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HEALTH AND SAFETY AUTHORITY

The costs and effects of workplace accidents

Twenty case studies from Ireland

A report for the Health and Safety Authority by:

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February 2007

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The injured employees interviewed. They deserve great credit for relating painful and deeply personal information. Their dignity in the face of adversity can hopefully be sensed in these case studies.

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Foreword

This report presents details and analysis of twenty case studies of accidents at work. The aim of the research is to highlight for employees and employers, the financial, physical and psychological effects an accident at work can have. The case studies are narrated as personal perspectives so that the reader may understand the physical reality of an accident at work and its subsequent effects.

There is no judgement or fault attached to any employee or employer in the study, only the reported effect on the individual, together with financial losses to the organisation they worked for at the time.

These twenty case studies are not representative of the Irish workplace. To extrapolate the empirical findings presented here to the wider workforce, would be misleading because of the small numbers involved.

Accidents at work must be viewed in perspective. The majority of people will go through their working lives without any injury or illness directly caused by the workplace. The data on the number of fatalities and injuries at work supports this. However some of us will go to work and be injured as a result, an even smaller number of us of will be fatally injured at work.

These case studies afford an insight into published injury rates and accident data. They enable the reader to appreciate what an accident at work actually entails on the day weeks and in some cases, years after the event. It is hoped that all stakeholders including employers, employees, regulators, unions, insurers, professional bodies and safety practitioners will reinvigorate their efforts to prevent the pain, suffering and financial losses brought about by accidents at work.

Executive summary

Introduction

The costs and effects of twenty workplace accidents are documented in this report. The research was commissioned by the Health and Safety Authority and undertaken by Mr. V. Hrymak and Dr. J. Pérezgonzález from the School of Food Science and Environmental Health, Dublin Institute of Technology. The aim of the research project was to investigate the impact of workplace accidents through use of a case study approach. The findings are intended to supplement previous quantitative studies undertaken by the Health and Safety Authority, and to inform the Authority's future promotional campaigns. The specific research objective was to identify the financial, physical and psychological effects that workplace accidents can have for employers and employees. The method involved interviewing the injured employees and their employers (or representatives) and presenting the findings as case studies.

The case studies

Twenty workplace accidents were investigated from various work sectors and locations around Ireland. The term accident was broadly defined and includes stress and violence related incidents. The twenty case studies comprised an almost equal mix of public and private sector employments; including health, manufacturing, construction and local authority sectors. The injured employees were from a range of occupations; the majority worked in larger sized companies or organisations. The work based accidents included falls, accidents while using machines or equipment, manual handling incidents, driving or motor vehicle accidents, stress related incidents, and verbal and physical abuse. The accidents occurred between 1995 and 2006. Eleven of the injured employees were male, and nine were female.

Costs of the workplace accidents to the employers

The case studies show that a wide range of negative costs and effects resulted from the accidents. In terms of financial costs to employers, the amounts varied greatly from €0 to over €3.8 million. The average cost of the twelve middle-range accidents was approximately €52,000. The costs found were in almost all cases underestimates as productivity losses (with one exception) were not recorded by employers. Nearly half (8) of the more serious accidents in the case studies resulted in personal injury claims. Of the four settled claims, three compensation awards came to approximately €30,000 and the remaining award was for €152,000.

Employer costs from the accidents included salary costs for replacement staff or overtime payments, production and productivity losses, retraining costs, personal injury claim compensation, repair bills, medical & travel expenses and increased supervision. Salary costs were the largest cost category, being nearly half (45%) of total losses. Resentment towards the employer from the injured employee was also reported. Over one-third of the injured employees reported a 'significant' or 'large' amount of resentment towards the employer after the accident. This was reported to result from the way they were subsequently treated by their employer rather than from the accident itself.

Employee costs and effects

The amount of money lost by employees varied greatly. Seven employees did not lose any money. Over half (12) lost money and the amounts varied from less than €1,000

to €112,000; the average loss of these twelve employees was approximately €21,000. These figures take account of any compensation received. Where employees lost money, the largest proportion, approximately 85%, was due to lost salary and overtime payments. One quarter (5) of the injured employees are incurring ongoing financial losses due to a change in employment status as a result of the accident. If their circumstances do not change, these employees are set to lose between €38,000 and €268,000 over the remainder of their careers.

Each accident had personal consequences for the employee and they all endured pain and suffering to various degrees. Although the amount of pain suffered cannot be measured objectively, sixteen of the twenty employees suffered what can be described as very painful injuries. For ten employees the negative physical consequences of the accident are permanent. Over half the employees reported suffering anxiety and over half reported that their close family and friends were affected; a quarter reported suffering depression. A range of psychological effects was reported with over half of the employees reporting two or more negative psychological consequences.

Overall impact and outcomes

The overall impact of the accidents on the employees was high. Seventeen employees rated the overall impact of the accident as 'significant' or 'large'. Furthermore the impact of the accident was "felt" much more by the employee than by the employer. It was found that the employee had to bear the negative financial, physical and psychological consequences of the accident far more and for far longer, than his or her employer. Fourteen of the twenty case study employers have not acted in any meaningful way to prevent the same accident from recurring. This is a major concern from a regulatory and humanitarian perspective.

Conclusions and recommendations

The unpredictable outcome of accidents in terms of costs and effects became evident. It was not possible to gauge either the severity of the accident or the subsequent costs and effects to employers and employees from the initial accident.

Costs to employers varied greatly from €0 to over €3.8 million. Costs to employees also varied from €0 to over €100,000. For five employees, these losses are continuing.

The accidents affected the employees far more than their employers and resentment towards the employer was also found in seven out of eighteen relevant case studies. All of the more serious accidents resulted in negative consequences for the employee and their families. These conclusions are expanded on in Section 8 of this report.

A number of recommendations emerged from the case studies. These include: the need to further publicise the impact an accident can have on the employee; the advantages to the employer in maintaining a higher level of contact with the injured person and proactively managing the absence, and where the medical evidence is uncontested, immediate expenses should be reimbursed to the employee. Further research into the propensity to claim for a workplace accident as well as the identification of factors that will motivate employers to implement adequate safety management is needed.

Section 1. Introduction and methodology

1.1 Introduction

The background and approach to this study is presented in this section. The objectives and scope are first outlined, followed by a summary of the research design. Finally the structure of the report is outlined.

1.2 Background and objectives

The Health and Safety Authority commissioned this research on the effects of workplace accidents in 2006. The School of Food Science and Environmental Health in Dublin Institute of Technology was contracted to undertake the research.

The aim of the research was to investigate the impact of workplace accidents through use of a case study approach. The specific research objective was to identify, the financial, physical and psychological effects that workplace accidents can have for employers and employees. This information was intended to supplement findings from previous quantitative studies undertaken by the Health and Safety Authority and to inform the Authority's future promotional campaigns.

1.3 Scope and focus of the research

The research was exploratory in nature, based on a case study methodology and focused on the collection of qualitative and quantitative data. It was envisaged that the research findings would also inform the design of future cost studies by the Health and Safety Authority. The terms of reference for the project specified that the case studies should provide details of:

- the accident
- financial costs incurred as a result of the accident
- the wider psycho-social effects of the accident.

The terms of reference also specified that data be collected from a range of different sized organisations and across different sectors. It also specified that the data collection methodology should build on research frameworks for identifying potential costs and effects previously used by the Health and Safety Authority and the UK Health and Safety Executive.

Definitions
The following definitions and parameters of costs were used in the study:

Workplace accidents were defined as including accidents, assault and abuse related incidents and illness resulting from work related stress.

Employer included the employer or their representatives, including safety practitioners, occupational health staff or insurance executives.

Employer costs included productivity losses, lost business opportunities, salary of the injured employee or of a replacement employee or additional overtime costs, expenses reimbursed to the injured employee, repair, rental or replacement costs, changes to insurance premiums, and legal costs.

Employee costs as a result of the accident included: loss of salary; loss of overtime payments; medical, travel or other expenses, compensation received; lost savings; retraining costs; pay differences from any new employer.

Psycho-social effects of accidents on the employee included aspects of work, family, leisure, and community life

1.4 Research Design

Key elements of the research process included a review of literature, selection of case study employers and employees, design of an interview protocol, fieldwork, data analysis and report writing. Further details of the methodology are presented in Appendix 1, including an assessment of the validity of the interview data and cost calculations.

1.4.1 Review of literature and desk research

National, European and international studies on the financial costs and psychological effects of workplace accidents were examined to provide context and to assist in identification of key issues for inclusion in this study.

1.4.2 Identification and selection of case study employers and employees

The terms of reference for the project proposed that the following four sectors be included in the analysis:

- Construction,
- Health Care,
- Local Authority
- Manufacturing.

These sectors were chosen because of the high proportion of the Irish workforce employed in these sectors, the high proportion of reported injuries, and perceived ease of access to participants. In addition a geographical spread was required so that all regions of Ireland were represented in the sample.

A list of companies to be contacted was compiled by three methods. Firstly, staff within the faculty of Tourism and Food and the School of Food Science and Environmental Health, Dublin Institute of Technology provided the names of employers and companies with which they had contact. Secondly, graduates from the School of Food Science and Environmental Health, Dublin Institute of Technology who were now employed within

industry and public sector organisations made recommendations. Thirdly, companies were selected from listings in trade magazines and the Golden Pages.

In the first instance, over 120 companies were invited to participate after being contacted by telephone. Employers who expressed an interest in the research were sent two letters - one of these letters was from the Health and Safety Authority the other from the Dublin Institute of Technology. Examples of these letters are contained in Appendix 2.

Employers were asked to nominate an employee that had experienced a workplace accident or injury as a potential case study participant[1]. Where an employee name was given as a possible participant by a contact other than the employer, the relevant employer was first contacted to establish participation.

Twenty employers (one of whom was self-employed and injured) together with nineteen injured employees agreed to participate. Twenty case studies are presented here as a result. The twenty employers (or employer representatives) were from sixteen different companies or organisations. One multi site employer provided three employees to interview; two other multi site employers provided two employees each to interview.

1.4.3 Design of interview protocol

An interview protocol was designed to gather data on both the financial costs and the psycho-social costs of workplace accidents (see Appendix 3).

The interview protocol covered three distinct areas;

- Costs and effects associated with the employer
- Costs and effects associated with the employee
- The nature of the accident

The interview protocol was based on available models designed to estimate the costs and effects of accidents. All previous models have concentrated either on the cost element of accidents or on the psycho-social effects of significant life events. This interview protocol combined the two areas to elicit a more holistic view of accidents and their effects.

Assessing the costs of the accident to the employer and employee

For this section of the research a number of models were assimilated and modified. The models were; Mottiar, Z. (2004)., HMSO (1993)., Mossink , J. and De Greef, M. (2002). The costs data gathered can be summarised as follows:

Employer profile details including sector, number of employees, turnover etc.

Employer costs including:

- Lost business opportunities
- Productivity losses

[1] Sample letters are included in Appendix 2

- Salary of the absent injured employee
- Expenses reimbursed to the injured employee
- Repair, rental or replacement costs
- Insurance premium changes and legal costs
- Any "PR","IR", reputational or corporate & social responsibility costs
- Additional training or supervisory costs

Employee costs including;
- Loss of salary
- Loss of overtime payments
- Medical, travel or other expenses
- Compensation received
- Lost savings
- Retraining costs
- Pay differences from any new employer

Assessing the effects on the employer's safety management system
The model selected here was devised by Pérezgonzález (2005a). This model covers the following elements;
- Policies and goal-setting
- Recruitment and selection of new staff
- Safety training
- Safety communication
- Monitoring, auditing and carrying out risk assessments
- Reporting of unsafe acts
- Cooperation of staff on safety matters
- Implementation of necessary safety procedures
- The overall safety management system

Assessing the psycho-social effects of accidents on the employee
The model selected here was Dubin 1956 and 1976. This "Central Life Interests" model allows all relevant aspects of the injured employee's life to be considered. It covers five specific "life spheres" of an individual. It also covers the psychological and emotional identification of these spheres and how important they are in the employee's life. Dubin's theory has been extensively used in organisational work psychology (See also Meaning of Work International Research Team 1987; Harpaz 1990; Díaz Vilela, 1997; Pérezgonzález & Díaz Vilela, 2005). These life spheres are as follows;

- Work sphere which covers all aspects of life at work.
- Family sphere which covers all aspects of family life.
- Leisure sphere which covers all aspects of sports and leisure time activities,
- Community sphere which covers all social and political responsibilities
- Religious sphere which covers all aspects of religious and spiritual life.

The religious sphere was not assessed during the research due to its ethical connotations.

Obtaining a personal account of the accidents from employees was a key objective of the research. Therefore a semi-structured interview protocol was designed to allow a personal narrative from the employee to be elicited. It also allowed the interviewer to prompt relevant questions in those cases where the account could be improved.

Finally, questions about feelings toward the employer and colleagues were included. This section was designed in a prominent manner due to the informative data elicited on the consequences of accidents.

A Likert type five point scale was incorporated into each section of the protocol so that the interviewer could quantify, both objectively and subjectively, the effect of the accident on the employer and employee. (See original procedure in Pérezgonzález, 2005b)

Employers and employees were asked to respond to their relevant sections and the results were subsequently analysed using Excel and SPSS data packages. The protocol was piloted in one case study and after modification, used for all case studies.

1.4.4 Interview process

Interviews were carried out with the twenty employers (one of which one was self employed and injured) and nineteen injured employees between April and June 2006. Once the employer (or their representatives) and the relevant employee had agreed to participate, arrangements were made for interviews to be carried out in a location chosen by the participants. Venues included participants own homes, hotels or workplaces. One interview with an employer representative was carried out over the telephone. Employer representatives included safety practitioners, occupational health staff or insurance executives. At all stages of the recruitment process, subsequent contact and field-work period, the participants were informed that they could withdraw from the process at any point. No employers or employees withdrew once they agreed to participate.

Paraphrased records of interviews were given to participants to check for accuracy, and with their agreement, were then given to their employers to check accuracy. All employees and employers indicated that they were satisfied with the representation of the situation in the interview scripts, (with some minor changes by employees). All employee participants were informed that as a gesture of thanks for their involvement, a donation to a charity would be made by the Health and Safety Authority. A draft final report was also sent to all participants for approval. Again only minor changes by employees were subsequently requested from any of the participants. One injured employee did not receive the final draft due to leave of absence abroad.

1.5 Summary of the research process

A summary outline of the research process and the number of participants is shown in the following table.

Table 1.1 Summary research process	
Process	**Sectors and participants**
Literature review and design of interview protocol	-
Identification of sectors to be researched	Manufacturing, Health Care, Construction, Local Authority
Identification of study population	120 companies
Piloting of interview protocol	1 injured employee and 1 employer
Selection of employers	20 employers (or their representatives) from 16 companies or organisations
Case study interviews carried out	20 employers, 1 injured self-employed person and 19 injured employees
Analysis and presentation of results	-

The limitations of this research methodology are considered in detail in Appendix 1, together with further information on the calculation and accuracy of the costs data.

1.6 Structure of the report

Key findings from the research process are presented in this report as follows:

- Section 1 (this section) has set out the background, objectives, scope and methodology of the research
- An outline review of relevant studies is provided in Section 2
- An overview of the employers and employees participating in the research is provided in Section 3
- The twenty case studies are individually documented in Section 4
- Employer related effects of workplace accidents are outlined in Section 5
- Employee related effects of workplace accidents are outlined in Section 6
- A comparison of employer and employee effects is provided in Section 7
- Conclusions and recommendations are presented in Section 8

Section 2. Costs and effects of workplace accidents in Ireland and internationally

2.1 Introduction

In this section, key findings from national, European and international studies on the financial costs and psychological effects of workplace accidents and ill health are presented. Issues for consideration in the measurement of costs are also discussed.

2.2 National costs of workplace accidents and ill health

The Health and Safety Authority has published extensively in respect of the frequency of reported accidents and ill health. They report for example, that the total number of reported workplace accidents and cases of ill health resulting in more than three days absence in 2004 was 45,550. (Health and Safety Authority 2006). However, accurate assessment of the costs of these accidents and ill health has been difficult, but the following publications present data on such costs.

A recent report for the Department of Enterprise, Trade and Employment by Indecon Consultants (2006) extrapolated the cost of Irish workplace accidents and ill health to be between €3.3 and €3.6 billion per annum.

Two preliminary surveys on this topic were commissioned by the Health and Safety Authority (Millward Brown, 2005 and Dalley, 2005). The Millward Brown study was based on 301 questionnaires returned by employers in Ireland and reported the following costs associated with accidents. Median losses amounted to approximately €10,000 for each accident. The highest proportion of this €10,000 was extra salary costs averaging approximately €3,000. Productivity losses averaged approximately €1,700 and repair costs averaged approximately €2,000. Court costs were approximately €10,000 for each relevant accident.

The findings from the Dalley survey were based on 33 questionnaires returned from the Construction, Mines and Quarries, Agriculture and Forestry sectors. Average accident costs reported were approximately €17,000 in construction, approximately €8,700 in Mines and Quarries and approximately €2,000 in Agriculture and Forestry.

2.3 International costs of workplace accidents and ill health

Costs associated with accidents and ill health vary greatly on an international scale. In the UK, the Health and Safety Executive (2005) as part of its "Good Health and Safety is Good Business" campaign reported that on an annual basis;

- Over 1 million injuries are experienced by workers;

- Around 40 million working days are lost to business;
- Over 25,000 workers are forced to give up work due to injury or ill health.

They report that accidents cost employers between £3.3 billion and £6.5 billion each year, of which between £910 million and £3710 million is accounted for by accidental damage to property and equipment (given as 1995-1996 prices).

Mossink and De Greef (2002) report that whatever the initial costs associated with the accident, the consequential costs go beyond what may or may not be visible and subject to insurance cover. These include disruption to production, bad publicity, administrative costs, legal costs and lost workdays. Mossink and De Greef (2002) estimated that the EU lost between 1 and 3 % of GNP as a result of accidents and ill health in 1998. They also stated that in 1998 there were approximately 150 million work days lost as a result of accidents and ill health. Mottiar (2004) cites the overall costs of accidents and ill health in the European Union in 2002 as being approximately €20 billion and approximately €171 billion in the U.S.

Despite the magnitude of the financial losses associated with accidents at work, Mossink and De Greef (2002) reported that it is difficult to convince employers and decision-makers of the financial benefits of workplace accident prevention. They further stated that this may be due to the economic consequences of accidents being obscure inaccessible or difficult to calculate.

The most significant costs that can be expected from workplace accidents are summarised by Mossink and De Greef (2002) in Table 2.1 below.

Table 2.1 Expected employer costs from accidents*

Cost variable	Description
Fatalities, injuries and absenteeism	Cost of lost work time, production, fines and legal payments
Staff turnover	Replacement training and recruitment costs
Early retirement and disability	Costs associated with retirement, fines and payments to the injured person
Non-medical rehabilitation	Counselling, retraining and workplace changes
Administration duties	Time and effort spent investigating the accident
Damaged equipment	Repair and replacement costs
Insurance premiums	Any increases, refusal, changes in cover or conditions attached
Legal liabilities	Fines, regulatory activity, settlements and associated fees
Lost production time	Losses in production
Opportunity losses	Lost orders, inability to start or finish orders on time
Present income losses	Loss of income from present and second jobs
Loss of potential future earnings	Loss of income from present and second jobs
Expenses not covered	Medical, travel, new clothing

* Adapted from Mossink and De Greef (2002)

2.4 Psychological effects of workplace accidents

Mossink and De Greef (2002) reported that the cost of accidents is not just a burden to businesses but also to the injured workers, their families and society in general. They reported that consequences for employees included loss of quality of life and human suffering (see also Rikhardsson & Impgaard, 2004). Mossink and De Greef identified significant psychological effects in terms of health, grief and suffering and quality of life as a result of workplace accidents. These are outlined in the following table.

Table 2.2 Expected psychological effects from accidents *

Effect	Description
Health	Hospitalisation, medical care, permanent disability, rehabilitation
Quality of life	Life expectancy, quality and disability adjusted life years issues
Grief and suffering	To the injured person, their friends and relatives

The UK Health and Safety Executive has broadened the debate on the social, psychological and financial impact of workplace accidents on the individuals involved and their families (Health and Safety Executive 2006). This research has produced compelling evidence-based data on the possible range of negative consequences arising from workplace accidents and ill health. The data was collected in three ways. Firstly through telephone interviews with over 200 individuals who had suffered a serious work related accident or illness in the construction or health care sector in the UK. Secondly, personal home-based interviews were carried out with eighty individuals drawn from this group, including family members. Thirdly, "follow up" interviews were undertaken with forty individuals.

The study found that "*serious work related accidents and illness can have a widespread impact on individuals and their families*" and that "*many will find their working life is significantly affected*"

Psychological consequences included;

- high levels of psychiatric morbidity
- a significant proportion of accident cases at risk of post traumatic stress disorder
- a higher number of cases of anxiety and depression compared to a control group

Behavioural consequences included;

- common instances of disturbed sleep and noticeable changes in temperament
- cognitive changes for example in concentration and decision making
- socialising patterns changed among male outdoor construction workers
- behavioural changes that could last for several months
- detrimental changes in the behaviour of children

* Adapted from Mossink and De Greef (2002)

Social consequences included;

- a pervasive and damaging impact on personal and family life
- feelings of frustration, depression and social isolation
- frustration and anxiety about the future
- additional social consequences for those living alone

Vocational consequences included;

- over half the cases reported that their working life is or will be significantly affected
- a lack of formal return or remain at work schemes

Economic consequences included;

- a serious loss of income among construction workers
- additional medical and travel expenses
- family and friends losing pay and time from work
- a high level of compensation claims as individuals saw their employer as responsible

Amati and Scaife (2006) provide a further overview of the links between psychological ill health, stress and safety

2.5 Measurement of costs in workplace accidents.

When analysing the costs of accidents it has been a common practice to present the mathematical relationship between different types of costs. Heinrich's frequently depicted iceberg model (as quoted by Rikhardsson & Impgaard, 2004) is often used to convey the concept of a relationship between direct costs such as repairs and indirect costs such as lost business opportunities. The ratio between these two types of costs has been found to vary across work sectors (Mottiar, 2004) and cannot be directly compared between studies (Grimaldi & Simonds, 1984; HMSO, 1993; Larsson & Betts, 1996; Monnery, 1998). Hence this iceberg model is a poor predictor of the actual negative cost consequences an organisation is likely to face from workplace accidents.

There are methods available to approximate the potential indirect costs based on direct costs. Both the Occupational Health and Safety Administration in the US and the Health and Safety Executive in the UK present such "calculators" retrievable at;

- http://www.hse.gov.uk/costs/index.asp
- http://www.osha.gov/SLTC/etools/safetyhealth/mod1_estimating_costs.html

The Zenith insurance company also presents a "calculator" retrievable at;

- http://www.thezenith.com/zenith_web/webui/employers/emp_pi_accidentcost.jsp)

The disadvantage of this type of research is that it focuses on gathering data to inform academic theories. It tends to lack any practical application to the workplace. Researchers focus either on calculating the costs associated with specific accidents, or on estimating the ratio between direct and indirect costs. Researchers have tended to approach companies with predefined categories of accident costs or use secondary evidence, such as insurance statistics, in order to gather their data. Therefore, while the methods are all essentially the same, they have limited predictive capabilities (Rikhardsson & Impgaard, 2004).

A second line of research has tried to develop a more practical method for estimation of the total costs of workplace accidents in a quick and accurate manner, while at the same time documenting the consequences of accidents for society, the organisation and the injured person (see Aaltonen et al, 1996 and Aaltonen, 1996 quoted by Rikhardsson & Impgaard, 2004). This line of research uses predefined forms for documenting the consequences of each occupational accident at individual, organisational and societal levels. However this approach suffers from the same methodological problems as previous research (Aaltonen et al., 1996) and a solution has not yet been achieved (Rikhardsson & Impgaard, 2004).

Section 3 Profile of case study participants

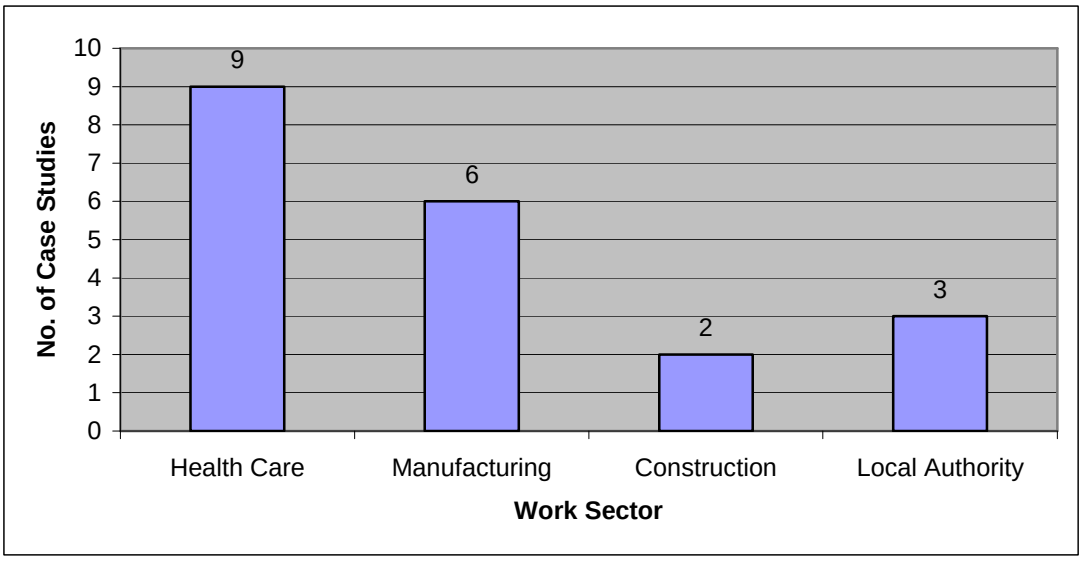
3.1 Introduction

A profile of the employers and the injured employees included in this research is provided in this section. The employment sectors, number of employees and year in which the workplace accident took place are first outlined. Job titles, age, gender and geographical location of the injured employees are presented, followed by a synopsis of each of the twenty case study accidents.

3.2 Employer and company profile

Employment sector
Just over half (12) of the case study participants worked in public sector organisations, while eight were in private sector companies. Almost half (9) were in the health care sector and a further quarter were in manufacturing. The sectors to which the case study employers relate are shown in Figure 3.1.

Figure 3.1 Sector to which the case study relates



Number of employees

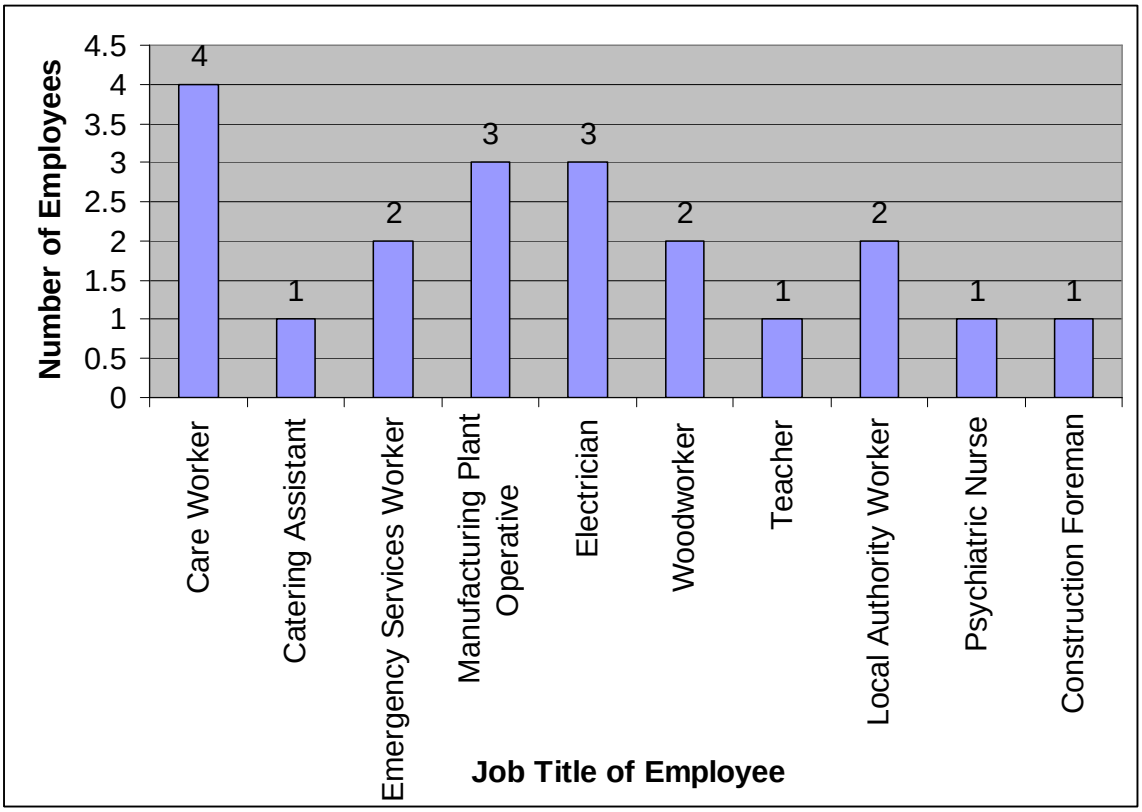
The number of employees in each case study organisation is given in Table 3.1. Almost half of the organisations have over 2000 employees and a further quarter have between 1,000 and 2,000 employees.

Table 3.1. Number of employees in the case study organisations	
No. of employees	**No. of case study organisations**
1 (self-employed)	1
2 - 99	2
100 - 299	1
300 - 499	2
500 - 999	0
1000 - 1999	5
2000 +	9
Total	20

Occupation of injured employee

The participants are from a wide range of occupations; they included care workers, electricians, manufacturing plant operatives, and woodworkers. The range of occupations of the injured employees at the time of their injuries including case study 20 are shown in Figure 3.2.

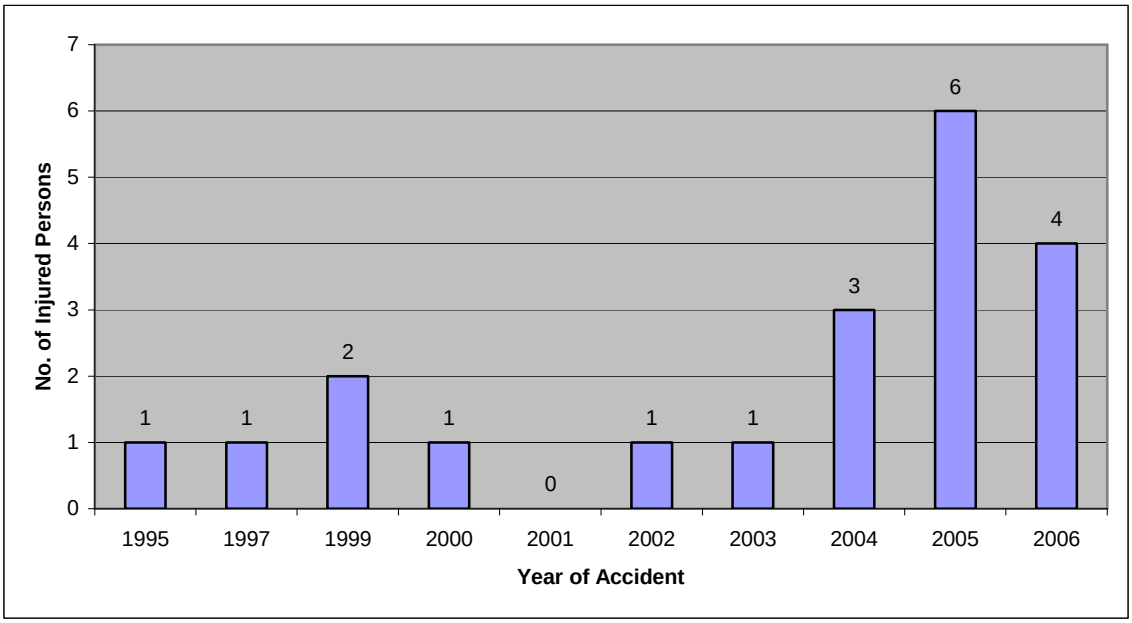
Figure 3.2 Job title of injured employee at the time of accident



Year of accident

Half of the accidents were within the past two years, and a further quarter occurred between 2002 and 2004. Figure 3.3 shows the year in which the accident occurred, including case study 20.

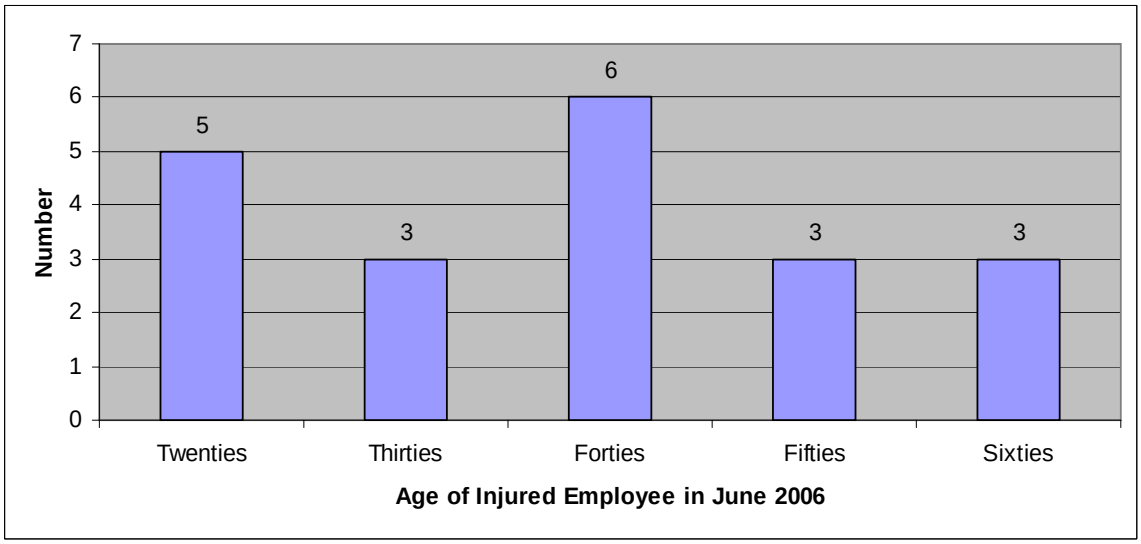
Figure 3.3 Year accident occurred



Age and gender of injured employee

The age data is banded to protect the confidentiality of participants. Twelve participants are over forty years of age, while eight are under forty. Figure 3.4 shows the current age of the injured employee as of June 2006, including case study 20. Eleven of the case study participants were male and nine were female.

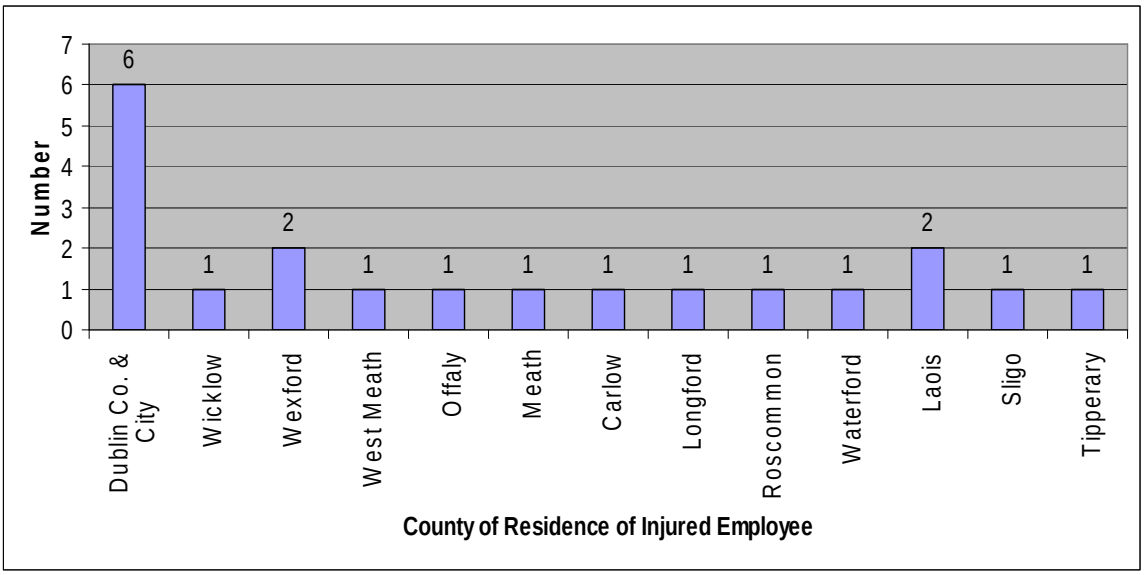
Figure 3.4 Age of injured employee in June 2006



County of residence of injured employee

There were thirteen counties of residence for case study participants. Over one-quarter lived in Dublin County or City. Figure 3.5 shows the county of residence of the injured employee including case study 20. The location of the case study employer has not been displayed for reasons of confidentiality.

Figure 3.5 County of residence of injured employee



3.3 Outline profile of employees and workplace accidents

Job function and accident type

A summary profile of the case study workplace accidents is presented in Table 3.2. The work based accidents in the case studies included falls, accidents with machines or equipment, manual handling incidents, driving or motor accidents, stress related incidents, and verbal and physical abuse**.**

Table 3.2 Summary profile of case study work place accidents

Case study number	Year of accident	Employees job function	Accident type
1	2004	Electrician	Fall from ladder
2	2005	Care worker	Trip on torn stair carpet
3	2005	Plant operative	Contact with packaging machine
4	2006	Plant operative	Fall from storage racking
5	2003	Electrician	Electrical shock in switch room
6	2004	Emergency services	Stress
7	2006	Psychiatric nurse	Assault by patient
8	2002	Care worker	Potentially contaminating scratches
9	2005	Emergency services	Removing person from car
10	2000	Woodworker	Contact with circular saw
11	2004	Care worker	Car in collision with a lorry
12	1999	Woodwork teacher	Contact with planeing machine
13	2005	Plant operative	Pushing defective trolley
14	2006	Catering assistant	Cut wrist from opening a tin
15	1995	Electrician	Carbon monoxide poisoning from vehicle
16	1997	Foreman	Struck by falling canopy
17	2006	Local Authority worker	Verbally abused by member of public
18	2005	Local Authority worker	Potential contamination by used syringes
19	1999	Care worker	Tripped by chair wheel
20	2005	Woodworker	Contact with planer thicknesser

Synopsis of accidents and injuries

A synopsis of each of the twenty case study participants their accidents, and outcomes follows and all character names are fictitious. Each case study is documented in detail in Section 4. Names have been changed to protect the confidentiality of participants.

Case study 1
Donnacha O'Riordan is an electrician in his sixties. In 2004 he fell about twenty feet from a ladder located in an underground storage bunker. He spent eight weeks recovering from cracked and bruised ribs.

Case study 2
Mary O'Malley is a health care worker in her fifties. In 2005 she caught her foot in a piece of torn stair carpet and fell. She was initially diagnosed with a broken finger however she subsequently developed a neurological condition and lost most of the use of her left arm. She has not returned to work and has had to retire as a result.

Case study 3
Hugh O'Carroll is a manufacturing plant worker in his twenties. In 2005 Hugh was clearing a blockage from a stationary machine when another worker switched on the machine. This caused the blades in the machine to operate. Hugh had the tops of his index and middle finger on his left hand amputated.

Case study 4
John Duggan is in his twenties and works for a manufacturing company. He has been capped 7 times for Ireland in his chosen sport. He was due to go to the world championships last summer. Last year, while at work he was climbing up storage racking. He was at a height of fifteen feet when he fell off. He landed straight onto his knee causing extensive muscle and ligament damage. He missed the world championships and his long term sporting career is in serious doubt.

Case study 5
Dave Horgan is an electrician in his forties. In 2003 while working in the electrical switch room of a manufacturing company he was electrocuted. He suffered severe burns to his left hand.

Case study 6
Peter Callaghan is an emergency vehicle controller in his forties. In 2004 he was diagnosed with work related stress and spent over a year on sick leave.

Case study 7
Pat Liddy is a psychiatric nurse in his forties. Last year while administering medication, a patient assaulted him. He took one week off as sick leave and returned to work fully recovered.

Case study 8
Margaret Murphy is a health care worker in her sixties. In 2002 while attending to a homeless woman in hospital, her arm was scratched which caused light bleeding. She had to wait for blood tests regarding Hepatitis and HIV.

Case study 9
James McGrath is an emergency services and health care worker in his thirties. In 2005 as James was pulling a car crash fatality from a vehicle, he slipped two discs in his neck. As a result he was off work for four months.

Case study 10
Gerry Mullins is a training consultant in his twenties. He began his career as a cabinet maker and specialist woodworker. In 2000 he caught all the fingers of his hand in a circular saw. He suffered extensive damage to his right hand, which is now shorter than his left hand.

Case study 11
Anne Dempsey is a health care worker in her fifties. She was driving back to her office when a fully laden articulated lorry skidded into the back of her car. Anne subsequently suffered from a slipped disc in her neck.

Case study 12
Lorcan Dennehy is a woodwork teacher in his thirties. In 1999 he was using a planer when he ran his ring finger over an exposed part of the blade. As a result, he had to have the top of his finger amputated.

Case study 13
Deidre Kelly is a manufacturing plant operative in her sixties. In 2005 as she was struggling to push an equipment trolley at work, she tore ligaments in her knee. She was off work for fifteen weeks in total and still has a pronounced limp.

Case study 14
Olga Timorenko is a catering worker in her twenties from eastern Europe. One day last year while opening a small tin of beans, she cut her wrist on the exposed edge of the lid. She was off work for eight days.

Case study 15
Donal Macken is a caretaker in his fifties. Prior to that, he was an electrician for twenty three years with the same company. During that time he would use a company van for transport. Twelve years ago, he drove a van that had a faulty ventilation system. This allowed exhaust fumes into the van and as a result, both he and his co-worker suffered from carbon monoxide poisoning. He was off work for six weeks. To this day he still suffers from bad headaches, almost on a daily basis.

Case study 16
Bill Cowan is a construction project manager in his forties. One day in 1997 while working as a foreman, he was supervising the lifting of a large wooden canopy. A timber support gave way and the canopy fell. Bill was hit on the head and had to have 11 stitches. He spent a week off work.

Case study 17
Aoife McGuire is a Local Authority worker in her thirties. She provides a front line service to members of the general public. One day in 2006 she encountered a member of the general public in the entrance hallway of her building. He began to verbally abuse her. This abuse included shouting into her face, pointing at her and preventing her from leaving. She had to lock herself into a side room until he left. Verbal abuse is now a common occurrence in Aoife's work and she does not feel secure in her workplace anymore.

Case study 18
Maura MacManus is a Local Authority worker in her forties. One day in 2005 she was opening a small parcel on her desk, fully expecting to find a bunch of keys. Three used syringes together with small bags of white powder fell out instead. One of the syringe needle points fell directly onto her hand. She had to wait for six months to see if she had contracted either Hepatitis B, Hepatitis C or the HIV virus. During the wait, she was diagnosed as suffering from post traumatic stress disorder.

Case study 19
Brenda Lynch is a catering worker in her forties. As a result of a trip in 1999 causing a shoulder injury, she was off work for over six years. During that time she developed depression.

Case study 20
Tom Browne is a self employed cabinetmaker in his late twenties. He has over ten years experience in designing, making and installing fitted kitchens for one off commissions. One day in 2005 he caught his right hand in the blades of a planer thicknesser machine. He lost the top of middle finger and was off work for most of three weeks.

Section 4 Twenty case studies of workplace accidents

4.1 Introduction

In this section the individual experiences of each of the twenty employees injured in workplace accidents is documented. Details of each accident and its immediate and subsequent effects are presented. The costs from both the employer and employee perspective are outlined at the end of each case study.

Case Study 1

Donnacha O'Riordan is an electrician in his sixties. He fell about twenty feet from a ladder located in an underground storage bunker. He spent eight weeks recovering from cracked and bruised ribs. He tells his story;

One morning in 2004, I began my days work much as normal. I've spent over forty years working as an electrician and I've worked here for over fifteen years so I know the site well. On that particular day, the job I had to do was routine and well within my capabilities. I had to reconnect some electrical wires that had earlier been disconnected to allow some upgrading work. The wires were located on the wall of an underground storage bunker. So I had to climb down a manhole cover that allowed access to the bunker. While I was on the fixed metal access ladder, I had to reconnect the wires.

This access ladder is about thirty foot long and reaches the bunker floor. It did not have any restraining hoops. I was on the ladder about twenty feet up and working on the nearby cables attached to the wall. I was working alone and no one on the ground above knew I was there. Then for some reason I began to feel faint and I passed out. I think it was something in the air down there, but I never found out. When I came round I remember myself flying through the air, feeling everything was slowing down around me and thinking this is going to hurt.

I was falling for what seemed like a long time. During the fall I tried to keep my head up but kept on thinking this is it, I'm gone. The fall just kept on going on and on and on. I have a theory why I felt I was so long in the air waiting to hit the ground. I think it was because my mind started to speed up so fast, that everything around me became slow motion. I was in mid air for what felt like ages…….. then I hit the ground.

I just lay there, I didn't pass out, the pain was something else, the worst I've ever felt. I had fallen on my back and side and the first thing I thought was I'm going to have a heart attack. I couldn't breathe properly and every breath was very painful and wheezy. It sure did hurt. At least I was alive. If I had hit the ground head first I would be dead. God knows how long it would have been before I would have been found. Or how long I would have lived for down there before I died. My mobile was in my jacket which I'd left on the ground above. But even if I would have brought my mobile phone, the chances are I would have broken it with the fall.

So there I was, at the bottom of the chamber and no one knew I was there. I told myself I had no choice, I had to get out, even though I was in pain I had to get out. I don't know how I did it but I started to climb that ladder back up to the ground. I eventually crawled out of the manhole and onto the ground above. When I reached the open air I couldn't talk and so I waved to a woman who happened to be walking by. She called an ambulance for me.

Eventually the fire brigade ambulance arrived. They put me on a rigid stretcher and then into the ambulance. They gave me oxygen and I remember how good that felt. I was still in great pain and the worst of it was I couldn't breathe, but the oxygen helped. With the traffic, it took about half an hour to get to A&E. Which is funny really as the A&E is very close by and normally I would have walked there quicker.

All the while I was in the most pain I've ever been in. In the meantime my employer rang my wife. My wife and daughter were very upset at the news. When I was in A&E they stuck all sorts of needles into me and were constantly monitoring my heart rate. They gave me painkillers but the pain was still something else. I was diagnosed with cracked and bruised ribs. I was released the next day but it took eight weeks to get rid of the pain completely.

I was laid up in bed for about four days before I started to walk. Then I began to walk a small amount each day until I felt better. All the while my breathing was difficult and incredibly painful. My wife had to take a day's leave but apart from that I was able to fend for myself. I lost weight at home but I've put that back on now. Whilst I was at home, some of my work friends rang to see how I was. However my employer never rang me and that really annoyed me. I know that other employees still work on their own down there, but I won't anymore.

Total employee costs €1,800
€1,720 Lost overtime payments
€80 GP visits

Total employer costs €31,363
€9,863 Salary costs of injured employee
€21,500 Improvements to access and ventilation in the bunker

Case Study 2

Mary O'Malley is a health care worker in her fifties. She caught her foot in a piece of torn stair carpet and fell. She was initially diagnosed with a broken finger however she subsequently developed a neurological condition and lost most of the use of her left arm. She has not returned to work and has had to retire as a result. She tells her story;

I've had over thirty years in this job and I've worked in the same residential care home for the majority of those thirty years. I've enjoyed my work immensely and I don't mind telling you I was known for my dedication, service and friendliness. Over the years, I've raised thousands of Euro for the care home.

At 7am one day in 2005, I was coming to the end of my night shift. I had been up and down the stairs of the care home countless times that night. I had passed the torn stair carpet without incident up until that point. I had one more job to do that shift, which was to get the residents up for their breakfast.

The torn stair carpet had been known about for months but requests from our Health and Safety Committee to have the carpet repaired or replaced had gone unheeded. The torn section had been repeatedly taped up by our staff, but contractors had removed the covering during renovations earlier that week.

So that morning I began to walk up the stairs to get the residents up. As I walked up the first stair I tripped on the torn section of carpet and fell forward. I put out my left hand to brace my fall. As I got up I didn't feel anything. However when I looked down I saw that the top of my ring finger, above the knuckle was now snow white in colour and bent upwards towards me. I knew straight away that I had broken my finger. I wasn't in pain at that point and I remember thinking that I have to get the residents up for their breakfast.

So, with the help of a colleague, I just took my wedding rings off, bandaged my finger and continued the job of getting the residents up. At 9.00 am I finally left and drove myself to my GP. He told me to go to A&E, so by 9.45 am and accompanied by my husband, I received treatment in A&E.

I was given two injections into my hand and remember the blood spurting out of the punctures made by the syringe. It was then that I started to feel pain in my finger and hand. The doctor made a splint for my finger and sent me home.

Two weeks after the accident I began to feel pain in my shoulder as well as my finger. Then I started to slowly lose the strength in my arm. I went back and forth to my GP, consultants and physiotherapists and all the time my hand, arm and shoulder were getting worse. During one visit they found out that I must have dislocated my shoulder during the fall. Then I was finally diagnosed with something called reflex synthetic dystrophy. I've been off work since. That's over a year now and I've been told I will not be able to go back to work.

I have no strength left in my left arm now. I can just about put my arm into my lap. My hand is always swollen. It's red and purple in colour and feels cold all the time. I can't lift my arm far without using my other arm to pick it up. I cannot even wear my wedding rings any more. My arm will not be getting better, it's going to be like this forever. It might even get worse and I'm left with this disability for good. This accident has turned my life upside down physically emotionally and financially.

In physical terms I just can't do the things I was able to do. Simple things like making the bed or using the Hoover are now beyond me. I used to enjoy knitting, but that's gone now. I can't shop properly. I get other people to buy all my drinks and bottles at the supermarket as they are too heavy for me to carry now. Emotionally the accident has affected me greatly. I loved my work. I really enjoyed the company of my workmates and the residents. Now I don't see them any more. I can't bring myself to go to see them. The loneliness and isolation I now feel because I have no work, is difficult to bear. I'm still in touch with my workmates which is so important to me now.

I still remember the residents though. When I was working there, they were always asking after me, they were like family to me. I was always looking out for them and them for me. It makes me so sad to think I had another eight years left before I was to retire. And now I'm just left here, forgotten, after all those years of dedicated work and service.

Financially, I'm a lot worse off now. I get my sick pay but I've lost all the extra payments I used to get. So all my overtime payments, night work payments, money for working long weekends and bank holidays, that's all gone now. Also I have my visits to the consultants and physiotherapists to get to and pay for. All my savings are now gone. I need to buy a car with automatic gear change but how can I afford that?. The doctors have told me I won't be going back to work, so now I have to live on what I get.

Sometimes I feel so sad but sometimes I feel so incredibly angry. No one from management has come to see how I am, or how I'm getting on. They have done nothing for me. All this pain and suffering because of a torn stair carpet. Management knew it was torn and did nothing about it. They even said the carpet was too expensive to replace and to think I used to raise money for the home. Now look at me, I'm just left here with my disability.

Total employee costs €27,072
€7,572 Lost salary
€12,500 Lost overtime payments
€7,000 Medical and travel expenses.

Total employer costs €21,824*
€10,912 Salary costs of injured employee
€10,912 Salary costs of replacement staff

* Please see note in Appendix 1 on calculation of employer costs (section A2.3)

Case Study 3

Hugh O'Carroll is a manufacturing plant worker in his twenties. Hugh was clearing a blockage from a stationary machine when another worker switched on the machine. This caused the blades in the machine to operate. Hugh had the tops of his index and middle finger on his left hand amputated. He tells his story:

One day in 2005, I came to work at eight o'clock as usual and was told I had to cover for another employee. I was put on a different packing line to the one I normally worked on. After a few minutes of instruction from my supervisor I started work.

The packing line looks like one of those X ray machines you put your belongings through in an airport. In the factory the product is put on the conveyor belt and whilst inside the housing, is shrink wrapped in plastic. The excess packaging sliced off with two large and very sharp blades.

So there I was putting the product onto the conveyor belt and watching it pass through the packaging machine. Everything was ok until I returned from my lunch to start the two o'clock shift. Some of the product had become jammed which is fairly common. The jam causes the line to stop until it is cleared by turning the machine off and pulling the product clear.

On this occasion the jam was caused by the product being caught inside the housing where the blades operate. As usual the machine was stopped and I went to free the product from inside the housing. It's easy enough to clear the product, you just lean in and with one hand pull the product and any bits of packaging clear from the blades and rollers.

So I was leaning in and freeing the jam with my left arm when I felt the machine had suddenly been turned on. I instantly knew something bad had happened. I pulled my hand out of the machine and looked at my fingers. They were covered in blood. I couldn't see what the damage was, except I could make out a small thin white bone on the end of my middle finger, just above the top knuckle. To be honest, I didn't feel much pain, I just held my fingers in my right hand and went to the sink to wash the blood off.

I shouted to some of my work mates and two of them came across to help. I remember feeling a bit faint and I was told I looked very white, but still no pain. In fact after I had washed the blood off, I was joking and laughing with my work mates. In the meantime someone had gone to look for my fingers, found them and put them in an ice bag.

I was taken to a first aid station and had my fingers bandaged by the factory nurse. She and one of my workmates then drove me to the nearest A&E. The drive took about forty five minutes. While I was in the car I remember my fingers started to hurt.

I also remember the nurse carrying an ice bag with her in the car. Inside this ice bag, I could clearly see my two finger tips with the nails and skin intact. It was then that I

remember thinking my finger tips are gone for good. When I was in A&E, I began to realise that I had lost those parts of my fingers and I began to feel sad about the loss. It felt so permanent. I was taken straight into A&E and got two injections in each finger. Then they sent me for X rays.

The doctors had the tips of my fingers in the ice bag as they were talking to me. They said there was nothing they could do with them. The doctors asked me if I wanted the finger tips back but I said no. What was I going to do with my severed finger tips?. I asked them to throw the finger tips away and I've never seen them since.

The next morning I was sent to St James's in Dublin to see if I needed any skin grafts. The doctors there said the nerves in the fingers had been cut as well, so I was to expect pain for a good while, a couple of years at least. They were right about that, nine months on and I still feel the pain in my finger tips. The pain is worse if I touch my fingers off anything, which happens often enough. The pain can last anything up to an hour, depending on how hard I've hit my fingers.

The accident has affected me in other ways, as I can't use my left hand properly now. Also in cold weather my fingers hurt so I've given up fishing. I can't tie my shoelaces properly and that can be embarrassing. If I'm out and my laces are undone, I have to ask other people to tie them up. I can't hold a fork properly so eating is more awkward. Even holding the steering wheel of a car when I'm driving is more difficult. I used to play hurling with my young nephew but I can't hold the hurley properly now. My nephew still keeps asking about my fingers when he visits.

Feelings of embarrassment have also affected me. After the accident, I didn't want to go out and socialise because I didn't want people looking at my hand. I didn't go out for a long time until a group of my friends came to my house one night and dragged me out. I go out more often now but I still feel uncomfortable in the company of others.

I returned to work after nine months off. I don't know the long term outlook for my fingers, nobody knows, I hope they get better.

Total employee costs €0

Total employer costs €49,832

€16,273 Salary costs of injured employee
€ 1,000 Medical expenses
€32,059 Retraining of staff in machinery safety
€500 Poster campaign
The personal injury claim has been estimated to be in the region of €200,000

Case Study 4

John Duggan is in his twenties and works for a manufacturing company. He has been capped 7 times for Ireland in his chosen sport. He was due to go to the world championships last summer.

Whilst at work he was climbing up storage racking. He was at a height of fifteen feet when he fell off. He landed straight onto his knee causing extensive muscle and ligament damage. He missed the world championship and his long term sporting career is in serious doubt. He tells his story;

My job is to test the quality of materials as they are delivered to the manufacturing plant. The materials arrive on pallets and if it passes our quality tests, I put a sticker on the pallet.

The accident happened in 2006. On that particular day there was a pallet I had not tested because I couldn't find it. When this happens, it normally means the pallet has been moved by the forklift trucks to the high bay storage racking. This racking is sixty foot high and the product is stored there until used.

If the pallet to be tested is on the racking, the forklift is supposed to bring the pallet down to floor level so I can test it. However this takes time and I decided it would be quicker for me to climb up the racking and look for the pallet. So off I went and I started to climb the outside of the racking.

As I was climbing I reached the second floor level of the metal decking and went to put my right foot on the surface. The problem was that the metal decking floor was wet. As I put my weight on my foot, I slipped backwards lost my grip and I began to fall. I tried to catch the decking with my hand but that didn't work because of the wet surface, so I fell straight down the front of the racking.

As I fell I remember telling myself I have to keep my head up. Then I hit the ground. I managed to fall in such a way that I landed straight onto my right knee. I got such a shock when I landed but I remember thinking, at least I didn't land on my head. I knew I could easily have gone head first. That would have been a lot worse.

I was now on the ground and I could feel blood oozing into my track suit trousers from my knee. I pulled my trouser leg up to see what I had done and I could see a gash close to my knee with the blood coming out.

I got up on one leg and tried to move away from the area. I had a lot of pain in my knee and I knew I had done something serious. I didn't know what, but I knew it was going to be bad.

Two other workmates had come across to me by now. With my arms around their shoulders I was carried to an office and sat down. A first aider was called who cleaned up my knee and put a bandage on. The knee was now swollen and bruised.

I was driven to a local GP who immediately sent me to the nearest general hospital for an X ray. I met my dad at the GP's surgery and he drove me on to the hospital. The pain from the knee was now unbelievable. It had swollen up more and I couldn't move the knee at all.

I arrived at the X ray department at about three o'clock and had to have five X rays. They needed this number because there was a lot of internal bleeding around the knee. They gave me painkillers in the hospital and at about six o'clock I left the hospital on crutches.

The doctors said I had done a lot of internal damage to the knee. The muscles in the knee had been torn and ripped away from the bone. I also had serious ligament damage. I was to spend nearly two months on crutches and have physiotherapy at least three times a week.

The next day my knee had swollen up more. I went to see the physiotherapist from my local football team and he began my treatment. He told me to try and move the knee as much as possible. After about seven weeks of physiotherapy, I was able to walk without using crutches but I still have a slight limp. I went back to work after seven weeks at home.

The accident has affected my sports career very badly. Before the accident, I would play a competitive game at least once or twice a week. I would go training at least four or five times a week. Most weeks I would be training or playing, every day of the week.

I am lucky enough to play at a high level. I have been capped for Ireland and was due to go to the world championships last year with the national squad. All this has now stopped. I can't train anymore. I've put on one and half stone in weight. More worryingly for me, I have now lost the fitness levels I need to play my sport at a national level.

At my age I'm close to the peak of my physical ability, but the doctors have told me to take my recovery slowly. I was told a full recovery could take two years or more. They also said I shouldn't rush my recovery and come back too early before the damage has fully healed. They said one knock before I'm fully recovered and I could be back to square one.

I don't know if I'll ever play any sport again, never mind reach my previous levels. I feel like time is running out for me. To stay competitive at international level, I need to be playing and training with the national squad regularly and right now, not in two years time.

At the moment I'm back to light jogging with physiotherapy twice a week. If I put too much pressure on my knee, the pain comes back. If I'm driving for more than an hour or so, I'll be limping afterwards.

I was looking forward to playing for the national squad last summer. Ireland had a good chance of winning a medal at these championships. My brothers are also on the national squad and dad used to be national coach. I went to the world championships to support Ireland and my brothers, but I was watching instead of playing.

Total employee costs €0
All costs are being paid for by the company
John's dad drives him to the physiotherapist two or three times a week

Total employer costs €9,494
€3,797 Salary costs of injured employee
€2,892 Increased supervision to date
€1,805 Retraining costs
€1,000 Medical bills

Case Study 5

Dave Horgan is an electrician in his forties. Whilst working in the electrical switch room of a manufacturing company he was electrocuted. He suffered severe burns to his left hand and face. He tells his story;

One day in 2003, I had arrived at work for eight o'clock as usual. I was instructed to carry out some routine maintenance work in an electrical switch room. All was going to plan and I was near to finishing the job around mid-day.

I was reconnecting some wiring in the switch room. The wiring was in an awkward spot to get at. I had to gain access to an area that was between two metal cabinets. This meant I had to put my arm all the way up to my shoulder, through a narrow gap, to get access to the wiring. The gap was a little wider than my arm. The left hand side of my face was also up against the cabinets. So there I was reconnecting some wiring which was fiddly because of the poor access.

With no warning whatsoever there was a very loud bang from the place where my hand was. This was followed instantly by a very bright flash of light. In the split second before I closed my eyes, I saw this flash become a very bright sheet of flame which came out of the gap and straight at me. I was instantly blown backwards onto the concrete floor by the force of the explosion. Then the fire alarm went off.

I was on the ground temporarily blinded for a few seconds and listening to the fire alarm sounding. Then the pain started. An incredible mind numbing pain of such awful intensity it was instantly unbearable. The pain from my hand and face was unforgettable. It was an indescribable level of pain, beyond understanding.

The sight in my eyes returned but the burning pain from my hand and face continued. I then looked at my left hand and saw an unforgettable and frightening sight. My left hand was now as black as charcoal. Black all over, my fingers, my fingernails, my palm and the back of my hand, all jet black.

The burning pain had now well and truly set in. I put my burnt blackened hand on the concrete floor to try and cool it down, to try and lessen the pain, but no use. The pain continued. The constant incredible burning pain just continued to hurt.

By this time, my workmates had come into the switch room and saw me there. They picked me up and quickly organised a car to take me to a doctor. They led me outside to the waiting car. I remember seeing the factory employees at the assembly point outside. The fire alarm had caused an evacuation and the workers were standing there looking at me as I walked past. The explosion had also caused a total loss of electrical power to the factory.

I was put in the car and driven to the nearest GP. It was too far to the nearest hospital and the GP was much closer. I remember putting my burnt blackened hand out of the window

to try and cool it down. All the time I was going mad with the pain, the unbelievable intensity of the pain was with me all the time.

I arrived at the GP after about twenty minutes in the car and he began the treatment straight away. He first cut off my overalls and jumper. He then cut my wedding ring from the burnt hand. He covered my hand and face with antiseptic cream and then he applied an ice pack to my hand. My burnt hand was still jet black and I remember how wrinkled the skin looked.

The GP had called the local chemist in advance of my arrival and she came to the surgery to give me an injection of morphine. The morphine and ice finally calmed the pain down. At last I felt some relief from the pain I had endured.

I could see my blackened hand but didn't know about my face. I could feel my lips were bleeding and very swollen. I asked those around me about my face, but all they said was it would be ok and I wasn't to worry. I knew my left eyebrow was burnt off as well as the hair from the left side of my head, but they just said don't worry it would be all right.

The time at the surgery was the worst of it. My wife had been told by this stage and she arrived at the same time I was getting my morphine injection for the pain. She was very upset. Her being upset caused me to be upset as well. The ambulance arrived soon after my morphine injection to take me to hospital. The ambulance drivers wired me up to their heart monitor as a precaution before driving off.

By now I was in the regional hospital. Here the treatment was painkillers, antiseptic cream and regular changes of the bandages. Then after about two days, they sent me to the burns unit at St James's in Dublin. During this time the pain just kept on cutting in and cutting out, lessening and intensifying, getting better then worse, it was a nightmare.

I well remember the treatment at St James's. The doctor said she was going to cut the skin off my hand. So I started to watch and saw her lift off the skin with a pair of tweezers. The skin came away so easily. It was like lifting a piece of tissue paper off a marble table top. I stopped watching after she lifted the skin from the wrist to the knuckles in one piece. She put more antiseptic cream on and bandaged the hand again. I was then sent back to my regional hospital in an ambulance.

Ill never forget the trip back. The pain came back with a vengeance. I nearly went mad with the pain. The trip took about four hours and I was beyond myself for that time. It was the worst, insufferable, intense and unbearable pain.

Back at the regional hospital during re-bandaging, I saw that my hand had become one big fluid filled blister sack. I had to hold my hand up to ease the pain and saw the blister fluid trickling down my arm. I spent several days in hospital and the pain was always the same, getting worse then getting better, getting worse then getting better.

I was then sent home and I spent weeks on sick leave. Twice a week I went to my GP to changes the bandages. I also had to go back to St James's to see if I needed a skin graft.

The appearance of my left hand changed after I had the burnt skin removed. It was now red raw. It was like a piece of meat you would buy at the butchers with the skin taken off. If you buy pork with the skin on for your Sunday dinner and imagine what it looks like with the skin completely pulled and peeled away, then you will know what my hand looked like.

Those weeks at home were difficult for me and my family. Very difficult. I was eating packets and packets of painkillers. I had to go to counselling and still do occasionally. I was crying and upset. I was not pleasant company. My wife and two kids suffered as well. They knew I was not well and I knew I was not well. I became a different person. I was changed forever by that experience. It was a very hard time for me and my family and we all suffered. I still experience the trauma from time to time, in both a mental and physical sense.

Total employee costs €0

Total employer cost €132,712
€125,000 Production loss
€6,712 Salary costs of injured employee
€1,000 Repair costs

Case Study 6

Peter Callaghan is an emergency vehicle controller in his forties. He was diagnosed with work related stress and spent over a year on sick leave. He tells his story;

I have been working in emergency response since the early eighties and I enjoyed my time there. You never knew what a shift could bring. There were some days when you saw things that would be unimaginable to most people, but I was well trained and had no trouble with the job back then. I was able to put away any negative thoughts about what I encountered and concentrate on the job in hand, that was to provide an emergency service to the general public.

In the late nineties I was promoted to a regional emergency control office where my duties included receiving phone calls from the general public and assigning vehicles to attend. I was in a team of seven which was on duty twenty four hours a day, seven days a week, year in year out. 24/7 as they say.

I knew there was going to be pressure with my new job, but I was coming from a job that already had its fair share of pressure, so I was just expecting a different type. What I didn't bargain for was the increase in workload, the lack of staff and the lack of support from management.

Soon after I took the job the geographical area we covered was expanded. We didn't get any extra staff and as a result, work started to get busier and involve longer hours. We still had to provide the 24/7 cover though. Hence the normal practice of one twelve hour shift at a time started to change. It began with having to work extra hours at the end of the shift. Then the odd double shift had to be worked. Then the number of times I had to work both the longer hours, as well as extra shifts began to increase.

The absolute need to provide a 24/7 service to the public is obviously paramount. But those of us in the service had to take into account holidays and sick leave. So on some days and nights I would often have to work an eighteen hour shift. About once a month I found myself working a twenty four hour shift. The lack of staff also meant I could be working alone in the control office. This was all happening despite well laid down rules about work practices.

At the time, I was fully involved with the management staff responsible for the service. I duly kept them informed about the problems we were encountering including the lack of staff to fully cover the control office. I also kept them informed of particular instances such as staff being left on their own, but it was to no avail. We didn't get any extra staff and so the long hours just had to be worked, we had no choice in the matter.

I thought I could improve matters by being involved in the running of the control office. So I was included in working groups, the union and committees regarding the running of the service. I was also involved with plans to expand the building we worked in. However, nothing came from our discussions with management, absolutely nothing.

This lack of action from management began to demoralise me. It seemed as if they didn't care how bad things were or became. Even though the situation was plain to see, nothing was being done. This started to get me down.

Then things became worse. My job involved getting as much information from callers so that I could make decisions as to which vehicles to send. Most of the time the decision was straightforward, but when we had more callers than we had vehicles, I had to make a decision as to which situation took priority. Three or four callers all looking for a vehicle when only one was available, wasn't an uncommon situation.

As all our phone calls are recorded, these decisions can easily be reviewed to make sure we are making the right judgement calls. However I noticed that management were taking more and more of an interest in these decisions than in how many staff we needed. This practice became more commonplace and my decisions and conduct were increasingly being challenged by management.

So in spite of the long hours and lack of staff, the management seemed more interested in my conduct rather than the needs of the service. They either couldn't or wouldn't help in providing the support necessary, but they had the time and resources to look at my work practices. It seemed like management would use any excuse to look at my conduct and investigate as a result. I began to question my own decision making and found myself less able to come to conclusions. I was now second guessing the outcome of any possible investigations before making decisions. In the past making the right choice at work was no problem to me, now my ability to do just that, started to desert me.

This had the effect of undermining my confidence. After years and years of experience second to none in the service, my decisions were being scrutinised. Even though my decision making was found to be as required, I felt my confidence start to drain away. It felt so unfair, the long hours, the lack of support from management, the lack of staff and the feeling of being left alone to deliver the service without adequate resources. All these problems and all management were interested in was my conduct.

The situation was slowly getting worse and worse. I was totally demoralised by this stage and unaware of what I might be pulled up for next. I began to dread going to work. After twenty years of exemplary service, I had lost confidence in myself. There was no end in sight and nobody seemed to care. At the same time, the work load just continued and continued and continued. At that stage work seemed like a prison and it really started to take its toll.

My health problems started with not being able to sleep properly at night. Then I found myself being less and less interested in my surroundings. I was just not interacting socially with others. This was the start of my illness and in 2004 some years after I started in the control office, my personality had changed completely.

For six months in 2004 my symptoms accelerated. I was going downhill fast and I knew there was something wrong with me. From being a person who was happily married,

happy go lucky and with a good sports and social life, I had become quiet and withdrawn. I was someone else and I was on a downward spiral. I was withdrawn at home and I was withdrawn at work. I pulled out of all working parties union duties and committees to do with work. In effect I went into hiding.

I was physically absolutely shattered and eventually I was barely functioning. I was like a car that was grinding to a halt. I was eating very little and I had lost weight. I was getting panic attacks. I was now pacing the house getting chest pains and palpitations. I could not settle at all. I didn't want to leave the house.

The situation finally came to a head when my wife and in laws, concerned at my deteriorating behaviour, forced me to go see my local GP. I remember the GP taking my pulse in the surgery with my heartbeat racing. He diagnosed me as suffering from anxiety and stress. It was the first time I had associated those terms with myself. He gave me a certificate for one month of sick leave and prescribed relaxants.

That month off was a godsend. At last I could get some rest. I went to counselling during my sick leave and I found that very helpful. At the end of the month, although not fully back to health, I was much more like my old self. I remember starting to research the conditions I had been diagnosed with. I found that anxiety and stress have a lot of websites. On returning to the GP he gave me another month's leave.

Although I was still not fully recovered, I went back to work and faced the same conditions that I had left. I was not back long when after one particular shift, I was left so absolutely shattered and drained that I went back to my GP. He put me straight back on sick leave. Even though I was still off work I was worse than ever. I had now become very anxious and fearful about never being able to return to work.

When I went back to the GP he referred me to a stress clinic in Dublin. The psychiatrist there diagnosed me with work related stress and put me on sick leave for a further three months. I was prescribed anti-anxiety tablets and within three weeks I felt better. However, I was further instructed not to return to the same role in work.

This stipulation not to go back to the same work situation was a further upset to me, a real blow. To be told that I could not go back to the same role and responsibilities was a big disappointment. I'm only in my forties and I have a lot to contribute. I want to work and be productive.

But against that, and having been made ill as a result of poor work conditions, I'm not about to put my health at risk again. It's just not worth it. I remember the worst of my illness and I'm not going through that again. I know management have now made an effort to recruit more staff to the control office. The staff numbers have been doubled since I was there last but they still have a high turnover. Of the original team of seven when I joined, just two are left.

I went back to work full time in 2005. My duties are different now though and I don't have the same role. I feel I am totally under utilised as I'm only given administrative duties to carry out.

Thankfully I'm now almost back to the same level of health as I was three years ago, before the stress started. I'm still on the medication though.

I'm in a different work role now but my position at work has not been finalised. I'm having ongoing negotiations with our HR department about my employment status and I don't know what the outcome will be.

I started in this career over twenty years ago. Before I was promoted I was on sick leave twice in those twenty years. Once due to tonsillitis and once due to food poisoning. My life now has utterly and completely changed. I wish I could go back three years and stop what happened to me. I found out the hard way how your health can be affected at work.

Total employee costs €46,000;
€2,500 Stress management courses in Dublin
€1,500 Doctor's certificates and medication
€2,000 Travel to Dublin to visit psychiatrist
€30,000 Lost overtime payments
€10,000 Other expenses

Total employer costs €238,082*
€69,041 Salary costs of injured employee
€69,041 Salary costs of replacement staff
€100,000 Retraining cost for replacement staff

* Please see note in Appendix 1 on calculation of employer costs (section A2.3)

Case Study 7

Pat Liddy is a psychiatric nurse in his forties. He has over twenty years experience in the same hospital. Whilst administering medication, a patient assaulted him. He took one week off as sick leave and returned to work fully recovered. He tells his story;

One day in 2006 at about four o'clock, I went to give a patient his medication. It was a normal day at work and the job of administering medication is a daily occurrence. The method is straightforward. You put the pills in a small plastic cup and hand it to the patient.

So on this occasion I handed the cup to the patient who was now standing in front of me. I noticed he was in a fairly agitated state but I still had to give him the medication, so I reached out to him with the cup.

With no warning, he suddenly swung his arm and knocked the container out of my hand. He then went to punch me in the face. I saw the punch coming and managed to move my head out of the way. His punch hit me on the shoulder.

Then he grabbed hold of me and we started to grapple. Now this person was fairly big, bigger than me. He was about six foot tall and eighteen stone. As we struggled I called out to my colleagues and managed to activate my personal alarm.

Two other nurses came across straight away, grabbed hold of him and tried to restrain him. Two other members of staff quickly arrived and we all had hold of him trying to restrain him. More staff arrived due to the personal alarm and in the end there were seven of us restraining him.

It's important to get the person under control in such cases, otherwise he could harm himself as well as others. So he was brought under control as soon as possible and put into a side room until he calmed down.

All this took place very quickly. It was all over in four or five minutes. Even so I was breathless by the end of it. The person had a lot of strength and it took seven of us to finally get him fully under control. To onlookers it would have looked very dramatic.

In this line of work these events will happen. They are very difficult to predict so we have well laid out procedures to deal with such events. We all carry personal alarms and we are all trained in how to react in such cases.

Looking back on the events of that day, I remember thinking it could have turned out very differently. If his punch had hit me in the face I would have fallen to the floor. In that case the situation would have been more difficult to control and it could have turned out much worse. I've known people in this profession who have had to retire as a result of an assault.

After the event I noticed there was pain in my shoulder. I don’t know if it was caused by the punch or the struggle afterwards, but it hurt enough for me to go to my GP that evening.

At home I told my wife what had happened and she was upset and frightened. I didn’t tell my kids what had happened, but they knew something had gone on from my wife’s reaction and because I was home a bit early. So the kids were a little anxious too.

My GP diagnosed a muscle injury and I was told to stay at home for a week to allow my shoulder to recover. I was back a week later and resumed my normal duties.

Total employee costs €635
€35 Doctor’s certificate and painkillers
€600 Lost overtime payments

Total employer costs €1,315
€1,315 Salary costs of injured employee

Case Study 8

Margaret Murphy is a health care worker in her sixties. While attending to a homeless woman in hospital, her arm was scratched which caused light bleeding. She had to wait for blood tests regarding Hepatitis and HIV. She tells her story:

One day in 2002, I was at work when a homeless lady was being examined on the couch by a doctor. I was helping with the examination. The lady was in a poor state of physical hygiene, she looked like she had not washed for some time. Her clothes were tatty, she looked disheveled and her fingernails were dirty. There was a smell of drink off her and even though it was late afternoon, she was falling asleep on the couch.

As she started to slump into the couch, I went to help her up. I was wearing a short sleeved gown so my arms were bare. As I put my arms on her shoulders she suddenly grabbed my arm and dragged her nails down my forearm.

I looked at my forearm and there were long white scratches down it, but I paid no attention. I had to take the lady to one of the wards so I helped her from the couch and led her from the examination room.

When I was outside in the corridor, a passing doctor saw my arm and called my attention to it. By now the scratches had reddened and there were small bubbles of blood along the lines of the scratches.

The doctor passed the lady over to another nurse and he took me back into the examination room where there was a sink. He washed the blood from my arm. I covered the area with some gauze to soak up the blood still oozing from my arm.

The doctor then sent me to the nearest A&E in a taxi. He had telephoned the hospital and I was treated straight away. They referred me on for blood tests, which I had carried out the next day.

When I had my blood taken, I asked about the effect of the scratch. I was told that the chances of contracting Hepatitis B, C or HIV were low.

However, I was still worried. The results thankfully came back negative but I remember being anxious while waiting for the results. Even though I knew the risk was low, it was always at the back of my mind that I may have contracted Hepatitis or HIV.

Total employee costs €0

Total employer costs €0

Case Study 9

James McGrath is an emergency services and health care worker in his thirties. As James was pulling a car crash fatality from a vehicle he slipped two discs in his neck. As a result he was off work for four months. He tells his story;

One day in 2005, I turned up for duty at the control office. We had a received a call relating to a road traffic accident. So working under orders from the officer in charge, we drove to the scene with two emergency services vehicles.

When we arrived at the scene we found a car that had crashed into a large tree. We then began to remove a fatality from the car. Using hydraulic cutters and by removing the windscreen we managed to free a way out for the body to be removed. The ambulance trolley had been placed along side the car ready to receive the body.

As I am a manual handling instructor, I would know the importance of correct lifting techniques. My job involves a good deal of manual handling and I'm used to the demands of lifting, pushing, pulling and moving heavy items. A car crash usually makes access difficult. So I had to make sure I was in the best position to safely extricate the body from the car.

I positioned myself in the car and brought the body up to my chest. Sitting behind the body I could then put my arms under his arms and grab him firmly around the chest. I then began to move myself backwards out of the car and at the same time bring the body with me.

I was now ready for the lift which involved pulling the fatality clear of the car and placing him on the trolley. For this lift I had the assistance of two others ready to take some of the weight.

I had the body tight to my chest and I made sure we were all ready to begin the coordinated movement of lifting and pulling the body back out of the car. This was done successfully and I was now upright and backing towards the trolley. All that was needed at this stage was one final lift and turn, so that the body could be placed on the trolley.

So all at the same time, I twisted myself around my torso, lifted the body and pushed it towards the trolley. Unfortunately the fatality was still caught in the car. My momentum was already established and basically the body stopped and I kept moving forward.

I immediately felt a sharp, niggling, tingling pain in my neck. It was on the right hand side of my neck where it joins the collar bone.

I told the officer in charge that I had a sharp pain in my neck and he asked me to step aside. The body was then freed by my colleagues, placed on the trolley and removed to hospital.

I didn’t think much about the pain at the time. I wasn’t in a lot of pain, but it was there. I just thought it was a muscle strain and didn’t pay it much attention. I finished my shift and went home.

Later at home that weekend, I noticed the pain in my neck had started to become worse. I also found that I couldn’t turn my head to the right very much. I could look straight ahead alright and to the left as normal, but once I tried to turn my head to the right, I could go no more than a few degrees. If you can imagine that straight ahead is twelve o’clock, the most I could turn my head to the right was one o’clock. To talk to someone on my right, I had to turn my whole body towards him.

I still thought the problem was not as serious as it eventually turned out to be. I just thought I had a crick in my neck. My sleep was also disturbed as I found it difficult to get into a comfortable position.

I was on annual leave for the following three days. During those days the pain continued, but I thought it would wear off. However the pain in my neck was still there when I was back at work, but I continued working and that morning went to help a person from his bed.

As I helped him, I got the same sharp pain in my neck, but this time it was worse, it was a lot more painful. A few moments after that, I found that I had lost any ability to turn my head to the right. I could see straight ahead and to the left, but I couldn’t turn my head to the right at all.

At this stage I informed my supervisor and went to sit down in a high backed chair. My supervisor came back with some painkilling gel for my neck and I rested there for a few minutes. I still thought it was a muscle strain and I assumed that after a few minutes rest I would be ok to resume work. So after a short while in the chair I went to get up. At that point I knew there was something seriously wrong. As I went to get up, I leaned forward and immediately felt an intense and extremely painful, sharp stabbing feeling in my neck.

I now couldn’t move my head neck or chest. I had to keep the upper part of my body still or I would increase the already intense pain I felt. I was helped up by work mates and told to go home immediately. I had to be driven home, as there was no way I could drive. I was in extreme pain and couldn’t move. I was just about able, very painfully and very carefully, to get into the car.

I was driven to my GP and by now the pain had spread and affected my neck chest and right shoulder. My GP put it down to a muscle strain and prescribed pain killers and anti inflammatory drugs. My GP also told me to stay off work and to return to him after one week.

I have to say the painkillers worked and lessened the pain, but I was still uncomfortable at best and much worse each time the painkillers wore off. I found myself having to lie flat out on the ground to get any relief from the pain.

During the following weeks, the number of times I had to lie on the ground started to increase. Eventually I would be lying on the ground six or seven times a day for an hour or so each time. My sleep was disturbed and I wasn't getting much rest. With the pain, having to lie down all the time and the lack of sleep, I was getting very tired and very irritable.

Even getting up off the ground was an issue because of the pain and immobility. I had to roll on my side first, then slowly and carefully get on my knees then, stand up. Any tiny movement of my neck would bring an immediate sharp and excruciating pain. It was some carry on all this.

This went on for seven weeks with no improvement. I was going back to my GP and getting pain relief which helped. I was also going to a physiotherapist twice a week but I wasn't getting any better. In the meantime there was all this lying down and getting up to contend with. It wasn't great. Simple housework was painful and standing at a cooker for longer than a short while was beyond me.

Then there was the boredom to deal with. A day at home on sick leave is long enough. It becomes even longer when you have to lie down on the floor and stay there for six hours or so, just to get some sort of relief from the pain.

After having spent seven weeks on sick leave I'd finally had enough and took the advice of some friends to go and see a bone setter. Now that turned out to be very helpful. I arrived at his surgery and told him of my problems. He felt my neck for a few minutes then grabbed hold of me and put me in a headlock, He then pressed firmly on my neck with his thumb. I heard a click from my neck. He did this again and I hear the same click from my neck.

After the clicks I felt instant relief. The reduction of pain was almost immediate. And then, just as quickly, my mobility was back. After seven weeks of pain and immobility I suddenly felt the pain lessen and now I could move my head in both directions.

Now I have to say, my neck was still painful, but the difference was incredible. The pain was much more bearable and now I could move my head much more. It was such a relief, seven weeks is a long time with such relentless pain and in seconds the bone setter had improved it. It was the bone setter who told me I had two slipped discs in my neck.

I visited the GP and told him of my improvement. He examined me and accepted the improvement but pointed out it was never possible for him to recommend a bone setter. Still he was genuinely pleased for me.

I was still seeing my physiotherapist and GP regularly. I was in some pain but it was not as bad as before. They both recommended that I continue to stay off work to allow me to recuperate completely. They told me that any return to work that included inappropriate lifting could reverse my improvement. My GP gave me a sick cert for another five weeks

off work. By that stage I had taken three months off work. However my GP and physiotherapist still felt I needed more time off work as I wasn't fully recovered.

I was still getting pain in my neck if I did any strenuous or continuous lifting, pushing, pulling or moving. So after any housework or shopping the pain would come back. My GP and physiotherapist advised me to take another month of work. I went to tell my HR department about this extra month as any sick leave after three months has to be sanctioned by them. The HR department didn't even know I was off sick. They then turned down my request for the extra month's sick leave.

Now that really, really, annoyed me. With no consideration or sympathy they dismissed my requests and I was left with the option of either going back to work, or taking unpaid leave. Here I was trying to recover from a bad injury carried out as part of my work duties and it seemed my employers were just not interested. I felt I had few options in the circumstances. Given the choice of my health, or returning to work, I chose my health. So I stayed at home for another month on unpaid leave to have more time to recover.

I remember my first day back at work after the leave. My neck had not fully recovered but it was much better. Even so at the end of that first day I was full of aches and pains. My neck injury still hasn't fully recovered but it's almost back to normal. The GP and physiotherapists told me they don't know when or if I'll ever fully recover. But I'm glad I've got most of my health back. I still get neck pain if I do something too strenuous or for too long a period, so I'm much more careful at work with any manual handling.

I've managed to take up my summer hobbies of golf and scuba diving again. I'm not as good at golf as I was though. I can't hit the ball as hard as I could, but at least I'm still playing. When I go scuba diving, I have to be careful carrying the gear. It's heavy stuff so I'm very careful about that. I find that each day brings situations at home and at work where I have to think before I lift, push, pull or move. I've been back at work now for a good while and being careful about my manual handling is now a reflex reaction. What still gets me though is that I see poor manual handling techniques at work all the time and no one seems to learn from my experience.

Total employee costs €10,180
€3,680 Lost overtime payments
€1,500 Medical and travel expenses
€5,000 Other expenses

Total employer costs €12,328
€12,328 Salary costs of injured employee

Case Study 10

Gerry Mullins is a training consultant in his twenties. He began his career as a cabinet maker and specialist woodworker. Then he caught all the fingers of his hand in a circular saw. He suffered extensive damage to his right hand, which is now shorter than his left hand. He tells his story:

I began my working career as an apprentice cabinet maker in the nineties. I liked my job and was considered good enough at the end of my apprenticeship, to be put forward for the prestigious Apprentice of the Year Award.

In the late nineties I went to work as cabinet maker for a kitchen manufacturer and quickly became established there. I was soon put in charge of specific contracts for clients and within a couple of years, I would have seen myself as site foreman. There were ten of us in the workshop and we would carry out a whole range of kitchen work including design commissions from clients and installation.

One day, a client came into the workshop looking for me. She gave me a magazine photograph of a modern looking but intricate corner unit kitchen cabinet. She wanted an exact replica for her own kitchen. So I set about making her a kitchen from that photograph. So one morning in 2000 I was working as normal in the workshop up until half past one in the afternoon.

Now the cabinets she had chosen were modern looking but they still had lots of detailed mouldings cornices and edges. These all needed to be made from scratch and assembled. Some of these mouldings were very intricate and delicate and I was working on one particular moulding when the accident happened. This moulding was the thickness of a ball point pen and about two foot long. So I selected a suitable piece of hardwood and was using the circular saw to bring the moulding down to size.

The saw I was using was a large professional table saw. The saw blade is mounted vertically in the middle of the table with a guard covering the top of the blade. I was bringing the moulding up to the teeth of the saw blade and with my fingers gently sliding the piece against the right hand side of the saw blade. I was only taking a shaving off the moulding each time so as to trim the thickness down to the exact size I needed. The teeth of the blade at that speed are just a blur and it was delicate work. It needed my full concentration to make sure the cut went well.

I was close to the width I wanted as I offered up the moulding to the saw blade for the final time. With my two fingers of my right hand pressing down on the moulding, I pushed the hardwood piece into the blade. The teeth bit into the wood and then I started to slide the moulding against and past the right hand side face of the blade.

The moulding had begun to pass the back of the saw blade when the accident happened. A table saw turns anticlockwise and the spin of the blade is towards you and your fingers. As the moulding slid past, it caught the side of the blade, flicked up and shot past me. I saw the blurred movement of the moulding and I turned to look behind me to see where

the moulding had ended up. This turning round caused me to lose concentration on where my hand was. Then I felt a sensation in my fingers and knew instantly I had done something wrong. I knew that the saw blade teeth had sliced into my fingers but I didn't know how badly at that stage.

I instantly pulled my injured hand back, closed it to make a fist and pulled it up across my chest. I covered my right hand with my left hand and held it there, tight against my right shoulder.

I didn't feel any pain at first, but there was a sensation in the fingers and I knew I had done something. I decided to take a peek my hand and took my left hand away to see what was there. I saw some cuts to my fingers but my hand was still closed up so I didn't see the full extent of the damage. I covered my injured hand, still lying across my chest with my left hand and walked over towards another workmate.

He asked me if I was ok and I told him I had just cut my fingers on the table saw. I took the covering hand away to show him but I didn't look at it myself. I remember him going white as a sheet. I asked him if it was bad and he said "ah no, it'll just need a few stitches, hold on there and I'll get the foreman". The foreman came across and again, I took away my covering hand to show him. Again I didn't look. The foreman said "oh Jesus…… I'll get Mick (the owner).

One of the other lads came across with some clean cloths and I put them over my hand again without looking. Another of my workmates came up to me then and said "I don't like doing this, but do you want me to go back over to the table to see if there are any parts of your hand there". I said yes and he came back quickly to say he hadn't found anything.

There still wasn't any pain at this stage and I was in good humour. I was joking with the lads and in good spirits considering what had happened. Mick the owner came across and I showed him my hand. He then put me in a car and we both drove to the regional hospital A&E. I rang my dad from a mobile in the car. I told dad what had happened and asked him to get to the hospital as soon as he could.

I arrived at A&E about twenty minutes later still in good humour and without much pain. The nurse saw me, took one look at my hand and waved me straight through the people sitting in A&E. I was taken to an observation room and told to lie down on a couch. It was then that my fingers began to hurt. The nurse gave me an injection of morphine for the pain.

The doctor came in to look at my hand. I just held my arm outstretched as I still couldn't bring myself to look. He was asking me questions and I couldn't understand him all that well. I remember him talking about deathness or something like that. That was a bit worrying. Eventually I understood what he was saying, it was Tetanus, not deathness. So to add to my troubles, I had to roll over to get another injection in my backside. The doctor cleaned my hand and put a bandage on. The bandage was huge, my hand was

completely wrapped up in this white bandaging and it looked like a giant cotton bud. The doctor said he was going to send me to the plastic surgeons in St James's in Dublin. I asked the nurse how bad it was, but all she would tell me was that it would be ok.

At the same time my mum and dad came in. My mum started crying and I joined in. I didn't realise it at the time, but I had a large blood stain on my shirt where I had held my hand against my chest.

At that stage the shock started to set in. I knew I had done something serious to my fingers and I wondered how many of them were injured. I remember thinking that I might have hurt one maybe two fingers. The doctor and nurse came back and told me the news. Basically all the fingers of my right hand had come into contact with the blade. The least affected was my thumb but the others were badly injured. They wouldn't know how bad until the plastic surgeons in St James's could have a look.

I was transferred to St James's the next day and that was the first time I began to realise the extent of the damage. I was having my bandages changed in the morning before surgery and I decided I was going to look. So I did and I was shaken by the sight.

I could see the blood stains on the bandaging as they removed the dressing on the fingers. The fingers were splayed out with the amount of bandages wrapped round each one of them. I watched as they unwrapped my fourth finger first. I saw that the top of my fourth finger down to the first joint, was split in two down the middle. I remember the v shape it formed with half of the finger top leaning to one side and the other half leaning to the other side. The other fingers were still bandaged. From the size and shape of the bandaging I knew they were bad, but I couldn't bring myself to look as they took the bandages off.

I had the surgery that afternoon and when I came round the first thing I remember was the vomiting. I was there for about an hour, vomiting constantly. Then the nurse came round and gave me more morphine. The doctors then arrived and told me about the operation and how well it had gone. They said that in the long run, I would not be all that badly impeded and they explained what they had done.

Basically they had amputated the top of my fourth finger. That was the one with the split down the middle. Also I had lost the middle knuckles of my second and third finger. The blade had sliced clean through and taken most of the bone. As I didn't have much knuckle left there, they had to fuse the top of the finger bone to the bottom of the finger bone on both my second and third fingers. Finally my little finger had been sliced deeply. In addition there was extensive muscle, nerve and ligament damage to all four fingers. I was visited that day by my mum and dad and my girlfriend, who is now my wife and I told them the extent of my injuries.

The next day I was having my bandages changed and I decided I was going to look at my fingers. So when they had taken all my bandages off I looked. The first thing I noticed was the size of my fingers. They had swollen to more than twice their normal size. They

were that swollen that they were splayed apart as far as they could go. Then I noticed wires sticking out of my fingers. Then I saw all the stitches. I was told there were more that a hundred stitches in total. They were in all my fingers and I could see the black thread of the stitches in amongst all the dried blood.

The wires were there so that the two bones in my fingers could be brought together and fused solid. Those two fingers don't bend in the middle any more as I don't have a knuckle joint there. One complication was that the fingers had fused too straight. I had to have another operation a few days after the first, to break the fingers and reset them at an angle to each other. That way I could close my hand without these two fingers sticking straight out.

I was discharged a few days later and my mum and uncle came up to collect me. The effect of the injury on day to day activities soon began to affect me. We stopped at a pub on the way home for something to eat. When the meal arrived I realised I couldn't use a knife and fork. My mum had to cut up the meat for me. I had a couple of beers as we waited for the meal and as a result I had to go to the toilet. Once inside I realised I couldn't unzip my trousers to use the urinal. My uncle had to come in and help me. That was very very embarrassing. For a long time after that, I would only wear track suit trousers when going out. There were other things I couldn't do. For example, I couldn't butter bread. Driving was beyond me for a long time because I only had one good hand.

I was eight months off in total and in that time there wasn't any really bad pain except when I hit my hand off something. Then it was unbelievably painful. The top of my amputated finger was now very sensitive. The doctors had warned me that would happen. The physiotherapist had me dipping the top of that finger into a bowl of rice to harden the skin and to desensitise the area. I remember that used to hurt when I first started.

My most upsetting memory at the time, was seeing my young niece starting to cry when she saw my hand for the first time. Then other little things would upset me. People staring at my hand was one of them. So I found myself hiding my hand under tables and using my left hand to shake hands. I now have misshapen fingers with scars and scar tissue all over them. If I put my hands together as if I'm praying, the fingers of my right hand are shorter than the others. I now think to myself that I have one big hand and one small hand.

I became a bit depressed during the time at home. I put loads of weight on. There was nothing to do other than go around picking at food. I had to go back to living off mum and dad and they had to pay all my bills. That included the car loan and credit union loan. I was making good money at work back then. I was working six days a week and with lots of overtime the money was flying in. The accident changed all that. I was beginning to worry about money and where it was going to come from.

I also decided that I wasn't going to go back to work as a cabinet maker any more. With the accident and all that went with it, I had lost enthusiasm. I was now also a little

nervous around circular saws. It was a shame really as I was doing really well as a cabinet maker.

For the next few years I had a variety of jobs but never really settled. I even went back into a workshop once and started a job in a door manufacturing company. That lasted all of three days. It's now six years since the accident and I've finally settled in employment terms. I've been with my current employer for over a year now and I'm enjoying the work.

I'm still affected by the accident though. As I am right handed I now can't write properly because I don't have great control over the pen. My hand is now easily affected in cold weather. So, in the winter months my fourth finger will go numb and a dull ache will affect my hand.

Before the accident I used to go bowling. Now I will go, but I won't actually use the bowling ball. I'm also still a little self conscious. I find myself hiding my hand away in public. Even though I haven't got any kids at the moment, I often think of what I'll say to them when they look at my hand.

I now have a disability pension. The Government has classified me as being 10% disabled. I still keep getting reminders of the accident. Not too long ago an acquaintance stopped me in the street and asked me if they had ever recovered my fingers from the workshop.

Total employee costs €93,614 in the six years since the accident

€6,120 Lost salary
€15,240 Lost overtime payments
€127 Medical expenses
€127 Travel expenses
€10,000 Other expenses (Repaying loans paid off by relatives)
€2,000 Retraining costs for new career
€60,000 Lost salary, difference in annual salary before and after accident @10,000 pa

Gerry received a total of €171,904 in the six years since the accident
€152,000 Compensation
€3,344 Sick pay
€16,560 Disability pension

Gerry's Employer

Well now I'll tell you about that accident and the effect it had on us. First off, we were all shocked and felt bad about it. Gerry was a nice lad. He was hard working, reliable and an important member of our staff. We were all upset for him.

Eamon Collins, one of our machinists took it very badly. He was very shaken by it all. Eamon was standing near Gerry when it happened. Eamon didn't see it, he just heard it. He actually heard the saw blade slice through his fingers. We had to take Eamon off the machines and put him on other duties for while. When we eventually heard about the extent of Gerry's injuries we were all very concerned for him and felt for him. Unfortunately he never worked for us after that. It was a great pity, he had a bright future ahead of him.

As for the business, it was a financial disaster. The company only just survived the effects of Gerry's accident. There were lots of times when I thought we were going under. We only just pulled through. It's now six years since the accident and we are just about back to where we were. Let me explain how it affected us.

On the day of the accident we were all shocked and feeling down. There was no work done that day, none at all. None of the staff, myself included, felt like doing any work. You couldn't really work, the thought of poor Gerry in the hospital and looking at the machine that caused it. It's little wonder there was no work that day. In fact the whole week was slow after the accident. The mood of the lads was down for a good while. It took a whole week before the machines were being fully used again. So we weren't making any kitchens properly for over a week.

The kitchen cabinets that Gerry was working on when he had the accident were thrown out. That kitchen was never finished. The woman who commissioned it came in and we explained to her what happened. She didn't mind that the kitchen wasn't built.

I was also helping Gerry out financially after his accident. He was on full pay for the first ten weeks. After that he went onto social welfare. But with Gerry now not getting his regular overtime money, his debts started to mount up. I ended up giving him near €200 a week for a good while to tide him over. I was told a few times not to give him any money, but Gerry was a good lad and a good employee. We couldn't just ignore him. He was in trouble over his car loan and the money was to cover the repayments.

Now you have to remember that at the time of the accident, business was booming. We were flying, we were finding it hard to keep up with the demand for our kitchens. The Celtic Tiger and the building boom meant we had work coming out of our ears.

We had just settled into our new workshop which was three times the size of our old one. That's how good business was. Our new premises was 9,000 square feet, fully modernised and with state of the art woodworking machines. In all we had twenty five lads working for us six days a week. We also had a show room and storage facilities. Our

turnover that year, up until Gerry's accident was nearly one and a half million Euro. As I said, we were flying.

Then I informed the insurance company about the accident and they sent down one of their engineers. He really kicked off the start of our financial difficulties. The insurance man wanted to make sure all the lads had their training and apprenticeship certs before he would even think about continuing our cover.

A good few of the lads had told me they were all trained up and were in order. But they couldn't or wouldn't produce their certs. That didn't impress the insurance company and I had no choice but to let twelve of the lads go. The insurance company wouldn't let me keep them and provide cover at the same time. Now as I said business was booming, but to try and find twelve skilled woodworking machinists in a short amount of time was just impossible. It couldn't be done.

So, I had to start cancelling orders. I had to start turning away work. I had to stop tendering for new work. We had just lost an important member of staff and our output had suffered with Gerry's loss. On top of losing him, having less staff meant I couldn't tender for the same amount of work as before. That was very frustrating. There were clients of mine who were looking to give me work, but I just didn't have the staff.

The result was that our yearly turnover dropped dramatically from near one and half million Euro to 750,000 Euro. In effect our turnover was halved in a short space of time. Before the accident we were making and installing about twenty kitchens a week. After the accident, that figure dropped to six a week.

Then our insurance costs went up. Before the accident our insurance was in the region of €19,000 a year. When it came to renewing our insurance, the premium went straight up to €32,000 per year. The next year it went to €40,000 per year and stayed there till last year.

I rang other insurance companies to see if I could get any cheaper premiums, but only my existing insurance company was interested in quoting. None of the other insurance companies gave me a quote when I informed them of the accident and the outstanding claim. Last year was the first year that our premium dropped by €5,000.

Then there was the bank manager to deal with. I had financed the new workshop with borrowings from the banks. When turnover started to go down, the bank manager was not happy to keep lending me money, and to be honest I didn't blame him. If you looked at our accounts in the years after the accident you would have seen the following:

- Turnover down by nearly half
- The workforce halved
- Contracts and sales figures down
- Insurance premiums doubled
- A personal injury claim hanging over the company

So for about five years after the accident we were struggling. The banks would not lend us any more money and those years were tight. I was staring at bankruptcy for a good while and we only just got through it all. The accident was a real set back to our development and we had to suffer five poor trading years as a result.

We are nearly back to normal. The number of kitchens we now make is up to twelve a week. I managed to find extra machinists in the intervening years so I was able to expand production. This summer we are taking delivery of a new batch of woodworking machines and our output will be up to twenty kitchens a week. That's the same production levels as we had five years ago before Gerry's accident. So in the end our costs came to:

Total Employer Costs €3,870,500
€1,000 Unfinished kitchen
€3,500 Salary costs of injured employee
€3,750,000 Lost production,
€116,000 Additional insurance premiums

Case Study 11

Anne Dempsey is a health care worker in her fifties. She was driving back to her office when a fully laden articulated lorry skidded into the back of her car. Anne subsequently suffered from a slipped disc in her neck. She tells her story:

One day in 2004, I was driving back to my office from my scheduled visits. It was the afternoon and it was a wild, wet, windy day. It was lashing rain the branches on the trees were swaying about.

As I was driving, I was aware of an articulated lorry behind me and I had been keeping an eye on him in my rear view mirror. In front of me there was a line of traffic approaching and I saw another lorry coming towards me.

As the lorry in front of me came closer a sheet of building material, suddenly peeled off the back of the lorry and flew off upwards, high into the sky. I watched the sheet, fly up into the air before it began to fall.

I could clearly see it in the air. Unfortunately it had moved across the road and was now falling towards the ground, on my side of the road. The path it was taking meant it could hit my car.

The sheet was too close to the car to take the risk of driving under it, so I braked to avoid hitting it. Now I didn't brake heavily. I was doing about 40mph before I started to brake and I slowed down gently. The car was still moving slowly, as I watched the sheet land in the ditch.

Then the lorry behind me skidded into the back of my car. All I heard was a grinding sound as my car was shunted forward about ten yards. In the few seconds after the car had been hit, I felt the situation I was in was not good. My worry was that the car could suddenly catch fire. I stepped out of the car while I called for help. I was constantly thinking about what would happen if a fire started. The results of a fire in the car, with me inside, would have been absolutely frightening and horrendous, too horrible to contemplate.

In the meantime the lorry driver who had hit my car came over to me and asked how I was. I said I was ok and he rang the emergency services. What we would have done without mobile phones in that situation I don't know. It felt like a long time before help arrived, but within ten minutes the Gardai and an ambulance were on the scene. I was later told a fire was unlikely to have happened, but how was I to know that at the time.

I also remember the way people behaved in cars on the other side of the road going past me. Some cars deliberately slowed down, just to get a really good look at my car. Then they would stare directly at me before driving off. They must have got great entertainment that day. I found out later there was another car crash on the same road not far from where I was.

I remember the lorry driver who hit me and I felt sorry for him. He told me that he had seen me brake and that he then braked and skidded into me. The lorry that hit me was big. It was an articulated lorry and was full to the brim with it's load. After the accident I was going to contact him to see how he was, but the Gardai advised against that. He was interviewed by the Gardai that night and after that he went home. As to the lorry that had lost part of its load and caused me to brake in the first place, well he never stopped and I never saw him again.

I was taken to hospital in the ambulance. Thankfully I was discharged that evening. At the hospital I met up with workers and friends from the office who came up to see how I was. They were very good to me, very sympathetic and kind. They were a great help and comfort to me at the time.

At the hospital I found it difficult to concentrate. I suppose the shock of it all had now taken hold. I was very shaken up by the whole event, I was still thinking of what could have happened. I kept on playing out all the possibilities in my mind. What if a fire had started with me in the car?. What if the lorry had hit me harder and crushed me?. What if the lorry had pushed me into oncoming traffic and caused a head on collision with another car?. I was driven home by my friends but I was still shaken. I took a few days off work after the car crash. I was feeling much better when I returned to work and things were back to normal.

Everything was fine at work until some months after the car crash. I was there at work, when I suddenly began to get pain in between my shoulder blades. It then started to spread to my right shoulder and all the way down my right arm. I was in a lot of pain for the next few days and I went to see my GP. He referred me to an orthopaedic surgeon and within days I had an MRI scan. The results were not good. I had a protruding disc on vertebrae five. In other words I had slipped a disc in my neck. I was subsequently off work some five months in total.

I've been back at work now for a good while. Even though it's been nearly two years since the car crash, my neck hasn't really healed. Also I've now lost the full use of my arm. Before the crash I was fine and never had any neck or arm problems and now all this trouble.

My neurologist told me that as it hasn't healed by now, the chances are it won't get any better. So I'm left to get on with my life. So what I do now is to be as careful as possible and I avoid any excessive or strenuous manual handling as far as I can, but to avoid all lifting at work is impossible.

The crash has affected my home life too. I have a family so there's always housework to do, but I find every day activities are difficult now on account of my neck and arm. I'll give you some examples. I find it difficult to peel potatoes and carrots, to wring out the washing, to dry the dishes to lift the Hoover, to do the ironing, to put the washing on the line. Every couple of days I have to exercise my neck to try and separate the vertebrae.

I'm still very nervous about driving and avoid it if at all possible. I won't drive any vehicle at work if I can help it because I'm just too scared. I still keep on thinking of the possible consequences of the crash even though its now nearly two years on. To think I could have been killed because someone had not tied down a load properly and someone else was driving too close in wet conditions.

Total employee costs €4,500
€2,000 Medical costs
€500 Travel expenses
€2,000 Lost overtime payments

Total employer costs €31,068*
€15,534 Salary costs of injured employee
€15,534 Salary costs of replacement staff

* Please see note in Appendix 1 on calculation of employer costs (section A2.3)

Case Study 12

Lorcan Dennehy is a woodwork teacher in his thirties. He was using a planer when he ran his ring finger over an exposed part of the blade. As a result, he had to have the top of his finger amputated. He tells his story.

I qualified as a woodwork teacher back in the nineties and I've spent most of my teaching career in the same school. At college I received the basics about woodworking machinery safety and I learned a lot more when I began teaching. In the years since I qualified, I have had a lot of dealings with woodworking machinery and I would always be careful, given my responsibilities as a teacher.

One day in 1999 I was going to use the planeing machine in class, something I had done countless times before. On that day, the class were making small wooden plaques. I was taking a double woodworking period but wasn't as comfortable in myself as I'd normally be. I had been temporarily moved to a neighbouring school that week, so I wasn't totally familiar with the students or the woodworking machinery in the class room.

Even so, there were the normal array of woodworking machines and tools including circular saws, pillar drills, sanders, power tools and hand held tools. There was also a planer, the one I was about to have my accident on. The planer was an industrial grade professional machine about the size of a small door.

A student asked me if I would plane down a piece of rough softwood to a smooth finish for him to use. The piece of wood was about the size of a tabloid newspaper and three quarters of an inch thick. We wouldn't let a student use such a hazardous machine due to health and safety considerations, so I was planeing the wood for him.

As usual and before I switched the machine on, I placed the wood on the metal planer table and lined it up against the roller blades. I saw that the roller blades were wider than the piece of wood by about three inches. Normally I would use a guard to prevent access to any exposed part of the moving roller blades on planers. Unfortunately the machine was an old model and it didn't have a proper guard fitted. So a quarter of an inch of the roller blades were showing above the table and were unguarded.

Nevertheless I switched the planer on and noted the continuous low hum of the machine as it reached its normal operating speed. The blades were unguarded to the left of the roller and were now spinning at such a high speed that they were a blur. I then began to guide the piece of timber over the blades to plane and smooth the underside of the wood.

As normal I put both my hands on top of the timber and used my fingers to gently and firmly glide it across the blades. I had all my fingers on top of the timber except for the third, fourth and fifth fingers of my left hand. They were dangling off the edge of the wood and were in line with the roller blades. I didn't know they were in line.

Needless to say, as I pushed the piece of timber over the roller blades, the tops of my fingers made contact. For the first few seconds I didn't feel any pain. I immediately clenched my injured hand tightly and covered it with my other hand. After a few seconds though, the pain started and I have to say it was very, very painful.

Then there was the blood to deal with. There was a lot of blood at this stage and it was splattered everywhere. Large drops of blood were quickly forming in my hand and they were splashing onto the planer table, the wood, the workbench, my clothes, indeed everything in my immediate vicinity. I saw the drops as they spilled from my hand and splashed onto the floor forming bright red circles of blood, the size of bottle tops.

I held up my hand to stop the pain and I got some relief from doing that. I then told myself I had to turn the machine off. So I had to lower my hands and use my good hand to quickly turn the machine off at the stop button. When I lowered my injured hand I could feel the sensation of blood pumping at the top of my finger. This increased the pain again and was a very unpleasant sensation. The pain lessened slightly as I held up my arm again but I had managed to turn the machine off.

Some of the class now came across to me looking very concerned and asked if I was ok. I just headed for the door clutching my hand and bleeding over the floor. I made my way to the Principal's office which was next to the class room. I told him what had happened and he quickly got another teacher to take me to the local GP. He also rang the GP and told him to expect me.

I was feeling worse at this stage. I was now in shock and the pain was getting stronger. I was also now worried about bleeding to death. Another teacher came across to me with a bandage to wrap round my finger. I couldn't look, I just let him bandage the finger and then I went with him to the car and was driven to the GP.

Some time after the accident, I asked the teacher what he saw when he bandaged my finger. He said he could see that the bone in the top of the finger was exposed. He could also see the nail and a lot of loose skin hanging off what remained of the finger.

The GP gave me a morphine injection and then sent me to A&E, which was a thirty five minute drive for my fellow teacher. In the car I was feeling drowsy and sick from the morphine and nearly passed out a few times.

In A&E the doctor examined my fingers, but I couldn't bring myself to look at the injury. The doctor told me I had a bad cut and asked me if I had kept any of the finger. I told him I hadn't. In any event the machine had made mincemeat of the end of my finger so there weren't any pieces of finger left on the planer that were worth saving. I was then sent for X rays and afterwards taken to a ward. I was still bleeding when I was put into my bed. My clothes and new bandages were all soaked in blood.

I was to spend that night in hospital before an operation the next day. In the meantime my mum and dad came to visit as they had received a message that I had been in an accident.

However the information they received was that my arm had been severed. So they were actually relieved when they saw me. On the other hand I was lying in bed worrying if I was ever going to work as a woodwork teacher again.

That night in hospital was very uncomfortable. Whilst in bed, I remember keeping my injured hand above my head by holding onto a drip stand. This was to get some relief from the pain. The pain was awful. Even though I was given more morphine, the pain was still very bad.

The next morning I was taken to theatre for the operation. I was given a local anaesthetic and they began. I still couldn't bring myself to look at my injured fingers. The nurses were very reassuring and they were talking to me throughout the half hour operation. There was no pain but I was aware of the sensation of them operating, For one thing, I could hear a crunching sound and then a grinding sound as they took away the surplus bone from the end of my finger.

They gave me more morphine when the local wore off. Before the morphine took effect, the pain was unbelievable and I was back to holding my hand up high. The surgeons had said the operation went well and that they had managed to leave a small part of the nail root still attached. This they felt, would allow a nail of sorts to grow, so that it could cover part of the severed area and protect some of the end of the finger. I now have a small section of nail that grows, curls over and into the end of my finger. It's a small nail that forms a lump rather than an actual finger nail. These days I have to file it regularly to stop it from becoming a visible lump of nail.

I was released from hospital two days later and went home. A week after the accident I finally brought myself to look at the injured finger when my bandage was being changed. There was still a lot of blood and I remember the stained bandages being removed. I was shocked when I saw the injury. The finger was so much shorter than it used to be. I measured it against the fourth finger of my right hand and it was a good half inch shorter.

It also looked awful. The finger was discoloured. The tip of the finger that was left was greatly swollen. Skin from under the injured area had been wrapped over the end of the finger. The remains of my nail root was showing at the end of the injured area.

I was off work for a total of three weeks before returning. In those weeks the injury was still very painful. Towards the end the pain began to recede somewhat, but I was on painkillers for a good while. In fact the pain didn't go away fully for a good three months. It still hurts in the cold weather but apart from that, I don't get much pain from it now.

To this day, and it's been over seven years, I'm still self conscious of the appearance of my injured finger. I find myself clenching my fingers a lot, which covers the injury and stops people looking. If people do see my finger, for example when I'm holding a glass in company, they will invariably stare at it and ask how it occurred. It's not something I like to be reminded of but having said that, I would think about the accident or be reminded of the injury, on a daily basis.

One particularly unpleasant memory concerned my wedding day. The accident affected my ring finger, so I had to make sure it didn't show on the wedding photographs. In particular the planned photograph of putting our rings on each other had to be thought through carefully. I had my wife practicing putting on the ring but covering the end of my finger with her hand. But sometimes there is no hiding my injury. As a woodwork teacher I naturally have to show techniques in full view of an entire class. I can't hide my finger in those situations.

These days if I can avoid using a planer I will. I have used them when necessary and will keep on doing so, but I don't like working with them. The accident has also made me much more safety conscious. I am very strict now about health and safety. Before the accident health and safety was important but now it's my highest priority in the woodwork class.

I am also very conscious of other people's safety and how they work. If I see an unsafe act in my class I will act very quickly. I can almost see a person about to commit an unsafe act. I now watch what people do even before they pick up a tool or approach a woodworking machine. But to this day, if someone is working at a planer, I can't watch.

Total employee costs €1,400
€1,200 in medical expenses
€200 in travel expenses

Lorcan received €34,925 in compensation

Total employer costs €4,226*
€2,013 Salary costs of substitute teacher
€2,013 Salary costs of injured employee
€200 Cost of a new guard for the planer

* Please see note in Appendix 1 on calculation of employer costs (section A2.3)

Case Study 13

Deidre Kelly is a manufacturing plant operative in her sixties. As she was struggling to push an equipment trolley at work, she tore ligaments in her knee. She was off work for fifteen weeks in total and still has a pronounced limp. She tells her story;

I've been with this company for over twenty five years now and I've been doing the same job there for over twenty years. The job involves pushing large trolleys loaded with equipment to designated areas where they are steam cleaned. The trolleys are stainless steel and a good size. They are about eight foot by six foot by six foot. When the trolleys are loaded with equipment to be cleaned they weigh about thirty stone each.

So when I came to work on that particular day in 2005, it was to do a job I was very experienced at and had been doing for a long time. Now these trolleys are like the supermarket ones in that if you get one that has a dodgy wheel, it isn't easy to control. You end up forcing the thing to go where you want it to go. Normally the trolleys at work are fine but the one I had to push that day had a dodgy wheel.

We always work in pairs and that day Jenny and myself had one of these trolleys each. We had to take them to the cleaning area about fifty yards away. So there I was pushing and pulling the trolley and it was fighting me all the way. I was having to use my weight and the weight of the trolley to control its direction. So it was a fairly physical matter to make sure the trolley didn't hit other fixtures and fittings along the way.

I was close to leaving the trolley in its designated area and it just needed a couple more pushes and pulls to finish the job. So I grabbed the trolley again leaned into it and went to push it. Then my right knee just gave way underneath me. I fell forward against the trolley. My right leg collapsed as if the knee wasn't there and I had a very painful and sharp stabbing pain in my knee.

I turned to Jenny and said "Jesus I'm just after getting a pain in my knee" and she waited for me as I tried to put some weight on the leg. But that was no good. The pain was too much and I had to take all weight on my other leg.

I still had a couple of yards to go to where I was to leave the trolley so I kept on going. I sort of hobbled on as I pushed the trolley those last few yards. I didn't think I had done anything serious so I hobbled back with Jenny to where my work station was. On the way back I was holding onto anything that would give me support like handrails, window ledges and furniture. It was still painful when I got back to my station but at least I knew there was a chair there and I could sit and rest the knee.

I went to sit in the chair and as soon as I did I let out an unmerciful scream of pain. The front of the chair had dug into the back of my knee and it was extremely painful. I stayed in the chair for a few minutes to get my composure back but the pain in my knee was still at me. A few of the others came over to see how I was and I just stayed in my chair. My lunch break was a few minutes away so I decided to wait for that and then go to see the company nurse.

When lunch arrived I began to hobble my way to the nurse's office and she made a doctor's appointment for me that day at four o'clock. I then took some painkillers and I waited back at my station in my chair. I rang my daughter and told her what had happened to me. She came to collect me in her car and together we went to see the company doctor who is based in town.

The GP examined me which was again painful as he started to twist and pull at my leg. He prescribed painkillers and anti inflammatory drugs. He also told me to stay off work for the next two days and the weekend before going back to work. That weekend the pain was still there and my knee had swollen up noticeably. I wasn't able for work on the Monday so I went back to my GP. He sent me straight to A&E and rang the hospital to tell them I was arriving.

At the hospital I was diagnosed with ligament damage and given more painkillers. They told me to rest for at least two to three weeks at home and I was instructed not to put any weight on my knee for that time. Those two to three weeks turned out to be four weeks before I could even stand again. After that month I could walk a good bit but only with a pronounced limp. It was fifteen weeks before I could go back to work again.

I was in pain for a long time. I was on painkillers continually for the first month after the accident. Finally after that month, the amount of pain lessened and I took fewer tablets as a result. The pain is not as bad now, but I'm still taking painkillers on and off.

During those weeks off work, I went for an MRI scan. The orthopaedic surgeon told me that I had torn the ligaments very badly on the outside of my knee. I had also torn them at the back of my knee but not as badly. He said I was lucky they had not snapped. He also told me it could be at least another six months before the ligaments would be fully healed. Even though I'd been attending a physiotherapist and had acupuncture, the healing has been slow. It's now seven months after the accident and I'm still limping.

The worst of it though was the sheer and absolute boredom at home. For nearly four months I was off work and I was driven to near despair by being cooped up in the house. Before the accident I made sure to keep myself fit by walking and swimming. I would walk three miles every day except Sunday. I'd go swimming once a week. All that has gone now. Any physical exercise and my knee swells up. So I just have to wait till the knee heals up before I can get out and about again.

I put on two and a half stone in weight when I was off work. I just found there was nothing to do all day, so I started to pick at sweets, chocolates, cakes and the like. I often thought that if I had time off, I would be able to do so many things. But the reality was that with my knee injury, I could do very little.

The housework is still a problem to me if I have to stay on my feet for a long time. I can't use the Hoover at all on account of not being able to push it forwards, without hurting my knee. On Sundays I sit over the cooker in a high chair to do the dinner. I'm now thinking about my nephew's wedding in August and how I won't be able to dance at the reception.

At work I now have a helper as I'm not able for the same amount of effort as before. She's with me part time to give me a hand with the trolleys. I'm still limping and I just have to wait until I get better. I could have another MRI scan, but that's not going make me heal any quicker, so I don't think I'll bother.

So now my GP and physio have allowed me back to light walking for exercise. I'll walk for up to fifteen minutes once or twice a week. Any more than that and I could damage the ligaments again. At this stage I have to say I'm just fed up with it all. Completely and utterly fed up. I just want my knee healed up so I can get my life back.

Total employee costs €500
€500 Travel expenses

Total employer costs €20,403
€3,835 Salary costs of replacement staff
€1,500 Medical expenses
€10,068 Salary costs of injured employee
€2,000 Productivity losses
€3,000 Repair costs

Case Study 14

Olga Timorenko is a catering worker in her twenties. Olga is from eastern Europe and has been working in Ireland for six and a half years. She has been a catering worker for two years. While opening a small tin of beans, she cut her wrist on the exposed edge of the lid. She was off work for eight days. She tells her story:

One day in 2006 at twenty past five in the evening, I was preparing a meal that included baked beans. So I had a small tin of beans and I was using one of those two handled tin openers.

With the tin of beans on the worktop I went to open the lid. I had the two handles of the opener in my left hand and I was twisting the butterfly screw with my right hand. The tin was now being held tight against the opener. Opening a tin is an everyday occurrence, so there was nothing unusual in what I was doing. It's something everyone has done.

So there I was, twisting the screw and the lid was coming away and lifting itself upwards from the tin. The lid was half way off when I twisted the bottom of the tin downwards on the table to get a better grip. With the pressure of my left hand holding the opener, the tin suddenly and very quickly slipped sideways. The result was that I had managed to push the sharp edge of the tin lid, deep into my right wrist. This all happened very quickly and I didn't have much time to think as I saw the deep cut begin to bleed.

The cut was about two inches long and a quarter inch deep. It ran along the base of the palm and was angled downwards and towards my fingers. The deepest part of the cut was in the middle of my wrist. Here the edge of the tin had dug into the wrist, opened it up and pushed the flesh backwards.

There was blood everywhere and I could see the blood pumping out of the cut. I dropped the tin and opener and went straight over to the nearby sink. I put my wrist under the cold tap and ran water over the gash which was bleeding profusely. It was all happening so quickly and I didn't feel any pain. I was there at the sink, just looking at the deep red blood colouring the water pink before draining away.

Another worker, who was in the kitchen with me at the time, came over to the sink and saw what had happened. She asked me if I was ok before going to fetch bandages. Luckily she had been trained in first aid and knew exactly what to do.

She came back very quickly with bandages and a sling. She wrapped my wrist in the bandage very tightly and then put my arm in a sling so that my hand was up by my shoulder. She said I would need stitches and she called a taxi for me to go to A&E.

The taxi came very quickly and I was sent off to A&E. This all happened so quickly that I didn't even have time for a change of clothes so after telephoning my husband, I arrived at A&E, still in my catering uniform and still carrying the kitchen keys. I was told later that taking the keys had caused a few problems back at work.

I began to worry about what I had done in the taxi. I didn't know what the damage from the cut was, but because of the rush to get me to A&E and the blood which was now seeping through the bandage, I thought it was serious. Also, because the bandage was on so tight, I couldn't move my fingers very much. I thought I had damaged the nerves and tendons. I became very worried at that point. In A&E I waited about twenty minutes before being called up. My wrist was still bleeding while I was waiting so I remember thinking that the injury must be serious. When I was in the examination cubicle the doctor gave me two injections. One was a local anaesthetic and one was for tetanus.

As the doctor cleaned the area it looked horrible. There was still a lot of bleeding and I could see the lump of flesh that had been pushed up by the sharp lid. I was given three stitches and the wound was bandaged up. I was also told to stay off work for two days and to come back in a week to have the stitches removed. After that, I went home and took painkillers for two days solid as by then the injury had started to hurt. I went into work the next day to see my supervisor. Even though I wanted to return to work straight away it was not going to be possible. Apart from letting the injury heal the bandage on my hand meant I couldn't wash my hands. As a food handler, that was not a good idea.

My supervisor sent me to the company occupational health service. A nurse there arranged for me to come in every day so that the bandages could be changed. It was there that the stitches were removed after ten days. The cut was deep so it took a good while to heal. Each time they removed the bandage I could see the cut healing and after eight days I was allowed back to work with a small bandage covering my wrist. In the end I had to go to the occupational health nurse fifteen times. I also had to wear long gloves to prevent the dressing getting wet at work. Two and half weeks after the accident, the bandages came off and I was back to normal.

So for two weeks I was not able to use my right hand properly. Most of the time it was ok but there were some problems at home. My husband works in construction and isn't home till seven in the evening. So each day for two weeks he had to come home after his days work to begin the cooking and do all the cleaning. Also during the time off, I was very bored. There was nothing to do and the time went very slowly. Everything is back to normal now.

Total employee costs €280
€280 Lost Salary payments

Total employer costs €2,074
€522 Salary costs of injured employee
€60 Cost of A&E
€900 Cost of visits to occupational health service
€592 Salary costs of replacement staff

Case Study 15

Donal Macken is a caretaker in his fifties. Prior to that, he was an electrician for twenty three years with the same company. During that time he would use a company van for transport. One day twelve years ago, he drove a van that had a faulty ventilation system. This allowed exhaust fumes into the van and as a result, both he and his co-worker suffered from carbon monoxide poisoning. He was off work for six weeks. To this day he still suffers from bad headaches, almost on a daily basis. He tells his story;

That day in 1995 was like any other and I arrived at the depot in my car at my usual time. The routine was the same, I would get my worksheet to show which jobs needed doing. I was a maintenance electrician and the company would get reports of places where electrical problems were reported. It was my job to go to these places and sort them out.

The company gave me the use of a van to get to these jobs and I was the driver. I would always have another electrician in the van and Aidan was with me that day. We were both in the front. These vans only have front seats and are converted to take shelving and storage areas for our tools and supplies in the back. So after we loaded the van with what we needed for the day, we drove to our first job. The job happened to be in the centre of town and it took us about twenty minutes to get there.

The van that we used that day was not our normal one. That one was being serviced and we were driving a replacement van. This replacement van was fairly new, about four years old and appeared ok to us.

So we drove into town as normal. I would have the windows up and the blower fan on to circulate air in the van. It was a warm day, but I still had the windows up. I always did this because I don't like fumes from traffic getting into the cabin.

When I was in the van I started getting a headache which quickly got progressively worse and worse. By the time we arrived I had a blinding headache which was very painful and I was feeling sick. I didn't vomit but I was feeling very nauseated. These symptoms came on very quickly and I thought I was coming down with the flu. We had arrived at the job but I was feeling too bad to do anything.

Aidan wasn't feeling the best either, so he decided to go straight home from town. I was feeling worse again, so I also decided to call it a day and also go home. I thought I only had the flu, so I climbed back into the van and began to drive back to the depot.

I vaguely remember the drive back. I can recall snippets of the journey but large parts of that drive are just blank. I cannot for the life of me remember whole sections of that journey back in the van. I don't know the roads I took and I don't know what I did on the roads on the way back. It was as if sections of my memory were erased for good.

When I arrived back at the depot I was still feeling bad. The blinding headache was still with me and it was so bad at some stages that I couldn't see properly. I was still feeling sick and nauseated.

Even so I got into my own car and drove the couple of miles back home. Again I don't remember large parts of that journey but I remember pulling into my drive, parking and going into the house.

My wife remembers my arrival differently. She heard the car coming and went to the window to see who it was. She saw me pull into the drive and instead of park on the hard standing, I just swerved and lurched the car onto to the front lawn. I then got out and staggered to the front door talking absolute gibberish. I was acting as if I was completely drunk. As I don't drink, my wife knew there was something wrong. She rang her brother, who happened to work for the same company and he came round later to see what was wrong. By this stage I was in the kitchen and again I was talking absolute nonsense. To me, what I was saying to my wife was normal and completely understandable. To my wife I was incoherent, babbling and talking utter gibberish.

I remember holding onto the kitchen table as I began to hallucinate. I gripped the table as I saw the floor underneath me completely disappear to reveal an endless black void. I thought I was going to fall into this blackness, which was why I was holding the table so tightly. Later on that day when my brother in law arrived, I was still in a bad way. By that time my wife had decided it was time to take me to the GP. She drove me down to the GP's surgery. I wasn't hallucinating as much by that time but I still had blinding headaches and nausea.

At the surgery the GP listened to my wife and myself and heard enough to ring the poisons unit at Beaumont Hospital in Dublin. It was Beaumont who made the diagnosis. They said it was likely I was suffering from carbon monoxide poisoning. The GP sent me for blood tests at the local hospital. The blood tests were done that evening and I went to bed that night with painkillers, still suffering from very painful headaches and feeling nauseated. The bad headaches and sickness kept on going for the next three weeks. After those three weeks the nausea went but the headaches stayed with me. They weren't as blindingly painful but still bad. These headaches are with me to this day. If I get a day a week without a headache, it's like being on holiday. Most days and for most of the day and night, I have a headache.

On the day of the incident Aidan had also reported sick. He rang my house and had talked to my wife. He was also sent for blood tests, but he wouldn't go. He is afraid of needles and he wanted to wait for the results of my blood test. At this stage the van had been recovered by the company and sent for an examination. The investigating engineers eventually confirmed that exhaust fumes were being pumped into the cabin by the blower fans.

I finally went back to work after six weeks. I was still doing some very strange things during those weeks off. One episode sticks in my mind. In the middle of the night I had just decided it was high time to decorate the living room ceiling. So I was found by my wife and kids getting all the materials and equipment ready to paint the ceiling. I couldn't understand why they were at me to stop. As I said, I thought I was talking and making

absolute sense. It seemed the most natural thing in the world to paint the ceiling at three o'clock in the morning. To my wife and family it was of course, complete nonsense and I was talking absolute rubbish again. I can't imagine how it looked to them.

A couple of months after I was back at work I went to my GP again. I asked her about the headaches and why they hadn't gone away. I was still taking painkillers but they only took the edge off the headaches. I was still feeling sick quite often but I think that was on account of the headaches being so bad. My sleep was now very disturbed and I was not getting any rest. I was now very irritable. I also started getting nightmares.

By then, my GP and wife had persuaded me to go to a psychiatrist. I was reluctant to go at first but eventually I went. In the end I saw him for over two years. He diagnosed me with depression and put me on anti depressant medication. He said part of the reason for my illness was constantly thinking the incident over and over and over. Especially the part where I couldn't recall the car journey home.

In the meantime I had begun to think about what accidents I could have caused with the van or the car on the way home. I was still having nightmares at that time. Those dreams were very, very, very, vivid. After one particularly bad nightmare I couldn't sleep for two days. That dream was a horrible experience as it was so real. I thought I was actually awake and experiencing the dream for real. It involved me driving and causing a horrific car crash, too horrific to describe here.

After that particular nightmare I was referred to another psychiatrist. After a few visits to him, he suggested that I should consider another career, one that didn't involve driving. The company was offering redundancy at the time and I had been considering that for a while. The company had retrained me for a different technical role, but I never took to the new role as I didn't take a shine to it and it still involved driving.

The second psychiatrist finally made up my mind for me. So five years after the accident, I took the redundancy and left the company. After a short while I found a job as a caretaker. The money isn't as good but there's no driving involved. As I said I still get the headaches, but at least the nightmares are gone.

Total employee costs €47,282
€762 Lost overtime payments
€2,000 Other expenses (borrowed from credit union)
€75,000 Less take home pay over five years
€30,480 Awarded in compensation

Redundancy payments from the company are not included

Total employer costs €48,305
€3,131 Salary costs of injured employee
€4,349 Salary costs of replacement staff
€5,000 Solicitors fees

€30,480 Compensation to injured employee (company self insured at this level of claim)
€3,048 Medical expenses
€127 Travel expenses
€500 Technical examination of vehicle and report
€400 Hire of replacement vehicle for one week
€1,270 Repairs to vehicle

Case Study 16

Bill Cowan is a construction project manager in his forties. One day he was supervising the lifting of a large wooden canopy. A timber support gave way and the canopy fell. Bill was hit on the head and had to have 11 stitches. He spent a week off work. He tells his story.

The accident happened in 1997. I was working as site foreman for the company at the time. I've had lots of experience of construction sites. I started as a carpenter and was at that for twenty years. I joined my present company as site foreman and was working for them for five years when the accident happened.

The job involved lifting a roof shaped wooden canopy and bolting it to the ceiling. The size of this canopy was about eight foot by about four foot. It was made from MDF and wood and weighed about fifteen stone in all. The canopy was to take light fittings for the desks underneath.

The job was being carried out in the town centre. Our client owned the building and we were completely refurbishing this particular floor. The job had gone to plan and we were nearing completion. Fixing the canopy was being carried out at the same time as the office furniture was being moved in and fitted.

We had decided the best way to get the canopy fixed to the ceiling was to use a tower scaffold. After the canopy had been made in our workshop, it was delivered to the job and left on the floor. Our first job was to lift the canopy onto the scaffold platform directly underneath the ceiling where it was to be bolted. The height of the scaffold platform was about six foot and we had secured the base of the scaffold with outriggers to make it stable. The plan was to get the canopy lifted onto the scaffold platform first. When that was done, we were to lift the canopy to the underside of the ceiling and bolt it into place.

The floor was busy that morning and there were about fifteen other lads working at the same time. So we "borrowed" a few of them to help with the first lift. With two lads on each side of the canopy we lifted it onto the scaffold platform without too much bother. The next part was a bit trickier and we had to have the help of five lads, myself included, for this part of the job.

To get the canopy to the underside of the ceiling, we decided we would lift it up a few feet at a time and prop it in place in between each lift. We had made up timber props specifically for this job. The idea was that as it was lifted, the props were placed underneath the canopy to hold it up until the next lift. So we had three lads on the scaffolding lifting the canopy a couple of feet at a time. Each time the canopy was lifted, another worker and I would hold the canopy up using these specially made props.

So this was going ok and we lifting the canopy bit by bit. We were not far off the final lift and the canopy was now about nine foot off the ground. I was looking away when I heard a sound from the scaffold. I turned back to see a prop slipping out from underneath the

canopy. I saw the other props start to give way and the canopy began to fall. The canopy edge hit me just above my forehead.

I remember coming round and lying face down on the ground. I also remember feeling very sick and nauseated. I vomited as a result. I could feel a wetness under my cheek and I was wondering whether it was blood, sweat or vomit. I could hear people shouting around me as I was lying on the ground. I heard one of the lads shouting “don’t move him”. I heard another lad saying “Jaysus, look at all the blood”

All the while I was slipping in and out of consciousness and feeling sick when I came round. One of the lads had seen me vomit and thankfully had the wit to put me into the recovery position. There was now a good bit of commotion around me as I heard one of the lads say “the ambulance is on its way”.

The ambulance crew didn’t move me at first. They asked me some questions before they wrapped a bandage around my head. Then a stretcher was brought, but even though I was very dazed and groggy, I had made up my mind that I wasn’t going to be taken away by stretcher.

I was helped up by one of the ambulance crew and one of the lads. The three of us walked over to the lift and I was taken away by ambulance to A&E. I wasn’t in any pain, but I was still feeling sick. The pain didn’t start until the wound was being stitched by the doctor in A&E. At that stage my head started to throb and the injury started to hurt.

I was given eleven stitches in total. I was told by the doctor that as I had a head wound and concussion, I wasn’t going to receive any pain relief. So I felt each one of those stitches going into my scalp. I remember thinking it could have been a lot worse though. If that canopy had smashed into my face the damage would have been much more serious. The canopy edge could have hit me in my eyes, it could have smashed into my nose or my teeth or my jaw or all of them together.

The doctor wanted to keep me in the hospital for that night, but I wasn’t having any of that. One of the lads from work had stayed with me and I knew that if I was kept in, he would have to tell my wife. I didn’t want my wife and kids hearing of my accident from anyone other than me and certainly not over the phone. So against all the medical advice I said I wanted to go home and I discharged myself. The lad who had stayed with me drove me back and I arrived home at about four o’clock in the afternoon.

The A&E staff had wrapped the top of my head up in a new bandage. Even so when I arrived home the bandage was blood soaked. My wife and kids were very upset. My kids started crying. I spent some time explaining what had happened and kept telling my kids everything was going to be ok. Seeing my kids crying brought it all home to me. I was still concussed and in pain, but I remember thinking I should have stayed in the hospital. I went to sleep and stayed in my bed till the same time the next day.

I was still concussed when I went to my GP a few days later. He gave me painkillers and told me to stay off work until the stitches came out. I wanted to go back to work but the GP told me that if I went back, there was a high chance the wound would become infected. In the end I was off work for a week and a half but I was glad to get back to work. I was going mad at home with the boredom. By midweek the pain had worn off but I was completely bored. It felt like an age before I was back to work and back to normal.

Total employee costs €254
€254 Lost overtime payments

Total employer costs €1,312
€435 Salary costs of employees accompanying injured employee to hospital
€852 Salary costs of injured employee
€25 Medical expenses

Case Study 17

Aoife McGuire is a public sector worker in her thirties. She provides a front line service to members of the general public. One day in 2006 she encountered a member of the general public in the entrance hallway of her building. He began to verbally abuse her. This abuse included shouting in her face, pointing at her and preventing her from leaving. She had to lock herself into a side room until he left. Verbal abuse is now a common occurrence in Aoife's work and she does not feel secure in her workplace anymore. She tells her story.

Lunch time was approaching and I was about to leave my office to buy a sandwich. So I was in the entrance hall of my building heading for the main exit. As I approached the exit door a man turned to me and said "You're the one that's caused me problems"

This man was in his late thirties and the same height as me. He was stocky and well built. He appeared very presentable and was well dressed. But with no warning whatsoever he just turned to me and launched into a very aggressive and very animated verbal attack. He was literally in my face shouting at me. We were standing toe to toe and he was shouting loudly, gesticulating, waving his arms about and pointing his finger in my face. I remember very clearly how angry he was and how aggressive he was.

I tried to calm the situation and talk to him, but it was no use. He just kept on shouting. He was still very angry and irate no matter what I said. He just wouldn't calm down at all, he just kept on shouting at me and pointing at me.

I told him to make an appointment with me to discuss any issues he had, but that was no use. He just kept shouting at me "I want this conversation now". I told him I was not putting up with this and went to walk around him and out of the building. But that didn't work, he just moved to block my path and was shouting into my face again. I tried to move out of his way once more but again he blocked my path and kept on shouting. At one point he was holding his arms out so I couldn't get past at all.

As he wasn't letting me past him, I turned around to go back to my office. He just followed me, still shouting. So I quickly entered my office and went to lock the door. He tried to keep the door open and I had to use all my weight to close it and lock it. He was still trying to get in as I could see the door handle turning.

This whole event happened very quickly and it was over in about three or four minutes. I still remember how angry he was and how insistent he was that I should talk to him. But at least I was now in my office and it seemed like the commotion had died down.

I remember feeling embarrassed that other staff and the general public in the entrance hall had been subjected to this spectacle. I was taken completely by surprise. I was not expecting any of this in the entrance hall. He just exploded at me. After I was sure he had gone, I unlocked my office door and checked that he wasn't around. I then went to buy a sandwich, still shaken by what had just happened.

When I came back from lunch I reported the incident to my line manager in accordance with our procedures. Looking back on the incident that afternoon, I was left with feelings of vulnerability in the very place I worked. The next day I was discussing the case with management. It dawned on me again during that meeting, the realisation of just how vulnerable I was during the incident and just how vulnerable I continue to be. These feelings of not being safe were very real to me at the time. As a result of my increasing sense of insecurity, I couldn't face work and I didn't go in for two days. At that stage I had become completely overwhelmed by the event. I was offered counselling by my employer which I duly accepted. I found the session with the psychologist very helpful. A week later the Gardai took a statement from me over the incident, but he never received a summons. I know he still frequents this area.

I have been well trained in dealing with the general public. As such I expect that some of them will be unpredictable and their behaviour unacceptable. I am also very aware of changes in the way some of the general public act towards service providers. People these days are much more aware of their rights and entitlements. They expect more from service providers and in some cases become angry when they don't get what they feel is rightfully theirs. As a result, I have learned to be careful and take the appropriate steps when I meet members of the general public I don't know. However that particular incident just went to show how insecure I was in my own workplace. I am now aware that the very building in which I work cannot guarantee my safety or stop such incidents from happening again. Indeed incidences involving verbal abuse are now commonplace. They are now such routine events, that I can expect them on a daily basis.

So one thing we do now is that we always meet people in pairs, or in an office with others present. I don't work on my own anymore. I feel safer doing that but it does have knock on effects on our work. For one thing the queues waiting to see us are bigger and the public have to wait for longer.

Another consequence of working together is that our work load in now greater. We still have the same number of people coming to see us, but we end up working longer hours to cover the work load. I would estimate that we now work two hours longer, each and every day as a result.

One other consequence is that I am much less likely to go out to places that will attract crowds. For example, I will avoid large sporting events or busy nights in town. I just don't feel comfortable with the thought of meeting large groups of people outside work hours. But even at work, the feeling that I am not safe in my own workplace remains with me constantly.

Total employee costs €0

Total employer costs €326
€80 Counselling sessions
€246 Salary costs

Case Study 18

Maura MacManus is a Local Authority worker in her forties. She was opening a small parcel on her desk, fully expecting to find a bunch of keys. Three used syringes together with small bags of white powder fell out instead. One of the syringe needle points fell directly onto her hand. She had to wait for six months to see if she had contracted either Hepatitis B, Hepatitis C or the HIV virus. During the wait, she was diagnosed as suffering from post traumatic stress disorder. She tells her story:

I was coming back from lunch one day in 2005 and there on my desk, was a small brown paper parcel about the size of a lunchbox. Now as I was expecting a large bunch of keys from a co worker I naturally assumed these were the keys. So I picked up the parcel and grabbed one end of it firmly with my hand and with my other hand ripped the parcel open. I looked down at the parcel and to my complete shock, saw three used syringes drop out and land onto my desk. One of the needles hit my hand before landing.

As well as the syringes, there were five or six small transparent bags filled with white powder which also dropped out. They were the size of teabags. The white powder was also in the parcel itself so that my hands and sleeves and front of my dress were now speckled and spotted with the powder. As I wasn't expecting any of this, I just stared down at the syringes, bags and white powder now on my desk. I looked at the syringes and I could clearly see the brown stains of dried blood inside the transparent barrels.

Seconds after the syringes fell out, I realised the potential consequence of what had just happened. On seeing a used syringe hit my hand with the point of the needle, I started to think of Aids and Hepatitis. There was another woman with me in the office. She took one look at the contents of the parcel and just ran out of the room. We recently had emergency anthrax procedures detailed to us. As I didn't know what the powder was I followed those procedures. That involved sealing the room off, informing my line supervisor and calling the Gardai.

With those procedures followed I went to the cleaner's cupboard and found some bleach. I washed my hands thoroughly with the bleach and soon after the Gardai arrived. After they had interviewed me they took the parcel and contents away. I was informed later who had sent the package. It turned out to be the disgruntled mother of a local heroin addict. She was trying to make the point that the local authority was not doing enough to help her son's drug addiction. The parcel just happened to land on my desk by mistake. I never knew what the powder was.

A few weeks later I was at a meeting when a senior colleague drew attention to the incident in front of the group in a very public manner. By this time, word had spread of what had happened to me, so it was common knowledge. However I found that the matter being brought up in front of so many people was embarrassing to say the least.

He asked me if I was ok and I replied that I was. That was a lie to save my embarrassment. I was most definitely not ok. I was in fact, very very worried and concerned. In the meantime I had bumped into a Garda that I knew. He was aware of the

addict who had used the syringes in the parcel. My worries were confirmed when he told me the addict in question did indeed have Hepatitis.

I then decided to go to my GP and tell him about what had happened. My GP strongly recommended that I go for a blood test and at the same time go for counselling. Whilst I was in the surgery I told my GP of other symptoms I had including weight loss and anxiety. He told me that I was suffering from post traumatic stress disorder as a result of the incident.

So I went for the blood tests, three of them in total. What happens is that they take a blood test every two months. After the last test which is in six months, you find out if you have contracted either Hepatitis or HIV. It was a very long six months to wait to see if I was in the clear, a very long six months.

In the interim there were a few issues I had to deal with. I was applying for a mortgage at the time. There's a question on the form which asks if you have ever had a blood test for Hepatitis or HIV. I explained to the mortgage company what had happened. They told me they would have to wait for the results of my blood tests before proceeding with the application.

Also during that time I was going out with a man. That relationship finished during the six months wait. The blood tests were not the sole reason for the relationship ending, but knowing that I might have Hepatitis or HIV did not help matters. I was also conscious that I couldn't tell my family, I didn't want them to know because I just didn't know what they might do or say. So I kept the matter from them as I waited for the results of the blood test. I had counselling during that time and went to a psychologist once a week for an hour. I found that those sessions helped but they don't take the worry away, only a negative result will do that, so I just had to wait.

There was one incident at work, which I would say was the worst of all in terms of stress. A couple of months after the syringes had fallen out of the parcel, I was in a progress meeting with management. The syringe incident came up on the agenda. To my absolute disgust the matter was regarded as having been dealt with. I was furious. After all I had gone through. For it to be treated in such a dismissive manner, left me appalled. There I was, waiting for the results of my blood tests and management saw the matter as closed and saw no reason to take it any further. I told management what I thought of them and their decision in no uncertain terms. They continued with their view that the matter did not need to be taken any further so the meeting ended in a stand off between us. The matter has never been resolved satisfactorily. Finally, after six months, I received the results of the blood tests. I was so relieved to find them negative.

Total employee costs €120
€120 GP visits

Total employer costs
€640 Counselling sessions

Case Study 19

Brenda Lynch is a catering worker in her forties. As a result of a trip causing a shoulder injury, she was off work for over six years. During that time she developed depression. She tells her story;

Since I finished school, I have worked as a care assistant for the same health care organisation. That was up until 1999 when I had my accident. On that particular day I was helping a nurse with a patient. We had to lift him from his bed and we were using a patient hoist. We were both at the same side of the bed tying the lifting straps around him. I went to walk round the bed so that I could tie a strap from the other side of the patient. That's when I tripped and fell. As I walked round the bed, I tripped over the wheel of a Buxton chair that was close to the bed. What ever way I fell, I hit the ground heavily with my shoulder.

The nurse came to my aid and lifted me up. The pain wasn't too bad at that point and I carried on working for about half an hour or so. I then went to the ward sister's office with the nurse to report the accident. In the office I told the sister what happened and she filled out an accident report form. The accident happened close to lunch time so after I had reported what had happened, I went on my break.

The pain in my shoulder was still there during lunch and I thought it best to go home. So I had a couple of painkillers and took the afternoon as sick leave. The next day the pain was still there in my shoulder so I went to see my GP. She gave me more painkillers and sent me for an X ray. In the X ray department they told me I had suffered some tissue damage and they put my arm in a sling. They recommended that I go for physio on my shoulder. By now the pain was worse and the painkillers didn't really work. So I had more physio and after a week I went back to my GP. The pain was still in my shoulder, so I was sent for more physio again.

Well this carried on for a month or so. I was going to physio but the pain was still there. I was also going weekly to my GP to get a sick cert for work. Then I was sent for an MRI scan up in Dublin. They said the same thing as the people in the X ray department. It was tissue damage and to keep on with the physio and painkillers. So I did the physio for the next couple of months which helped, but the pain didn't go away. I packed in the painkillers though as they were causing stomach problems for me.

The next thing that happened was that I was sent to a consultant. He said the fluid in the joint was thickening up from time to time. It was this thickening that was causing the pain. At the same time I was also going to the occupational health department at work. The doctor there was seeing me from time to time with a view to assessing when I was able to go back to work. As a care assistant I would do a good bit of manual handling at work. Anyway they wouldn't let me back until I was fully healed. The problem was my shoulder wasn't getting any better and time was passing by.

In 2001 I went to see the occupational health department at work again, but wasn't allowed back. In the meantime I had been sent to a pain management consultant with my

shoulder. He had given me a course of injections over a number of months but again the pain was still there. The pain would go away, but it would soon come back. Sometimes there would be no pain, then a dull ache, then there could be quite a lot of pain. It was like this for months and months.

So the months and then years passed by. Physio twice a week and a monthly visit to my GP was the routine. I wanted to go back to work, but the occupational health department at work had different ideas. They said no each time I was reviewed by them. They said I wasn't properly healed and had to stay off work. They suggested I do some educational courses while I was off, so I did a couple of computer courses.

Then in 2002 I became depressed. The whole situation was not working out. I so much wanted to go back to work, but I felt my employer wasn't doing enough to let me back. I was also having financial difficulties. With me being off for so long, my wages were stopped after five months. After that I was on social welfare which came to about €100 a week. The social welfare people kept on writing to me offering job interviews and back to work schemes. I kept telling them about my sick certs, but they still wrote to me.

Money was getting tight and there was no sign of getting back to work quickly. I was becoming anxious, worried and stressed over the money and about staying at home. I also felt my employer wasn't helping. To think I'd given my employer many honest years of service with very little sick leave and they still wouldn't let me back. I went to my GP and told her how I felt. She prescribed me anti-depressants and took my case up with the occupational health department at work. I was on those anti depressants for the next two and half years. My GP had told me that not being able to work was a principal cause of my depression.

The occupational health department, to be fair to them, were just doing their job. My shoulder wasn't healed so I suppose they had no choice. They sent me to a psychiatrist and for counselling which helped. I was seeing a psychiatrist every month or so for over a year. He told me again that the depression was caused in most part by being at home.

My home life was affected by all this carry on. Having less money was hard. We didn't go on holiday for the six years I was off work. I couldn't afford the money for the kids to go on school tours either. The house had started to look a bit shabby but we couldn't afford to redecorate. Then, with my shoulder the way it was, on the days I had pain I couldn't do any house work. On those days hanging out washing and the like was beyond me. We also had less money for socialising. So I missed the Christmas parties and the nights out with my friends at work.

In the meantime I had started a personal injury claim against my employer. The case kept on being adjourned, which was also causing me a great deal of anxiety. Eventually the case came up in 2004 and was settled. My solicitor told me, to my great relief, that my employer had kept my job open for me. But again, I had to wait for the occupational health department to say I was able to go back. They did say to me that if a suitable job did come up, one that didn't involve manual handling, I would get it.

Then in 2004, a supervisor's job came up that was perfect for me as it was the same type of work I had done before, but I didn't get it and I became annoyed and angry. I was so angry at my employer, it just felt so unfair. So I went looking to anyone who could help. I went to the unions and I went to the citizen's advice people. Citizen's advice sent someone up from Dublin, who said she would take the matter up in the courts on my behalf.

Then, at last, at long last, a job came up and it was offered to me. It was a catering job and it started in 2005. I took it straight away and finally, after six and a half years I was back at work. It was a huge relief to be back. I know it's in catering and I miss the care attendant duties, but a job is a job and I was glad of it. My husband even started to decorate the house.

Being back at work is like the past never happened, it's just a bad memory now. The effects are still there though. I still get pain in my shoulder. When it gets bad I'll take painkillers for it. I can't sleep on my right side any more since the accident. Also I'm still out of pocket. Even though I got the compensation money, I'm still down thousands over it. Another thing is that care attendant staff are looking at a pay increase, so I'll miss out on that as well. But the main thing is I'm back at work.

Total employee costs €112,000
€115,000 Lost salary
€23,000 Lost overtime payments
€4,000 Medical and travel expenses
€30,000 Compensation award

Total employer costs €20,000*
€10,000 Salary costs of injured employee
€10,000 Salary costs of replacement staff

* Please see note in Appendix 1 on calculation of employer costs (section A2.3)

Case Study 20

Tom Browne is a self employed cabinetmaker in his late twenties. He has over ten years experience in designing, making and installing fitted kitchens for one off commissions. One day he caught his right hand in the blades of a planer thicknesser machine. He lost the top of middle finger and was off work for most of three weeks. He tells his story;

The first part of making a kitchen is to spend a considerable amount of time with the client finalising designs. I make solid wood kitchens from scratch in my workshop and then install them in the homes of clients. Because of the nature of my work, I don't need permanent staff. My work is very skill intensive so I just employ someone on an informal part time basis, to assist me when I need an extra pair of hands. Each one of my kitchens takes an average of three weeks to make.

At the time of the accident, I was under pressure and was making two kitchens at the same time. It was an afternoon in 2005 and about 1.30 pm. I didn't have a busy weekend, so I was feeling good and looking forward to the work. I was planeing wood using a planer/thicknesser machine to produce frames for a kitchen unit. I had recently purchased a new circular saw but hadn't got around to getting the appropriate dust extraction for it. As a result, I was using the dust extraction pipe work on the planer as well as the saw.

These two machines produce different types of waste. The saw produces a fine dust and the planer produces quite substantial wood shavings. As I was using the planer that day, the extract pipe running from the planer to the collection bag was repeatedly getting blocked by the bigger wood shavings. This was because I wasn't using the right extraction system. So for about the fourth or fifth time that day, the planer extraction system was blocked. Each time it became blocked, I would turn off the planer and wait for the blades to stop turning. I would then remove the wood shavings from the area underneath the planer blades by hand to clean it out.

When the blockage occurred again I was working flat out. So I was anxious to clear the machine out quickly. This time I was not thinking much about my own safety, only about clearing the blockage so I mistakenly turned the dust extraction off, but left the planer on. I inserted my right hand close to the blades as I had been doing to clean out the shavings but this time the blades were spinning at high speed. I was wearing gloves at the time, as I like the control and grip they allow me. In the blink of an eye, I felt a slight tug on the glove and a sensation on my hand. I immediately pulled back my hand and ripped off the glove. I didn't feel pain as it happened very quickly, but when I looked at my fingers I was scared. I saw that the planer had scooped out the shape of the planer blade on my middle finger. My fourth finger was also cut. I remember there wasn't any blood but I just knew by looking at my finger that I had done some damage.

I didn't know how much damage but I knew it was more than just a scrape. Even so I thought I was going to be ok. My workshop is situated beside my parent's house and I immediately ran next door to have my father bring me to hospital. My mother was very upset when she saw my fingers, but she remarked on how calm I appeared as I wrapped my hand in a towel. It wasn't bleeding much but looked quite nasty.

I was in the hospital ten to fifteen minutes after the accident. It was only on reaching the hospital that I realised I was in shock. It was the nurses who met me in A&E that told me. That made me think how much I had been affected by the accident. When I arrived at A&E, they treated me straight away and gave me morphine. By this time I was in a lot of pain. Also the mental thought of what I had done to myself haunted me. The doctor stitched what he could on the middle finger and the fourth finger of my right hand, but to be honest there was not much skin on the damaged part of my fingers to work with. The doctor then wrapped a bandage around my fingers. The hospital rang the plastic surgery unit in Cork University Hospital and made an appointment for me at 9.00 am the next morning. They kept me in hospital overnight. Later that evening the doctor and nurse changed my bandage and they both grimaced at the sight of my fingers.

The next morning, my girlfriend drove me to Cork. The morphine was wearing off and I was in a lot of pain. The plastic surgeon saw my fingers and said that they would have to remove the top joint on my middle finger and would wait and see if the same was needed for my fourth finger. I was sent home that night and they performed the operation the following day.

For about four weeks after that, I had to travel to Cork regularly for the specialist to examine my progress. My right hand was out of use for most of three weeks after the accident. I found I couldn't do simple things like tying my shoes laces. But at least I didn't lose any more parts of my fingers. Ultimately, looking back at the accident I would say that I have made a full recovery. Every so often when I use the planer, I still get the odd flashback of what happened. My overriding thought though is sheer relief at how relatively light my injuries were. But it also sends shivers down my spine to think that I could just as easily have lost my right hand. In many ways I was very very lucky and I still know this to be true.

I know the pain and worry I went through in the first few days after the accident and how it could have been an awful lot worse. I also know that this was down to human error and ultimately my own fault for not giving my machines the due respect they deserve. I was far too complacent. The accident has really made me think. Fortunately, I was able to go back to work and resume my business with minimum disruption. Without wishing to glib about it, that accident has made me think. I now realise and appreciate just how defenceless we are against these powerful machines if we ever lose concentration, even for a brief second.

Total employer costs €8,700
€100 Medical expenses
€300 Travel and accommodation expenses
€8,000 Three weeks of lost work
€300 Purchase of dust extraction for circular saw

Section 5. Effects of workplace accidents on case study employers

5.1 Introduction

This section is focused on the overall costs and effects of workplace accidents for employers. Information is first provided on the costs arising in each of the accidents documented in the case-studies. The main overall costs are then identified. Personal injury claims against employers are discussed, followed by a review of changes made to safety management systems following the accidents.

It should be noted that because of the small number of case studies the findings can only give an indication of the type and range of costs experienced by employers as a result of workplace accidents. Similarly it must be borne in mind that figures have not been adjusted for inflation and while fifteen out of twenty accidents occurred since 2002, four out of twenty occurred before 2000.

5.2 Employer costs

Individual employer costs

Table 5.1, lists the total costs borne by each employer and the personal injury claim status of each accident. These figures have been calculated up until June 2006. Case study 20 is self employed and for the purposes of costs is treated here as an employer. The table shows that costs to the employers varied greatly from €0 to over €3.8 million. Given the large amount borne by the employer in case study 10 and the low amounts in seven other case studies, presenting averages would be somewhat misleading. If the highest amount of over €3.8 million and the lower amounts of less than €5,000 are removed, an "illustrative" average per accident for the remaining twelve case studies approximates to €52,000[*].

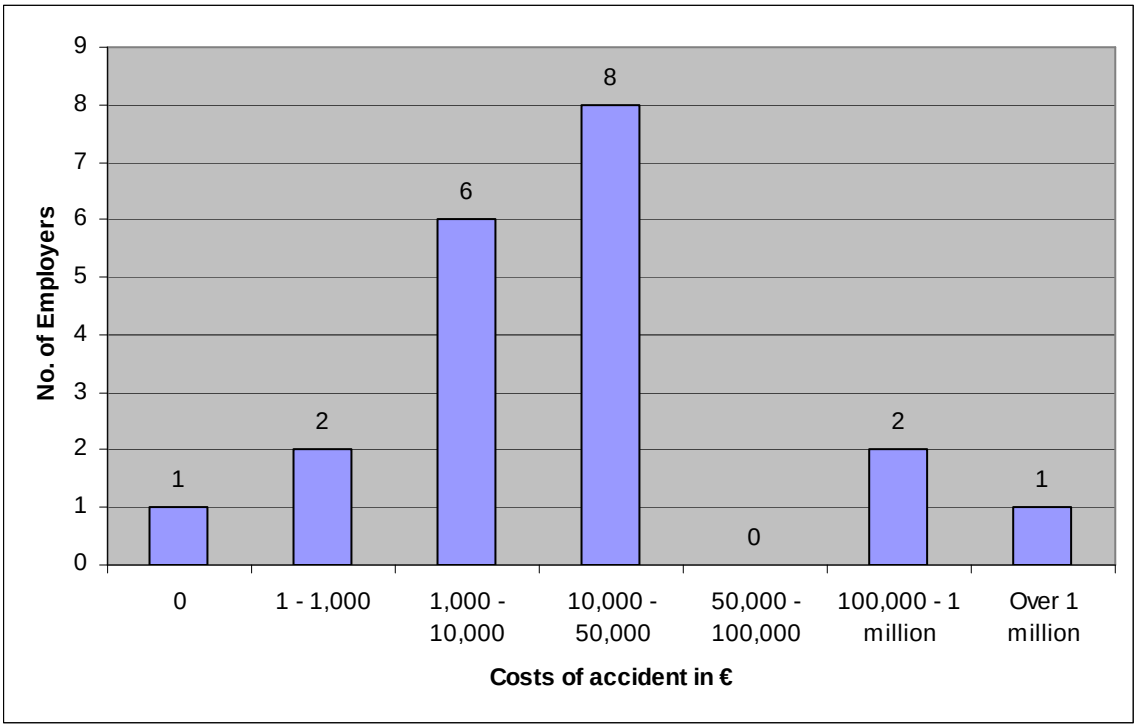
Distribution of employer costs

The distribution of employer costs across the twenty case studies is shown in Table 5.1. The cost bands with the highest frequency was €0 - 10,000. Nine case studies were found in this range. The second highest cost band was €10,000 - 50,000. Eight case studies were found in this range. The final costs to the employers in four case studies (2, 3, 5 and 6) have not yet been settled due to personal injury claims. It is certain that once these liabilities are settled, the costs in those case studies will increase substantially.

[*] See Appendix 1-1.5.3 note on calculation of employer costs

Table 5.1 Total employer costs and personal injury claim status of the accidents			
Case study number	**Year of accident**	**Total employer costs in €**	**Personal injury claim status against employer**
1	2004	31,363	None
2	2005	21,824	Lodged
3	2005	49,832	Lodged
4	2006	9,494	None
5	2003	132,712	Lodged
6	2004	238,082	Lodged
7	2006	1,315	None
8	2002	0	None
9	2005	12,328	None
10	2000	3,870,500	Settled
11	2004	31,068	None
12	1999	4,226	Settled
13	2005	20,403	None
14	2006	2,074	None
15	1995	48,305	Settled
16	1997	1,312	None
17	2006	326	None
18	2005	640	None
19	1999	20,000	Settled
20	2005	8,700	None

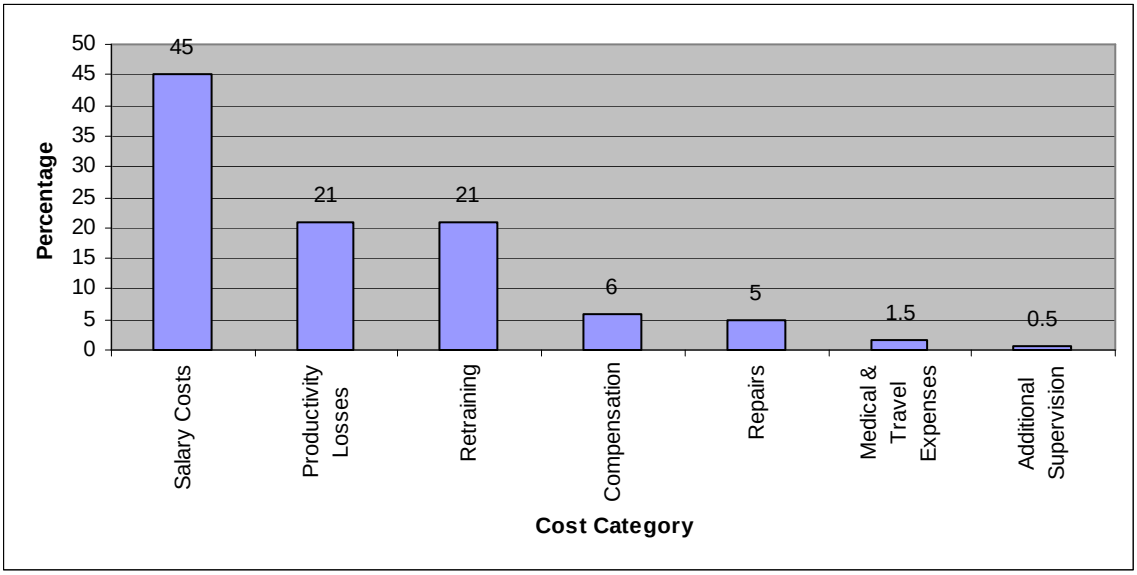
Figure 5.1 Employer accident costs in bands



5.3 Main employer cost categories

In order to analyse these costs, the highest amount (over €3.8 million in case study 10) has been omitted to allow a more meaningful analysis of the remaining nineteen case studies.

Figure 5.2 Breakdown by category of total costs to the employer



As shown in Figure 5.2, salary costs amounted to approximately 45% of total costs incurred by employers. Productivity losses and retraining costs each accounted for a further 21%. Therefore the largest amount of loss the employers faced in these case studies was for the continued payment of salaries to absent staff, and the cost of replacement staff or resultant overtime.

5.4 Productivity losses

The cost of productivity losses proved difficult to measure in totality due to its inherent intangible nature. However, productivity losses were indicated in case studies 5, 10, 13, 17 and 18. Case study 10 also reported customer losses and case study 17 reports that the time taken to provide the service had increased as a result of the accident.

In case study 5 the decline in the amount of product being manufactured was measured. The plant temporarily shut down for at least one hour and the corresponding production loss was calculated. The estimated figure of €125,000 is most likely an underestimate as it is doubtful that the plant would be fully operational one hour after a complete power failure and staff evacuation.

In case study 10 the accident precipitated a long and rapid decline in the finances of the company. For this employer, production losses amounted to half the normal annual

turnover for five years. In case study 13 the employer had a methodology in place to quantify the cost of an accident in terms of productivity. It was based on a unit output per person and the productivity loss as a result of this accident was calculated at €2,000. Case study 20 reported that there were three weeks of "lost work" for this self employed person due to his accident which cost him €8,000.

The findings demonstrate that productivity whether it was precisely measured or not, declined as a result of the accidents. The evidence for this is three fold. Firstly, as above, where productivity could be measured, a loss was recorded as a result of the accident (Case studies 5, 10, 13 and 20). Secondly, from a logical and intuitive perspective, if a member of staff is absent, their workload inevitably has to be passed on, or left until their return. In eighteen out of twenty case studies, cover for the absent injured person was required. This is likely to have affected continuity and costs would have been incurred as a result. Thirdly, interviews with employers revealed that even though productivity was not directly measured (except in case study 13) financial losses due to staff absences were generally accepted. When asked to quantify these costs the employers had difficulty articulating amounts. Instead they tended to report the consequences of productivity losses and costs rather than actual costs. These costs and effects were variously reported as:

> **"***Overtime would have been arranged to cover for absences*"
>
> "*The job would have been delayed until they were back or someone found*"
>
> "*There's enough of us here to cover the missing person*"
>
> "*The job would have taken longer to finish*"
>
> "*We rang the client to say the job would finish later*"
>
> "*We had to ask the remaining staff to work harder*"
>
> "*The person covering didn't have the same level of experience*"
>
> "*The clients noticed that the person they normally dealt with, was missing*"
>
> "*When they were absent, there was a lack of continuity*"
>
> "*Their being away did inconvenience us*"

5.5 Cost effects for SMEs

Although the number of relevant case studies is low, there is some evidence to show that accidents had a greater adverse effect on smaller-sized businesses. Firstly, the case studies of businesses with smaller numbers of employees revealed this effect. For example, Case study 10 which involved a staff of twenty five employees, reported a large turnover and profit loss. Similarly, in case study 20, no work was carried out for some three weeks as the injured person was self employed.

Secondly, the research team recorded the number of staff available to cover for absent employees. It found, not unsurprisingly, that the larger sized organisations had a larger pool of staff to cover for employees. This would suggest that the smaller sized businesses or organisations would feel the effects of an employee's absence more than their larger counterparts.

5.6 Personal injury claims against the employer

Four employees have received monetary compensation as a result of their personal injuries claim (see case studies 10, 12, 15 and 19). In a further four case studies (2, 3, 5 and 6) personal injury claims against the employer have commenced (Table 5.1)

The employee in case study 3 is assessed by the employer as likely to receive somewhere in the region of €200,000 in compensation. Two employers (case studies 3 and 5) self-insure themselves below €1 million so costs arising from these claims will be borne by them. Out of the twenty case studies, four personal injury claims have been settled, and four claims are being processed. When case studies 7 and 8 are removed (because of their relative low severity and short lasting injury) and case study 20 is removed (self-insured) eight out of seventeen case studies have resulted in a personal injury claim.

The employers in the remaining case studies could also have faced personal injury claims. During interviews with the employers and employees some factors emerged on the issue of propensity to claim, these are quoted as follows;

> "*The company treated the family of the injured employee very well in a previous non injury scenario. So we think company loyalty remained high after the accident*"
>
> "*The solicitor informed me that that as there were no lasting physical injuries to me, I wouldn't get much*"
>
> "*Even as his employer, I told him to claim. I looked at his injuries and knew he needed to get money from the insurance*"
>
> "*I (the employer representative) still don't know if he will claim or not*"

The data on personal injury claims shows that the propensity to claim is not straightforward and does not only reflect the seriousness of the injury. Because of the uncertainty of the litigation outcome, the final cost to these employers cannot be estimated with any degree of certainty. However, the final cost to the employers in these cases is certain to be higher than the costs recorded to date in this research.

5.7 Increase in insurance premiums

Only one case study (No.10) recorded a direct increase in premiums as a result of the accident. Another case (No.12) involved a claim against a public body. The public body reported an increase in employer liability premium the following year of over 20%. But this large increase was reported by the insurer as being directly attributable to investment losses and "9/11".

5.8 Effects on employer safety management systems

In some cases the accidents had detectable effects on the way the employers operated their safety management systems. Four case studies reported changes in their respective safety management systems. The changes introduced to prevent a recurrence of accidents were as follows:

- access to the area where the accident happened was restricted to fewer staff;
- extensive retraining of operatives and new supervisory procedures were introduced;
- a new and more extensive supervisory regime was introduced to prevent a recurrence;
- a detailed review and a new risk assessment resulted in a revised maintenance regime.

In two case studies, employers reported that employees had developed a higher regard for health and safety matters after the accident.

However, no other discernible changes to the procedures which comprised the employer safety management system were reported. The employers in two case studies stated that either training had been provided prior to the accidents, or that the accident could not have been prevented "in a reasonably practicable manner". Taking these two "defences" as being in good faith on the part of the employer, it was found that over two-thirds (14 of 20) of employers did not act in any meaningful way to prevent the same accident from recurring. In keeping with the confidentiality conditions of the research, the case studies where these preventative measures were implemented have not been identified.

There were no reported visits from the regulatory authorities in any of the case studies. There were no reported visits from any insurers prior to any accident in relation to safety management issues. Four out of the twenty case study employers are self-insured.

Cost of accident investigation time

Another issue with regard to costs was the time taken to investigate the accident and the numbers of persons involved in the investigation itself. This data was collected for all case studies but has not been presented as a cost because of inherent methodological

problems. Typically an accident investigation was found to take four man hours to complete and involve two to three staff. As the investigations were all carried out internally, associated productivity costs were not reported by employers. Hence these investigation procedures are not costed into the overall results.

Section 6. Effects of workplace accidents on case study employees

6.1 Introduction

Overall costs of workplace accidents to the employees are reviewed in this section. The amount and nature of financial costs arising for the injured employees are first presented. Findings on the overall physical and psychological effects of the accidents on the injured employees are then presented.

It should be noted that because of the small number of case studies the findings can only give an indication of the type and range of costs experienced by employees as a result of workplace accidents. Similarly it must be borne in mind that figures have not been adjusted for inflation and while fifteen out of twenty accidents occurred since 2002, four out of twenty occurred before 2000.

6.2 Financial costs

Amount of financial loss

Table 6.1 shows the amounts lost by injured employees as a result of the workplace accidents. Where costs have been accruing, the figures have been calculated up until June 2006.

Table 6.1 Total amount lost by employees[1] until June 2006 & until retirement				
Case study number and year of accident		**Amount lost by the employee until June 2006 in €**	**Amount expected to be lost through retirement by the employee in €**	**No of years until retirement**
1	2004	1,800	-	-
2	2005	27,072	96,000	7
3	2005	0	-	-
4	2006	0	-	-
5	2003	0	-	-
6	2004	46,000	200,000	20
7	2006	635	-	-
8	2002	0	-	-
9	2005	10,180	-	-
10	2000	0	268,000*	37
11	2004	4,500	-	-
12	1999	0	-	-
13	2005	500	-	-
14	2006	280	-	-
15	1995	47,282**	180,000	12
16	1997	254	-	-
17	2006	0	-	-
18	2005	120	-	-
19	1999	112,000	38,000	19

As shown in Table 6.1, in over one-third of cases (7 of 19) the injured employee did not lose any money. In five cases the employee lost the relatively small amount of less than €1,000. In two cases (10 and 12) the employees "gained" money due to compensation awards hence their losses are recorded as €0. In three case studies (3, 4 and 5) the amount lost was €0 due to the employer paying all expenses. In two case studies (8 and 17) the employee reported not losing any money as a result of the accident.

Almost two-thirds (12 of 19) of the injured employees did however lose money as a result of their accident. The amounts varied greatly, ranging from €120 to €112,000; the average was nearly €21,000.

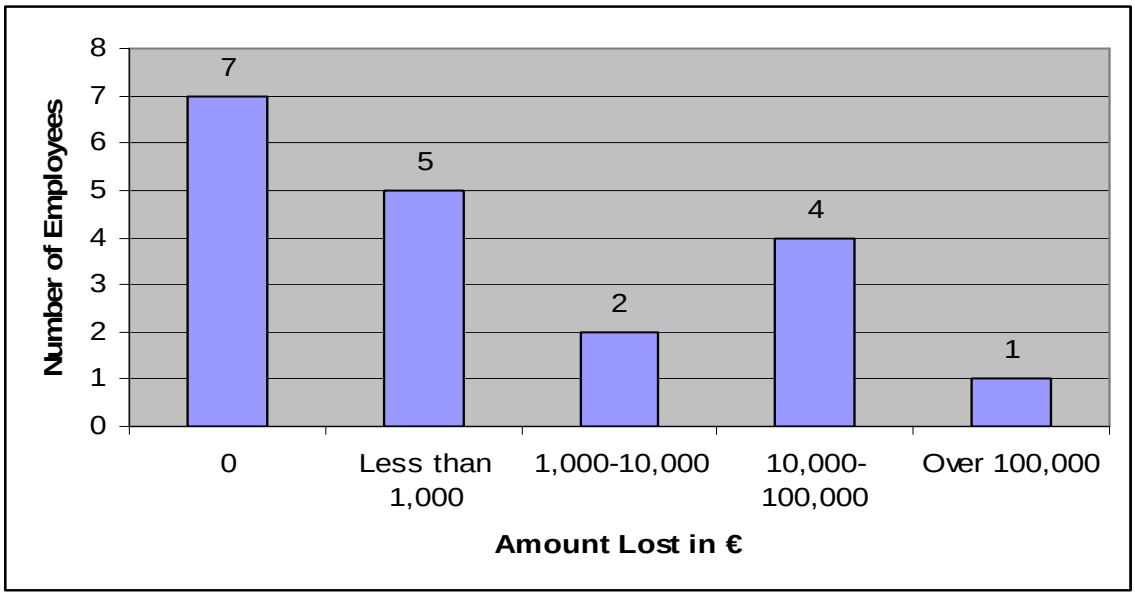
In five cases (2, 6, 10, 15 and 19) employees will go on to lose further substantial amounts of money during the remainder of their working careers due to changes in their working circumstances as a result of the accident. These amounts vary between €38,000 and €268,000. When considering these consequential losses over a working career, no account has been taken of any potential career improvements on salary.

[1] Case study 20 was self-employed and treated as an employer for analysis of costs.
* 37 years of disability pension has been subtracted; ** Does not include redundancy pay

These continuing costs are important to consider when ascertaining the total financial losses accruing to the injured employee over the course of his or her working career. Hence the costs in Table 6.1, column 3 is the actual amount of money lost by the injured party up until June 2006. Those costs in column 4 of the same table are expected losses for the injured employee at retirement age.

The costs in case studies 10 and 15 may be interpreted in different ways. The injured employee decided to leave his employer at some point after the accident for alternative employment at a lower rate of pay. If the injured employee had stayed, he would not have incurred any financial losses. He related that his choice to leave the employer was in large part, as result of the accident. Therefore, the resultant reduction in salary has been presented as a loss.

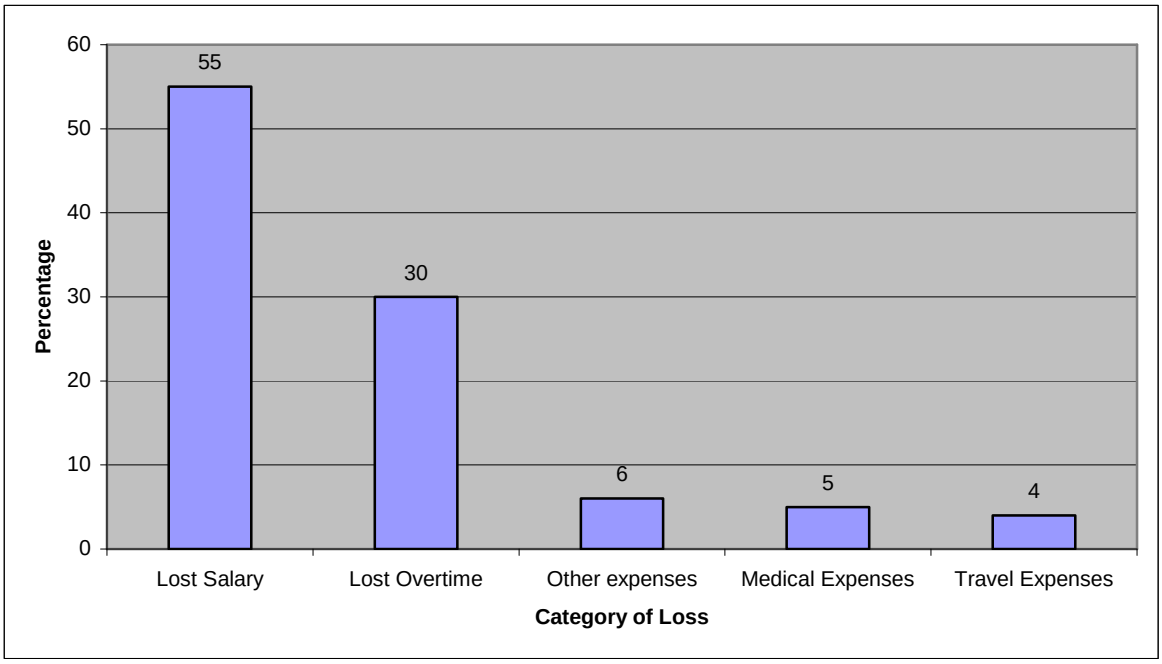
Figure 6.1 Amounts lost by employees in cost bands



Main financial cost categories for employees

The main elements of costs for those twelve employees who lost money are presented in approximate terms in Figure 6.2.

Figure 6.2 Breakdown by category of total costs to employees



By far the largest percentage proportion of money lost by employees was lost salary and overtime which together accounted for approximately 85% of losses. Medical, travel and other expenses amounted to approximately 15%.

Other expenses

The figures for 'other expenses' should be treated with caution because these figures were given as approximations only. Respondents reported that they used savings or borrowed money to meet other expenses arising from the accident (such as increased household bills, costs of borrowings). The employee in case study 2 declined to give any figures other than to say her savings were used up. The results are clear - unless the employer pays the bills and expenses, the injured person will lose money (either through used up savings or borrowed money) and the amounts can reach high levels. Also, the amount received in compensation does not necessarily cover all subsequent losses incurred, as was found in case studies 15 and 19.

Table 6.2 Other expenses reported by the employee as a result of the accident

Case study number	Amount of other expenses in €
6	10,000
9	5,000
10	10,000*
15	2,000*

*Borrowed amounts

6.3 Physical effects of the accidents on the injured employees

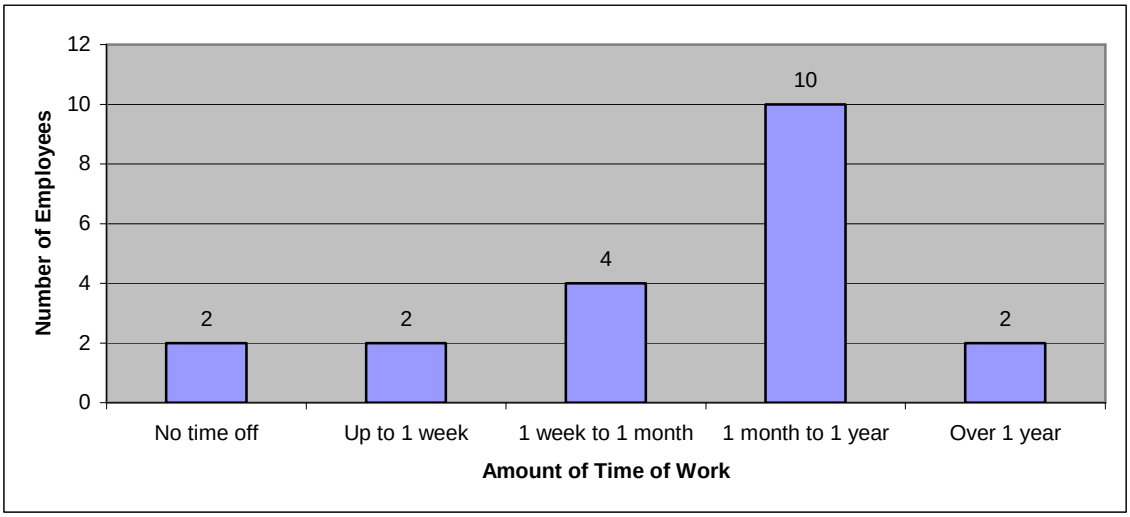
One third (7) of those injured reported that there was no permanent change to themselves or the way they worked as a result of the accident. Permanent physical effects occurred to ten employees; these are reported below in Table 6.3. All the case study employees reported pain and suffering due to the accident.

Table 6.3 Permanent physical effects on the injured & time off work

Case study number	Effect	Time taken off work in months (Unless otherwise stated)
2	Retired due to arm injury	13
3	Permanent disability – fingers	9
5	Persistent pain in the hand in direct sunlight	3
9	Cannot carry out manual handling as previously	4
10	Permanent disability - fingers	8
11	Cannot carry out manual handling as previously	3
12	Permanent disability - finger	3 weeks
15	Persistent headaches	2
19	Persistent pain	78
20	Permanent disability – fingers	3 weeks

The physical effects of the accidents can also be appreciated by looking at the amount of time off as a result of the accidents. This varied from no time off work to six and a half years off work. One employee retired through ill health. The amounts of time taken off work by the injured employees as a result of the accidents are shown in Figure 6.3.

Figure 6.3 Amounts of time off work by employees



The pattern here shows the general severity of the workplace accidents researched. Only four employees took one week off or less. The majority of employees (twelve) took more than a month off work. The results here include case study 20 who is self employed.

The amount of pain borne by the injured person in physical terms, including stress, violence and abuse, is too subjective to attempt any analysis or comparison. However the descriptions of pain in the interviews indicate the level of suffering borne by the employee as a result of the accident. Psychological pain and suffering were equally described by the employees and are commented on in the next section.

6.4 Psychological effects of the accidents for the employees

Reported psychological effects of the workplace accidents include anxiety, depression, upset to family and friends, difficulty in carrying out non-work activities and in undertaking sports activities and hobbies. The range and type of psychological effects reported by each injured employee are shown in Table 6.4

Figures 6.4 and 6.5 show the frequency of various psychological effects reported by those injured. Anxiety affected over half of the injured employees; depression was recorded in a quarter of the case studies. Over half the employees reported direct negative consequences to their family and close friends. Over one-third indicated that they experienced difficulties in non-work activities; over one third reported difficulties in hobbies or leisure activities. Figure 6.5 shows that the majority of those injured, (17 of 20), suffered multiple negative psychological effects. Half of the case studies reported two to three effects. Seven reported four or more effects.

Figure 6.4 Psychological effects reported by injured employees

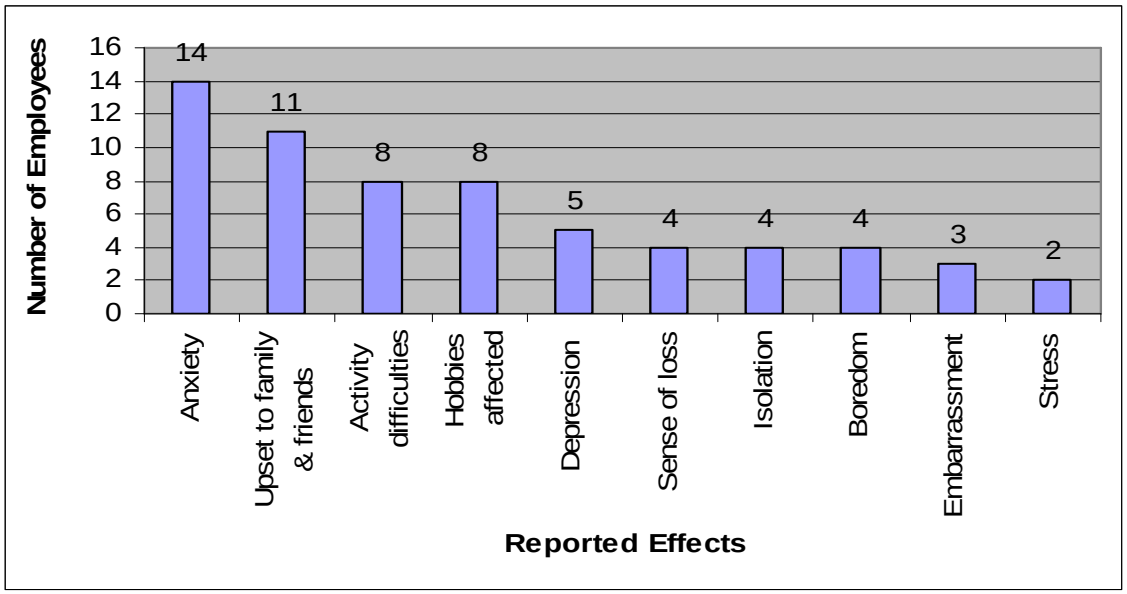


Figure 6.5 Frequency of psychological effects on the injured employee

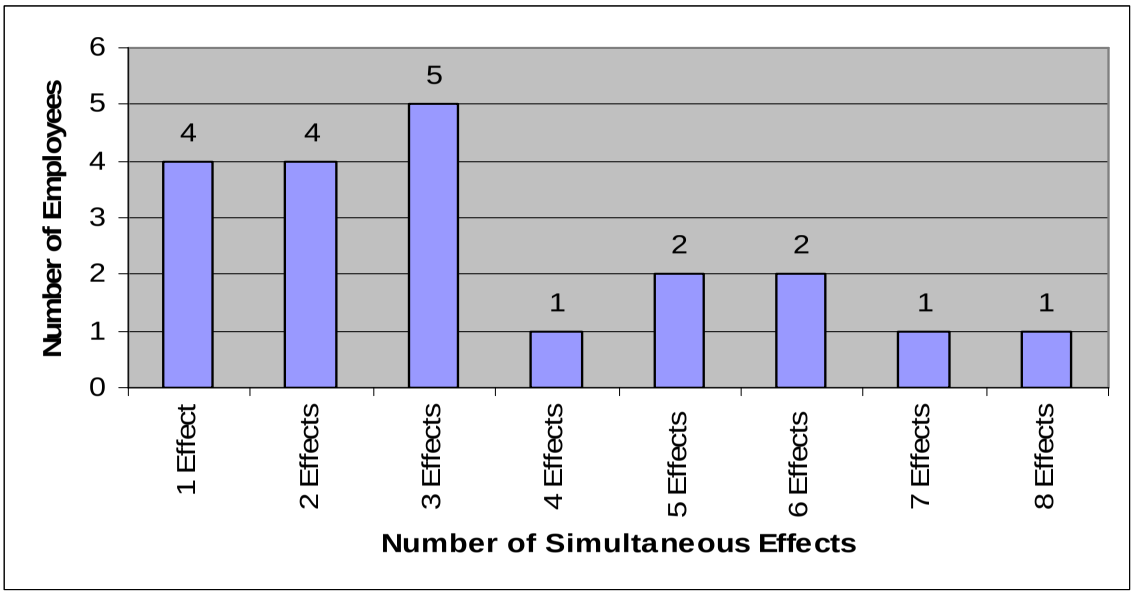

Number of Employees
6
5
4
3
2
1
0
4
4
5
1
2
2
1
1
1 Effect
2 Effects
3 Effects
4 Effects
5 Effects
6 Effects
7 Effects
8 Effects
Number of Simultaneous Effects

Table 6.4 Psychological effects reported by the injured employees as a result of the accident

Case Study No.	Anxiety	Difficulty in carrying out normal activities	Upset to family & friends	Depress-ion	Couns-elling received	Sports & hobbies affected	Sense of loss	Feelings of embarra-ssment	Feelings of isolation	Stress	Boredom
1			*								
2	*	*				*	*		*		
3	*	*				*	*	*	*		
4	*		*			*	*				
5	*		*		*						
6	*	*	*	*	*				*	*	
7			*								
8	*										
9		*				*					*
10	*	*	*	*		*		*			
11	*	*									
12			*					*			
13						*					*
14	*	*									*
15	*			*							*
16			*								
17	*				*	*					
18	*		*	*	*					*	
19	*	*	*	*	*	*	*		*		
20	*		*								

6.5 Overall effect on the employee

The findings show that the overall effect of workplace accidents on the injured employees was substantial. Seventeen of the twenty injured, reported that the accident had either a significant or large effect on their lives (See Figure 7.2). The interviews also reflect this finding. An idea of these impacts and effects can be gauged from the following selected quotes from the case studies:

Case Study 2

"*I'm just left here with my disability*"

Case Study 3

"*Feelings of embarrassment have also affected me. After the accident, I didn't want to go out and socialise because I didn't want people looking at my hand*."

Case Study 4

"I don't know if I'll ever play any sport again, never mind reach my previous level (capped for Ireland). "

Case Study 5

"*My wife and two kids suffered as well. They knew I was not well and I knew I was not well. I became a different person. I was changed forever by that experience*."

Case Study 6

"*Having been made ill as a result of poor work conditions, I'm not about to put my health at risk again. It's just not worth it. I remember the worst of my illness and I'm not going through that again*."

Case Study 10

"*I'm still affected by the accident. As I am right handed I now can't write properly because I don't have great control over the pen. My hand is now easily affected in cold weather So in the winter months my fourth finger will go numb and a dull ache will affect my hand*."

Case Study 11

"My neurologist told me that as it hasn't healed by now, the chances are it won't get any better. So I'm left to get on with my life."

Case Study 13

"*At this stage I have to say I'm just fed up with it all. Completely and utterly fed up. I just want my knee healed up so I can get my life back*"

Case Study 15

"By then, my GP and wife had persuaded me to go to a psychiatrist. I was reluctant to go at first but eventually I went. In

the end I saw him for over two years. He diagnosed me with depression and put me on anti depressant medication"

Case Study 17

"the feeling that I am not safe in my own workplace remains with me constantly"

Case Study 18

"*He (the GP) told me that I was suffering from post traumatic stress disorder as a result of the incident.*"

Case Study 19

"*My GP had told me that not being able to work was a principal cause of my depression.*"

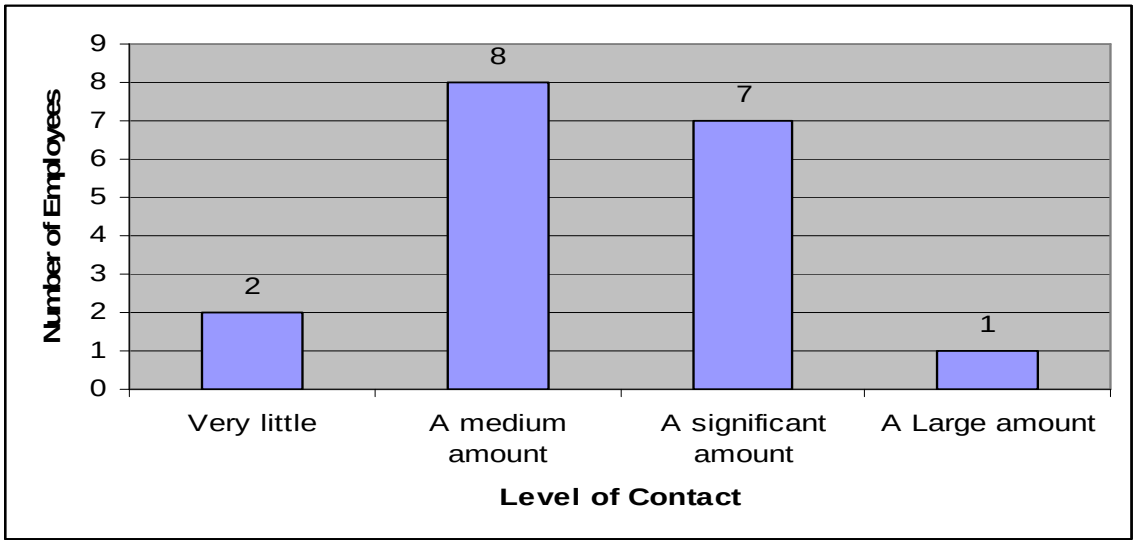
When these results are compared to the findings from the Health and Safety Executive (2006) study in the UK there are many similarities. The results in this study further support and strengthen the conclusions of the UK study, as already outlined in Section 2 of this report.

6.6 Employer-employee relationships after the accidents[1]

Relationships with work colleagues

As shown in Figure 6.6. Most injured employees (16 out of 18) reported that they retained a medium significant or large amount of contact with other employees after the accident.

Figure 6.6 Level of contact between employees and their work colleagues after the accident as reported by the employee

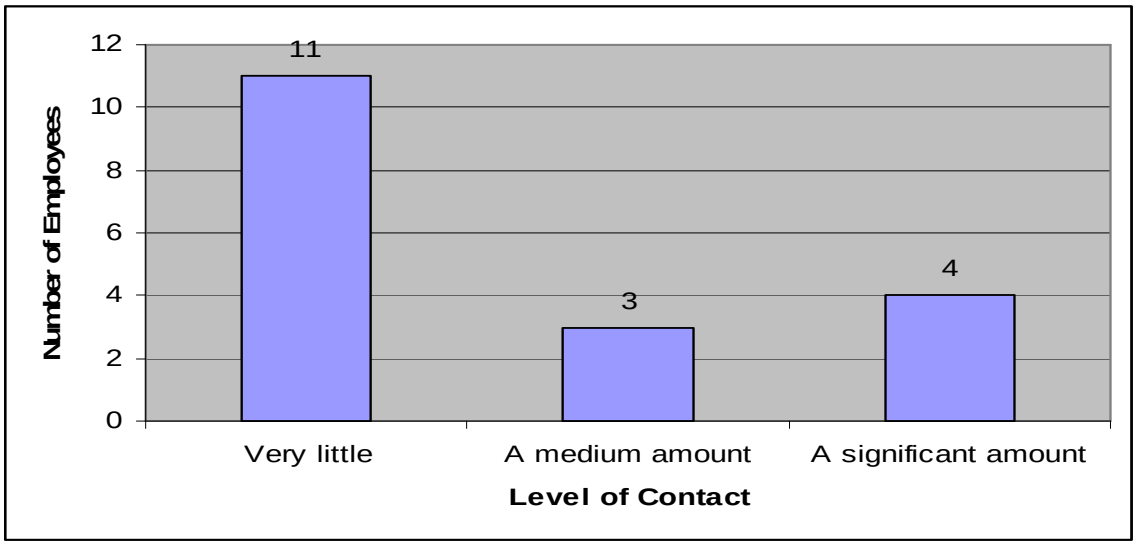


[1] Eighteen case study employees are included in this analysis. Case study 8 had no time off and the question was not considered relevant. Case study 20 is self employed and was not considered relevant.

Contact with employers

The level of contact between the injured employee and the employer was lower and more polarised, than the level of contact with work colleagues; this is shown in Figure 6.7. More than half (11 of 18) reported very little contact with their employer however four stated that they had a significant amount of contact.

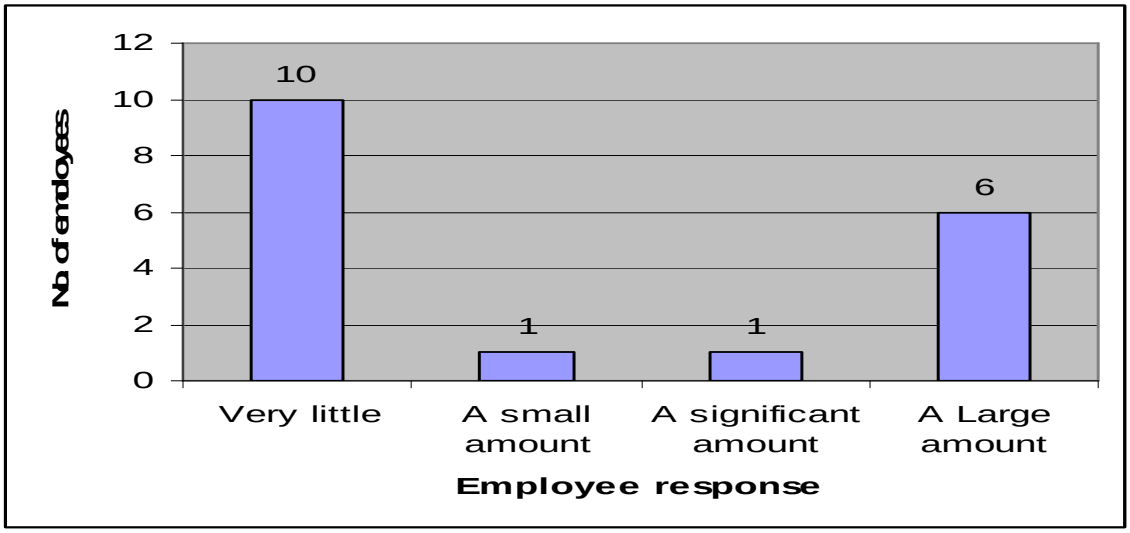
Figure 6.7 Level of contact between employees and their employers after the accident as reported by the employee



Changes in feelings towards the employer

In eleven out of eighteen case studies, the injured employees reported very little or a small amount of change in the way they felt towards their employer. In seven out of eighteen case studies the resultant levels of resentment after the accidents were described as significant or large.

Figure 6.8 Levels of resentment towards the employer after the accident



A higher number of contacts between employers and employees after the accident was associated with lower levels of employee resentment. Figure 6.8 shows the resultant level of resentment to the employer from eighteen case study accidents.

Resentment arose mainly because of the way the employee perceived they were being treated by the employer after the accident. With the exception of one employee, the accident was not the major cause of resentment. The small sample size on which this finding is based must again be borne in mind.

Section 7. A comparison of the impact of accidents on employers and employees

7.1 Introduction

Comparative data on the overall impact of the workplace accidents on employers and employees is presented in this section. A summary outline of the costs and effects of the accidents on employers and employees is first provided; this is followed by comparative analysis of the effects of accidents on both parties.

7.2 Overview of costs and effects

Table 7.1, overleaf, provides an outline of the costs and effects of the workplace accidents for both employers and employees in each of the twenty case studies.

Table 7.1 Summary of costs and effects of accidents on employers and employees in twenty case studies

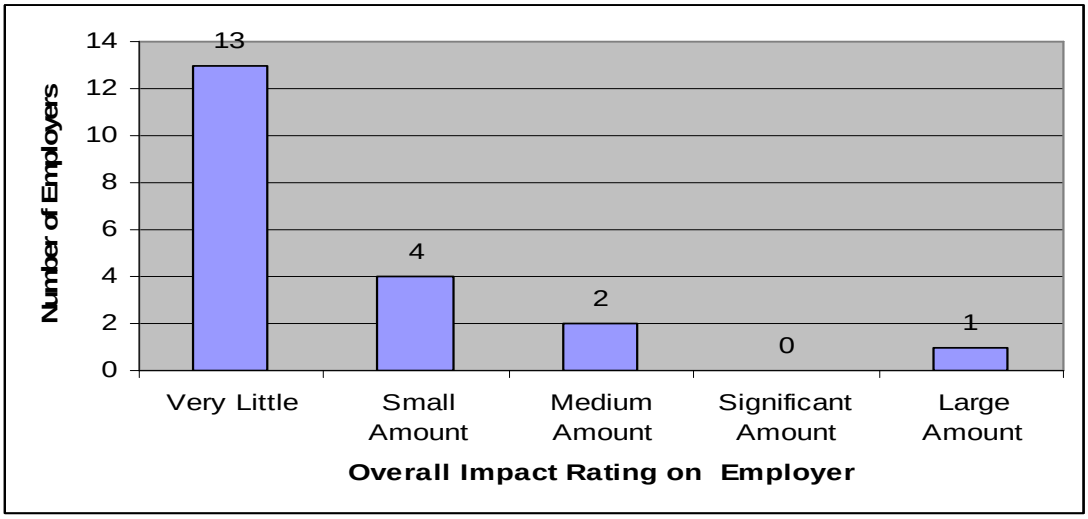
Employer costs and effects						Employee costs and effects					
Case Study Number	**Work sector of employer**	**Number working for the employer**	**Total employer costs in €**	**Personal injury claim status against employer**	**Overall impact on employer Scale 1-5 (1 very little - 5 large amount)**	**Employee job title/ function**	**Amount lost by employee in €**	**Amount expected to be lost by age 65 by the employee in €**	**No. of years till 65 for the employee**	**Overall impact on employee Scale 1-5 (1 very little - 5 large amount)**	**Time taken off work in months (unless otherwise stated)**
1	Health Care	1,000 - 2,000	31,363	Considered	1	Electrician	1,800	-	0	4	2
2	Health Care	Over 2,000	21,824	lodged	1	Care worker	27,072	96,000	7	5	13
3	Manufacturing	1,000 - 2,000	49,832	lodged	2	Plant operative	0	-	0	4	9
4	Manufacturing	1,000 - 2,000	9,494	None	2	Plant operative	0	-	0	5	2
5	Manufacturing	1,000 - 2,000	132,712	lodged	1	Electrician	0	-	0	5	3
6	Health Care	Over 2,000	238,082	lodged	1	Emergency services	46,000	200,000	20	5	2
7	Health Care	Over 2,000	1,315	None	2	Psychiatric nurse	635	-	0	3	8 Days
8	Health Care	Over 2,000	0	None	1	Care worker	0	-	0	1	0
9	Health Care	Over 2,000	12,328	None	1	Emergency services	10,180	-	0	5	4
10	Manufacturing	25	3,870,500	Settled	5	Woodworker	0	268,000	37	5	8
11	Health Care	Over 2,000	31,068	-	1	Care worker	4,500	-	0	4	3
12	Local Authority	200-300	4,226	Settled	1	Woodwork teacher	0	-	0	4	3 weeks
13	Manufacturing	1,000 - 2,000	20,403	-	3	Plant operative	500	-	0	5	3
14	Health Care	Over 2,000	2,074	-	1	Catering assistant	280	-	0	4	8 Days
15	Manufacturing	Over 2,000	48,305	Settled	1	Electrician	47,282	180,000	12	5	2
16	Construction	25	1,312	-	2	Foreman	254	-	0	4	1 week
17	Local Authority	400-500	326	-	1	Local authority worker	0	-	0	5	2 Days
18	Local Authority	400-500	640	-	1	Local authority worker	120	-	0	5	0
19	Health Care	Over 2,000	20,000	Settled	1	Care worker	112,000	38,000	19	5	78
20	Construction	Self employed	8,700	-	3	Woodworker	0	-	0	Self Employed	3 Weeks

7.3 Levels of impact on employer and employee

Impact on the employer

Figure 7.1 shows the level of impact the accident had, on the case study employers. Most employers (17 of 20) indicated that the individual workplace accident had very little or only a small amount of impact on their business or organisation.

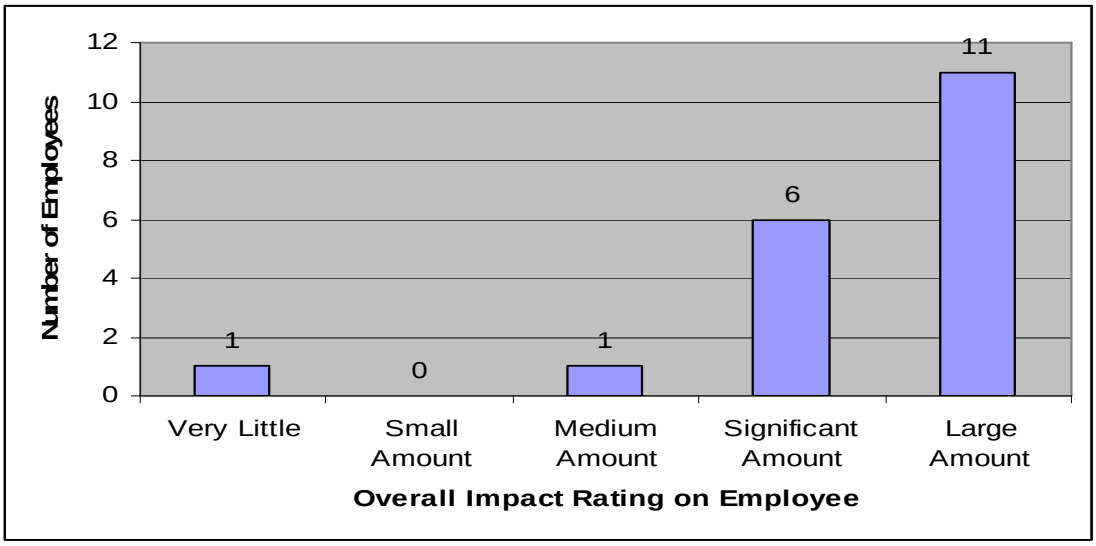
Figure 7.1. Rating of accident impact on the employer



Impact on employee

The level of impact of the accident on the injured employees is shown in Figure 7.2. Over half of the injured employees (11) indicated that the accident had a large impact, while a further quarter (6) said it had a significant impact.

Figure 7.2 Rating of accident impact on the employee



Comparative impact

Figures 7.1 and 7.2 clearly show that the impact of the accident was much lower on the employer, than on the employee.

A higher proportion of employees than employers rated the impact as having a large amount or a significant amount of impact. This difference is statistically significant. ($p = <0.05$[*]). In two case studies (8 and 10) the impact was rated the same. The overall differences in the scales of impact rating are noticeably polarised.

Difficulties with scientific validity arise when attempting to compare subjective data (such as pain or suffering) with objective data (such as the cost of repairs). Case study 10 illustrates well the difficulties in comparing subjective and objectives loss. Both the employer and the employee rated the accident to have had a 'large amount' of impact. However, an intuitive review of the cases studies clearly supports the idea that if all pain, suffering and loss could be measured without error, then employees have borne proportionally more of the negative impact of the accidents than their employers.

There are those who will argue that many accidents are exaggerated for personal gain. There is no doubt that there are individuals who have and will continue, to fabricate their evidence and use hyperbole, to gain financially from their employer. However these case studies and the Health and Safety Executive (2006) study, clearly show that where an accident occurs, pain, suffering and loss will follow. This important point should not be overshadowed by those who view the publicity surrounding spurious accidents as being reflective of a workplace reality.

[*] Mann–Whitney U test.

Section 8. Conclusions and recommendations

8.1 Introduction

The key conclusions from this research are presented in the first section of this chapter. This is followed by a summary of the specific costs and effects of the workplace accidents for employers and employees. The chapter concludes with recommendations to address the issues identified in the current research.

8.2 Key conclusions

The case studies revealed five main conclusions. Firstly, the unpredictable outcome of accidents in terms of costs and effects became evident. It was not possible to gauge either the severity of the accident or the subsequent costs and effects to employers and employees from the initial accident.

Secondly, the cost of accidents to employers varied greatly from €0 to over €3.8 million. The costs found were in almost all cases underestimates as productivity losses (with one exception) were not recorded by employers.

Thirdly, the cost of accidents to employees also varied greatly from €0 to over €100,000. In five case studies these losses are continuing.

Fourthly, the accidents affected the employees far more than their employers. Employees reported greater deleterious effects to themselves, when compared to the effects on their employers. In some cases subsequent employee resentment towards the employer was also encountered.

Finally, the psychological effects of the accidents were found to be greater than previously reported. All of the more serious accidents resulted in negative consequences for the employee and their families.

8.3 Summary of costs and effects to employers and employees

Costs of the workplace accidents to the employers

The case study findings demonstrate that a wide range of negative costs and effects resulted from the accidents. In terms of financial costs to employers, the amounts varied greatly from €0 to over €3.8 million. Excluding the highest and lowest costs to arrive at twelve more "illustrative" case studies, the average cost per accident came to approximately €52,000. One employer found that his financial viability was threatened as a result of the accident.

At the very least, the accidents resulted in production losses. Further losses included salary costs for replacement staff or overtime payments, retraining costs, personal injury claim compensation, repair bills medical & travel expenses and increased supervision.

The largest cost employers encountered as a result of workplace accidents was salary costs which came to nearly half (45%) of total losses.

For some of these employers, the costs are set to increase further due to personal injury claims. Eight personal injury claims have been lodged from the twenty case studies and four have been settled. Nearly half of the more serious accidents in these case studies resulted in claims. Of the settled claims, three compensation awards came to approximately €30,000 and the remaining award was for €152,000. One of the four unsettled claims has been estimated to be in the region of €200,000.

One other effect of workplace accidents found in the case studies is the possibility of resentment towards the employer from the injured employee. Over one-third (7 of 19) of the injured employees reported a 'significant' or 'large' amount of resentment towards the employer after the accident. This was, in large part, reported to result from the way they were subsequently treated by their employer rather than from the accident itself.

Costs to employees

The amount of money lost by employees varied greatly. Seven employees did not lose any money. Twelve employees lost money and the amounts varied from less than €1,000 to €112,000. The average loss of these twelve employees was approximately €21,000. These figures take account of any compensation received. Where employees lost money, the largest proportion, approximately 85%, was due to lost salary and overtime payments.

Five employees are incurring ongoing financial losses due to a change in employment status as a result of the accident. If their circumstances do not change, these employees are set to lose between €38,000 and €268,000 over the remainder of their careers.

Physical effects on employees

For all the employees, each accident had personal consequences and they all endured pain and suffering to various degrees. Although the amount of pain suffered cannot be measured objectively, sixteen of the twenty employees suffered what can be described as very painful injuries. For ten employees the negative physical consequences of the accident are permanent.

The amount of time off work provides an idea of the range of severity of the injuries. Two employees had no time off, ten employees had between one month and one year off work. Two employees had more than a year off work.

Psychological effects on employees

Over half the employees reported suffering anxiety and over half reported their close family and friends were affected; a quarter reported suffering depression. A multiplicity of psychological effects were reported with over half of these employees reporting two or more negative psychological consequences; five employees have received counselling.

The overall impact of the accidents on the employees was high. Seventeen employees rated the overall impact of the accident as significant or large. Furthermore the impact of

the accident was “felt” much more by the employee that by the employer. It was found that the employee had to bear the negative financial, physical and psychological consequences of the accident far more and for far longer, than his or her employer. In this sense, the moral imperative on the employer as well as his legal and financial obligations to prevent workplace accidents is clear.

Overall effects on employers and employees

The range of costs and effects borne by employers and employees as a result of the workplace accidents described is outlined in Table 8.1.

Table 8.1 Summary of types of costs and effects reported from the case studies

Employer costs and effects	Employee costs and effects
Salary and overtime costs	Lost salary
Productivity losses	Lost overtime payments
Retraining costs	Medical and travel expenses
Compensation costs	Pain and suffering
Repair costs	Permanent disabilities
Medical and travel expenses	Anxiety
Additional supervision	Difficulty in carrying out normal activities
Resentment from the employee	Upset to family & friends
	Depression
	Sports affected
	Counselling sessions availed of
	Feelings of embarrassment
	Feelings of isolation
	Hobbies affected
	Boredom
	Resentment towards the employer

8.4 Conclusions and recommendations

These case studies demonstrate the pain, suffering and financial loss incurred by employees and their employers as a result of workplace accidents. The need to bring workplace accidents to an irreducible minimum is therefore clear and reinforced.

There are messages here for both employers and employees. Employers should now understand that an employee and their family can be affected by an accident, to a far greater extent than was generally realised. There is now highlighted, a moral as well as a legal and business imperative to prevent accidents.

Employees should now understand the serious costs and effects an accident can have on them and their families. The need for employees to work as safely as possible has been graphically illustrated and reinforced.

A number of recommendations arise from this research. These case studies and the UK HSE research (Health and Safety Executive 2006), show that employees in particular need to be aware of the potentially serious financial and psychological effects an accident can have on them and their families. This will hopefully motivate them into improving their own safety behaviour.

There also appears to be advantages to the employer in maintaining a higher level of contact with the injured person and proactively managing their absence. This would seem to give two advantages. The first is to reduce levels of resentment. The second is to co-ordinate state service provisions so that that the injured employee's return to work can be better managed. For example, a recent Irish study, cited in Health and Safety Review (2006) illustrated the benefits of lower back pain absence intervention. Furthermore, rehabilitation is now one of the four "pillars" of the Health and Safety Authority's Strategy for Health and Wellbeing at Work to be launched in 2007. The Strategy will recommend the development of an integrated infrastructure to support people to return to work, incorporating services such as physiotherapy, occupational therapy and social welfare.

With some employees, there appears no alternative but to begin a personal injury claim to recoup lost earnings. The establishment of the Personal Injuries Assessment Board has reduced the costs associated with bringing such claims. However the employee must still engage in an adversarial process with his employer to be recompensed for financial losses due to the workplace accident. It therefore seems advantageous, where the medical evidence is uncontested, that employees should have their immediate expenses reimbursed in order to lessen any financial hardship and resentment towards their employer.

Further research into the propensity to claim for a workplace accident is needed. Given that nearly half of the more serious injuries in the case studies led to a claim being pursued, the factors underlying this behaviour should be investigated.

Fourteen out of the twenty case study employers have not acted in any meaningful way to prevent the same accident from recurring again. This is a major concern from a regulatory and humanitarian perspective. Again the small study population size may mean that this behaviour is not replicated in the wider workplace. However, this finding illustrates the need for further research to identify factors that will motivate employers to implement adequate safety management.

Appendix 1 – Note on methodological issues

A1 Validity of research data

A number of steps were introduced to ensure, as far as possible, the validity of the interviews and data produced.

A1.1 Employee self-reported data

Validation of employee self reported data was raised as an issue by a number of potential employer participants, particularly in respect of exaggeration of injuries. It was noted that this concern, where expressed, was about other employers and not their own employees. The validity of the interviews was strengthened in two ways; all interviews were given back to the interviewees on two occasions to check for accuracy. Any changes requested by the interviewees were made. Apart from minor issues there was only one change requested whereby information on personal costs was withdrawn by the employee. One other employee was on a leave of absence abroad and could not be contacted for a second time.

With the agreement of the interviewees, all the interview scripts (except one) were then given to the employers or their representatives, who were asked on two occasions to comment on validity. In one exception, the interview was related to the employer over the telephone at the request of the employee. All of the employers reported the accounts to be accurate representations. One employer could not confirm the validity of the interviewees continued ill health because he did not have the medical reports. However, he did confirm the initial accident and subsequent time off work.

A1.2 Employer bias

Employers, or their representatives were asked in the first instance for suitable candidates. Employers were not directed in any way by the research team regarding the type of employee to provide, other than that he or she should have suffered an injury resulting in either time off work or a related deleterious effect. (See appendix 2, Letters to participants). It was not thought likely that employers would put forward employees who they suspected of having spurious injuries.

A1.3 Sectoral bias

The health care sector is over represented in the study. This reflected the relative ease of contact with health care organisations compared to the other sectors. Some sectors were particularly resistant to participation. It should be noted that arranging participation was, in all cases, a slow and difficult process and any follow up study should take this into account.

A1.4 Population size and location bias

The sample was biased towards the larger employers in terms of number of employees. There was one self-employed person but no other “micro-businesses” were involved (defined as less than ten employees); two of the employers had twenty five employees. The sample size was too small to be considered geographically representative of all

Ireland. Six of the case studies were located in the Dublin metropolis. The majority of case studies can be described as recent events with approximately 60% of them occurring after the year 2003. The time frame covered is from 1995 to 2006.

A1.5 Severity of injury bias

The principle method of assessing severity was by duration of leave. Using this measure the case studies present accidents with a wide range of severity outcomes. They range from no time off (two cases) to returning to different employment or duties (three cases) to ill health retirement (one case). Various levels of severity of injury are reflected in the case studies.

A2 Limitations of the study

The essentially random nature of selection of participants ensured as good a sample as twenty case studies could achieve. However, the results cannot be assumed to be representative of the wider workforce. The factors outlined below should also be taken into account when considering the results.

A2.1 Self reporting of injuries

There are anecdotally opposing views regarding the severity of accidents on individuals. On the one hand there is a view that the effects of accidents are exaggerated for financial and personal gain. On the other hand there is a view that the effects of "genuine" accidents are under reported. Furthermore, injured employees and an independent medical observer may give a different evaluation of the same injuries.

The accounts of the injuries were self reported and for reasons of logistics, confidentiality and consent could not be independently medically verified as part of the research project. There remains the possibility that the extent and severity of the injuries may have been over or under represented by the employee. Also, the symptoms reported may not have been a direct consequence of the workplace accident, even if thought to be the case by the employee. Without an independent medical examination, this misrepresentation remains a possibility. The case studies therefore represent the employees perception of the accident. However, the researchers contend that over representation or exaggeration was not encountered to any great extent. The researchers would suggest the opposite, as it was more common for employees to downplay their symptoms and wider effects of the accident. Also the employers did not report any over representation or exaggeration.

It could be argued that the participants themselves were unrepresentative because of their willingness to communicate the findings of their accident experience. However, the random approach to the selection of participants should minimise the number of individuals recruited with motives not conducive to the research aims.

The case studies date back to 1995, although the majority of case studies are from the last three years. The issue of accurate recollection of past events remains. Even though no data that involved any ambiguity has been presented, this possible misrepresentation is relevant.

Employer self reported data was not verified by any independent second reading. Much of this data was deemed confidential and was not available to third parties for verification purposes.

Employer data is not as complete as employee data. Examples of employer data which was not available, or withheld, included insurance premiums, turnover, profit margins, pending personal injury claim details. However many details were available and facilitated the research. Furthermore the case study methodology itself remains a valid research methodology and was deemed the most suitable for the data required.

A2.2 Accuracy of reported costs

When considering costs, the approximations used in the research must be borne in mind. Many of the respondents gave information in an approximate manner. For example;

> "I used to get at least €100 a week in overtime, up until I was injured"

In such cases it was difficult to record the exact financial information. However the overall data would not have been significantly improved if such accurate figures were made available. Where there was any doubt about whether the cost had been incurred, the figure was not included. So if the employee or employer could not clearly recall or document a specific cost or activity, for example if an absent person was actually replaced by another employee on overtime, then this cost was excluded.

All the figures relate to the year in which the expenditure occurred and have not been adjusted to current prices. Due to differences in inflation rates between medical treatment costs and consumer price indices, the figures have not been adjusted. A further point to note when considering long terms costs, is the manner in which the long term absence has been managed by the employer or employee. No account has been taken of the possibility of the employee finding alternative and or, better paid work.

Taking this conservative approach to presenting cost data, it is highly likely that the costs reported here are underestimates of the true costs involved. It is important to bear in mind the possible sources of error listed above. Reviewing the data presented in the cases studies suggests that these errors, although accepted as being present, do not materially affect the conclusions drawn.

A2.3 Calculating employer costs

In five case studies 2, 6, 11, 12 and 19, two salary amounts are shown in the costs section at the end of the narrative. Here two salaries have been shown representing the cost of paying an additional employee to cover for the absence of the injured employee. It can be argued, that only one salary is expended by the employer and not two; this is because the salary paid to the absent injured employee would have had to be paid in any event. Hence the only additional cost to show on any end of year accounts as a result of the accident would be one additional salary cost. However two salary costs are presented for the following reasons:

Firstly, presenting only one salary cost would not show that two salaries have actually been expended as a result of the accident, accepting that one salary will be offset by the productivity of the additional employee. In effect the employer is paying the wages of the absent injured employee and in addition, paying the employee brought in to cover for the absence. However end of year accounts would not show that the employer had to pay the injured employee while he or she was away from work.

Secondly, it is normally assumed that the additional employee brought in will be as productive as the absent injured person. This however, could not be verified by the research team. Such costs as recruitment fees, social welfare payments, time taken for the additional employee to become as productive as the injured person, administrative or managerial costs and time taken to employ the additional employee could not be included.

Thirdly, in the remaining fifteen case studies, even though cover was required, additional staff were not employed as a result of the accident. If two salary costs were not presented in respect of the five case studies referred to above, it would appear that the cost of the accident to the employer is the same whether or not additional staff were employed. This would be misleading. Given that an objective of the research is to quantify the costs of accidents as far as possible, it was decided that it would be more illustrative and informative to present two salary costs in case studies 2, 6, 11, 12 and 19. If the reader wishes to interpret the employer costs in these case studies as one resultant salary expenditure only, then the subsequent salary costs can easily be deducted.

In overall terms these additional salaries are a small but significant percentage of total salary costs. If these additional salary costs are removed from the twelve case studies which reported significant employer costs, the approximate average cost to the employer in terms of total losses is reduced by just over 17%. This reduction is in large part due to case study 6, where the lengthy employee absence generated a high second salary cost.
The resultant approximate average cost for these twelve case studies therefore falls from €52,000 to €43,000.

Appendix 2 – Letters to employers

Mr Pat O'Neill,
Safety Officer,
Shamrock Manufacturing,
County Dublin

Dear Pat

Re research into the costs and effects of accidents at work.
As discussed with you on Thursday the 13th of April, I would inform you that the Dublin Institute of Technology has been contracted by the Health and Safety Authority to carry out research into the costs and effects associated with accidents at work. The results may form the basis of an awareness campaign to be released at a later date. This campaign will highlight the costs of accidents and the effects on the individuals concerned.

The Dublin Institute of Technology research team therefore kindly requests your co-operation, in allowing interviews with one or two members of your staff. We are particularly looking to talk to members of your staff who have been injured as a result of a work accident. We would also request an interview with a member of your staff who would be able to quantify the costs associated with that accident.

At this point I would confirm the absolute confidentiality of this research. Your staff and organisation will not be identified and will remain indistinguishable from your sectoral colleagues. If you have further queries in this regard please contact Marie Dalton research manager in the Health and Safety Authority (01 614 7061) who will answer any further questions you may have about the purpose of the project and the confidentiality aspect.

I will contact you shortly to see if you are willing to participate further, explain the research methodology and set up dates for possible visits. As a small token of our collective appreciation we will ask you to nominate a selected charity to which the Health and Safety Authority will make a contribution. If I can be of any assistance in the meantime please do not hesitate to contact me.

Yours Sincerely

Victor Hrymak
Lecturer in Environmental Health and Safety
Dublin Institute of Technology, Cathal Brugha St
Dublin 1
13th April 2006

HEALTH AND SAFETY AUTHORITY

ACHIEVING A HEALTHY AND SAFE WORKING LIFE – TOGETHER

10 Hogan Place, Dublin 2, Ireland
Telephone: 01 6147000 Fax: 01 6147020 Website: http://www.hsa.ie

Dear Sir Madam

Research Project into the Cost and Effect of Accidents at Work

As part of ongoing efforts to increase awareness of health and safety, the Health and Safety Authority have contracted a project team from DIT to conduct research on the costs and effects of accidents at work.

It would greatly assist the work of the Health and Safety Authority if you could provide assistance in this important research. In this regard the Dublin Institute of Technology will contact you in due course to explain the methodology.

At this point I would confirm the absolute confidentiality of your organisation and that the researchers are operating under confidentiality clauses. It is planned that the results of the research will form the basis of an awareness campaign, highlighting the costs associated with accidents and the effects on the individuals and employers involved.

Marie Dalton from this Authority will be acting as the research manager and will be available to answer any queries or provide references for the researchers. She can be contacted on 01 614 7061.

May I thank you in advance for your co-operation in this matter. As a small token of our appreciation the Health and Safety Authority will make a contribution to one of the following charities:

- Irish Motor Neuron Disease Association
- Irish Cancer Society
- The Multiple Sclerosis Society of Ireland

You can indicate to the research team from DIT which charity you would like to receive a donation.

Yours Sincerely,

Martin O' Halloran
Assistant Chief Executive and Board Secretary
Health and Safety Authority

HEALTH AND SAFETY AUTHORITY

ACHIEVING A HEALTHY AND SAFE WORKING LIFE – TOGETHER

10 Hogan Place, Dublin 2, Ireland
Telephone: 01 6147000 Fax: 01 6147020 Website: http://www.hsa.ie

16th Jan 2007

Dear Sir or Madam,

Research Project into the Cost and Effects of Accidents at Work

In the summer of 2006, you participated with the Dublin Institute of Technology and this Authority in the above research project. A draft copy of the report is enclosed for your information.

On behalf of the Health and Safety Authority and the Dublin Institute of Technology may I sincerely thank you for your important contribution.

May I ask that you read the draft report for any changes you wish to be made within the next two weeks. These changes can be returned in the stamp addressed envelope to Victor Hrymak from the Dublin Institute of Technology who will make the necessary changes.

The finalised report will be used by this Authority to publicise the effects accidents at work can have in Ireland. As token of our appreciation the Health and Safety Authority has made a contribution to the charities nominated by the injured persons.

Yours Sincerely,

Martin O' Halloran
Assistant Chief Executive and Board Secretary
Health and Safety Authority

Appendix 3 - Research Protocol

Employer Details

- Details of Employer , product or service
- No of Employees
- No of staff injured person has in immediate section
- Turnover 2005
- Profit 2005
- Is there a safety professional within the company YES No if yes details….title and hours worked per week on safety issues
- Is safety advice bought in YES No if yes details …… cost of any advice given

Organisational Costs and Effects of the Accident

Specific employer costs involving

- What is your current employer liability insurance premium……
- What is your current public liability insurance premium…….
- Loss of customers orders or other opportunities YES NO if Yes any details…….
- Cost of any productivity loss resulting from injury YES NO if Yes any details…….
- Replacement of persons by way of extra salary costs YES NO if Yes any details…….
- New equipment costs YES NO if Yes any details…….
- Rental costs YES NO if Yes any details…….
- Damage to plant or equipment and repair costs YES NO if Yes any details…….
- Sick pay YES NO if Yes any details…….
- Overtime wages YES NO if Yes any details…….
- Compensation to injured party YES NO if Yes any details…….
- Lost production time in hours YES NO if Yes any details…….
- Cost of external consultants to advise on work practice changes YES NO if Yes any details…….

- Costs of resultant work practice changes YES NO if Yes any details…….

EFFECT ON COMPANY

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Specific Legal & Insurance Costs,

- Legal costs or court expenses YES NO if Yes any details…….
- Any fines or penalties YES NO if Yes any details…….
- Any pending legal actions by Health and Safety Authority YES NO
- Any statutory directions from Health and Safety Authority or other State regulator YES NO if Yes any details
- Any pending personal injury claims YES NO
- Any excess charged by insurance company YES NO if Yes any details…….
- Any increase in insurance premium after the accident YES NO if Yes any details…….
- Any underwriting refusal YES NO if Yes any details…….
- Any additional insurance conditions attached before re-insurance YES NO if Yes any details…….
- Any loss of no claims bonus YES NO if Yes any details…….
- Increased cost of insurance premium resulting from accident YES NO if Yes any details…….
- Medical bills paid to injured person YES NO if Yes any details…….
- Travel expenses paid to injured person YES NO if Yes any details…….

EFFECT ON COMPANY

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Reputation, Image, Public Relations, Industrial Relations or Corporate & Social Responsibility Costs Specifically

- Effect on staff morale and productivity YES NO if Yes any details
- Ability to attract new employees YES NO if Yes any details
- Quality reduction YES NO if Yes any details
- Any loss of standing in the community YES NO if Yes any details
- Any perceived loss in the ability to comply with any future tender stipulations on health and safety YES NO if Yes any details
- Any negative Industrial Relations consequences YES NO if Yes any details

EFFECT ON COMPANY

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Costs due to the investigation of the accident, specifically

Was the accident investigated YES NO if yes ;

- Number of approximate man hours spent investigating the accident…….
- Number of persons involved in investigating the accident…….

EFFECT ON COMPANY

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Recruitment, selection and staffing changes including re-structuring of the workforce, or policies and practices for recruitment or selection of new staff, or the overall staffing of the company Specifically;

- Any new recruitment practices YES NO , if yes details
- Any new staff recruited as a result YES NO , if yes details

EFFECT ON COMPANY

Very little < €100 Amount if known	A small amount €100 - €1, 000 Amount if known	A medium amount €1,000- €10, 000 Amount if known	A significant amount €10K– €100K Amount if known	A large amount >€100K Amount if known

Re-structuring of training_ including re-training and refresher training, investment in training materials, etc. Specifically

- Has any retraining taken place YES NO if yes;
- Time taken to retrain …….
- Numbers of persons retrained ……
- Cost of any retraining…….

EFFECT ON COMPANY

Very little < €100 Amount if known	A small amount €100 - €1, 000 Amount if known	A medium amount €1,000- €10, 000 Amount if known	A significant amount €10K– €100K Amount if known	A large amount >€100K Amount if known

Re-structuring of Communication practices and channels (including awareness campaigns, investment in leaflets, posters, etc.; toolbox talks, etc.) Specifically;

- Any communication changes YES NO , if yes details
- Cost of communication changes…….

EFFECT ON COMPANY

Very little < €100 Amount if known	A small amount €100 - €1, 000 Amount if known	A medium amount €1,000- €10, 000 Amount if known	A significant amount €10K– €100K Amount if known	A large amount >€100K Amount if known

Re-structuring of auditing activities (including changes in auditing practices, frequency, re-training of auditors, etc.) Specifically;

- Any internal auditors assigned additional duties and time subsequently spent YES NO , if yes :
- Any internal auditors time subsequently spent
- Any external auditors / consultants appointed YES NO if yes any details
- Cost of external auditors appointed to date

EFFECT ON COMPANY

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Re-structuring of reporting activities including implementation of new reporting systems,

- Any new reporting systems or structures YES NO if Yes any details…….
- Any additional time taken for new reporting system… YES NO if Yes time taken ……

EFFECT ON COMPANY

Very little < €100 Amount if known	A small amount €100 - €1, 000 Amount if known	A medium amount €1,000- €10, 000 Amount if known	A significant amount €10K– €100K Amount if known	A large amount >€100K Amount if known

Re-structuring of co-operation activities (including changes in supervision, toolbox talks co-operation among employees and with managers:

- Any changes in time taken for any new supervision practices YES NO if Yes any details……..
- Any changes in time spent in collaborating with fellow employees YES NO if Yes time taken……

EFFECT ON COMPANY

Very little < €100 Amount if known	A small amount €100 - €1, 000 Amount if known	A medium amount €1,000- €10, 000 Amount if known	A significant amount €10K– €100K Amount if known	A large amount >€100K Amount if known

Any other changes to the Health & Safety Management System

Has re-organisation or re-structuring of policy and goals taken place. How much has it affected the organisation including time spent in meetings and at workshops in order to change health and safety policies and goals). Any recurrent or capital costs involving

- Any changes in safety policies
- Any changes in any other safety procedures
- Any changes in terms of organisational culture initiated by top management or shop floor workers YES NO if yes any details
- Any changes to prevent the accident from happening again

EFFECT ON COMPANY

Very little	A small amount	A medium amount	A significant amount	A large amount

Accident circumstances to elicit a narrative account of the incident, specifically

The Person

- Background of person, age and county of residence
- Job title
- Length of time in sector
- Length of time with employer
- Family status,

The Accident

- Day and time of accident
- Circumstance leading up to accident
- Detail of accident and injury
- Immediate effect of injury on the employee, consciousness, cognition, motor skills, pain
- Detail of first aid
- Actions of co – workers
- Actions of management
- Removal to hospital and time
- Action of hospital on arrival
- Details of treatment
- Details of diagnosis and prognosis
- Initial contact with relatives
- Effect on relatives
- Time spent in hospital
- Details of release
- Any contact with co workers
- Any contact with employer
- Details of time spent at home after release from hospital

- Effect on family routine
- Immediate costs faced by injured person on return from hospital
- Subsequent non envisaged costs faced by injured person on return from hospital
- Effect on family and relatives of injury
- Any permanent changes to family activities
- Any permanent changes to injured person activities
- Effect on injured person activities taking a longer term outlook
  any overriding memories challenges or feelings of the accident
- Any permanent non injury effects of the accidents
- Any message to co workers management state bodies and government

Individual costs and effects

Direct costs to the individual specifically

- Number of working days absent …….
- Period of time for which salary was not received from company YES NO if Yes any details
- Annual/ salary
- Any other payments received for example sick pay, social security YES NO if Yes any details
- Any medical costs YES NO if Yes any details
- Any travel costs YES NO if Yes any details
- Any overtime bonus premium or unsociable hours payments lost YES NO
- What is the probability of injury/illness leading to future absence and loss of earnings?
- Value and date of compensation received YES NO if Yes any details…….
- Retraining costs for any new career YES NO if Yes any details…….
- New clothing or new equipment purchased YES NO if Yes any details…….
- Any modifications to the home made and costs involved YES NO if Yes any details…….
- Effect on spouse's/partners/other resident family members participation in the workforce and take-home pay YES NO
- Any long term medical consequences or effects from the accident YES NO if Yes any details…….
- Any lost savings YES NO if Yes any details
- Days spent in hospital A&E and No of visits as outpatient

EFFECT ON INDIVIDUAL

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Work sphere, including working life, motivation, promotion opportunities, etc.

Has the accident affected any of the following areas of your life and in what manner? Specifically: Recurrent / Capital costs:

- Any changes in working life Yes No if yes any details
- Any lost promotion opportunities with the employer Yes No if yes any details

EFFECT ON INDIVIDUAL

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Where individual has returned to work with different employer as a result of injury or illness, then detail

- New salary and start date
- Value of loss of benefits (e.g. pension entitlements, leisure, creche facilities)
- Comparison of promotional prospects
- Value of disability pension received

EFFECT ON INDIVIDUAL

Very little	A small amount	A medium amount	A significant amount	A large amount
< €100	€100 - €1, 000	€1,000- €10, 000	€10K– €100K	>€100K
Amount if known	Amount if known	Amount if known	Amount if known	Amount if known

Leisure and social sphere effect

Including hobbies sports, time spent in other activities than home, work and community life; sport and recreation; time spent with friends, etc.

EFFECT ON INDIVIDUAL

Very little	A small amount	A medium amount	A significant amount	A large amount

Family sphere
Effect of accident on family life

Very little	A small amount	A medium amount	A significant amount	A large amount

The community sphere, **community life, political associations, unions and cultural groups, neighbour associations, etc.**

EFFECT ON INDIVIDUAL

Very little	A small amount	A medium amount	A significant amount	A large amount

Overall effect on individual

Very little	A small amount	A medium amount	A significant amount	A large amount

Feelings towards the employer

Contact with employer management after the accident

Very little	A small amount	A medium amount	A significant amount	A large amount

Contact with workmates after the accident

Very little	A small amount	A medium amount	A significant amount	A large amount

Change in any level of resentment towards the employer

Very little No Change	A small amount	A medium amount	A significant amount	A large amount

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