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**The incidence of occupational skin and respiratory disease as reported to The Health and Occupation Reporting (THOR) network by physicians in the Irish Republic between 2005 and 2007.**

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## **EXECUTIVE SUMMARY**

**Background:** The Republic of Ireland's Health and Safety Authority requires methods of determining the incidence of occupational disease and work-related ill-health and of identifying causal factors. Voluntary reports from physicians allow monitoring of occupational ill-health within the ROI as they currently do in a number of EU countries, and aid intervention planning aimed at reducing workplace risks.

**Objectives:** To summarise occupational disease reported to The Health and Occupation Reporting network (THOR) from physicians in the Irish Republic (2005-2007), and to provide baseline information for comparison with further data relating to occupational skin and respiratory disease.

**Methods:** Chest physicians and dermatologists in the ROI have been voluntarily providing anonymised case reports for occupational skin and respiratory disease since January 2005 whilst occupational physicians have been reporting since January 2007. Incident cases for occupational disease were analysed by age, gender, occupation/industry, and suspected causal agent.

**Results:** Dermatologists and respiratory physicians from the Irish Republic reported 181 incident cases of occupational skin disease to Occupational Skin Surveillance (EPIDERM) and 35 cases of occupational respiratory disease to Surveillance of Work-Related and Occupational Respiratory Disease (SWORD)

from 2005-2007 whilst occupational physicians reported 82 incident cases of work-related ill-health to Occupational Physicians Reporting Activity (OPRA) (35 mental ill-health, 35 musculoskeletal, 8 skin and 4 respiratory) during 2007. Dermatology cases comprised 47.5% males, while 89.2% of respiratory cases were male. The majority of cases reported to OPRA were female (78.0%). The mean age for dermatology cases was 37.0 years (males 38.5; females 35.9), and for respiratory cases was 50.9 years (males 52.9; females 41.2) whilst for cases reported by occupational physicians it was 41.4 years (males 43.7; females 40.7). The dermatology diagnoses were mainly contact dermatitis (98%); respiratory diagnoses included occupational asthma 51.4%, pneumoconiosis 20.0%, mesothelioma 8.6%, and non malignant pleural disease 5.7%. The cases reported by occupational physicians were mental ill-health 42%, musculoskeletal 42%, skin 9.6% and respiratory 4.8%. Agents commonly associated with case reports were thiuram and nickel (skin disease), and silica and asbestos (respiratory disease). The most frequently reported precipitating event for mental ill-health case reports was 'factors intrinsic to the job', for example, 'workload'. Tasks and movements commonly associated with the musculoskeletal cases were 'lifting/carrying/pushing/pulling' and 'materials manipulation', respectively. Cases were most frequently reported from the hospital activities sector for mental ill-health, musculoskeletal and skin disease, and from mining/quarrying for respiratory disease.

**Conclusions:** Information sent by reporters from the Irish Republic to THOR is an important source of data that indicates types of work-related ill-health and related industries for targeted disease prevention. In due course it should also contribute to EU 'statistics' from the ROI.

## 1 INTRODUCTION

The Republic of Ireland (ROI) requires information on incidence of occupational disease and work-related ill-health to help determine the best preventative strategies and to help fulfil its EU obligations. A number of EU centres e.g. the UK, Netherlands and France use voluntary reporting from physicians for these purposes. Thus, in the UK, from 1996 to 2001 the estimated average annual specialist reported incidence rate of work-related skin disease was 97 per million<sup>1</sup>. These early data were based on 8559 case reports resulting in 28088 estimated diagnoses of occupational dermatoses over this 6 year period. For occupational respiratory disease, data from 1992 to 2001 (based on 10253 case reports) give an estimated average annual incidence rate of 2795 per million<sup>2</sup>. Data from occupational physicians suggested an incidence rate (1999 to 2001) of work-related mental ill-health of 1103 per million<sup>3</sup> (based on 3544 case reports) and an incidence rate of work-related musculoskeletal disease of 1643 million (based on 5278 case reports)<sup>4</sup>.

These incidence data are reliant on sources such as voluntary surveillance schemes for occupationally related ill-health, which are based on medical reports. In the UK such schemes comprise The Health and Occupation Reporting network (THOR), which was established in 2002<sup>5</sup>. In THOR, occupational skin disease is reported by dermatologists to EPIDERM (occupational skin surveillance) and respiratory disease is reported by chest physicians to SWORD (Surveillance of Work-related & Occupational Respiratory Disease). In addition, occupational

physicians can report any case of work-related ill-health to OPRA (Occupational Physicians Reporting Activity).

One of the strengths of THOR is that it obtains information from different strands of medically reported sources. This allows better incidence estimates to be calculated and identification of high risk occupations and their sequelae, with a view to targeting prevention. It has also been shown that it is possible to draw valid conclusions from THOR data, even for small nations such as Scotland<sup>6</sup> as well as for specific industrial sectors<sup>7</sup>, and this preliminary report aims to illustrate the value of such information in the Irish Republic.

## **2 AIMS AND OBJECTIVES**

This paper reports on three strands of information reported by physicians in the Irish Republic to THOR, namely occupational skin disease (reported by dermatologists to EPIDERM), occupational respiratory disease (reported by chest physicians to SWORD) and all occupational diseases (reported by occupational physicians to OPRA). The baseline information provided here can be used for comparison, and also for targeted disease prevention relating to occupational skin and respiratory disease.

## **3 METHODS**

The methodology behind EPIDERM, SWORD and OPRA has been described in detail previously<sup>8,9,10</sup> with participating physicians being asked to report new

cases of disease that have been caused or aggravated by work. Precise case criteria and definitions are not imposed (but guidance is provided), and reporters are not requested to carry out investigations beyond those necessary on clinical grounds. The methodology was established using paper-based reporting (a reporting card), however more recently reporters have been invited to provide data in an electronic format, with this methodology being the subject of a recent survey<sup>11</sup>. Thus, since 2002 all new THOR schemes including one for GPs in the UK (THOR-GP) and the schemes in the ROI have been designed to be exclusively electronic. The reporting web-form asks the physician to provide the same information as was requested previously on paper, and electronic reporting has been the sole method of reporting in the EPIDERM, SWORD and OPRA schemes based in the Irish Republic. Reporters are requested to give information on age, gender, geographical location, job title, industry, and suspected agent (up to six agents can be recorded) for each case. The occupational information within the case reports is coded using the Standard Occupational Classification (SOC) for the job title, and the Standard Industrial Classification (SIC) for data on industry<sup>12,13,14</sup>. Coding of suspected agents is based on a scheme that was developed by the Health and Safety Executive (HSE) in the UK for internal use. All coding is undertaken independently by two researchers, and any discrepancies are reconciled by a third person.

In EPIDERM physicians are requested to report on the full range of occupational skin diseases, with the major sub-groups on the web-form being: contact

dermatitis (CD), contact urticaria (CU), folliculitis / acne, infection, mechanical dermatoses, nail disorders, neoplasia, and “other dermatoses” (including low humidity or cold temperature induced dermatoses). In SWORD, physicians return case details for all causes of occupational respiratory ill-health; the sub-groups for SWORD are occupational asthma, inhalation accidents, allergic alveolitis, bronchitis/emphysema, infectious disease, non malignant pleural disease (NMPD), mesothelioma, lung cancer, pneumoconiosis, and “other respiratory disease” (including rhinitis and byssinosis). In OPRA, occupational physicians return case details for all causes of occupational ill-health. Diagnostic information is coded using the International Classification of Disease 10<sup>th</sup> Revision (ICD-10)<sup>15</sup> so that comparisons can be made between reporting schemes.

Cases of occupational disease reported to EPIDERM, SWORD and OPRA by physicians in the Irish Republic from 2005 to 2007 have been extracted from the databases (current at 1/4/08). Data were analysed using the statistical package SPSS V14.0.

Ethics Committee approval has been given for THOR in the Irish Republic by the Public Health Research Ethics Committee of The Royal College of Physicians of Ireland.

## **4 RESULTS**

### **4.1 Participation**

At the beginning of 2005, 14 consultant dermatologists and 12 consultant respiratory physicians in the Irish Republic agreed to participate in THOR. The number of active reporters (physicians who returned a web-form, either containing cases or a nil return) in EPIDERM was 7/14 (50.0%), and 4/12 (33.3%) in SWORD. The number of reports received for EPIDERM and SWORD by quarter is shown in Figure 1; an average of 17.8 cases and 1.8 nil returns each quarter, and a slight fall in reporting in the last two quarters of 2007.

At the onset of Irish OPRA, 18 occupational physicians agreed to participate. The number of active reporters in OPRA was 7/18 (38.9%). The number of reports received for OPRA by quarter is shown in Figure 2; an average of 20.5 cases and 1.3 nil returns.

Steps have been taken and others are in progress to improve the physicians' participation (see discussion).

### **4.2 EPIDERM**

#### **4.2.1 CASE REPORTING AND DIAGNOSES**

EPIDERM received 181 case reports producing 179 diagnoses (2 cases were not assigned a diagnosis). A further 20 returns stated that the physician had "no cases to report" for a particular month. Of the 7 physicians who sent in EPIDERM returns, 6 have returned case reports, and 1 has only ever returned a "no cases to report" reply. Of the 181 case reports, 86/181 (47.5%) were males, with a

mean age of 38.5 years (range 15-75), while the 95/181 (52.5%) females had a mean age of 35.9 years (range 18-65).

The major diagnostic sub-groups in EPIDERM are shown in Figure 3, with nearly all the diagnoses (176/179, 98%) being contact dermatitis (CD).

#### **4.2.2 SUSPECTED AGENTS**

Up to 6 suspected agents may be cited for each case report, and the agents most frequently associated with CD are shown in Figure 4. For allergic contact dermatitis (ACD) thiuram was the agent most often associated with case reports, in irritant contact dermatitis (ICD) the agent was wetwork, while for mixed contact dermatitis (MCD) preservatives were most frequently reported. The remaining (non-CD) reports comprised 2 diagnoses of contact urticaria (where the suspected agents were wood shavings, latex, cobalt chloride, and nickel sulphate), and 1 infective case which was associated with contact with infected animals. A summary of numbers of these ACD, ICD and MCD diagnoses, mean ages, and age ranges by gender is given in Table 1. Overall, there were a few more cases of CD reported in females (54.3%) than males (45.7%), and females were slightly younger than males (mean age; females 35.6 years, males 38.4 years).

### **4.2.3 OCCUPATION AND INDUSTRY**

The most frequently reported industrial sectors in EPIDERM were hospital activities which contributed 39/181 (21.5%) cases, and construction (32/181; 17.7% cases), as shown in Table 2.

Of note, other service activities (SIC 93) include washing and dry cleaning of textile and fur products, hairdressing and other beauty treatment, funeral and related services, and physical well-being activities. Analysis of case reports by occupation (Figure 5) shows that most jobs (67/181, 37.0%) were classified as “skilled trades”; this group would include construction workers, chefs, and electricians.

The 33 hospital activities sector workers had a mean age of 38.8 years (range 18-64), were almost all females (31/33, 93.9%), and nurses made up the largest occupational group (25/33, 75.8%). Diagnoses for all the 33 cases were CD; 22 allergic, 10 irritant, and 1 mixed allergic/irritant.

The 32 construction workers were made up of a younger group of workers (mean age 33.1 years, range 15-60), were all males, and were mainly bricklayers, plasterers or builders (21/32, 65.6%). All but 2 of this sector of workers were diagnosed with CD, and the remaining two cases (neither of which were assigned a diagnosis) were a carpenter (associated with paratertiary butyl phenol formaldehyde (PTBPF) resin in footwear) and in a builder (attributed to

cement/cobalt). Of the 30 CD diagnoses, 20 were allergic, 6 were irritant, and 4 were mixed allergic/irritant.

### **4.3 SWORD**

#### **4.3.1 CASE REPORTING AND DIAGNOSES**

SWORD received fewer case reports than EPIDERM overall, namely a total of 35. These case reports produced 35 diagnoses, with 1 case assigned 2 diagnoses, and 1 case not being assigned a diagnosis (involving a dentist exposed to adhesive/bonding agents). Of the 4 active reporters in SWORD, 2 have returned case reports plus “no cases to report” replies, and the other 2 have solely returned case reports to THOR between 2005 and 2007. For the cases reported to SWORD, the majority (29/35, 82.9%) were in males and their mean age was 52.9 (range 30-83) years. The 6 females (18.8%) reported to SWORD were younger, with a mean age of 41.2 years (range 19-64).

The major diagnostic sub-group in SWORD was occupational asthma (18/35 diagnoses, 51.4%) as shown in Figure 6. Most of these occupational asthma diagnoses were reported as sensitisation (15/18 diagnoses), but there were 3 diagnoses reported as caused by irritation (reactive airways dysfunction syndrome [RADS]).

#### 4.3.2 SUSPECTED AGENTS

The number of sensitising agents associated with the 18 diagnoses of occupational asthma was 16; 3/16 (18.8%) were hairdressing chemicals, 3/16 (18.8%) were printing chemicals, and the agents listed below were each cited on 1 occasion:

- glues/adhesives
- cobalt
- drugs/medicaments
- wood/wood dust
- flour
- plant material (pollen)
- isocyanates
- epoxy resins
- chromium

For the 3 RADS diagnoses, there were 6 associated agents; 2 were soaps/detergents, 3 were acids (sulphuric, hydrochloric, and phosphoric), and 1 was bleach.

Pneumoconiosis contributed 7/35 (20.0%) respiratory diagnoses, with 6 of these being associated with silica, and 1 with asbestos. Asbestos was also cited as the causal agent for a further 6 diagnoses; 2 were NMPD, 3 were mesothelioma, and 1 was lung cancer. The remaining 3 diagnoses reported to SWORD were allergic alveolitis, bronchitis/emphysema, and “other respiratory disease”

(rhinitis/cough/rash), with suspected agents for these 3 diagnoses being thermactinomycetes, wood dust, and drugs/medicaments respectively.

### **4.3.3 OCCUPATION AND INDUSTRY**

Mining and quarrying was the most frequently reported industrial sector in SWORD, and contributed 7/35 (20%) cases, as shown in Table 3. These miners were all males and had a mean age of 64.1 years (range 51-83). Case reports for all but the youngest of these workers stated that they had retired from employment. These 7 case reports produced 8 diagnoses; 6 cases were solely diagnosed with pneumoconiosis (all associated with silica exposure), while 1 case had a dual diagnosis of pneumoconiosis and NMPD (and was associated with asbestos exposure). The most frequently reported occupational group for respiratory cases was 'process, plant & machine operatives' followed by 'skilled trades' (Figure 7).

## **4.4 OPRA**

### **4.4.1 CASE REPORTING AND DIAGNOSES**

Occupational physicians reported 82 case reports (producing 87 diagnoses) to ROI OPRA during 2007. Of the 7 active reporters in 2007, 4 have returned only case reports, 2 have returned both case reports and "no cases to report" replies, and 1 has only ever returned a "no cases to report". The majority of the cases reported to OPRA were females (64/82, 78.0%) with a mean age of 40.7 (range

19-61) years. The male cases (18/82, 22.0%) were slightly older with a mean age of 43.7 (range 29-61) years.

As indicated in Figure 8, the majority of diagnoses reported to OPRA were mental ill-health diagnoses (40/87, 46.0%) and musculoskeletal (35/87, 40.2%) with a smaller proportion of skin (8/87, 9.2%) and respiratory cases (4/87, 4.6%). Of the mental ill-health cases 20 had a diagnoses of stress, 8 of anxiety/depression, and 5 had a co-diagnosis of both anxiety/depression and stress. There was also 1 reported case of post traumatic stress disorder in a catering assistant and 1 diagnosis of “mixed affective symptoms” in a nurse. The majority (20/35) of the musculoskeletal cases were back/thoracic spine disorders with the remaining cases upper limb disorders. All of the 8 skin cases were contact dermatitis (7 irritant and 1 suspected allergic) whilst the respiratory cases comprised of 2 cases of asthma, 1 case of bronchitis and 1 case of rhinitis.

#### **4.4.2 SUSPECTED AGENTS**

The 35 mental ill-health cases were associated with a total of 48 precipitating events, classified into four main categories and 15 subcategories (Figure 9). The most frequently associated precipitating event (23/48, 47.9%) was ‘factors intrinsic to the job’ which included ‘workload’, ‘travel’, and ‘organisational factors’. This was followed by ‘interpersonal relationships’ (15/48, 31.2%) which included 8 cases of perceived bullying. The remaining precipitating events were ‘changes at work’ (5/48, 10.4%) which included ‘changes in work content’ and ‘reduction of resources’, and ‘traumatic events’ (4/48, 8.3%) which included an assault at

work, (witness) of a suicide on a railway track, a road traffic accident and an accident at work.

As indicated in Figure 10, the 35 musculoskeletal cases were associated with a total of 36 tasks (6 different categories) and 39 movements (7 different categories). The most frequently associated task was 'lifting/carrying/pushing/pulling' (12/36, 33.3%) followed by 'materials manipulation' (11/36, 30.6%) and 'keyboard work' (7/36, 19.4%). The most frequently associated movement was 'materials handling' (22/39, 56.4%) followed by 'postural' (6/39, 15.4%). Four of the 35 musculoskeletal cases were attributed to accidents.

The suspected agents associated with the 8 skin cases were; wetwork, cleansing agents, glove use, dishwashing detergents, Hydrex(chlorhexidine) and hand detergents whilst the suspected agents associated with the four respiratory cases were; chlorine disinfectant, wood dust, chlorine dioxide and 'sanitizer fumes'.

#### **4.4.3 OCCUPATION AND INDUSTRY**

The majority of the cases reported to OPRA (71/82, 86.5%) were in the health and social care sector (Table 4). Cases reported in this sector were predominantly female (61/71, 85.9%) and had a mean age of 42 years (age range 19-61). A further 6 cases were reported in the land transport sector (5/6, 83.3% were anxiety diagnoses with 1 musculoskeletal diagnosis), 4 of which were reported in the rail industry and 2 in the bus service industry.

The most frequently reported occupation was nurses (22/71, 31.0%) which falls within the SOC category 'associate professional and technical' (Figure 11). Other cases included 6 cases reported in clerical workers, 4 cases in pharmacy technicians and 3 cases in hospital consultants. Non-healthcare related occupations reported to OPRA included bus drivers (2 cases), train drivers (1 case), legal secretaries (2 cases) and carpenters (1 case).

#### **4.5 DISCUSSION**

One of the fundamental aims of THOR is to produce estimates of incidence of work-related ill-health, with occupational skin, respiratory, mental ill-health and musculoskeletal disease being important diagnostic areas encompassed within this. In order to do this, the data need to be as accurate as possible, and their constraints and limitations should be identified. In this, the extent of our reporting network (THOR) within the Irish Republic is therefore important, as is the behaviour of both reporters (physicians) and patients.

The reporters in EPIDERM and SWORD are specialists in dermatology or respiratory medicine within the Irish Republic whilst the reporters in OPRA are occupational physicians. Within the period reported here (2005-2007) this resulted in 18 active reporters in the three schemes. However, there are eligible consultant specialists who do not report, either by declining to participate in EPIDERM, SWORD and OPRA, or by signing up to the scheme but not returning any web reports. Any means that could be applied to raise participation rates in

THOR should therefore be encouraged, including the circulation of information about the schemes (including this report) to potential THOR participants. To this end we have lectured to physicians in Ireland (e.g. Prof Agius delivered the Smiley lecture in November 2006, and Dr Noone delivered the Eustace lecture in April 2008 – both at the Royal College of Physicians in Dublin). We have enlisted the help of medical Faculties and Societies in the ROI. Thus, the Faculty of Occupational Medicine officially supported this initiative in 2006 and more recently the Irish Society of Occupational Medicine has been helpful too. Through the good offices of Dr James Hayes the last Annual General Meeting of the Irish Thoracic Society passed a motion encouraging its members to participate and has just circulated a letter of invitation from us with details on how to join. In order to improve further the participation of Irish physicians besides the two lectures mentioned above we have had newsletter entries published on our behalf by the Faculty of Occupational Medicine in Dublin and we are making data (such as in this report) available for publication in Irish medical meetings. In due course we plan to submit a peer reviewed paper on this data.

In the UK, participation in EPIDERM, SWORD and OPRA is high (ranging from 86% to 98% from 2000-2003)<sup>16</sup> and appears to be higher than that found in the early stages of the schemes in the Irish Republic. The UK reporting rate may in part be due to the “two tier” system of reporting (every month for “core” reporters and one calendar month in 12 for “sample” reporters in the UK based schemes) which allows reporters to sign up to a model with which they are able to comply. Higher participation rates may also be as a result of the length of time that the

schemes have been established, for example, in the UK, SWORD, EPIDERM and OPRA have become known to specialists in dermatology and respiratory medicine and occupational physicians over time. This pattern may also be seen in due course within the Irish Republic, especially when increased amounts of data are received (over time).

In schemes such as EPIDERM, SWORD and OPRA, reporter and patient behaviour are also very important. For example, the decision making process as to whether or not a physician reports a case to THOR will depend upon the physician's clinical experience, and whether or not the physician considers occupation or work-related factors in assessing a case. As many physicians reporting occupational dermatoses and respiratory ill-health to EPIDERM and SWORD may not have access to patch or bronchial challenge testing facilities, their attitudes and beliefs are likely to have a substantial effect on reporting patterns. Such factors have been investigated for musculoskeletal reporting of occupational ill-health within THOR where, despite the lack of strict criteria for case definition, there was strong agreement between rheumatologists and occupational physicians on work-relatedness and work attribution<sup>17</sup>. However, these results (albeit encouraging) cannot be transferred directly from occupational musculoskeletal disease to occupational skin and respiratory disease reporting.

Patients also play an important factor in what is reported to THOR, by presenting (or not) to a physician, and also in the information they give to the physician(s) who they see in the medical consultation process. The natural history of the condition also plays a part here, and assuming that the remission of symptoms is the patient's only or main aim, this would affect the history given to their physician. In addition, the role of the general practitioner (GP) is pivotal, as many cases will not be referred beyond the GP, and a proportion of cases of occupational disease will therefore not be referred to physicians reporting to schemes such as EPIDERM and SWORD. In order to address this important area of omission, in the UK a reporting scheme for general practitioners (THOR-GP) was established in 2005, and data from this scheme is in press in due course<sup>18, 19</sup>.

As the data for the Irish Republic schemes increases then it should be possible to compare data obtained from these schemes with data from THOR schemes in Northern Ireland (where 75 doctors report, including 9 dermatologists, 14 chest physicians, and 19 occupational physicians). Further comparisons could also be made between data from the Irish Republic, Northern Ireland, and the rest of the British Isles, to provide invaluable information to assist the production of incidence estimates for occupationally related ill-health in the European Union (EU). Epidemiological studies of occupational dermatitis and respiratory disease from beyond the British Isles and elsewhere in the EU may allow additional comparisons beyond the EU to be made, but the data sources used are likely to

differ to those used in THOR, and need to be considered carefully in such a process<sup>10, 20-23</sup>.

The comparison of data obtained for different industrial sectors also has practical relevance, and analysis of such information should allow the early recognition of new workplace hazards, and also of potential hazards within new workplaces. This process is assisted by THOR's regular receipt of reports (on a monthly basis), and by developments and improvements in electronic communication within the reporting scheme<sup>11</sup>. Within industrial sectors, the importance of the different sources of information (such as EPIDERM, SWORD and OPRA) also becomes apparent, as shown by variation in reporting patterns for industries by dermatologists, respiratory physicians and occupational physicians illustrated in this study. Once more data are collected in the Irish Republic from EPIDERM, SWORD, and OPRA, the quality of the denominator information can be explored with a view to attempting to determine true incidence rates.

Beyond THOR, further information on occupational dermatitis, respiratory, mental ill-health and musculoskeletal disease is also available from self reports of work-related ill-health, which are an important source of information. For example, in the UK overall estimates for 2004-2005 were that 576,000 people had an illness that they believed was caused or made worse by current or past work who had become aware of their illness in the previous 12 months<sup>24</sup>. These self reports have the advantage of originating from a broad base as they are based on

55,000 households (0.2% of the population), but are disadvantaged by individuals either not realising that their ill-health is work-related, or mistakenly thinking that it is.

Despite its limitations, we believe that the information produced by surveillance schemes such as THOR is an important source of data for work-related ill-health, and is currently the best available overall source of data relating to medically certified occupational disease incidence. Such data are highly relevant for recognising, evaluating and controlling workplace hazards, especially when plans are being formulated to target groups of workers in disease prevention programmes.

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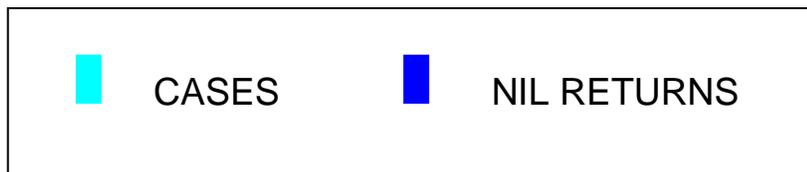
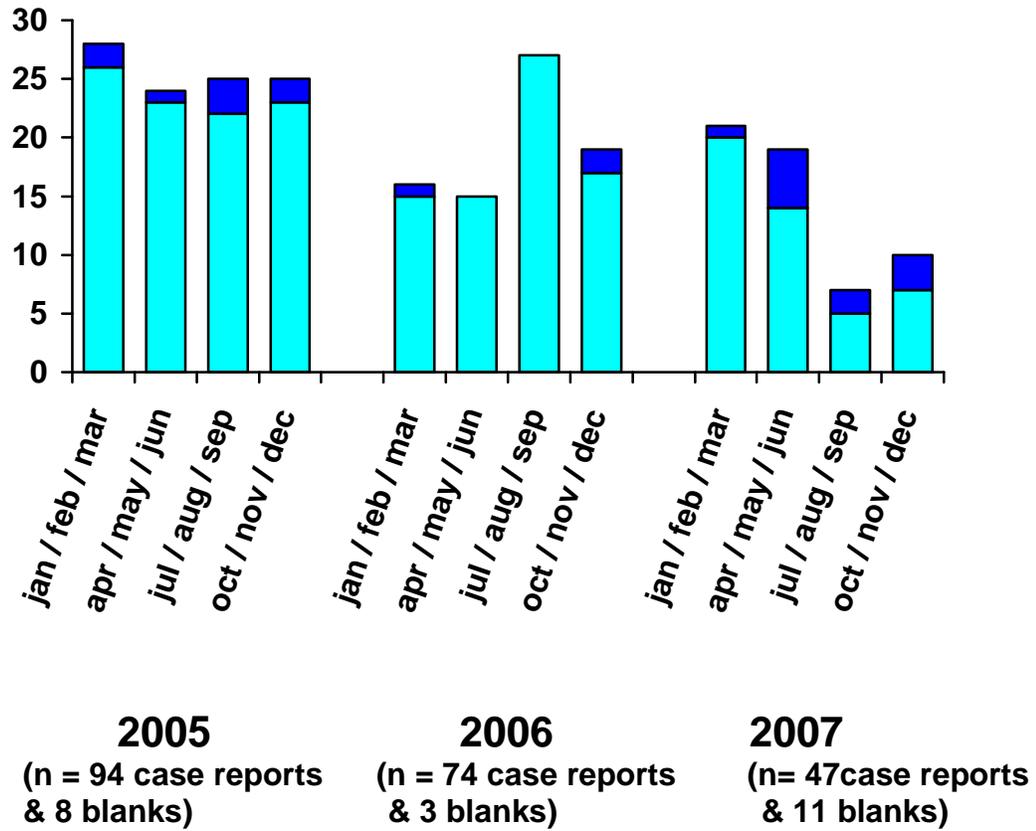
who wish to join THOR and participate in the reporting schemes can find further details at <http://www.medicine.manchester.ac.uk/coeh/thor>

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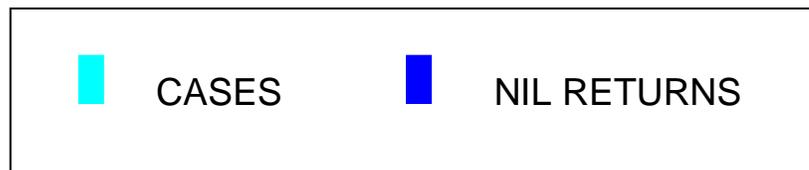
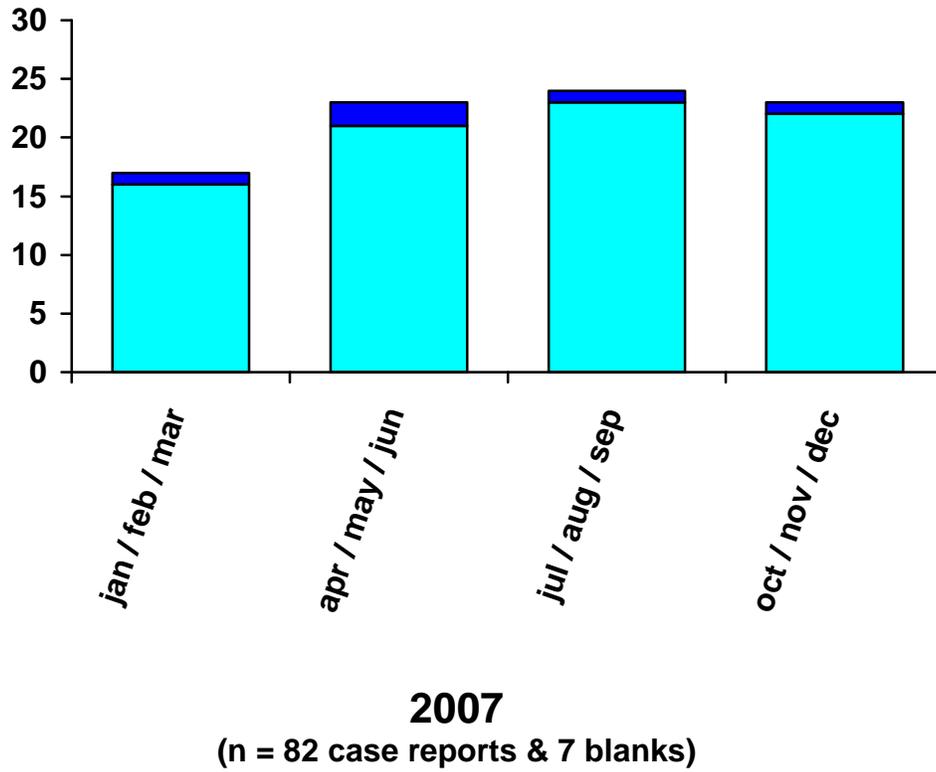
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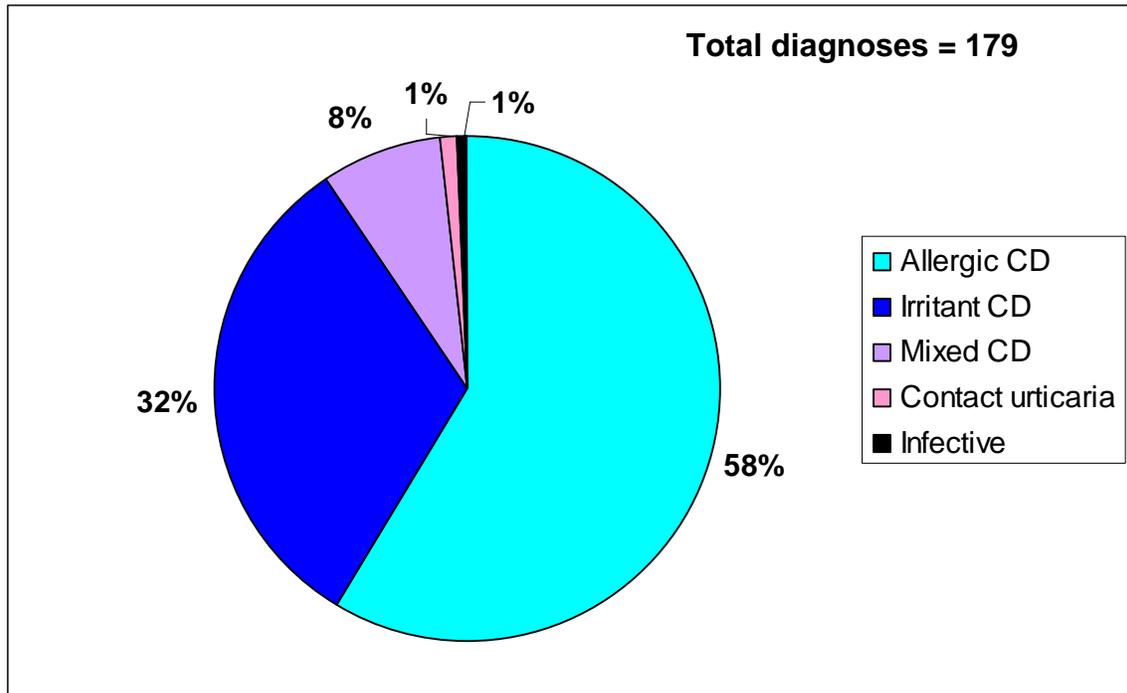
**Figure 1 Reports (cases and nil returns) in Irish EPIDERM and SWORD by quarter for 2005 - 2007**



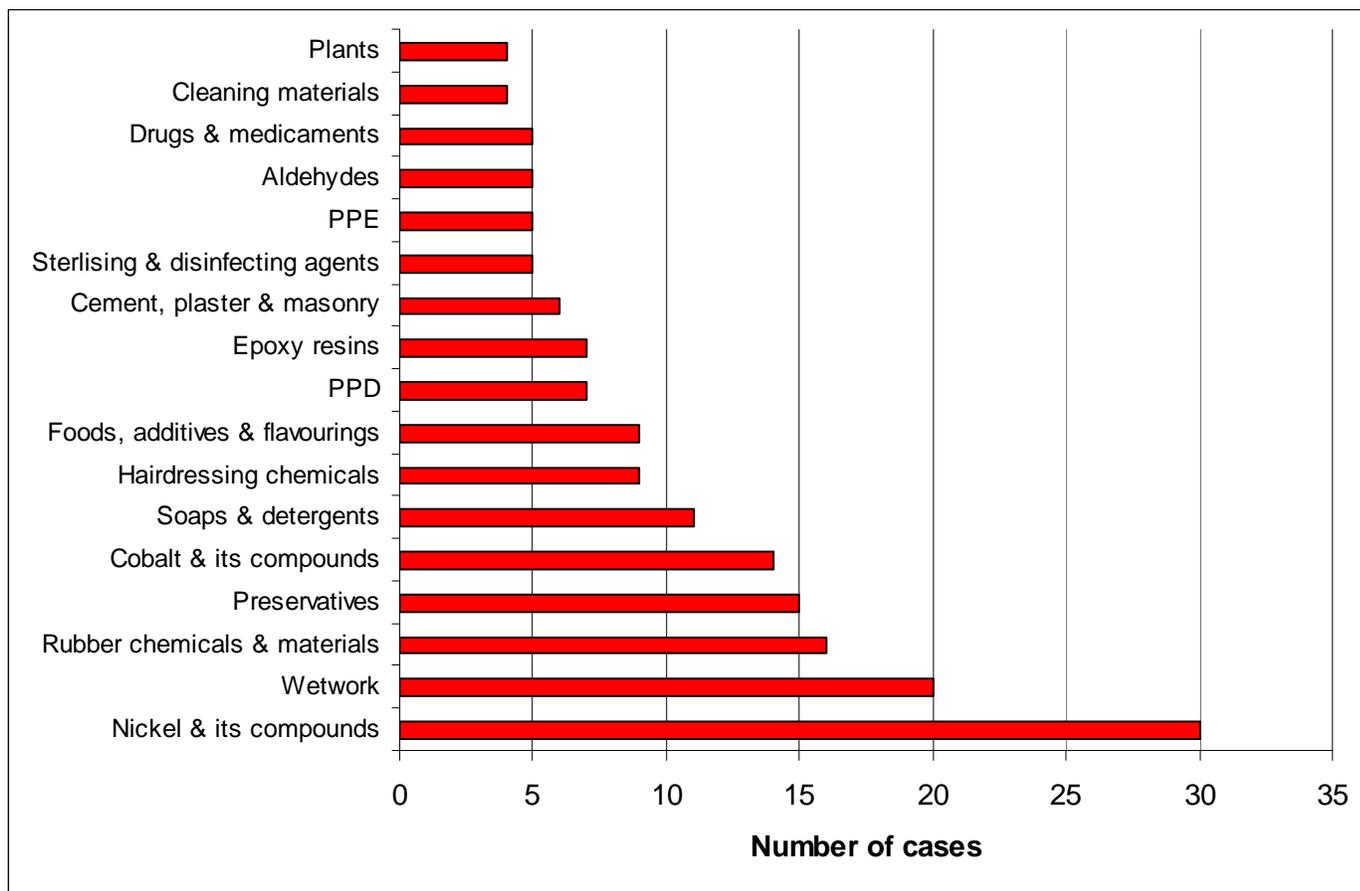
**Figure 2** Reports (cases and nil returns) in IRISH OPRA by quarter for 2007



**Figure 3 Disease categories reported by dermatologists in the Irish Republic to EPIDERM (2005-2007)**



**Figure 4 The most frequently reported agents for contact dermatitis, reported by dermatologists in the Irish Republic to EPIDERM (2005-2007)**



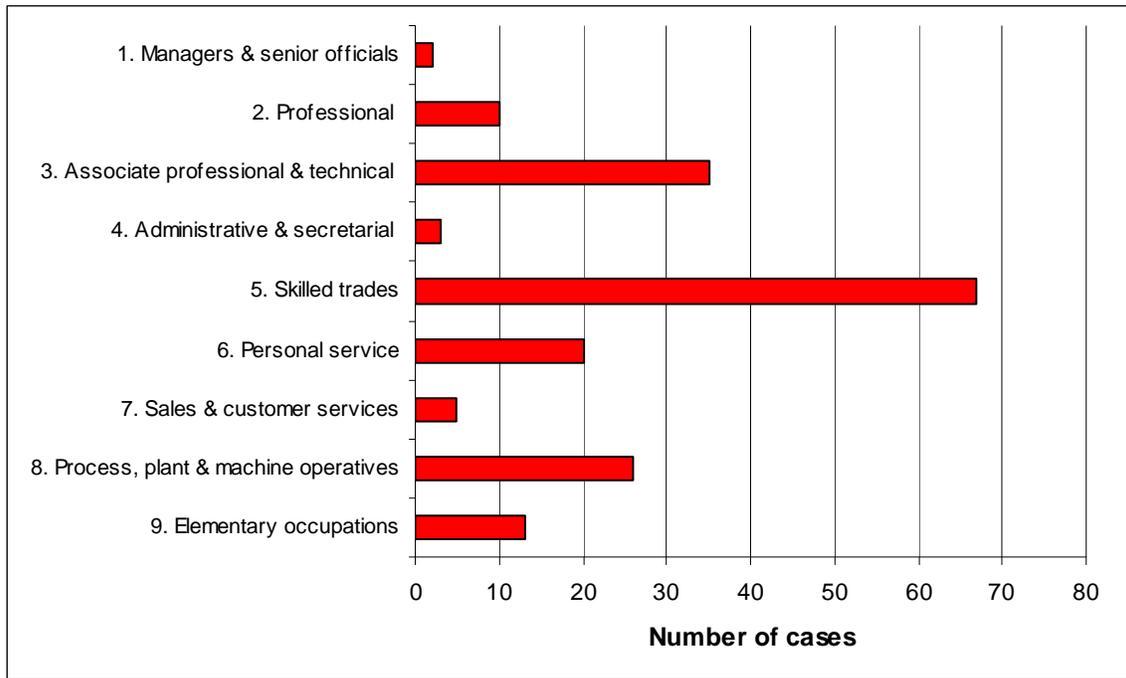
**Table 1 Age and gender of cases diagnosed with contact dermatitis in Irish EPIDERM (2005-2007)**

<b>DIAGNOSIS</b>	<b>MALES</b>	<b>FEMALES</b>	<b>ALL</b>
<b>Allergic CD</b>			
Number of cases (%)	50 (49.5%)	51 (50.5%)	101 (100%)
Mean age (years)	38.6	37.2	37.9
Age range (years)	15-75	17-64	15-75
<b>Irritant CD</b>			
Number of cases (%)	23 (40.4%)	34 (59.6%)	57 (100%)
Mean age (years)	37.5	31.0	33.6
Age range (years)	16-62	19-62	16-62
<b>Mixed CD</b>			
Number of cases (%)	5 (35.7%)	9 (64.3%)	14 (100%)
Mean age (years)	38.2	43.7	41.7
Age range (years)	19-54	17-65	17-65
<b>ALL CD</b>			
Number of cases (%)	79 (45.7%)	94 (54.3%)	173 (100%)
Mean age (years)	38.4	35.6	36.7
Age range (years)	15-75	17-65	15-75

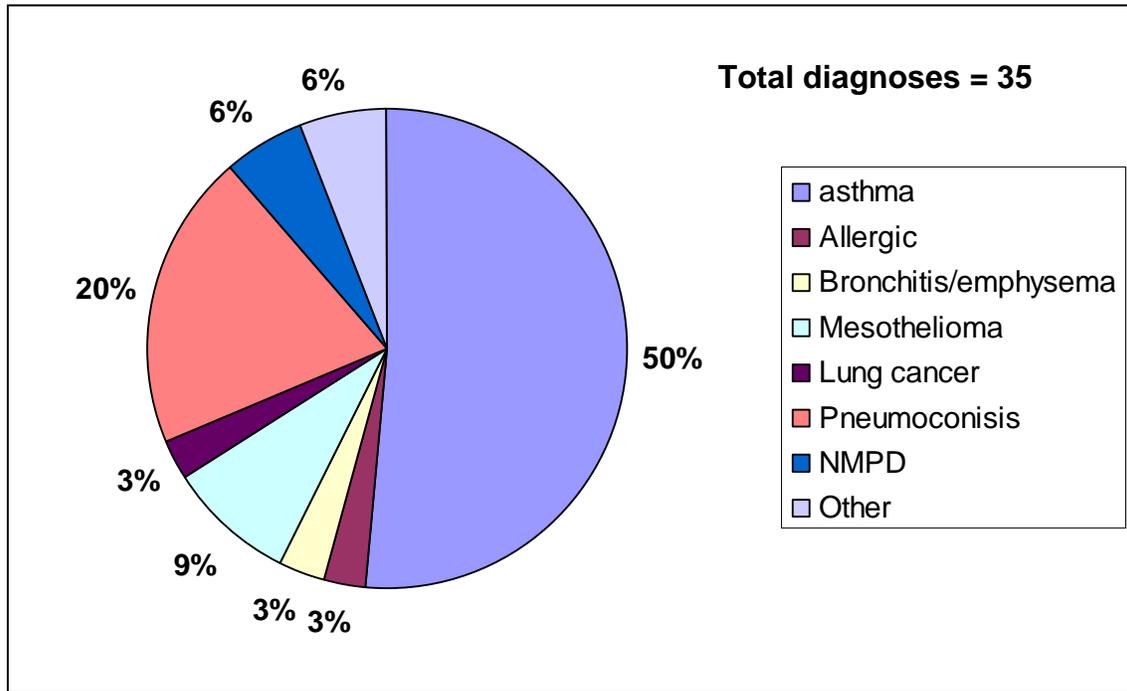
**Table 2: Cases reported to Irish EPIDERM by Standard Industrial Classification (SIC)**

<b>SIC code</b>	<b>Industry</b>	<b>Number of cases</b>
01	Agriculture, hunting and related service activities	8
05	Fishing	1
15	Manufacture of food products and beverages	3
22	Publishing, printing & reproduction of recorded media	2
24	Manufacture of chemicals and chemical products	14
25	Manufacture of rubber & plastic products	4
26	Manufacture of other non-metallic mineral products	4
29	Manufacture of machinery and equipment not elsewhere classified	3
31	Manufacture of electrical machinery and apparatus not elsewhere classified	1
33	Manufacture of medical, precision and optical instruments, watches and clocks	6
36	Manufacture of furniture; manufacture not elsewhere classified	2
40	Electricity, gas, steam, and hot water supply	1
45	Construction	32
50	Sale, maintenance and repair of motor vehicles and motor cycles; retail sale of fuel	6
52	Retail trade, except motor vehicles & motorcycles; repair of personal and household	10
55	Hotels and restaurants	12
60	Land transport; transport via pipelines	1
64	Post and telecommunications	1
65	Financial intermediation, except insurance and pension funding	2
72	Computer and related activities	1
74	Other business activities (e.g. legal work, accountancy)	4
75	Public administration and defence; compulsory social security	1
80	Education	3
85.11	Hospital activities	33
85.13	Dental practice	4
85.14	Other human health activities (e.g. ophthalmologic dispensing)	2
85.2	Veterinary practice	1
92	Recreational cultural and sporting activities	1
93	Other service activities (e.g. hairdressing, beauty services)	15
0	Not enough information provided	3
	<b>TOTAL</b>	<b>181</b>

**Figure 5 Cases reported to Irish EPIDERM by Standard Occupational Classification (SOC)**



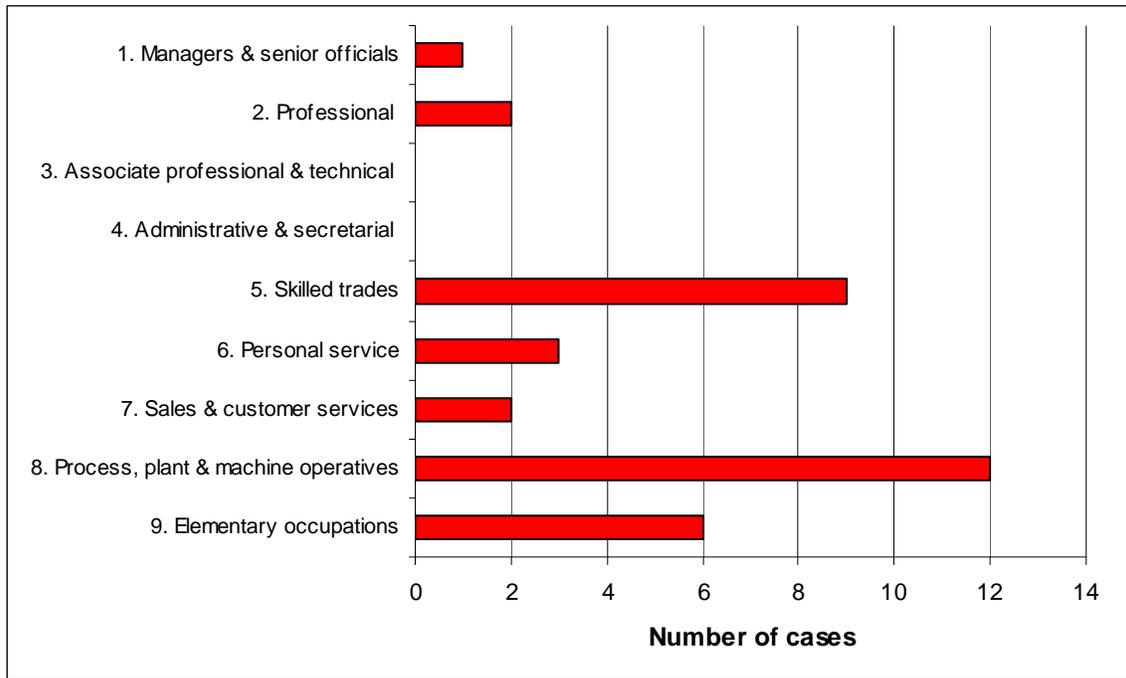
**Figure 6 Disease categories reported by chest physicians in the Irish Republic to SWORD (2005-2007)**



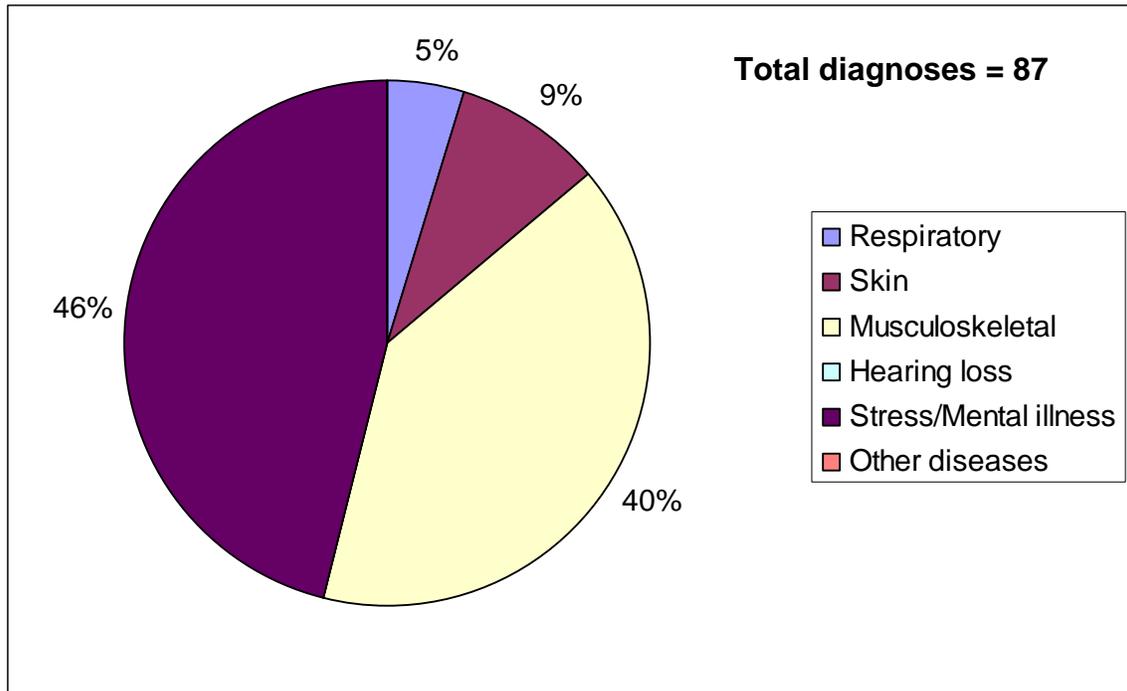
**Table 3: Cases reported to Irish SWORD by Standard Industrial Classification (SIC)**

<b>SIC code</b>	<b>Industry</b>	<b>Number of cases</b>
01	Agriculture, hunting and related service activities	1
14	Mining and quarrying (other than metal ores)	7
22	Publishing, printing & reproduction of recorded media	2
24	Manufacture of chemicals and chemical products	4
29	Manufacture of machinery and equipment not elsewhere classified	1
33	Manufacture of medical, precision and optical instruments, watches and clocks	1
35	Manufacture of other transport equipment	1
45	Construction	3
50	Sale, maintenance & repair of motor vehicles and motor cycles; retail sale of fuel	3
52	Retail trade, except motor vehicles & motorcycles; repair of personal & household goods	1
55	Hotels and restaurants	1
74	Other business activities (e.g. legal work, accountancy)	2
75	Public administration and defence; compulsory social security	2
80	Education	2
85.13	Dental practice	1
93	Other service activities (e.g. hairdressing, beauty services)	3
	<b>TOTAL</b>	<b>35</b>

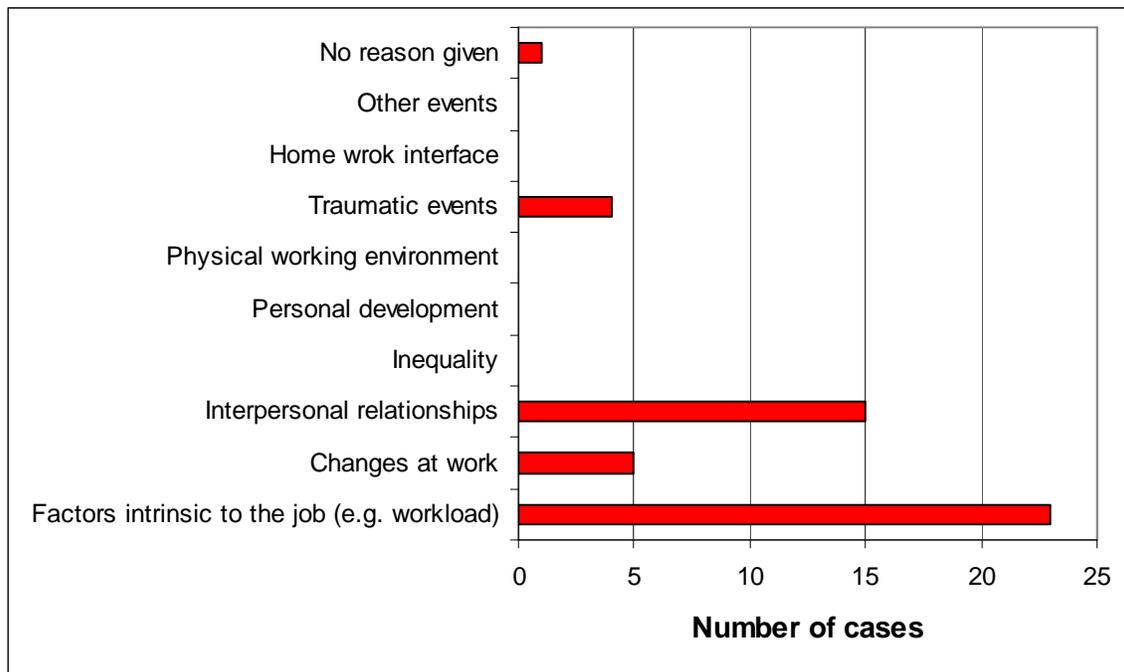
**Figure 7 Cases reported to Irish SWORD by Standard Occupational Classification (SOC)**



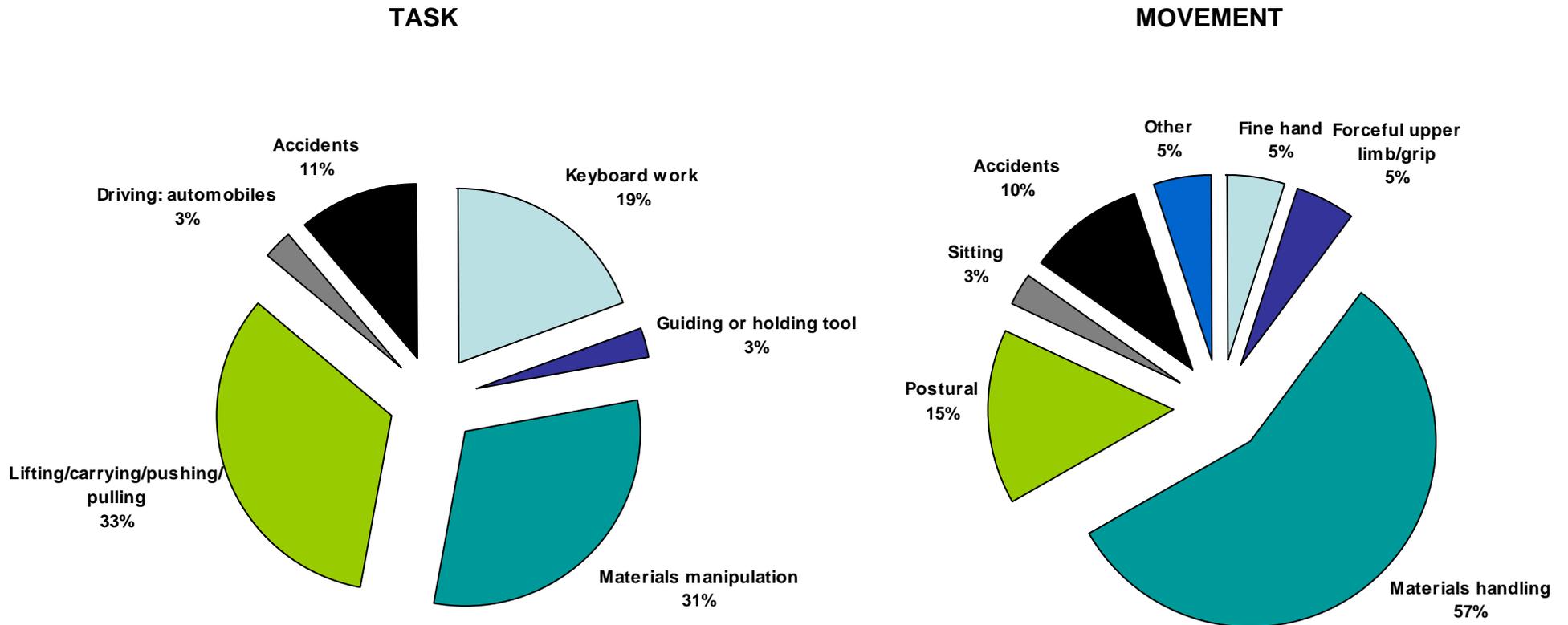
**Figure 8 Disease categories reported by occupational physicians in the Irish Republic to OPRA (2007)**



**Figure 9** Mental ill-health cases reported by occupational physicians in the Irish Republic to OPRA (2007) by precipitating event



**Figure 10 Musculoskeletal cases reported by occupational physicians in the Irish Republic to OPRA (2007) by task and movement**



**Table 4: Cases reported to Irish OPRA by Standard Industrial Classification (SIC)**

<b>SIC code</b>	<b>Industry</b>	<b>Number of cases</b>
60	Land transport; transport via pipelines	6
72	Computer and related activities	2
74	Other business activities (e.g. legal work, accountancy)	2
75	Public administration and defence; compulsory social security	1
85.11	Hospital activities	47
85.14	Other human health activities (e.g. ophthalmologic dispensing)	20
85.31	Social work with accommodation	1
85.32	Social work without accommodation	3
	<b>TOTAL</b>	<b>82</b>

**Figure 11 Cases reported to Irish OPRA by Standard Occupational Classification (SOC)**

