under development. They do not directly collect any data on occupational illness through the primary care system (with the exception of some occupationally-linked infectious diseases, dealt with below), and the Hospital In-Patient Enquiry System (HIPE) can identify some cases of occupational disease, where the patient was an inpatient in hospital (dealt with below). In relation to cases that may present at Accident and Emergency (A&E) Departments, until recently the European Home and Leisure Accidents Surveillance System (EHLASS) collected data on non-work accidents, but there is a proposal to extend this surveillance in this domain to all accidents, including occupational, however there are no plans to include A&E visits due to occupational disease.

5.3.6.4 Hospital Inpatient Enquiry Scheme

The Hospital Inpatient Enquiry scheme (HIPE) is an activity of the Department of Health and Children, which is managed by the Economic and Social Research Institute (ESRI). It is a computer-based health information system designed to collect clinical and administrative data on discharges and deaths in acute general hospitals in Ireland, using ICD-10-AM (Australian Modification) codes. Coders use whole patients' charts as the source document for coding of medical information, on discharge from hospital, and can register a primary diagnosis and up to 19 secondary diagnoses. In this way, a patient who has an occupational disease can be identified, even if they were admitted to hospital with a non-occupational primary diagnosis. A potential limitation to this system is that while the medical history data are taken from information entered into the patient's record by a doctor, it is based on the patient's own report of their medical history, particularly when the occupational disease is not the primary diagnosis. Notwithstanding this, the patient is likely to be asked questions, by a doctor, about their medical history that are more probing than, for example, the questions asked by the CSO in the QNHS.

Of relevance to occupational diseases, HIPE uses the ICD-10 AM (Australian Modification) codes for diagnoses, and E-codes are codes for external causes of injury, which include farms, mines and quarries and industrial places and premises.

For the purposes of this report, a request was made to the Department of Health and Children, to provide information, through HIPE, using ICD-10 occupational

disease codes, on the number of cases of a small number of diseases, which are widely accepted as occupational, over the past 2 years. The diseases were:

- Mesothelioma of pleura (C45.0)
- Pneumoconiosis due to asbestosis and other mineral fibres (J61)
- Pneumoconiosis due to dust containing silica (J62.- and J62.8)
- Byssinosis (J66.0)
- Hypersensitivity pneumonitis due to organic dust Farmers Lung (J67.0)
- Malignant neoplasm of the nasal cavity (C30.-).

The request included the disease as either a primary or secondary diagnosis (for persons aged 18 and over) and results were provided for 2005 and 2006. The search revealed at least 16 cases of mesothelioma of pleura, 34 cases of pneumoconiosis due to asbestos and other mineral fibres, 4 cases of pneumoconiosis due to dust containing silica, no cases of byssinosis, and 61 cases of Farmers' Lung. Full results are provided in Appendix 8.

HIPE is managed by the ESRI, and there is a process through with the ESRI provides data to the HSE and other agencies. While routine data are provided to the Department and the HSE, requests for additional data may carry a fee. Use of the HIPE system as a potential data source in this context, was raised previously by Donnelly (1997), and this source could be of value in relation to diseases considered to have a high attribution to work.

5.3.6.5 Health Protection Surveillance Centre

The Health Protection Surveillance Centre (HPSC) formerly the National Disease Surveillance Centre (NDSC) is part of the Health Service Executive and is responsible for collecting data following notification by clinicians and hospitals on infectious diseases. Their system involves the completion of a form by the reporter. There is a basic form for many diseases, and for some diseases, including Hepatitis B, leptospirosis and SARS, which may have an occupational cause, the reporter is required to complete an 'enhanced' form, which asks more detailed questions. Some forms include questions on risk factors, e.g. whether the patient is a health care worker, and exposure data. One of the occupational groups at greatest risk of infection transmitted through their work environment is health care workers, and it is likely that such infections should be identified through their occupational health departments, which most healthcare institutions have at this stage. This is itself is not enough to establish an occupational cause, because work may not have been the source of infection and risk factor data does not always indicate mode of transmission.

It is noteworthy that in this system, despite it being a legal requirement, under-reporting from clinicians (GPs and hospital clinicians) is a problem, and while HPSC states that in the absence of auditing, the extent of this underreporting is not known, they acknowledge that it is an issue, and since the introduction of reporting from laboratories in 2003, the number of cases has increased.

In discussion with HPSC, it is acknowledged that it should be possible to identify some cases of occupational disease through their system. While attribution of the source of an infection to an occupational cause cannot always be definitive, when asked if it would be possible to add a field to the forms asking whether the reporter thought that the source of infection could be occupational, the reaction was very positive, and the response was that, while such a request is unusual, as a genuine public health issue, if the HSA requested that such a field be added, the request would certainly be considered for specific diseases (HPSC, personal contact, 2007).

5.3.6.6 National Poisons Information Centre

SW33, the list of prescribed diseases, lists poisoning by a series of chemical agents among the compensatable diseases. To further explore the possibility of sourcing data on poisoning in the workplace, the National Poisons Information Centre was contacted. The main function of the Centre is to provide information on the management of acute poisoning, although staff provides specialised information about both acute and chronic toxicological issues. Hospitals, homes and workplaces can contact the centre with queries about poisoning, and this often happens when a poisoning event occurs. While the Centre keeps records and a database of enquiries, and produces statistics, it is not the role of the Centre to act as a notification point and there are many cases of poisoning that simply do not come to their attention, for many reasons, but increasingly because the hospital A&E department, for example, knows how to handle the event, or has found the information on an on-line information system, currently used by 34 Irish Hospital Emergency Departments.

The Centre's annual report for 2006 shows that the majority (88%) of the 9,000 cases of poisoning events occur in the domestic setting, with 2.6% located in work settings, and only 0.4% of enquiries coming from industry/manufacturer sources (National Poisons Information Centre, 2007). Personal contact with the Centre confirmed that these cases are likely to be acute, and if an occupational exposure is volunteered it will be recorded, but is not routinely asked.

While it may reveal an occasional occupational case, the National Poisons Information Centre is not considered likely to be useful as a data source for occupational diseases.

5.3.6.7 Sector-Based Data – Construction Industry

The Construction Workers Health Trust (CWHT) is a stand-alone unit, funded by a small levy, paid by workers who are members of the Construction Workers Pension Fund. It is dedicated solely to the promotion of better health and lifestyles among construction workers.

The pension fund is compulsory, and covers transient and temporary workers. Some employers do not facilitate it, and some workers do not know about it, but the majority of construction workers are part of the scheme.

The Trust provides health screening and lifestyle advice for workers, and carries out the health screening, on site, with the cooperation of employers. At the beginning of the health screening process, workers are asked to complete a lifestyle questionnaire.

The CEO of the Trust is confident that the health screening works because of its confidentiality, and while employers facilitate it, they are not privy to results. This is an important factor for employees and they require reassurance that no information will be divulged to employers; the sense is that employees do not want their employer to know a) that they have a health problem and b) that they do not want their employer to know what is wrong with them. The CEO feels that the scheme works because it is funded by the employees themselves and therefore there is no ulterior motive; he cited a similar scheme in the UK, which had a poor worker uptake, and it was felt that a major factor was that the scheme was employer funded, and that there was a level of mistrust among employees as a result (CWHT, personal contact, 2007).

The Medical Director of the Trust has carried out research on patterns of ill-health among construction workers (CWHT, 2000) and causes of death in construction workers (Brenner, 2003) using 29,000 records of absence from

sick-pay benefit scheme claims and over 1,600 death certificates supplied when death benefits claims were made. The CWHT also has lifestyle questionnaire data from over 15,000 respondents. The results of this research have been fed back into health promotion activities, and the research has been recently updated and publication of more recent reports in both domains is imminent.

While this research relates to all illness, and is not focused on occupational or work-related illness, the lessons to be learned are valuable. As with the Renaissance Project carried out by DSFA (Leech, 2004), the use of illness claims data, and in this case, deaths data can be valuable in developing a profile of ill-health among a population. While the numbers of claims for occupational diseases may be low, the opportunity to learn about work-related ill-health conditions is important from a wider health and well-being perspective.

5.3.6.8 Sector-Based Data - Agriculture

The agriculture sector has always posed a challenge to health and safety management, and data capture for occupational accidents has been a challenge, as there is little incentive for farmers to report accidents, and farm surveys has been the most effective way of estimating the extent of the problem to date. Information on disability among farmers is also gleaned from surveys. A survey attached to the National Farm Survey in 2002 provided information on farm-related ill-health among farmers (Finnegan and Phelan, 2003). Farm-related ill-health occurred on 11% of farms and in 85% of cases the farmer was the affected person. Lung problems (approximately 35%) and chronic back pain (approximately 50%) accounted for the majority of reported problems.

Teagasc, the national body providing research, advisory and training services to agriculture, is very concerned with the health and safety of farmers and participates in a variety of strategies and activities to this end. They are interested in statistics and trends in occupational disease so that it can be fed back into prevention. The National Farm Survey (NFS) is an annual survey, that collects and analyses information relating to farming activities as its primary objective, however, as in 2002, this survey can collect data on specific issues. Teagasc is open to the possibility of including a question on occupational disease in the National Farm Survey, and would consider including a question annually, or at agreed intervals, in its annual survey, if approached by the HSA (Teagasc, personal contact, 2007).

5.3.7 Health and Safety Authority

The Health and Safety Authority currently has a limited role in direct occupational disease data collection. It has a major role in developing a profile of occupational disease by collating and analysing data collected by other agencies, such as the Department of Social and Family Affairs and the Central Statistics Office.

The Authority's direct data collection role is currently limited to statutory disease notification requirements under the Safety, Health and Welfare at Work (Carcinogens) Regulations, 2001, and Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006.

The Safety, Health and Welfare at Work (Carcinogens) Regulations, 2001, require any employer who becomes aware of, or any registered medical practitioner who diagnoses, a case of occupational cancer to notify the Authority. The HSA is rarely notified of such cases by this route, and no cases have been reported in recent years (HSA, personal contact, 2007). These Regulations also impose duties on employers, in the event of the use of a carcinogen at work, to keep an up-to-date list of exposed employees and to maintain records on the

results of assessments, and measurements of exposure and health surveillance; such records must be made available to the HSA if requested. Such data, assuming all ethical and confidentiality issues were addressed, could be a valuable source for exposure studies. This, however, is a recording rather than a reporting requirement.

The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006, require the Authority to establish a Register (Asbestosis and Mesothelioma Register). Registered Medical Practitioners who become aware of a case of either condition are required to report it to the Authority. The Asbestos Regulations also specify personal and clinical information to be included in individual medical records of exposed employees, and this data too may be of value in respect of exposure data. The HSA is rarely notified of such cases by this route and no 'live' cases have been reported in this manner recent years. The Register is maintained, however, and in the past two years, 24 cases of persons who have died from the disease, have come to the attention of the Authority from Coroners' Offices.

When a person dies as a result of an occupational disease, the HSA may be contacted by a Coroner in the event of an inquest into such a death. In such cases, if the Coroner considers that the death is as a result of an occupational exposure, he/she may request the presence of an Inspector of the HSA at inquest. The HSA has become aware of the 24 deaths from mesothelioma in this manner since 2005, and this reflects an increase in the number being reported to the Authority in recent years (from 4 – 5 per year in the 1990s). Such cases reflect exposures from many decades ago, and many of the deaths are of persons who are long retired from work, although some cases aged in their 50s are included. More recently, because the nature of such cases has limited potential for preventive action, the Authority has requested that information on such cases be forwarded to them, rather than actually attending such inquests (HSA, personal contact, 2007).

The real number of occupational deaths from this cause is likely to be much higher) for two reasons:

1. Not all coroners bring such cases to the attention of the HSA, and the 24 cases in the Mesothelioma Register were sourced from Dublin City and County Coroners only. This suggests that there are many more cases that are not being captured (HSA, personal contact, 2007).
2. Coroners are dependent on referral of suspected occupational deaths by medical personnel in hospitals and other healthcare settings, and it is possible that many deaths are not reported to Coroners because of lack of knowledge of the notification requirement on the part of the person certifying the death (Drummond, 2007).

It is likely that the dearth of reporting under both the Carcinogens and Asbestos Regulations requirements is due to a certain extent to lack of awareness and knowledge due to the low number of such cases that is likely to come to the attention of any individual medical practitioner, but the latent period, the extended timeframe between cause and effect, is likely to be a major factor also, as such cases are unlikely to be diagnosed in the occupational health setting, where the physician is aware of the reporting legislative requirements.

Otherwise the HSA does not directly collect occupational disease data. It relies on data and information requested from, and provided by, other data collection agencies. These sources of occupational ill-health data are well documented in the HSA's annual statistical report (HSA, 2007c) and are discussed above. The two main providers of data to the Authority are the Central Statistics Office

(CSO) from data collected for the Quarterly National Household Survey (QNHS), and the Department of Social and Family Affairs through the Occupational Injuries Benefit (OIB) (illness) and Disability Benefit schemes. More recently the HSA has used voluntary reporting by physicians, as described above.

The strengths of using data collected by other agencies are that the data is being collected anyway, and there are likely to be minimal resource implications for data sharing. The weaknesses lie in that the data is not necessarily collected for occupational disease surveillance purposes (with the exception of the voluntary physician reporting scheme), and may not yield data that is valid for the intended purpose; data sharing raises issues of confidentiality and of non-uniform classifications and coding; and apart from the major sources of data, the use of multiple sources that each yield small amounts of data will require management and coordination, runs the risk of duplication of cases, requires relationship management, and it may be time consuming yet yield limited information.

5.3.8 Summary: Data Collectors

This section has reviewed the occupational diseases data collection role of a number of organisations. While each data collection system was set up for a different purpose, it was found that a small number of key stakeholder organisations /groups (DSFA, CSO, Occupational Physicians) collect the bulk of the data and have a major role in this regard, and yet there are still gaps in our knowledge, as each system of data collection has real, and unavoidable, limitations. While some of the other sources are of limited use, a number of data collection systems (such as HIPE and the HPSC), set up for health administrative and sector-based reasons, with the cooperation of their owners, together have the potential to add pieces to the jigsaw, that is the national occupational disease picture.

5.4 DATA USERS

A wide variety of stakeholders exist that consider occupational disease data important; these include national and international organisations. National stakeholders include government departments, the Health and Safety Authority, employer and employee representative groups, professional bodies, and training and education institutions.

5.4.1 National Data Users

Government departments, and the Health and Safety Authority need good quality statistical data to develop national policy and strategy, to identify priorities, to drive their prevention activities in programmes of work and to measure progress. They also need data in order to provide data and information to international agencies in order to allow comparison and to allow an international profile to be developed.

The primary data users in this context are:

- The Department of Enterprise Trade and Employment;
- The Health and Safety Authority;
- The Department of Social and Family Affairs, and to a limited extent;
- The Department of Health and Children.

All of the stakeholders spoken to value statistics as a resource, and appreciate the improvements that have been made in the statistical analysis available in recent years. Employer and employee representative groups require statistics to

identify trends, to carry out sectoral analysis and to plan for preventive strategies and training needs that are in their members' interests.

Occupational health is a multidisciplinary profession and a variety of health-based professions, and some safety-based professions rely on data to inform practice. A senior member representing some of the relevant professional bodies: the Faculty of Occupational Medicine (FOM) representing Occupational Physicians, the Occupational Health Nurses Association of Ireland (OHNAI) representing Occupational Health Nurses, and the Institution of Occupational Safety and Health (IOSH) Ireland Branch, representing Safety and Health professionals were spoken to in order to inform this review. Other similar professional bodies, such as the Occupational Hygiene Society of Ireland, the Irish Ergonomics Society, and the Irish Society for Chartered Physiotherapists in the Workplace would also have similar information needs. All felt that statistics were essential to their organisations, and of particular benefit to the employers that they deal with.

Educational institutions, such as the Universities and Institutes of Technology that teach OSH and particularly occupational health, need statistics to delvop curricula and to illustrate the extent of the problem to their students, and in some cases to illustrate how particular interventions can influence outcomes. Other Occupational Safety and Health (OSH) organisations, such as the National Irish Safety Organisation (NISO) and other training bodies, need statistics to decide on sectoral priorities and intiatives and to decide on elements of training, and to provide contextual information to individual trainers. Finally, the media and the public need statistics to develop awareness of issues of public concern and to monitor progress over time.

All users required summary data for their members, and some professional bodies and educational institutions saw a value in anonymised raw data, on which students could carry out secondary analysis as project work.

5.4.2 International Data Users

Data collected in Ireland, through both national and international collection instruments, are provided to international organisations in order to permit international profiles and comparisons to be made and for regional (EU) and Global estimates to be carried out. Organisations that use data generated in Ireland include the International Labour Organisation, and Eurostat. The role of the ILO has already been described.

Eurostat is the Statistical Office of the European Communities whose task is to provide the European Union with statistics at European level that enable comparisons between countries and regions. Eurostat does not collect data; collection is done in member states by their statistical authorities. Member states verify and analyse national data and send them to Eurostat. Health and Safety at Work statistics are managed by the Directorate of Social Statistics and Information Society.

Two of Eurostat's topics on health and safety statistics relate to occupational diseases:

- European Occupational Disease Statistics (EODS)
- *Ad hoc* surveys on Health and Safety at Work.

EODS has been described earlier in the report (section 2.4.1.4), and the statistics requested currently only cover the cases recognised as occupational by the national authorities and liable for compensation. Data were made available to Eurostat for all old EU-Member States combined (EU 15) for a 1995 pilot

project and for 12 Member States combined (Belgium, Denmark, Spain, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and United Kingdom) for 2001 data. From 2002 onwards the data were available for the same countries, except Ireland. More countries have joined the project in recent years
http://europa.eu.int/estatref/info/sdds/en/hsw/hsw_occ_dis_sm.htm).
EODS Phase 1 Methodology provides information on coding and uses ICD-10 for coding diagnoses; it provides a table of ICD-10 codes for occupational disease diagnoses (EC, 2000).

The *ad hoc* surveys are carried out as modules within the Labour Force Surveys in member states – the most recent took place in the second quarter of 2007 and was included in the Irish QNHS, and is the mechanism that Eurostat has used for collecting data on work-related health problems, in recognition that the methodology for collecting disease data (EODS) was not wide enough to capture all work-related health problems. Eurostat defines work-related health problems as "*all diseases, disabilities and other physical or psychological health problems, apart from accidental injuries, suffered by the person during the last 12 months, and caused or made worse by the work*". Eurostat acknowledges that this is a broad concept that covers much more than the diseases covered by the EODS. The summary methodology published by Eurostat for the ad hoc surveys allow that:

- The concept of work-related health problem be based on self-assessment of their work-related state of health by survey respondents;
- It includes complaints irrespective of their severity;
- It includes not only health problems caused by work but also those made worse by work;
- It includes health problems where the onset was more than one year prior to the survey, if the respondent has suffered from the health problem during the last 12 months.

(http://europa.eu.int/estatref/info/sdds/en/hsw/hsw_inj_pb_sm.htm)

5.4.3 Summary: Data Users

Data is a basic need of policy makers, and organisations with national prevention and enforcement roles. Their decisions need to be based on good quality data, which can be properly analysed so that the information derived can be used to drive policy, set priorities and targets and measure progress. Getting it wrong has a high cost. Information, derived from the data collected, is also a major requirement for a variety of Irish occupational health and safety stakeholders, who utilise statistics in a variety of ways – to make a point, to decide what direction to take, for educational purposes, to drive curricula. Once collected nationally, data is also needed to meet international legislative and statistical requirements, in order to put the Irish occupational disease profile into the international picture, and to contribute to regional EU and global estimates.

5.5 SUMMARY DISCUSSION

In this chapter, the occupational disease data collection capacity and data needs in Ireland have been reviewed by assessing current and potential data sources, current and potential data collectors and taking into account the views of the end-users of the data. The current main sources, and collection agencies have been examined, and their strengths and weaknesses discussed. Data is dependent on an interaction between the employee and the physician, one of whom has symptoms and the other the expertise to diagnose it as occupational. The employer should not be forgotten in this interaction, for it is the employer that controls exposure.

Many agencies collect data on occupational disease and illness, either as a primary purpose, or as secondary data. The primary data collection agencies are the CSO and the THOR scheme.

- The Central Statistics Office collects self-reported data from workers, and includes questions on occupational disease and work-related ill-health in its Quarterly National Household Survey (QNHS). It is based on a nationally representative random sample of households, and is statistically robust. To date they have included illness questions in one quarter per year, and this is due to be increased to a core requirement, which will yield better data and permit additional analysis. In addition, the QNHS includes the EU ad hoc module on work-related ill health when required, which provides even more data in this area (specifically on mental health issues and exposure information). The HSA has some input into the questions that are asked. This is a valuable data source for developing a picture of employees' perception of the conditions caused by their work, and is likely to meet a lot of the requirements of the proposed Regulation.
- THOR requires voluntary reporting by physicians of new cases of occupational disease or work-related illness; it captures employees who have access to an occupational physician, and employees who have a serious enough illness to visit a specialist who diagnoses it as occupational or work-related. This widens the target population beyond the insured working population, and widens the range of diseases, as data is collected on a wider list of diseases than in the prescribed list, reflected in the fact that THOR has had a greater number of new cases than OIB in the past two years. It does not collect data either on employees who may not be ill enough to need referral to a specialist, or employees who do not have access to an occupational health service. There are cultural and historical industrial differences between Ireland and the UK that result in a greater number of occupational physicians per head of working population in the UK and a greater role for the GP in Ireland. THOR has the advantage that the data is collected by an independent body in an anonymous manner, and this is likely to reduce the likelihood of non-reporting associated with other schemes. If THOR continues to be used as a data source, consideration should be given to extending the scheme to include THOR-GP. THOR collects new cases, and has already shown that it captures more cases than OIB, and this reflects the wider scope. There is the possibility of duplication of data collected by DSFA, as the employee may also claim benefit.

Secondary data is available from a number of bodies that collect the data for reasons other than occupational health surveillance. The main source of data, which is theoretically secondary, but is in fact an important provider of data in this context, is the Department of Social and Family Affairs (DSFA).

- The DSFA scheme is an administrative scheme, which works with a relatively narrow list of diseases, and excludes a proportion of the working population. DSFA collects this data for benefits purposes and not as an occupational health surveillance tool, so it is a secondary source, however it will continue to collect the data, whether or not it is used by the HSA, so it makes sense to maximise and formalise the data sharing opportunities, and use the data, in full knowledge of its limitations. With the exception of exposure data, this system is likely to be suitable as the collector of data for the current needs of Eurostat, under the European Occupational Disease Statistics project (EODS), as detailed in the 1990 Recommendation, which requests information on diseases for which compensation is payable. Data collected as part of the Renaissance Project may be a potential source of information on specific work-related illnesses, and is worth exploring further.
- Agencies that collect data for compensatory purposes (PIAB, State Claims Agency, Insurance Companies) may be able to provide some high level

secondary data on the number of claims. They are likely to include cases already identified by DFSA and / or THOR, but duplication is not a concern as they are probably not a means of identifying individual cases; their value would be in capturing summary statistics. While it can be difficult for insurance companies as for anyone else to attribute the disease to occupation, companies spoken to did not feel that occupational illness created any worthwhile statistics. Despite this, in terms of putting together a national picture, it may be useful to get annual high level statistics from these sources.

- Agencies that collect data for health statistics purposes are more likely to provide useful secondary data: these agencies include the National Cancer Registry of Ireland, the Health Protection Surveillance Centre, and the Hospital Inpatient Enquiry system. This data is collected as part of health surveillance, and the agencies concerned appear to be willing to explore the possibility of sharing data with authorised agencies, such as the HSA. It makes sense to have a systematic approach to identify how occupational cases can best be identified, and set up an annual data sharing arrangement.

Data collection is also undertaken by sector-based organisations in an effort to understand and improve occupational health in their sector. This is a good source of information for areas where data is traditionally hard to collect using official sources (such as farmers).

Data users include a wide range of stakeholders within Ireland, from Government Departments to social partner organisations, from professional bodies to training and educational institutions and the media and general public. Most require good quality, reliable, data, which is disseminated widely and on a regular, timely basis.

Finally, during discussions with stakeholders, a number of common themes became clear:

- Everyone is aware of the barriers to data collection in this context and feel that data collection from multiple sources is the best approach.
- No group feels that the first responsibility to report occupational diseases belongs to them, and while there were some strong views, there was no real consensus that any particular group should report.
- A survey carried out by one of the unions found that 92% of shop stewards and safety representatives felt that occupational diseases should be reported.
- The HSA was considered to be the appropriate body to which reports should be sent, although a number of groups also thought that an independent, objective system for collection and analysis had advantages.
- The view was expressed that the HSA needs in-house occupational medical or health resource to provide advice on occupational medical and health issues.
- Few groups were of the view that employers are the right group to report occupational diseases, for all of the reasons identified above, including the right to anonymity of the patient/employee, and this was a primary concern to many.
- There was wide support for the THOR scheme, among those who had heard of it.
- Closing the loop back to employers was deemed necessary for prevention, but not necessarily for prosecution, purposes, although some felt that an anonymous system that did not identify places of employment could be letting employers use anonymity to hide.
- Whoever reports and whatever system is used, it needs to be user friendly, and preferably on-line.
- The system should include dissemination of results to users.

Thus a picture is being built up of what Ireland's system needs to ensure that it is a quality system, which avoids known pitfalls and meets the needs of users. In the next chapter the questions raised and the issues that need to be addressed, in the Irish context, are identified, and the options available to the Board of the Authority are outlined, prior to making recommendations.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

Previous chapters have raised and discussed the issues that challenge development of a reporting system that will provide ideal data to identify trends in occupational disease and work-related illness. This chapter draws on and summarises information from previous chapters by identifying and attempting to address the main issues that arose as part of the discussion process, and draws conclusions. It also outlines some options that are available to the Authority and makes recommendations for consideration of the Board.

6.2 ISSUES AND CONCLUSIONS

The main issues that have arisen throughout this review are:

1. The difference between an occupational disease and a work-related illness and the implications of the difference.
2. Different occupational and work-related illness data reporting / collection systems.
3. The characteristics of a 'good' occupational disease surveillance system.
4. The optimum system of data collection for prevention purposes in Ireland.
5. The optimum system of data collection for Ireland to address national and international legislative requirements.

6.2.1 Occupational Disease and Work-Related Illness

An occupational disease is a disease that is caused by occupation, and for diseases where this cannot be said with certainty, there is much debate. For preventive purposes it would be prudent to include any disease that has any association with work, but recall that Leprince (2007) suggested that 'occupational disease' is a legal rather than a medical term, and where compensation and reporting is concerned, it becomes necessary to be very specific about what is occupational and what is not.

The 2005 Act defines personal injury as: "*...a) any injury, disease, disability, occupational illness or any impairment of physical or mental condition, or (b) any death, that is attributable to work.*" It could be argued that the key part of this definition is 'attributable to work'. The definition does not give a guide to what extent the condition should be attributable. The Government, or its agents, is the body that decides, following expert advice, which diseases are occupational, and on a case-by-case basis, the only person that is qualified to decide if a condition is attributable to work is a physician.

A work-related illness is a wider concept than an occupational disease; the condition does not have to be wholly attributable to work, in fact, the very reason that it is called work-related, as opposed to occupational, is because it is well known that work is a factor that contributes to, but does not necessarily on its own cause, the condition. Every country makes decisions on what diseases will be considered occupational and what will be considered work-related, and usually, the work-related conditions are not included on the occupational list. Once again, in individual cases, only a physician can decide if a condition is work-related.

In Ireland, occupational diseases are assumed to be those diseases on the list of diseases 'prescribed' for compensation and benefits purposes. This relatively narrow list is considered to be a narrow definition of diseases that are caused by one's work. There is no official list of work-related illness, but the common conditions that are generally accepted to belong in this category include mental

health illness such as stress disorders. A list of diseases considered, by the Health and Safety Authority, to be 'occupational diseases' would be useful.

The ILO also adds a category of occupational disease or illness, which results from a single exposure. This is quite separate from an occupational disease that comes about as a result of exposure to a risk factor over a period of time (Laborsta Internet, 2007, http://laborsta.ilo.org/).

6.2.2 Occupational and Work-related Illness Data Reporting / Collection Systems

The challenge to reporting or collecting occupational disease and work-related illness data lies in the fact that the unit of collection is the case of disease or illness, i.e. the effect, as opposed to the unit of collection for accidents, which is the event, i.e. the cause. A disease or illness is rarely due to a single event, and recording of occupational disease cases is a reactive measure within a wider occupational health surveillance system.

The main methods of collecting disease data are:

- Reporting to the social insurance scheme (compensation/benefit) is used widely, and the data available is dependent on the social system in place, and the population covered by the scheme. Occupational injury benefit schemes provide information only on prescribed occupational diseases and no information on work-related ill-health. The reporter may be the employer or the physician, or both.
- Reporting by employers is used in many countries; compliance levels are good in systems with a social system that requires reporting to insurance companies (public or private), but poor in systems where reporting is to the enforcing authority.
- Reporting by physicians (occupational and other specialties) results in medically validated data, which provide information on the incidence of occupational disease and work-related illness. In some systems this is a statutory duty, and in some systems the reports are voluntary on the part of physicians. The data may be collected by an insurance scheme, the enforcing authority or an independent body (e.g. research institute).
- Employee surveys are used to collect information on workers' perceptions of their work-related ill-health; they are designed to be statistically robust and representative of the working population, but are not medically validated.
- Health statistics can produce secondary data that is collected for general health purposes, but can identify some occupational component and be used to validate data collected in the other systems: such secondary data includes data collected on infectious diseases, hospital discharges, etc.
- Mortality data is available through the Deaths Certification Scheme and from Coroners' Offices. This is useful only for diseases where there is confidence about the attribution to work, as information on the occupation of the deceased is often incomplete or unusable.

6.2.3 The Characteristics of a 'Good' Occupational Disease Surveillance System

A good occupational disease surveillance system has many characteristics, but as a minimum, it:

- Is designed for occupational health surveillance needs, as opposed to administrative needs;
- Uses multiple data sources;
- Covers the full working population, public and private sector, organisations of all sizes, and the self-employed;
- Uses multiple collection methods (primary and secondary sources, surveys);

- Recognises and minimises bias;
- Complies with national legislation;
- Complies with international statistical needs;
- Utilises international standard classification systems;
- Enables avoidance of duplication of cases;
- Does not entail excessive administration on the part of the reporters;
- Is coordinated and managed;
- Is adequately resourced;
- Ensures that reporters have a motivation to report;
- Manages external relationships;
- Has built in checks for reliability and validity;
- Has expert input to provide advice on technical, as well as ethical and data protection issues;
- Makes maximum use of secondary data and encourages data sharing, without compromising individual patient confidentiality and anonymity;
- Has a built-in feedback loop to employers for preventive purposes;
- Incorporate a system for making changes when necessary – for example, to add newly recognised diseases;
- Communicates with stakeholders;
- Disseminates information in a timely manner;
- Is cost-effective;
- Is open to improvement.

6.2.4 The Optimum Data Collection System for Occupational Disease Prevention in Ireland

Prevention of occupational disease requires knowledge of what the current extent of the problem is, and what direction it is going in. This requires incidence data, prevalence data and the ability to identify trends. In order to identify trends, data need to be collected regularly, and there needs to be consistency of method, using multiple sources.

- The THOR scheme is an ideal scheme for trend analysis, and for identifying emerging issues and 'newer' illnesses. It provides medically validated data on the incidence of disease among reporters. It provides data on recognised occupational diseases and on work-related ill health, thus also permits the identification of new issues in the workplace; about half of the OPRA reports in Ireland in 2005-2007 were for mental illness (Noone, 2007), considered by occupational physicians to be work-related.
- The CSO QNHS is a consistent and valid survey that will provide information on the employee view of his/her ill-health in relation to work. This system is very good for prevention purposes, and includes diseases that are outside of the remit of the prescribed or EODS list, therefore allowing new issues to be identified. The planned addition of core collection (every quarter) in addition to the new information on mental health matters in the ad hoc module will also be very helpful and will permit more detailed analysis. While employees may attribute illness to work that is not work-related, so too may employees suffer from a work-related illness and not report it due to lack of knowledge.
- While THOR and the CSO data balance one another to a certain extent, supplementing them with secondary data from other health-statistics sources is necessary. Data from HIPE can provide information on prevalence of diseases that are definitively attributable to occupation; data from the NCRI can provide information on certain occupational cancers; and data from the HPSC could provide information on the incidence of infectious occupational illness. This process would need to be managed, as there is likely to be duplication of data with other sources, but health statistics can be used as a means of validating the other sources, for example if the HPSC data showed 5 cases of TB in healthcare workers and the other sources did not, then one would have to ask questions about why these cases were not being picked up

– addition of a question on whether there was a suspected work-related transmission for some infectious diseases could add value to the data.

- For deaths data, the death certification scheme, and the coroners' offices data can be used to identify deaths, however deaths from occupational disease are notoriously difficult to identify.
- To complete the picture these methods should be complimented by maximising information from other sources, such as: the OIB, sector-based surveys; summary statistics from the insurance industry; and by using data sharing opportunities with the claims sector.

Disease data collection for OIB purposes, while medically validated, has limited value for prevention purposes, because of the low number of reports, and because only prescribed disease data is captured. There is no evidence to suggest that statutory reporting by employers will aid prevention.

While it is still early days for THOR, it appears to be the most effective scheme for identifying occupational diseases and to have the most potential for meeting a broad spectrum of information needs. If the Board decides to continue to use this scheme, the possibility might be raised that an Irish scheme be developed based on the THOR model. The advantages of running with the Manchester scheme far outweigh any advantages of having a Irish-based system: the expertise and experience of the group has been built up over time; the infrastructure is in place and would be very costly to replicate; it can be seen to be totally objective because it is managed from outside of Ireland; it is part of a larger scheme and therefore many of the costs do not need to be duplicated; it will allow cross boundary comparisons to be made and will facilitate the production of all-Ireland information. There is no advantage to setting up an independent Irish model of THOR at this time, but there should be room in the scheme for having an Irish expert input to ensure that cultural differences are highlighted and that it is championed and has a sense of ownership within Ireland.

6.2.5 The Optimum Data Collection System to ensure that International and National legislative requirements are met

6.2.5.1 European Recommendation

The primary existing international disease data collection requirement is the Recommendation concerning the European Schedule of Occupational Diseases. This is closely associated with the European Statistics on Occupational Diseases Project and Ireland participated in the pilot for this scheme in 1995, using data from DFSA, but has not participated since. As this is a Recommendation, the requirements are not binding on member states. A number of actions are recommended to member states, and recommendations relate to preventive and research activities as well as data-collection related items; only the recommendations that relate particularly to collection of data are addressed here:

Article 1. 1) Introduce as soon as possible into their national laws, regulations or administrative provisions concerning scientifically recognised occupational diseases liable for compensation and subject to preventive measures, the European schedule in Annex I;
Article 1. 2) Take steps to introduce into their national laws, regulations or administrative provisions the right of a worker to compensation in respect of occupational diseases if the worker is suffering from an ailment which is not listed in Annex I but which can be proved to be occupational in origin and nature, particularly if the ailment is listed in Annex II;

Ireland has such legislation, but it comes under the remit of Social Welfare legislation. While anything to do with compensation is beyond the remit of the

HSA, non-medical staff in DSFA was not aware of the Recommendation or its requirements, and it would probably be in the interests of the HSA to work with DSFA on this matter, particularly because of article 1. 5, below.

Article 1. 5) Ensure that all cases of occupational diseases are reported and progressively make their statistics on occupational diseases compatible with the European schedule in Annex I, in accordance with the work being done on the system of harmonising European statistics on occupational diseases, so that information on the causative agent or factor, the medical diagnosis and the sex of the patient is available for each case of occupational disease.

The THOR scheme collects data on all of the variables needed under EODS, and therefore has the potential to be used for this purpose. If physicians engage with the system, THOR should be able to meet EODS needs in time. It would be necessary to make an arrangement with THOR that all of the variables in their data are coded appropriately, and perhaps provided in raw data format back to the HSA for some reconfiguration or re-coding before forwarding to Europe. In the meantime, the HSA and DFSA should review the data collected by OIB in order to see if the OIB data could be provided directly to Eurostat by DSFA.

Article 1. 6) Introduce a system for the collection of information or data concerning the epidemiology of the diseases listed in Annex II and any other disease of an occupational nature.
Epidemiology is the study of factors affecting the health of populations. The requirements of such a system are not clarified, but the collection of data on disease should contribute to addressing this need by looking at the incidence and prevalence and deaths data, and to complete the picture this requirement is more likely to relate to exposure data than disease data.

The existing data collection within DSFA, the OIB and Disablement Benefit schemes, collects data on new cases of recognised occupational diseases (referred to as prescribed diseases), and should be able to give information on incidence. Deaths data will need to be found in data from coroners or from deaths certification. Because the EODS list of diseases closely reflects the diseases found in lists of prescribed diseases this system better meets the legal and compensatory requirements than any other collection method. While the Irish system currently produces very low numbers, it works from a list similar to that in other countries, and Eurostat accepts that compensation arrangements are different in member states. Unless there is a change in the Social Welfare system, this is the only data available in Ireland that will meet this need at the moment. Most countries find it difficult to get data on the self-employed. It is possible that THOR will be capable of addressing this need in time.

6.2.5.2 Proposed European Regulation
The second international legislative requirement is the proposed Regulation on Community Statistics on Public Health and Health and Safety at Work (section 3.2.2). The final wording of the Regulation is obviously not available, but, based on the current wording of the proposal (EC, 2007b), it is likely to require that statistics on recognised cases of occupational disease and other work-related health problems and illnesses be compiled. It is surmised that incident cases of death and disease will be cases recognised as occupational diseases by the National Authority in each state. This will require clarification within Ireland on which diseases are occupational for this purpose, and a decision on whether it has the same meaning as prescribed diseases within the framework of Social Welfare legislation, or not. It is surmised that cases of work-related health problems and illness will be collected from population surveys. The minimum dataset will be:

- Characteristics of the diseased person and the disease or health-related problem;
- Characteristics of the enterprise and workplace;
- Characteristics of the causative agent or factor.

While no further detail is available at present, it is reasonable to assume that any data sought will closely reflect that currently requested by Eurostat under EODS, although Eurostat cannot comment on that. Member states are trying, and may manage, to negotiate on the wording of the document, so it is necessary to await the final decision and the implementing Regulations. If Ireland can provide the EODS data for Eurostat, we should be in a position to fulfill any forthcoming requirements, although this should be kept under review pending more information on the requirements.

6.2.5.3 National Legislation: Notification of Accidents

Recent changes to the national legislation outlined in section 3.3 have raised the issue of whether employers should be required to report diseases and illnesses to the HSA as part of the notification of accidents requirements. As can be seen above, the systems in place are likely to meet both prevention and legislative requirements, within limitations, and they do not include employer reporting systems. The definition of personal injury, which includes disease and illness, in the 2005 Act is entirely appropriate, however, diseases and ill-health are rarely caused by single incidents, and if a single incident (e.g. acute exposure to a chemical) resulting in illness occurs, it can be reported as an accident. Once again it comes down to the unit of reporting, for an accident the cause (an event) is reported, including the associated injury, for disease it is the effect (illness) that is reported.

In systems, other than the UK, which has a similar social insurance arrangement to Ireland, where employers have a statutory duty to report, the high rate of reporting only occurs for reporting for insurance purposes, and the information may or may not be passed on to the labour inspectorate. No evidence was found that reporting to enforcing authorities yielded a good return for disease reporting. Employers do not have the training or expertise to assess medical conditions or to assess the information written on a medical certificate, or to attribute medical conditions to work; so as a minimum, if they were to report, employers would need to be notified by physicians that the condition is occupational. An open system, where employers were required to report any suspected occupational illness or uncertified illnesses would be unmanageable, resource-intensive and yield no return in terms of prevention. In the UK compliance is so low that the HSE itself acknowledges it to be a waste of time for statistical purposes, or for anything except follow-up by the Employment Advisory Medical Service, for prevention and not prosecution purposes. In the Irish context, the most that this is likely to achieve is to duplicate and compromise reporting from the OIB system and THOR systems, and in the absence of the equivalent of the HSE's Employment Medical Advisory Service, the prevention and follow-up options are limited. While the OIB system has a bias, in that it only includes PAYE workers, at least it is a known bias; if employers were to be required to report, the extent of under-reporting would be an unknown and the resulting statistics would be useless for statistical purposes, of no value for reporting to Europe, and could be misleading in terms of prevention.

If employers were not to report occupational diseases, two questions arise; a) how the Authority might become aware of occupational health issues, and b) the risk of employers and employees thinking that the HSA does not consider occupational health to be an important issue (this was a concern in the RIDDOR review also). The other systems between them should provide a good picture of

the spectrum: the OIB system will capture prescribed occupational diseases with a three day severity; the THOR system will capture occupational diseases and illnesses from within and outside of the PAYE sector and goes outside of areas that do not have an existing occupational health provision; and the CSO will be providing much more information than previously because of the move to core reporting. The HSA is notified of OIB claims, and could technically follow up with the employer on individual cases that raised a cause for concern. The 2005 Act places a duty on employers to report accidents 'as prescribed' and diseases and illnesses arising out of an accident event can be reported under the notification of accident requirements. The legislation could prescribe that employers be required to record occupational diseases and illness when so notified by a physician or by an employee with a medical certificate, and to report to the HSA, when requested. 'When requested' would include making the information available to the Authority during any visit by an Inspector and could include targeted audits by the HSA in areas of concern. Organisations could be facilitated to keep the records with a down-loadable on-line template (with no direct link to the HSA), which they could complete, and print off a report if required or they could incorporate into their sickness absence records. It would be important that the thrust of the legislation would be that the record should be kept as part of a good health and safety management system, as a performance measurement tool, and be linked to preventive actions associated with exposure, including, if necessary review of risk assessment. Any system of reporting relating to occupational disease will contain personal medical information about individuals and the normal rules of medical ethics and confidentiality would apply to individual records.

The board has the following options in relation to disease reporting requirements:

a) Update the Notification of Accidents requirements and interpret the requirement to report disease under the 2005 Act as a requirement to report occupational diseases and illness that develop over time and require mandatory reporting by employers of a wide range of diseases; provide guidance on the circumstances and nature of disease and illness to be reported.

b) Update the Notification of Accidents requirements and interpret the requirement to report disease under the 2005 Act as a requirement to report occupational diseases and illness that develop over time and require mandatory reporting by employers of a list of prescribed diseases; provide guidance on the circumstances and nature of disease and illness to be reported. This would mirror the system in the UK.

c) Update the Notification of Accidents requirements and interpret the requirement to report disease and illness under the 2005 Act as a requirement to report diseases and illness that result from a single incident (accident) and require mandatory reporting by employers under the accident reporting requirement; provide guidance on the circumstances and nature of disease and illness to be reported.

d) Require employers to record occupational and work-related medically certified diseases and illness that they are informed of either by a medical practitioner or an employee and to report to the HSA when requested.

e) Remove the requirement to report diseases from employers completely.

This review does not recommend options a) b) or e) and recommends options c) and d).

Diseases and illness that occur as a result of a single incident would be identifiable by employers and should be reported under requirements similar to the existing Notification of Accidents Regulations. It would be a mistake to completely exclude any reference to 'occupational' diseases from the legislation,

it would suggest that occupational health was not important; however, as there is no evidence to suggest that reporting diseases would be feasible for employers or provide any benefit to the Authority, it does not make sense to require mandatory reporting of occupational disease. Option d) could be actively promoted as a positive action as part of a wider occupational health strategy, placing the emphasis on keeping records for prevention and for getting advice, rather than a system for identifying organisations to be targeted. Inspectors should ask to see the record when they visit an organisation. It is likely that most small organisations will not need to record, as few cases are likely to occur in any single company, and they may not comply; however, that is even more likely to happen with mandatory reporting. Larger organisations should comply and, as this data will already form part of their absenteeism records, it should not increase the administrative burden to a large degree. Organisations, such as multinationals in the private sector, and pubic sector organisations, such as the defence forces and hospitals, especially those with an occupational health service, are likely to already have such records, but the legislation should require that, where such records exist, that the emphasis be on exposure data and be used to inform the health and safety management system (without compromising individual confidentiality).

6.3 RECOMMENDATIONS

1. Retain, promote and resource the THOR scheme and extend it to include THOR-GP.

Experience in other jurisdictions has shown that, even with a statutory obligation to report, systems still suffer from under-reporting, so there appears to be no added value to imposing a statutory obligation, when physicians appear to be willing to participate without a 'stick' approach.

1.1 A concerted promotional campaign to recruit physicians, currently not reporting, should be planned. This scheme has the support of the medical bodies involved, which are prepared to help promote it with their members (Faculty of Occupational Medicine, and Irish College of GPs), and it has the individual support of physicians on the ground. This campaign should address awareness raising, support from the top of all organisations concerned, and will require dedicated funding within Ireland.

1.2 An ongoing programme to ensure that reporters remain motivated should be established. There are a number of supports for physicians provided by THOR Manchester, such as guidance and advice, and information in the form of 'case of the quarter', and reports, however this should be carried out in tandem with a local programme for encouragement, such as funding the inclusion of expert speakers from abroad in Faculty conferences and seminars, the inclusion of the activity of reporting as a CPD activity, etc. This programme will also need to be resourced within Ireland.

1.3 The THOR scheme should be extended to include THOR-GP. The industrial and economic history in Ireland is very different to that in the UK and the role of the GP in diagnosing occupational disease is probably greater in the Republic of Ireland. The THOR GP scheme, which should include only GPs qualified in Occupational Medicine, would add value to the system, and would probably pick up many of the (78%) non-reporters among the occupational physicians, who may not consider participating in OPRA because they are not working full-time in occupational medicine.

1.4 Evaluate the THOR system. Commission an independent evaluation of the THOR system after it has had time to embed, after a maximum of 5 years. The evaluation should include collating data from other data sources (triangulation), and examining reporting rates, to evaluate the effectiveness of THOR in developing a true profile of occupational disease in the Republic.

1.5 Ensure that there is a mechanism for an Irish input to ensure that the scheme is championed within Ireland, and that there is a sense of ownership in Ireland, even if the scheme is being managed in the UK. This might be a role for an advisory committee (see recommendation 7).

2. Continue work with the Central Statistics Office in carrying out analysis of relevant labour-related data.

The HSA should continue to work with the CSO, to have an input to deciding the most appropriate questions to be asked, and in carrying out, and publishing, detailed analyses of the data. The work-related diseases and mental health illness data, required by the proposed Regulation, will have to be collected using surveys, and is likely to be collected by the CSO, as part of the current data collection method and the ad hoc surveys carried out by the CSO for LFS.

3. The working arrangement with the Department of Social and Family Affairs should be formalised and roles clarified.

Work with the Department of Social and Family Affairs to establish a common understanding of needs for reporting to Europe, to clarify the different roles and responsibilities in this regard, and to formalise data-sharing arrangements. This should include liaison and cooperation between the IT personnel from each organisation. The HSA should work with DSFA to review the EODS list of diseases against the prescribed diseases list and to formally identify the diseases that are common, and the two departments should consider agreeing a list that can be used for both purposes. There is potential for better collaboration than exists at present.

4. Formal working arrangements with the Department of Health and Children (and if necessary the ESRI) re HIPE, with the Health Services Executive re Health Protection Surveillance Centre and the National Cancer Registry, and the Coroner's system, should be established.

To borrow a phrase from Europe, the existing "gentleman's agreements", should be formalised into service agreements or memorandums of understanding, so that data exchange does not rely on individuals and is properly explored and managed.

5. Work with relevant organisations to ensure that all reporting systems move towards the use of international standard classifications should be a priority.

This will include working with DSFA, CSO, and Eurostat. The use of internationally recognised systems simplifies collaboration and data sharing and should be used as much as possible.

6. Review the requirements of the Notification of Accidents Regulations to require that employers report accidents resulting in personal injury (including disease and illness) or death and record occupational diseases and work-related illnesses contracted as a result of an exposure over a period of time to risk factors arising from work activity and report to the HSA when requested.

Guidance should be provided for employers and employees on the conditions that are considered to be a) diseases and illnesses resulting from accidents, and b) occupational diseases and work-related illnesses.

7. Establish an advisory committee/expert group to advise the Board of the HSA on Occupational Disease Data Collection issues and on inter-stakeholder relationships.

Data collection and epidemiology is a specialised area that requires expert input and supervision. In the absence of a dedicated occupational medical resource, the HSA should establish a committee to advise on issues relating to occupational disease surveillance. The committee should have among its membership an occupational physician and other occupational health professional, a statistician or epidemiologist, and representatives of some of the key stakeholder organisations involved in providing primary and secondary data (e.g. THOR, DSFA representative, Department of Health and Children representative and someone from the insurance industry). One of the functions of the stakeholder members would be to ensure that the occupational disease reporting requirements of the HSA are brought to the agenda in their own organisation. There are health information developments taking place at national level and interdepartmental needs should not get lost, so it is important for the HSA to know what other Departments are doing in this context. There are also developments occurring at international level, not simply in Eurostat statistics, but also in the field of occupational medicine, toxicology and epidemiology and it is important that the most up-to-date information is available to Ireland, for example, individual committee members could be funded occasionally to attend relevant international conferences in sub-specialist areas, such as toxicological epidemiology.

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APPENDICES

APPENDIX 1: PERSONNEL INTERVIEWED AND / OR CONSULTED

The following personnel were either interviewed or consulted, and provided clarification and/or documentation, data, information and assistance. The author would like to thank them most sincerely for their contribution.

1. Central Statistics Office
   - Ms. Stephanie Collins, Statistician.
2. Centre for Occupational Diseases (NCvB), University of Amsterdam
   - Dr. Gert van der Laan, Director and Occupational Physician.
   - Dr. Marloes van Beurden, Data Manager.
3. Construction Workers Health Trust
   - Dr. Harold Brenner, Medical Director.
   - Mr. Brian Daly, CEO.
4. Department of Enterprise, Trade and Employment
   - Mr. Martin Lynch.
   - Mr. Tom Walsh.
   - Mr. Frank Mooney
5. Department of Health and Children
   - Mr. Hugh Magee, Senior Statistician, Information Unit.
   - Ms. Gráinne Cosgrove, Statistician / HIPE Analyst.
6. Department of Social and Family Affairs
   - Mr. Donncha de Burca.
   - Dr. Clement Leech, Deputy Chief Medical Adviser.
   - Mr. Padraig O'Ceallachain.
7. European Agency for Safety and Health at Work
   - Dr. Jukka Takala, Director.
8. Eurostat, Luxembourg
   - Dr. Antti Karjalainen, Statistician.
9. Faculty of Occupational Medicine, Royal College of Physicians of Ireland
   - Dr. Ken Addley, Dean.
10. Finnish Institute of Occupational Health, Helsinki
    - Dr. Timo Kauppinnen, Head of the Surveillance of Working Conditions and Health Team.
11. Health and Safety Authority
    - Dr. Marie Dalton, Research and Statistics Manager.
    - Mr. Martin O'Halloran, Chief Executive.
    - Mr. Robert Roe, Assistant Chief Executive.
    - Mr. Kieran Sludds, Occupational Health Manager.
12. Health and Safety Executive, Bootle, Liverpool
    - Mr. John Hodgson, Statistician, Statistics Branch.
13. Health and Safety Review
    - Mr. Herbert Mulligan, Editor.
14. Health Protection Surveillance Centre
    - Dr. Suzanne Cotter, Specialist in Public Health Medicine.
15. Institute of Occupational Safety and Health (Ireland Branch)
    - Mr. Bruce Phillips, Chairman.
16. Irish Business Employers Confederation
    - Mr. Tony Briscoe, Director.
17. Irish College of General Practice
    - Dr. Andrée Rochfort, Director, Health in Practice Programme
18. Irish Congress of Trades Unions (ICTU)
    - Mr. Fergus Whelan.

19. Irish Public Bodies
    Mr Terry O'Neill, Claims Manager.
20. National Irish Safety Organisation
    Ms. Liz Doyle Fleming, Safety Executive.
21. National Poisons Information Centre
    Ms. Nicola Cassidy.
22. Occupational Health Nurses Association of Ireland
    Ms. Mairead Holland Flynn, President.
23. Occupational Physician
    Dr. Peter Noone.
24. Office of the CMO of the Civil Service
    Dr. Tom Donnelly, Occupational Physician.
25. Personal Injuries Assessment Board
    Ms. Sinead Leydon.
26. Services Industrial and Professional Trades Union
    Mr. Sylvester Cronin. Health and Safety Officer.
27. Small Firms Association
    Ms. Avine McNally. Assistant Director.
28. State Claims Agency
    Ms. Gemma D'Arcy, Risk Manager.
29. Teagasc
    Mr, John McNamara. Health and Safety Officer.
30. University College Dublin
    Prof. Leslie Daly, Professor of Epidemiology and Biomedical Statistics
31. University of Manchester (THOR)
    Prof. Raymond Agius
    Dr. Melanie Carder
    Dr. Anne Marie Money
    Dr. Sue Turner

APPENDIX 2: GLOSSARY OF ACRONYMS

CSO	Central Statistics Office (IRL)
CWHT	Construction Workers Health Trust (IRL)
DEPS	Death Events Publication Service (IRL)
DOHC	Department of Health and Children (IRL)
DSFA	Department of Social and Family Affairs (IRL)
EC	European Commission (EU)
EODS	European Occupational Disease Statistics (EU)
EPI-DERM	Occupational Skin Surveillance Scheme (UK)
ESAW	European Statistics on Accidents at Work (EU)
ESOD	European Schedule of Occupational Diseases (EU)
ESRI	Economic and Social Research Institute (IRL)
EU	European Union (EU)
FIOH	Finnish Institute of Occupational Health (Finland)
FOM	Faculty of Occupational Medicine (IRL)
FROD	Finnish Register of Occupational Diseases (Finland)
HIPE	Hospital In-Patient Enquiry system (IRL)
HPSC	Health Protection Surveillance Centre (IRL)
HSA	Health and Safety Authority (IRL)
HSE*	Health and Safety Executive (UK)
ICD	International Standard Classification of Diseases
ICD-10-AM	ICD-10-Australian Modification
ICGP	Irish College of General Practitioners (IRL)
IIF	Irish Insurance Federation (IRL)
ILO	International Labour Office
IOSH	Institution of Occupational Safety and Health (UK)
ISCO	International Standard for Classification of Occupations
LFS	Labour Force Survey (EU)
MOSS	Musculoskeletal Occupational Surveillance Scheme (UK)
NACE	Statistical classification of economic activities in the EU
NCRI	National Cancer Registry of Ireland (IRL)
NCvB	National Centre for Occupational Diseases (Netherlands)
NISO	National Irish Safety Organisation (IRL)
NTMA	National Treasury Management Agency (IRL)
OIB	Occupational Injuries Benefit (IRL)
OPRA	Occupational Physicians Reporting Activity (UK)
OSSA	Occupational Surveillance Scheme for Audiological Physicians (UK)
PAYE	Pay As You Earn (IRL)
PIAB	Personal Injuries Assessment Board (IRL)
PPS	Personal Public Service (Number) (IRL)
PRSI	Pay-Related Social Insurance (IRL)
QNHS	Quarterly National Household Survey (IRL)
RCPI	Royal College of Physicians of Ireland (IRL)
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (UK)
RODD	Reporting of Occupational Dermatological Diseases (IRL)
RORI	Reporting of Occupational Respiratory Illness (IRL)
SCA	State Claims Agency (IRL)
SFA	Small Firms Association (IRL)
SIDAW	Surveillance Of Infectious Diseases At Work (UK)
SOSMI	Surveillance of Occupational Stress and Mental Illness (UK)
SWORD	Surveillance of Work-Related and Occupational Respiratory Disease (UK)
THOR	The Health and Occupation Reporting Network (UK)
THOR-ENT	Occupational Surveillance of Otorhinolaryngological Disease (UK)
THOR-GP	The Health and Occupation Reporting Network for GPs (UK)
UK	United Kingdom
WHO	World Health Organisation

*The acromym HSE, which in this document refers to the British Health and Safety Executive, is also used by the Irish Health Services Executive. The Irish Health Services Executive is referred to in this report, but is always referred to in full; wherever the acronym HSE is used, it refers to the Health and Safety Executive in the UK.

APPENDIX 3: PRESCRIBED DISEASES (IRELAND)

Description of each disease or injury, and type of employment for which it is prescribed

A. Conditions due to physical agents

Conditions	Occupation Type
1. (a) **Bursitis** or **subcutaneous cellulitis** arising at or about the elbow or the knee due to severe or prolonged external friction or pressure at or about the elbow or the knee respectively (*Beat elbow or Beat knee*)	Manual labour causing severe or prolonged external friction or pressure at or about the elbow or the knee respectively.
1. (b) **Subcutaneous cellulitis** of the hand (*Beat hand*)	Manual labour causing severe or prolonged friction or pressure on the hand.
2. **Byssinosis**	Work in any room where any process up to and including the weaving process is performed in a factory in which the spinning or manipulation of raw or waste cotton or flax or the weaving of cotton or flax takes place
3. **Carcinoma** of the **nasal cavity** or associated **air sinuses** (*nasal carcinoma*)	Attendance for work: **(a)** in or about a building where wooden goods are manufactured or repaired, or **(b)** in a building used for manufacturing footwear or components of footwear made wholly or partly of leather or fibre board **(c)** at a place used wholly or mainly for repairing footwear made wholly or partly of leather or fibre board
4. **Cramp** of the **hand** or **forearm** due to repetitive movements	Work involving prolonged periods of handwriting, typing or other repetitive movements of the fingers, hand or arm
5. Disease or injury caused by **electromagnetic** or **ionising radiations**	Work involving exposure to electro-magnetic or ionising radiations
6. **Dysbarism,** including **decompression sickness, barotrauma** and **osteonecrosis**	Work involving subjection to compressed or rarefied air or other respirable gases or gaseous mixtures
7. **Pneumoconiosis**	See below.
8. **Heat Cataract**	Work involving frequent or prolonged exposure to rays from molten or redhot material
9. **Miner's nystagmus**	Work in or about a mine.
10. **Diffuse mesothelioma** (primary neoplasm of the mesothelium of the pleura or of the pericardium or of the peritoneum)	Work that involves: **(a)** working or handling asbestos or any admixture of asbestos, or **(b)** manufacturing or repairing asbestos textiles or other articles containing or composed of asbestos, or **(c)** cleaning of any machinery or plant used in any of the above operations and of any chambers, fixtures or appliances for the collection of asbestos dust, or **(d)** substantial exposure to the dust arising from any of the above operations
11. Substantial **sensorineural**	Work that involves:

hearing loss amounting to at least **50 decibels** in each ear, being due in the case of at least one ear to occupational noise, and being the average of pure tone losses measured by audiometry over the 1, 2 and 3 **kilohertz** frequencies (*occupational deafness*) **Conditions for Occupational Deafness** You must have been employed in a prescribed occupation for at least 10 years. If you have left that employment, you must claim within 5 years of leaving	**(a)** using or working wholly or mainly right beside the vicinity of pneumatic percussive tools or high-speed grinding tools, in the cleaning, dressing or finishing of cast metal or of ingots, billets or blooms, or **(b)** using or working wholly or mainly right beside pneumatic percussive tools on metal in the shipbuilding or ship repairing industries, or **(c)** using or working right beside pneumatic percussive tools on metal or for drilling or of highspeed grinding tools on metal including the sharpening of such tools on metal, for at least an average of one hour per working day, or **(d)** working wholly or mainly right beside drop-forging plant (including plant for drop-stamping or drop-hammering) or forging press plant engaged in the shaping of metal, or **(e)** working wholly or mainly in rooms or sheds where there are machines engaged in weaving man-made or natural (including mineral) fibres or in bulking up fibres in textile manufacturing, or **(f)** using or working wholly or mainly right beside machines engaged in cutting, shaping or cleaning metal nails, or **(g)** using or working wholly or mainly right beside plasma spray guns engaged in the deposition of metal, or **(h)** using or working wholly or mainly right beside any of the following machines engaged in working wood or material composed partly of wood, that is multi-cutter moulding machines, planing machines, automatic or semi-automatic lathes, multiple cross-cut machines, automatic shaping machines, double-end tenoning machines, vertical spindle moulding machines (including highspeed routing machines), edge banding machines, band-sawing machines with a blade width of not less than 75 millimetres and circular sawing machines in the operation of which the blade is moved towards the material being cut, or **(i)** using chain saws in forestry, or **(j)** working wholly or mainly setting, tuning or testing of aircraft engines or right beside such work
12. **Traumatic inflammation** of the **tendons** of the **hand** or **forearm** or of the associated **tendon sheaths**	Manual labour, or frequent or repeated movements of the hand or wrist.
13. **Vibration-induced white finger** (that is, **traumatic vasospasm** of at least two **distal phalanges** of three or more digits of one hand - occurring without seasonal intermission)	Work that involves: **(a)** using chain saws in forestry work, or **(b)** using percussive-grinding or other rotary tools, or **(c)** using pounding machines, or **(d)** holding materials being worked on by percussive tools
14. **Ulnar Nerve Neuritis**	Work involving prolonged external pressure at or about the elbow
15. **Carpal tunnel syndrome**	**(a)** Work involving using hand-held power tools, but excluding those which are solely powered by hand, whose internal parts vibrate so as to transmit that vibration to the hand, or **(b)** repetitive and forceful work causing abnormal pressure on the wrist over a prolonged period

16. **Lateral epicondylitis**	Work involving over a prolonged period, repeated and forceful rotational movements of the forearm with hand extended

B. Conditions due to biological agents	
Conditions	**Occupation Type**
1. **Ankylostomiasis**	Work in or about a mine.
2. **Anthrax**	Work involving contact with animals infected with anthrax or with such animal products or residues or handling (including loading or unloading or transport) of merchandise contaminated by such animals, products or residues
3. **Glanders**	Work involving contact with equine animals or their carcasses.
4. **Infection by *Leptospira***	**(a)** Work in places that are or are liable to be infested by rats or field mice, voles or other small mammals, or **(b)** Work at dog kennels or the care or handling of dogs, or **(c)** Work involving contact with bovine animals or their meat products or pigs or their meat products
5. Infection by organisms of the **genus *Brucella***	Work involving contact with: **(a)** animals infected by brucella or their carcasses or parts thereof or their untreated products, or **(b)** laboratory specimens or vaccines of, or containing brucella.
6. Infection by ***Streptococcus suis***	Work involving contact with pigs infected by streptococcus suis or with the carcasses, products or residues of pigs so infected
7. **Extrinsic allergic alveolitis** (including farmer's lung)	Work that involves exposure to moulds or fungal spores or heterologous proteins due to employment in: **(a)** agriculture or horticulture, forestry, cultivation of edible fungi or maltworking, or **(b)** loading or unloading or handling in storage mouldy vegetable matter or edible fungi, or **(c)** caring for or handling birds, or **(d)** handling bagasse
8. **Tuberculosis**	Work involving close and frequent contact with a source of tuberculosis infection
9. **Viral hepatitis**	Work that involves contact with: **(a)** human blood or human blood products, or **(b)** a source of viral hepatitis
10. **Non-endemic infectious** or **parasitic diseases** which are not endemic in the State. For example, malaria, leprosy, yellowfever, leishmaniasis, toxaplasmosis would be included in the category.	Work involving contact with a source of any such disease

C. Conditions due to chemical agents	
Conditions	**Occupation Type**
1. (a) **Angiosarcoma** of the liver (b) **Osteolysis** of the terminal phalanges of the fingers (c) **Non-cirrhotic portal fibrosis**	**(a)** Work in or about machinery or apparatus used for the polymerization of vinyl chloride monomer, a process that for the purposes of this provision, comprises all operations up to and including the drying of the slurry produced by the polymerization and the packaging of the dried product, or **(b)** Work in a building or structure in which any part of that process takes place.
2. (a) **Carcinoma** of the mucous membrane of the **nose** or associated air **sinuses** (b) Primary **carcinoma** of a **bronchus** or of a **lung**	Work in a factory where nickel is produced by decomposition of a gaseous nickel compound that necessitates working in or about a building or buildings where that process or any other industrial process connected or incidental to it takes place.
3. **Dystrophy** of the **cornea,** (including ulceration of the corneal surface) of the **eye**	Work that involves **(a)** using or handling or exposure to arsenic or tar, pitch, bitumen, mineral oil (including paraffin) or soot, or any compound, product or residue of any of these substances except quinone or hydroquinone, or **(b)** exposure to quinone or hydroquinone during their manufacture
4. (a) Localised new growth of the **skin, papillomatous** or keratotic (b) Squamous-celled **carcinoma** of the skin	Work that involves using or handling or exposure to, arsenic, tar, pitch, bitumen, mineral oil (including paraffin), soot or any compound, product or residue of any of these substances, except quinone or hydroquinone
5. **Occupational vitiligo**	Work that involves using or handling or exposure to, para-tertiary-butylphenol or para-tertiary-butylcatechol or para-amylphenol, hydroquinone or the monobenzyl or monobutyl ether of hydroquinone
6. Primary **neoplasm** (including papilloma, carcinoma-in-situ and invasive carcinoma) of the **epithelial lining** of the **urinary tract** (renal, pelvis, ureter, bladder and urethra)	**(a)** Work in a building in which any of the following substances is produced for commercial purposes: (i) alpha-naphthylamine or beta- naphthylamine or methylene-bis-orthochloroaniline (ii) diphenyl substituted by at least one nitro or primary amino group or by at least one nitro and primary amino group (including benzidine) (iii) any of the substances mentioned in sub-paragraph (ii) above if further ring substituted by halogeno, methyl or methoxy groups, but not by other groups (iv) the salts of any of the substances mentioned in sub-paragraphs i, ii, iii above (v) auramine or magenta, or **(b)** the use or handling or any of the substances mentioned in sub-paragraph (a) i to iv, or work in a process in which any such substance is used or handled or liberated, or **(c)** maintaining or cleaning any plant or machinery used in any such process as mentioned in sub-paragraph b), or cleaning clothing used in any building as mentioned in sub-paragraph a) if such clothing is cleaned within the works of which the building forms a part or in a laundry maintained and used solely in connection with such works
7. Poisoning by acrylamide monomer	Work that involves using or handling or exposure to, acrylamide monomer
8. Poisoning by arsenic or a	Work that involves using or handling or exposure to the

compound of arsenic	fumes, dust or vapour of, arsenic or a compound of arsenic or a substance containing arsenic.
9. Poisoning by benzene or a homologue of benzene	Work that involves using or handling or exposure to the fumes of, or vapour containing, benzene or any of its homologues
10. Poisoning by beryllium or a compound of beryllium	Work that involves using or handling or exposure to the fumes, dust or vapour of, beryllium or a compound of beryllium or a substance containing beryllium
11. Poisoning by cadmium or its toxic compounds	Work that involves exposure to the dust or fumes of cadmium or its toxic compounds
12. Poisoning by carbon bisulphide	Work that involves using or handling or exposure to the fumes or vapour of, carbon bisulphide or a compound of carbon bisulphide or a substance containing carbon bisulphide
13. Poisoning by chlorinated naphthalen	Work that involves using or handling or exposure to the fumes of, or dust or vapour containing chlorinated naphthalene
14. Poisoning by chrome or its toxic compounds	Work that involves exposure to the risk of poisoning by chrome or its toxic compounds
15. Poisoning by diethylene dioxide (dioxan)	Work that involves using or handling or exposure to the fumes of, or vapour containing, diethylene dioxide (dioxan)
16. Poisoning by dinitrophenol or a homologue of dinitrophenol, or by substituted dinitrophenols or by the salts of such substances.	Work that involves using or handling or exposure to the fumes of, or vapour containing, dinitrophenol or a homologue or substituted dinitrophenols or the salts of such substances
17. Poisoning by *Gonioma kamassi* (African boxwood)	Work that involves manipulation of gonioma kamassi, or any process in or incidental to manufacturing articles from it
18. Poisoning by lead or a compound of lead.	Work that involves using or handling or exposure to the fumes, dust or vapour of, lead or a compound of lead or a substance containing lead
19. Poisoning by manganese or a compound of manganese	Work that involves using or handling or exposure to the fumes, dust or vapour of, manganese or a compound of manganese or a substance containing manganese
20. Poisoning by mercury or a compound of mercury	Work that involves using or handling or exposure to the fumes, dust or vapour of, mercury or a compound of mercury or a substance containing mercury
21. Poisoning by nickel carbonyl	Work that involves exposure to nickel carbonyl gas
22. Poisoning by nitro- or amino- or chloro-derivatives of benzene or of a homologue of benzene or poisoning by nitrochlorbenzene	Work that involves using or handling or exposure to the fumes of, or vapour containing, a nitro- or amino- or chloro-derivative of benzene or of a homologue of benzene or nitrochlorbenzene
23. Poisoning by oxides of nitrogen	Work that involves exposure to oxides of nitrogen
24. Poisoning by phosphorus or an inorganic compound of phosphorus or poisoning due to	Work that involves using or handling or exposure to the fumes, dust or vapour of, phosphorus or a compound of phosphorus or a substance containing phosphorus

the anticholinesterase or pseudo anticholinesterase action of organic phosphorus compounds	
25. Poisoning by the toxic halogen derivatives of hydrocarbons of the aliphatic series.	Work that involves using or handling or exposure to the fumes of, or vapour containing, toxic halogen derivatives of hydrocarbons of the aliphatic series
26. Poisoning by fluorine or its toxic compounds	Work that involves exposure to fluorine or its toxic compounds
27. Poisoning by alcohols, glycols or ketones	Work that involves using or handling or exposure to the fumes or vapour of alcohols, glycols or ketones used as solvents or dilutants
28. Poisoning by carbon momoxide, hydrogen cyanide or its toxic derivatives or hydrogen sulphide.	Work involving exposure to the fumes or vapour of carbon monoxide, hydrogen cyanide or its toxic derivaties or hydrogen sulphide
29. Poisoning by nitroglycerine or nitroglycol.	Work that involves using or handling or exposure to the fumes, dust or vapour of, nitroglycerine or nitroglycol or a substance containing nitroglycerine or nitroglycol
30. Latex allergy:	Work involving exposure to latex in respect of work in human healthcare

D. Miscellaneous conditions	
Conditions	**Occupation Type**
1. **Asthma** which is due to exposure to any of the following agents: (a) animals or insects used for the purposes of research or education or in laboratories (b) dusts due to sowing or cultivating, harvesting, drying, handling, milling, transporting or storing barley, oats, rye, wheat, or maize, or handling, milling, transporting or storing meal or flour made from them (c) fumes or dusts arising from manufacturing or transporting or using hardening agents (including epoxy resin curing agents) based on phthalic anhydride or tetrachlorophthalic anhydride, trimellitic anhydride or triethylene-tetramine (d) fumes arising from the use of resin as a soldering flux (e) isocyanates (f) platinum salts (g) proteolytic enzymes (h) red cedar wood dust (i) glutaraldehyde (j) latex in respect of work in human healthcare (occupational asthma) **Condition for occupational asthma** If you have left a prescribed occupation you must claim benefit within 10 years of leaving.	Work that involves exposure to any of the agents set out across
2. **Inflammation** or **ulceration** of the mucous membrane of the upper respiratory passages or mouth produced by dust or liquid or vapour	Work involving exposure to dust or liquid or vapour
3. **Non-infective dermatitis** of external origin (including chrome ulceration of the skin but excluding dermatitis due to ionising particles or electro-magnetic radiations other than radiant heat)	Work involving exposure to dust or liquid or vapour or any other external agent

	capable of irritating the skin (including friction or heat, but excluding ionising particles or electro-magnetic radiations other than radiant heat)

Type of employment for which Pneumoconiosis (A.7) is prescribed

Employment in any occupation:
1. (a) involving mining, quarrying or working of silica rock or the working of dried quartzose sand or any dry deposit or dry residue of silica or any dry admixture containing such materials (including any occupation in which any of the above operations takes place incidentally to the mining or quarrying of other minerals or to the manufacture of articles containing crushed or ground silica rock) (b) involving handling of any of the materials specified in the above sub-paragraph in or incidental to any of the operations mentioned in it, or substantial exposure to the dust arising from such operations 2. involving breaking, crushing or grinding of flint or the working or handling of broken, crushed, or ground flint or materials containing such flint, or substantial exposure to the dust arising from any such operations 3. involving sand blasting by means of compressed air with the use of quartzose sand or crushed silica rock or flint, or substantial exposure to the dust arising from such sand blasting 4. involving work in a foundry or the performance of, or substantial exposure to the dust arising from, any of the following operations: (a) the freeing of steel castings from adherent siliceous substance (b) the freeing of metal castings from adherent siliceous substance: by blasting with an abrasive propelled by compressed air, by steam or by a wheel, or using power-driven tools 5. in or incidental to the manufacture of china or earthenware (including sanitary earthenware, electrical earthenware and earthenware tiles), and any occupation involving substantial exposure to the dust arising from it 6. involving the grinding of mineral graphite or substantial exposure to the dust arising from such grinding. 7. involving the dressing of granite or any igneous rock by masons, or the crushing of such materials, or substantial exposure to the dust arising from such operations. 8. involving use, or preparation for use, of a grindstone, or substantial exposure to the dust arising therefrom. 9. (a) involving the working or handling of asbestos or any admixture of asbestos (b) involving manufacture or repair of asbestos textiles or other articles containing or composed of asbestos (c) involving cleaning of any machinery or plant used in any of the above operations and of any chambers, fixtures and appliances for collecting asbestos dust (d) involving substantial exposure to the dust arising from any of the above operations. 10. (a) involving work underground in any mine in which one of the objects of the mining operations is the getting of any mineral (b) involving working or handling above ground at any coal or tin mine of any minerals extracted from the mine, or any operation incidental to it (c) involving trimming of coal in any ship, barge or lighter, or in any dock or harbour or at any wharf or quay (d) involving sawing, splitting or dressing of slate, or any operation incidental to it 11. in or incidental to the manufacture of carbon electrodes by an industrial undertaking for use in the electrolytic extraction of aluminium from aluminium oxide, and any occupation involving substantial exposure to the dust arising from it 12. involving boiler scaling or substantial exposure to the dust arising from it
Employment to which presumption of occupational origin of disease does not apply
1. Employment in any occupation involving exposure to mineral dust.

Reference: Social Welfare (Consolidated Occupational Injuries) Regulations, 2007
Source: http://www.welfare.ie/publications/sw33.html

APPENDIX 4: EUROPEAN SCHEDULE OF OCCUPATIONAL DISEASES

Annex I
The diseases mentioned in this schedule must be linked directly to the occupation. The Commission will determine the criteria for recognising each of the occupational diseases listed hereunder:

1 Diseases caused by the following chemical agents:
100 Acrylonitrile
101 Arsenic or compounds thereof
102 Beryllium (glucinium) or compounds thereof
103.01 Carbon monoxide
103.02 Carbon oxychloride
104.01 Hydrocyanic acid
104.02 Cyanides and compounds thereof
104.03 Isocyanates
105 Cadmium or compounds thereof
106 Chromium or compounds thereof
107 Mercury or compounds thereof
108 Manganese or compounds thereof
109.01 Nitric acid
109.02 Oxides of nitrogen
109.03 Ammonia
110 Nickel or compounds thereof
111 Phosphorus or compounds thereof
112 Lead or compounds thereof
113.01 Oxides of sulphur
113.02 Sulphuric acid
113.03 Carbon disulphide
114 Vanadium or compounds thereof
115.01 Chlorine
115.02 Bromine
115.04 Iodine
115.05 Fluorine or compounds thereof
116 Aliphatic or alicyclic hydrocarbons derived from petroleum spirit or petrol
117 Halogenated derivatives of the aliphatic or alicyclic hydrocarbons
118 Butyl, methyl and isopropyl alcohol
119 Ethylene glycol, diethylene glycol, 1,4-butanediol and the nitrated derivatives of the glycols and of glycerol
120 Methyl ether, ethyl ether, isopropyl ether, vinyl ether, dichloroisopropyl ether, guaiacol, methyl ether and ethyl ether of ethylene glycol
121 Acetone, chloroacetone, bromoacetone, hexafluoroacetone, methyl ethyl ketone, methyl n-butyl ketone, methyl isobutyl ketone, diacetone alcohol, mesityl oxide, 2-methylcyclohexanone
122 Organophosphorus esters
123 Organic acids
124 Formaldehyde
125 Aliphatic nitrated derivatives
126.01 Benzene or counterparts thereof (the counterparts of benzene are defined by the formula: CnH2n-6)
126.02 Naphthalene or naphthalene counterparts (the counterpart of naphthalene is defined by the formula: CnH2n-12)
126.03 Vinylbenzene and divinylbenzene
127 Halogenated derivatives of the aromatic hydrocarbons
128.01 Phenols or counterparts or halogenated derivatives thereof
128.02 Naphthols or counterparts or halogenated derivatives thereof
128.03 Halogenated derivatives of the alkylaryl oxides
128.04 Halogenated derivatives of the alkylaryl sulfonates
128.05 Benzoquinones
129.01 Aromatic amines or aromatic hydrazines or halogenated, phenolic, nitrified, nitrated or sulfonated derivatives thereof
129.02 Aliphatic amines and halogenated derivatives thereof

130.01 Nitrated derivatives of aromatic hydrocarbons
130.02 Nitrated derivatives of phenols or their counterparts
131 Antimony and derivatives thereof
132 Nitric acid esters
133 Hydrogen sulphide
135 Encephalopathies due to organic solvents which do not come under other headings
136 Polyneuropathies due to organic solvents which do not come under other headings

2 Skin diseases caused by substances and agents not included under other headings
201 Skin diseases and skin cancers caused by:
201.01 Soot
201.03 Tar
201.02 Bitumen
201.04 Pitch
201.05 Anthracene or compounds thereof
201.06 Mineral and other oils
201.07 Crude paraffin
201.08 Carbazole or compounds thereof
201.09 By-products of the distillation of coal
202 Occupational skin ailments caused by scientifically recognised allergy-provoking or irritative substances not included under other headings

3 Diseases caused by the inhalation of substances and agents not included under other headings
301 Diseases of the respiratory system and cancers
301.11 Silicosis
301.12 Silicosis combined with pulmonary tuberculosis
301.21 Asbestosis
301.22 Mesothelioma following the inhalation of asbestos dust
301.31 Pneumoconioses caused by dusts of silicates
302 Complication of asbestos in the form of bronchial cancer
303 Broncho-pulmonary ailments caused by dusts from sintered metals
304.01 Extrinsic allergic alveolites
304.02 Lung diseases caused by the inhalation of dusts and fibres from cotton, flax, hemp, jute, sisal and bagasse
304.04 Respiratory ailments caused by the inhalation of dust from cobalt, tin, barium and graphite
304.05 Siderosis
305.01 Cancerous diseases of the upper respiratory tract caused by dust from wood
304.06 Allergic asthmas caused by the inhalation of substances consistently recognised as causing allergies and inherent to the type of work
304.07 Allergic rhinitis caused by the inhalation of substances consistently recognised as causing allergies and inherent to the type of work
306 Fibrotic diseases of the pleura, with respiratory restriction, caused by asbestos
307 Chronic obstructive bronchitis or emphysema in miners working in underground coal mines
308 Lung cancer following the inhalation of asbestos dust
309 Broncho-pulmonary ailments caused by dusts or fumes from aluminium or compounds thereof
310 Broncho-pulmonary ailments caused by dusts from basic slags

4 Infectious and parasitic diseases
401 Infectious or parasitic diseases transmitted to man by animals or remains of animals
402 Tetanus
403 Brucellosis
404 Viral hepatitis
405 Tuberculosis
406 Amoebiasis
407 Other infectious diseases caused by work in disease prevention, health care, domicilary assistance and other
comparable activities for which a risk of infection has been proven
5 Diseases caused by the following physical agents:
502.01 Cataracts caused by heat radiation

502.02 Conjunctival ailments following exposure to ultraviolet radiation
503 Hypoacousis or deafness caused by noise
504 Diseases caused by atmospheric compression or decompression
505.01 Osteoarticular diseases of the hands and wrists caused by mechanical vibration
505.02 Angioneurotic diseases caused by mechanical vibration
506.10 Diseases of the periarticular sacs due to pressure
506.11 Pre-patellar and sub-patellar bursitis
506.12 Olecranon bursitis
506.13 Shoulder bursitis
506.21 Diseases due to overstraining of the tendon sheaths
506.22 Diseases due to overstraining of the peritendineum
506.23 Diseases due to overstraining of the muscular and tendonous insertions
506.30 Meniscus lesions following extended periods of work in a kneeling or squatting position
506.40 Paralysis of the nerves due to pressure
506.45 Carpal tunnel syndrome
507 Miner's nystagmus
508 Diseases caused by ionising radiation

ANNEX II
Additional list of diseases suspected of being occupational in origin which should be subject to notification and which may be considered at a later stage for inclusion in Annex I to the European schedule

2.1 Diseases caused by the following agents:
2.101 Ozone
2.102 Aliphatic hydrocarbons other than those referred to under heading 1.116 of Annex I
2.103 Diphenyl
2.104 Decalin
2.105 Aromatic acids — aromatic anhydrides or their halogenated derivatives
2.106 Diphenyl oxide
2.107 Tetrahydrophurane
2.108 Thiopene
2.109 Methacrylonitrile
Acetonitrile
2.111 Thioalcohols
2.112 Mercaptans and thioethers
2.113 Thallium or compounds thereof
2.114 Alcohols or their halogenated derivatives not referred to under heading 1.118 of Annex I
2.115 Glycols or their halogenated derivatives not referred to under heading 1.119 of Annex I
2.116 Ethers or their halogenated derivatives not referred to under heading 1.120 of Annex I
2.117 Ketones or their halogenated derivatives not referred to under heading 1.121 of Annex I
2.118 Esters or their halogenated derivatives not referred to under heading 1.122 of Annex I
2.119 Furfural
2.120 Thiophenols or counterparts or halogenated derivatives thereof
2.121 Silver
2.122 Selenium
2.123 Copper
2.124 Zinc
2.125 Magnesium
2.126 Platinum
2.127 Tantalum
2.128 Titanium
2.129 Terpenes
2.130 Boranes
2.140 Diseases caused by inhaling nacre dust
2.141 Diseases caused by hormonal substances
2.150 Dental caries associated with work in the chocolate, sugar and flour industries
2.160 Silicium oxide

2.170 Polycyclic aromatic hydrocarbons which do not come under other headings
2.190 Dimethylformamide

2.2 Skin diseases caused by substances and agents not included under other headings
2.201 Allergic and orthoallergic skin ailments not recognised in Annex I
25.9.2003 EN Official Journal of the European Union L 238/33

2.3 Diseases caused by inhaling substances not included under other headings
2.301 Pulmonary fibroses due to metals not included in the European schedule
2.303 Broncho-pulmonary ailments and cancers associated with exposure to the following:
— soot
— tar
— bitumen
— pitch
— anthracene or compounds thereof
— mineral and other oils
2.304 Broncho-pulmonary ailments caused by man-made mineral fibres
2.305 Broncho-pulmonary ailments caused by synthetic fibres
2.307 Respiratory ailments, particularly asthma, caused by irritants not listed in Annex I
2.308 Cancer of the larynx following the inhalation of asbestos dust

2.4 Infectious and parasitic diseases not described in Annex I
2.401 Parasitic diseases
2.402 Tropical diseases

2.5 Diseases caused by physical agents
2.501 Avulsion due to overstraining of the spinous processes
2.502 Disc-related diseases of the lumbar vertebral column caused by the repeated vertical effects of whole-body vibration
2.503 Nodules on the vocal chords caused by sustained work-related vocal effort

Reference: L 238/34 EN Official Journal of the European Union

APPENDIX 5: MAIN LEGAL INSTRUMENTS

European Legal Instruments

European Commission. (2003). Commission Recommendation of 19 September 2003 concerning the European Schedule of Occupational Diseases. (2003/670/EC). Official Journal n° L238, 25.09.2003, p. 28-34.

European Commission. (2007b). Proposal for a Regulation of the European Parliament and of the Council on Community statistics on public health and health and safety at work. COM (2007) 46. 2007/0020 (COD). Brussels: EC.

Irish Legal Instruments

Safety, Health and Welfare at Work (General Application) Regulations, 1993. S.I. No. 44 of 1993. Part X: Notification of Accidents and Dangerous Occurrences.

Safety, Health and Welfare at Work (General Application) Regulations, 2007. S.I. No. 299 of 2007.

Safety, Health and Welfare at Work Act, 2005. No. 10 of 2005.

Social Welfare (Consolidation) Act, 2005. No. 26 of 2005.

Social Welfare (Occupational Injuries) (Prescribed Diseases) (Amendment) Regulations 200. SI No. 183 of 2005.

Social Welfare (Consolidated Occupational Injuries) Regulations 2007. SI No. 102 of 2007.

APPENDIX6: GLOSSARY OF TERMS AND DEFINITIONS

Central Statistics Office Definitions (Labour Force Survey)

Incidence	Refers to those who first became aware of their disease in the past 12 months
Prevalence	Includes long-standing as well as new cases.

Health and Safety Executive / National Statistics Office Definitions (UK)

Prevalence rate	The prevalence estimate divided by the population at risk of having a work-related illness (HSE, 2007)
Estimated prevalence	The estimated number of people with a work-related illness at any time during the 12 month reference period. It includes the full range of illnesses from long standing to new cases (HSE, 2007).
Estimated incidence	The estimated number of new cases of work-related illness occurring in the 12-month period, i.e. people first becoming aware of their illness in this 12-month period (HSE, 2007).
Incidence rate	The incidence estimate (restricted to individuals working in the 12 month period) divided by the population at risk of experiencing a new case of work-related illness during the reference period (HSE, 2007).

(Health and Safety Executive, 2007)

Eurostat, European Occupational Diseases Statistics (EODS) Definitions

Incidence rate	The incidence rate of incident occupational diseases is the number of incident occupational diseases per 100 000 persons in employment during the reference year (Eurostat, 2005).
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 in employment during the reference year (Eurostat, 2005).

(Eurostat, 2005).

APPENDIX 7: ILO LABORSTA DEFINITIONS

The national agencies are requested to provide the data in conformity with the most up-to-date international statistical guidelines in this field, currently the Resolution concerning statistics of occupational injuries (resulting from occupational accidents) adopted by the Sixteenth International Conference of Labour Statisticians (ICLS) (Geneva, 1998).

The Resolution contains the following definitions for statistical purposes:

occupational accident: an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death;
as occupational accidents are to be considered travel, transport or road traffic accidents in which workers are injured and which arise out of or in the course of work, i.e. while engaged in an economic activity, or at work, or carrying on the business of the employer;

occupational injury: any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity;

case of occupational injury: the case of one worker incurring an occupational injury as a result of one occupational accident;

incapacity for work: inability of the victim, due to an occupational injury, to perform the normal duties of work in the job or post occupied at the time of the occupational accident.

It also recommends that the statistics should cover all workers regardless of their status in employment (i.e. both employees and the self-employed, including employers and own-account workers), and the whole country, all branches of economic activity and all sectors of the economy.

The following are generally excluded: cases of occupational disease (an occupational disease is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity) and cases of injury due to commuting accidents (a commuting accident is an accident occurring on the habitual route, in either direction, between the place of work or work-related training and (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes her/his meals; or (ii) the place where she/he usually receives her/his remuneration; which results in death or personal injury).

Source: http://laborsta.ilo.org/

Resolution concerning statistics of occupational injuries resulting from occupational accidents. Sources and Methods: Labour Statistics Volume 8: Occupational injuries.

APPENDIX 8: RESPONSE TO HIPE ENQUIRY OCTOBER 2007

Hospital Inpatient Enquiry (HIPE) Discharges due to Selected Occupational Diseases
(Report provided by Information Unit, Department of Health and Children: 26 October 2007)

ICD-10-AM	Description	2005				2006			
		Principal Diagnosis	Secondary Diagnoses	Total Discharges [Principal + Secondary Diagnoses]	Total Discharges Excluding Re-admissions	Principal Diagnosis	Secondary Diagnoses	Total Discharges [Principal + Secondary Diagnoses]	Total Discharges Excluding Re-admissions
C45.0	Mesothelioma of pleura	33	55	88	22	46	37	83	16
J61	Pneumoconiosis due to asbestosis and other mineral fibres	7	30	37	30	1	42	43	34
J62.8	Pneumoconiosis due to dust containing silica	9	6	15	10	4	3	7	4
J66.0	Byssinosis	0	0	0	0	0	0	0	0
J67.0	Hypersensitivity pneumonitis due to organic dust Farmers Lung	15	69	84	61	17	86	103	66
C30.0*	Malignant neoplasm of the nasal cavity	31	8	39	26	38	110	148	41
Total Cases		**95**	**168**	**263**	**149**	**106**	**278**	**384**	**161**

Source: This table has been produced by the Information Unit and is based on Hospital Inpatient Enquiry (HIPE) data received to end of September 2007.
Note: It is only possible to indentify re-admissions to the same hospital
* The data above for C30.0 include 5 discharges of children in 2005 and 4 in 2006. There were no discharges involving children in any of the other categories

APPENDIX 9: SUMMARY OF CURRENT DATA COLLECTION COVERAGE

Data Collector	System	Coverage and comments	
Health and Safety Authority	Mesothelioma, Asbestosis Register	Coverage	Requirement for physicians to report to HSA when diagnosis made - covers all places of work
		Comments	Under-reporting; lack of awareness, latency period a problem
Department of Social and Family Affairs	OIB/DB	Coverage	PAYE workers eligible for occupational injuries benefit
		Comments	Possible under-reporting, excludes self-employed, defence forces, and some public servants; administrative system
	Renaissance-type projects	Coverage	PAYE workers eligible for disability benefit
		Comments	Unexplored potential to provide information on work-related illness (currently back pain, but move to mental health illness shortly)
Personal Injuries Assessment Board	Claims records	Coverage	Claims data from employees who sue their employer for compensation; no coverage of occupational diseases
State Claims Agency	Claims records	Coverage	Claims data from public servants who sue the state for compensation; unexplored potential for data sharing
Insurance Industry	Claims records	Coverage	Insured self-employed
		Comments	Uninsured; not all insured make claims; very little data.
Central Statistics Office	QNHS	Coverage	Nationally representative survey of working population
		Comments	illness not validated; valid and reliable source of self-reported illness; pending increase in data collection frequency
Occupational Physicians	OPRA	Coverage	Physicians who volunteer to report occupational illness
Specialist Physicians	THOR and SWORD	Comments	Potentially a good source of data; not representative, but can identify and monitor trends
			Slow uptake, potential for reporter fatigue, and low report numbers would limit analysis opportunities
General Practitioners	THOR GP	Coverage	Not in use in Republic of Ireland;
		Comments	Unexplored potential for use among GPs with occupational medicine training
Other health care professionals	Physician-reporting systems	Coverage	Unexplored potential for reporting from occupational health, specialist and practice nurses
National Cancer Registry of Ireland	Registry	Coverage	Majority of hospital patient files to collect all cases of malignant diseases
		Comments	Occupational cancers not easily identifiable; only useful for cancers that can be easily attriubuted to occupation
Death Certificates and Coroners files	Deaths notifications	Coverage	All registered deaths and all inquests
		Comments	Deaths registration of occupation is poor; deaths difficult to attribute to occupational cause
			Coroners information system not well developed, currently dependent on a few individual reporters
Department of Health and Children	HIPE	Coverage	All acute hopsital discharges
		Comments	Unexplored potential for diseases that can easily be attributed to occupation.
Health Services Executive	HPSC infectious disease notifications	Coverage	All notifiable diseases in the public health system
		Comments	Under-reporting: can be difficult to identify occupational diseases from all diseases
Other surveys	National Farm Survey	Coverage	Nationally representative surveys for single sector
		Comments	No questions included on occupational illness at present

APPENDIX 10: DATA COLLECTION DEVELOPMENT OPPORTUNITIES

Data Collector	System	Source/Reporter	Current use by HSA	Continue?	Development potential	Comment
Health and Safety Authority	Mesothelioma, Asbestosis Register	Physician, Coroner, Deaths	Yes	Yes		
	SAFE	Inspectors, other agencies	Yes	Yes	Yes	
Department of Social and Family Affairs	OIB/DB	Employee	Yes	Yes	Yes	Maximise data sharing opportunities
	Renaissance-type projects	Employee	Yes		Yes	Explore data sharing opportunities
Personal Injuries Assessment Board	Claims records	Employee	No		No	
State Claims Agency	Claims records	Employee	No		Yes	Explore data sharing opportunities
Insurance Industry	Claims records	Employers, self-employed	No		No	
Central Statistics Office	QNHS	Employee	Yes	Yes	Yes	Increased collection and analysis opportunities
Occupational Physicians	OPRA	Physician	Yes	Yes	Yes	Promotion and motivation
Specialist Physicians	THOR and SWORD	Physician	Yes	Yes	Yes	Promotion and motivation
General Practitioners	THOR GP	Physician	No		Yes	Initiation, promotion and motivation
Other health care professionals	Physician-reporting systems	Physician	No		Yes	OH practice, specialist nurses, explore possibilities
National Cancer Registry of Ireland	Registry	Patient files	Yes	Yes	No	
Death Certificates and Coroners files	Deaths notifications	Registration and Inquests	Yes		Yes	Explore Coroner Information System opportunities
Department of Health and Children	HIPE	Patient files	No		Yes	
Health Services Executive	HPSC infectious disease notifications	Clinicians and laboratories	No		Yes	Explore data collection and sharing opportunities
Surveys	National Farm Survey	Farmers	No		Yes	Explore data collection and sharing opportunities