

*patterns of
ill-health amongst
Irish construction
workers.*

1997- 2004



CWHT

**Construction Workers
Health Trust**

Trade Unions working to protect the health of construction workers.

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PREFACE

The Construction Workers Health Trust was founded in 1994 by the Construction Group of Trade Unions affiliated to the ICTU.

The Trust aims to promote a healthy lifestyle among construction workers. Research in other countries has shown conclusively, that the blue collar worker succumbs to serious illness up to twenty years earlier than white collar workers, and in Ireland, construction workers are a particularly vulnerable group.

The Trust is funded by a small levy, paid by workers, who are members of the Construction Workers Pension Fund.

We are a registered charity, and operate as a stand alone unit with our own board of Trustees, and a small dedicated staff.

The primary activities of the Trust are:

- Providing free Health Screening to building workers on site.
- Conducting research into conditions which affects the health of building workers.
- Running regular campaigns of testing for conditions such as Prostate Cancer, Colon Cancer and Diabetes.
- Giving support, financial or otherwise, to other national organizations engaged in the treatment of, or research into, serious illness.

This second report on patterns of ill health amongst Irish construction workers, which includes the reasons for sickness absence from work, highlights the hazards which building workers face in their everyday lives.

It is particularly disappointing to note that the primary causes of absence from work continues to be injury and musculo-skeletal disorders, both of which are largely preventable. In this regard we feel the time has come for the Health & Safety Authority to establish, as a matter of urgency, a task force, to examine the nature and extent of occupational illnesses that afflicts construction workers, and based on our extensive knowledge and experience, we would be happy to participate in such a venture.

Finally, I would like to thank Dr Harold Brenner for his thorough and dedicated work in trawling through the records of the Sick Pay Scheme, and I hope that this report proves useful, not only to medical decision makers in Ireland, but to students, observers and critics of our national healthcare services.

Michael Brennan

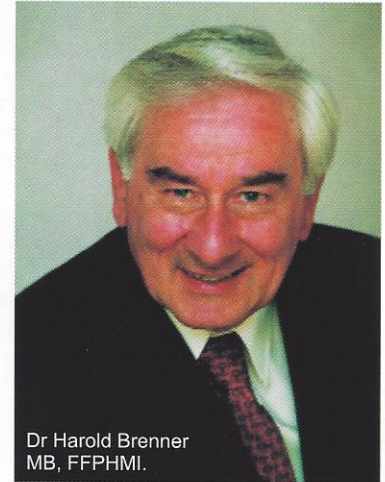
Chairman

INTRODUCTION

In 1997, the Construction Workers Health Trust investigated patterns of ill-health amongst Irish construction workers. From the archives of the Construction Federation Operatives Pension and Sick Pay Scheme (CFOPS), over 29,000 records of absences of its members in the period 1981 to 1996 were examined, as were over 3,000 records of early retirements of members on health grounds from 1965 to 1996.

The report was distributed to interested bodies, and subsequently published in the international journal, *Occupational and Environmental Medicine*.

The information gained was used to help develop a health promotion strategy for use not only by the Trust but also by the construction industry as a whole.



Dr Harold Brenner
MB, FFPHM.

The range of health disorders among industrial workers resulting in absence from work is well documented, and it is recognised that construction workers are at greater risk of developing certain health disorders than are the general population and workers in other industries. However, prior to this work, patterns of ill-health and injury giving rise to sick leave or early retirement in the Irish construction industry were not known.

In 2001, the Trust undertook a mortality study of construction workers and ex-construction workers who had contributed to CFOPS. Death certificates of over 1,650 men who died from 1995 to 2000 were examined, and the principal causes compared to those in the general Irish male population. The results reflected findings of the 2001 report, *Inequalities and Health in Ireland*, which confirmed the broad international experience of significantly higher mortality rates for people from lower socio-economic groups.

Since 1997 the construction industry in Ireland has greatly expanded. During this period there have been significant socio-economic changes in the country, general health services are under review and men continue to be reluctant to avail of health checks. Initiatives of the Trust during the last several years have attempted to improve the health of construction workers, with all members given the opportunity for health checks by their general practitioners, and those in the appropriate age group encouraged to attend their GPs in a campaign of early detection of prostate cancer, both campaigns at no cost to members themselves. Current initiatives include colon cancer screening in association with Tallaght Hospital, detection of unrecognised diabetes mellitus in association with St. James' Hospital, development of ergonomic techniques for brick and block layers in association with NUI Galway and FAS, and the development of a stop-smoking strategy in association with the Research Institute for a Tobacco Free Society.

In 2004, with the aims of further assessing the health status of construction workers and of improving ways in which its health promotion programme is delivered on construction sites (its core activity), the Trust decided to re-visit its earlier areas of research. The objectives were to review sickness absence and early retirement on health grounds since 1996 and to examine mortality in construction workers since 2000.

METHOD

The population base for the absence and early retirement parts of the study consisted of construction workers who were members of CFOPS, and thus eligible to receive benefits, between 1997 and 2004. The population base for the mortality study consisted of eligible construction workers and ex-construction workers who died between 2001 and 2004 and whose kin had applied for any type of death benefit from CFOPS. It is conservatively estimated that members form only one third of those eligible for membership of the scheme by virtue of working in the construction industry. In July 2006, CFOPS was re-organised as the industry-wide pension scheme and is now known as the Construction Workers' Pension Scheme (CWPS).

Pertinent records were made available by kind permission of the trustees and the administrator of CWPS. Information on sickness absence, early retirements and deaths was extracted from its databases, transferred to an epidemiological statistics computer programme, and appropriately analysed.

RESULTS

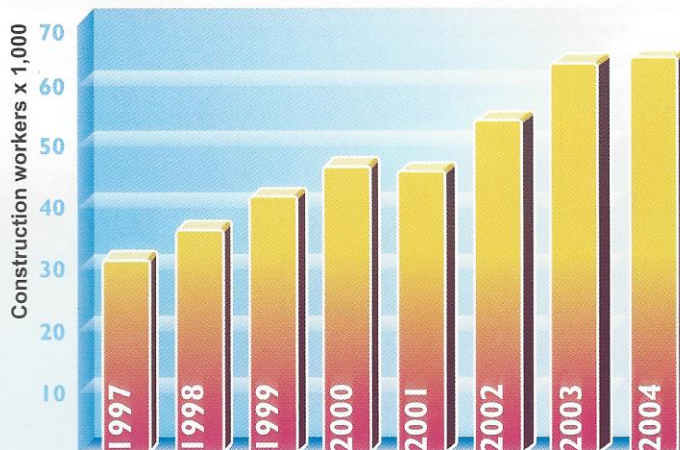
Where comparisons can be made with the earlier study covering the period 1981 to 1996, the figures for that earlier study are **shown in red**.

SICKNESS ABSENCE

Population base

The number of eligible workers, mostly male, increased each year from 1997 onwards as shown in Figure 1, continuing the trend started in 1996. This trend reflects the recovery and sustained expansion in the industry after a period of recession between 1985 and 1993.

Figure 1 Study Population 1997 - 2004



The 10-year age group distribution of the population remained essentially the same for each year of the study (Table 1).

Table 1 Age distribution of study population

| Age group | Percent | Age group | Percent |
|-----------|---------|-----------|---------|
| Under 20 | 1.5 | 40 – 49 | 19.6 |
| 20 – 29 | 35.4 | 50 – 59 | 13.3 |
| 30 – 39 | 27.5 | 60 – 64 | 2.7 |

Absences

An absence from work due to illness was recognised by CWPS if it entailed more than three working days and a sick certificate was received. There were 26,660 absences recorded over the eight-year period of the study, mostly (99.4%) involving male workers. A total of 15,408 individual workers were involved (155 were female). Table 2 shows the frequency of absences by these workers. Just over 60% were absent on one occasion only. The extreme case was a worker who was absent on 23 occasions during the eight-year period of the study.

Table 2 Frequency of absences of individual workers

| Frequency | No. of workers | Percentage | Earlier study % |
|------------------|----------------|------------|-----------------|
| Once | 9,285 | 60.2 | 63.2 |
| Twice | 3,545 | 23.0 | 21.0 |
| 3-9 times | 2,546 | 16.6 | 15.4 |
| 10 or more times | 32 | 0.2 | 0.4 |

Figure 2 shows absences as percentages of the study population for each year. There was little variation around the annual average of 6.9 absences per 100 workers (7.8 per 100 workers).

Figure 2 Annual rate of absence from work 1997 - 2004



Table 3 shows, for each year of the study, the age-specific rates of absence; the rate of absence rising with age is clearly illustrated.

Table 3 Annual age-specific rates of absence (per 100 workers)

| Age-specific rates | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|
| Year | 20–29 yrs | 30–39 yrs | 40–49 yrs | 50–59 yrs | 60–64 yrs |
| 1997 | 4.7 | 6.3 | 7.4 | 9.3 | 16.2 |
| 1998 | 4.7 | 5.9 | 7.2 | 8.5 | 15.9 |
| 1999 | 4.2 | 6.1 | 7.3 | 8.5 | 14.1 |
| 2000 | 5.4 | 6.9 | 8.7 | 10.3 | 20.6 |
| 2001 | 6.1 | 7.8 | 9.7 | 11.1 | 19.3 |
| 2002 | 5.3 | 7.0 | 8.0 | 10.3 | 14.7 |
| 2003 | 4.9 | 6.4 | 7.4 | 8.8 | 14.8 |
| 2004 | 5.1 | 6.8 | 8.0 | 10.6 | 13.6 |

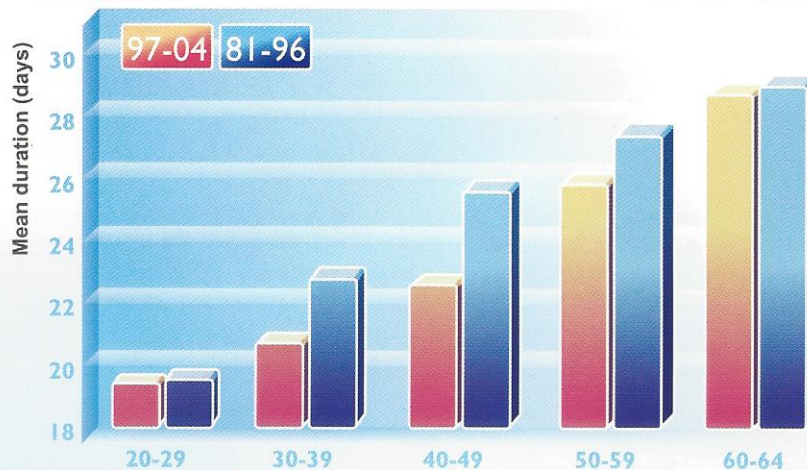
Age at time of absence

The mean age at time of absence was 39.4 years (38.7 years), the median was 38 years (37 years). Reflecting the larger proportion of younger workers in the study population, 75% of absences (78%) were among workers aged below 50 years.

Duration of absence

For the purpose of this study, the number of working days involved in each absence (calculated as three days added to the days for which sick pay was paid) is used as the duration of absence. The mean duration of absence was similar for each year of the study, varying from 21.6 to 22.7 days. Overall the mean duration of absence was 22.2 days (23.5 days); the median duration was 15 days (17 days). As in the earlier study, the mean duration of absence increased linearly with age (Figure 3).

Figure 3 Mean duration of absence by age 1997-2004 (1981-1996)



Regional variations in mean duration of absence and mean age at absence (for counties with more than 500 absences in the eight-year period) are shown in Table 4.

Table 4 Regional variations in mean duration of absence and mean age at absence

| County | Mean days | Mean age | County | Mean days | Mean age |
|----------|-----------|----------|-----------|-----------|----------|
| Clare | 22.4 | 40.9 | Louth | 22.9 | 37.6 |
| Cork | 22.4 | 40.1 | Meath | 23.6 | 40.0 |
| Dublin | 21.7 | 39.4 | Offaly | 21.6 | 39.7 |
| Galway | 21.4 | 38.7 | Tipperary | 21.7 | 38.5 |
| Kerry | 20.7 | 41.6 | Waterford | 21.0 | 39.2 |
| Kildare | 21.9 | 39.7 | Wexford | 22.6 | 39.2 |
| Kilkenny | 22.4 | 39.7 | Wicklow | 22.1 | 39.6 |
| Limerick | 24.0 | 38.7 | | | |

The mean duration of absence varied from 20.7 days (Kerry) to 24.0 days (Limerick). The mean age at absence varied from 37.6 years (Louth) to 41.6 years (Kerry).

Working days lost

During the period of the study, absence due to illness totalled 592,592 days, an annual mean of 74,074 days (42,340 days). The mean days lost per absence was 22.2 days (23.5 days). Recognising that these figures do not include the number of days where absences were less than 4 days duration, and using 230 days as the number of working days in a year, the annual percentage working days lost through sickness absence was calculated; they are shown in Table 5. Working days lost due to selected diagnostic categories are shown later (Table 8).

Table 5 Annual percentage days lost

| Year | % days lost | Year | % days lost |
|------|-------------|------|-------------|
| 1997 | 0.62 | 2001 | 0.78 |
| 1998 | 0.62 | 2002 | 0.71 |
| 1999 | 0.60 | 2003 | 0.61 |
| 2000 | 0.72 | 2004 | 0.68 |

In the previous study the annual percentages days lost varied from 0.6% to 1.1%.

Reasons for absence

Reasons for sickness absence were available for analysis in most (99.8%) cases. In the few remaining cases, no medical certificate was on file or no specific diagnosis was given on the certificate.

Available information suggests that all diagnoses in this study refer to the individual workers and not to sickness or injury to family members. It was not possible to identify work-related sickness or injury, nor was it a purpose of the study.

Table 6 shows the percentage distribution of the diagnostic categories of sickness reported in the medical certificates that were available for analysis, and numbers in categories grouped by age at the time of absence. The relatively few cases (120) under the age of 20 are included in the 20 to 29 year age group.

Table 6 Percentage distribution of diagnostic categories and numbers in categories by age at time of absence

| Diagnostic category | % | Age group | | | | | Total |
|-------------------------------|------------|-------------|-------------|-------------|-------------|-------------|--------------|
| | | 20 – 29 | 30 – 39 | 40 – 49 | 50 – 59 | 60 – 64 | |
| Injury | 31.4 | 3109 | 2269 | 1608 | 1017 | 347 | 8350 |
| Musculoskeletal disorder | 22.8 | 1274 | 1891 | 1541 | 1094 | 279 | 6079 |
| Infectious disease | 15.6 | 999 | 1098 | 939 | 825 | 301 | 4162 |
| Gastrointestinal disease | 5.4 | 372 | 354 | 345 | 284 | 80 | 1435 |
| Hospital investigations | 4.0 | 244 | 243 | 237 | 255 | 73 | 1052 |
| Post-operative recovery | 6.4 | 409 | 385 | 357 | 402 | 143 | 1696 |
| Surgical procedure | 3.6 | 259 | 218 | 206 | 214 | 64 | 961 |
| Cardiovascular disease | 4.1 | 60 | 121 | 284 | 445 | 173 | 1083 |
| Bronchitis, emphysema, asthma | 1.3 | 58 | 80 | 82 | 86 | 36 | 342* |
| Cancer | 0.15 | 3 | 5 | 8 | 15 | 9 | 40 |
| Mental disorder | 2.8 | 128 | 240 | 201 | 129 | 53 | 751 |
| Diabetes | 0.1 | 7 | 6 | 8 | 5 | 1 | 27 |
| Skin disorder | 1.7 | 126 | 111 | 90 | 83 | 34 | 444 |
| Blood disorder | 0.7 | 29 | 37 | 49 | 50 | 19 | 184 |
| ALL | 100 | 7077 | 7058 | 5955 | 4904 | 1612 | 26606 |

*Due to a change in the data input system since the previous study, cases of bronchitis and emphysema were inadvertently classified as respiratory infection and included in the infectious disease category. This number (342) is an estimate based on data from the previous study; the infectious disease number has been appropriately amended.

Injury is the most frequent reason for sickness absence, comprising 31.4% of all reasons (30.2%). Table 7 shows the types of injury.

Table 7 Categories of injury by age group

| Injury category | Age group | | | | | Total |
|--|-------------|-------------|-------------|-------------|------------|-------------|
| | 20-29 | 30-39 | 40-49 | 50-59 | 60-64 | |
| Head and neck | 393 | 360 | 283 | 130 | 63 | 1229 |
| Shoulder | 36 | 29 | 22 | 14 | 6 | 107 |
| Upper limb | 631 | 388 | 254 | 136 | 38 | 1447 |
| Lower limb | 321 | 187 | 160 | 83 | 19 | 770 |
| Limb unspecified | 1636 | 1243 | 856 | 631 | 213 | 4579 |
| Road traffic accident – injury unspecified | 92 | 62 | 33 | 23 | 8 | 218 |
| ALL | 3109 | 2269 | 1608 | 1017 | 347 | 8350 |

Musculoskeletal disorders accounted for 22.8% of absences (13.1%); back pain accounted for 67% (60%) of these. The percentage of these disorders is markedly higher than the percentage in the previous study

Infectious disease accounted for 15.6% of absences (25.4%). Lung infections comprised 20% (17%) of these and upper respiratory infections/flu 27% (48%). The percentage of infectious disease is markedly smaller than in the previous study.

Cardiovascular disease accounted for 4.1% of absences (3.6%). Hypertension comprised 27% (27%) of these.

Cancer (40 cases) accounted for 0.15% of absences (0.1%). No information is available about the cancer types associated with sickness absence.

Bronchitis, emphysema and asthma together accounted for 1.3% (4.4%). However 1.3% is an estimated figure (see note under Table 6).

Working days lost

Working days lost due to selected diagnostic categories are shown in Table 8.

Table 8 Total and mean working days lost per absence

| | Days lost | Mean days per absence | Mean days previous study |
|---------------------------------|---------------|-----------------------|--------------------------|
| Injury | 207,583 | 24.9 | 28.7 |
| Musculoskeletal disorder | 133,268 | 21.9 | 28.7 |
| Infectious disease | 59,822 | 13.5 | 16.9 |
| Cardiovascular disease | 34,993 | 32.3 | 39.4 |
| Cancer | 1,550 | 38.8 | 36.9 |
| Hospital-related reasons* | 94,764 | 25.6 | 31.6 |

*includes investigations, surgery and post-operative care

As in the previous study, the greatest number of working days lost was due to injury. However musculoskeletal disorder replaces infectious disease as the next highest number of days lost. Cardiovascular disease was fourth highest in terms of total number of days lost, but ranked second highest in mean days lost (32.3), while cancer was ranked highest in mean days lost despite the low total number of days lost.

Although hospital-related reasons accounted for a high number of days lost, it included investigations, surgery and post-operative care not easily sub-classified.

RETIREMENT ON GROUNDS OF ILL-HEALTH

From 1997 to 2004, 649 workers were granted early retirement based on health grounds; of these, records of 571 were available for the purpose of this study. The number and rate of these retirements in each year of the study are shown in Table 9.

Table 9 Annual number and rate (per 1,000 workers) of early retirements

| Year | No. | Rate | Year | No. | Rate |
|------|-----|------|------|-----|------|
| 1997 | 37 | 1.18 | 2001 | 76 | 1.65 |
| 1998 | 72 | 1.97 | 2002 | 91 | 1.68 |
| 1999 | 19 | 0.45 | 2003 | 108 | 1.70 |
| 2000 | 78 | 1.67 | 2004 | 90 | 1.40 |

Since the age structure of the population was essentially the same for each year, the annual rates of early retirement can be compared. The rates varied from 0.45 per 1,000 workers in 1999 to 1.97 in 1998 (the low rate in 1999 is due to most of the unavailable records being of retirements in this year). The mean annual rate was 1.46 per 1,000 workers (5.3 per 1,000, but this was due in large part to high rates of retirement, between 9 and 13 per thousand, in the years 1983 to 1988).

Table 10 shows the age of workers at the time of being granted early retirement. The mean retirement age was 55.6 years, the median 59 years (56.2, 58 years). The age at which the largest number of these retirements took place was 64 years (63 years).

Table 10 Age at early retirement

| Age group | No. | Age group | No. |
|-----------|-----|-----------|-----|
| 20 – 24 | 1 | 45 – 49 | 56 |
| 25 – 29 | 5 | 50 – 54 | 78 |
| 30 – 34 | 8 | 55 – 59 | 127 |
| 35 – 39 | 17 | 60 – 64 | 245 |
| 40 – 44 | 34 | ALL | 571 |

As expected, most early retirements on health grounds occurred in the later years of working life, 42.9% (43%) aged 60 years and over. However 11.4% (8%) were of workers under the age of 45 years. Early retirement on grounds of ill-health from the industry is based on certification of permanent disability by an independent occupational physician. Categories of medical diagnoses on the certificates are shown in Table 11.

Table 11 Diagnostic categories of permanent disabilities

| Diagnostic category | No. | % | Diagnostic category | No. | % |
|--|-----|------|---------------------------|-----|-----|
| Cardiovascular disease | 147 | 25.7 | Psychiatric disorder | 24 | 4.2 |
| Chronic obstructive pulmonary disease | 32 | 5.6 | Gastrointestinal disorder | 8 | 1.4 |
| Pulmonary fibrosis * | 6 | 1.1 | Cancer | 43 | 7.5 |
| Musculoskeletal disorder | 161 | 28.2 | Endocrine disorder ** | 7 | 1.2 |
| Injury | 96 | 16.8 | Chronic viral infection | 2 | 0.4 |
| Neurological disease | 21 | 3.7 | Ill-defined conditions | 8 | 1.4 |
| Genito-urinary disorders | 8 | 1.4 | Skin disorders | 2 | 0.4 |
| Blood and blood-forming organs disorders | 6 | 1.1 | ALL | 571 | |

* includes 3 cases of silicosis and 1 case of asbestosis

** all cases of diabetes mellitus

Disability based on a diagnosis of cardiovascular disease accounted for 26% of the retirements (31%) of which coronary heart disease accounted for 61% (56%); hypertension accounted for 12% (16%) and stroke for 14% (15%) of this category. Musculoskeletal disorders comprised 28% (30%) of diagnoses, of which degenerative disc disease accounted for 16% (20%) and all other forms of arthritis accounted for 84% (70%). Of the 43 cases of cancer, cancer of the larynx and lung accounted for 28% (31%) and cancer of the digestive tract 28% (20%). Injury formed 17% (8%) of the diagnostic categories of which limb and back injuries contributed 49% (63%). Psychiatric disorder comprised a small proportion (4.2%) of the grounds for early retirement (3.7%) corresponding to the low proportion (2.8%) of mental disorders as a reason for sickness absence (1.8%). A further breakdown of selected categories is contained in the following tables:

Table 12 Permanent disability – injury

| Site of injury | No. | Site of injury | No. |
|-----------------|-----|-------------------------|-----|
| Multiple | 22 | Upper limb | 15 |
| Head and neck | 6 | Lower limb | 19 |
| Spine and trunk | 13 | Unspecified/ill-defined | 21 |
| | | ALL | 96 |

Table 13 Permanent disability - cardiovascular disease

| Cardiovascular disease | No. | Cardiovascular disease | No. |
|------------------------|-----|--------------------------|-----|
| Coronary heart disease | 90 | Stroke | 21 |
| Heart valve disease | 3 | Peripheral heart disease | 5 |
| Dysrhythmia | 4 | Vein disease | 4 |
| Cardiomyopathy | 1 | Other | 1 |
| Hypertension | 18 | ALL | 147 |

Table 14 Permanent disability – musculoskeletal disorder

| Type | No. | Type | No. |
|----------------------|-----|---------------------------|-----|
| Arthritis of spine | 40 | Degenerative disc disease | 25 |
| Other osteoarthritis | 89 | Osteomyelitis | 1 |
| Rheumatoid arthritis | 6 | ALL | 161 |

Table 15 Permanent disability - cancer

| Type | No. | Type | No. |
|--------------|-----|------------------|-----|
| Brain | 3 | Bone | 2 |
| Larynx | 3 | Prostate | 2 |
| Lung | 9 | Bladder | 1 |
| Oesophagus | 1 | Leukaemia | 6 |
| Stomach | 3 | Lymphoid | 3 |
| Pancreas | 2 | Multiple myeloma | 1 |
| Colon/rectum | 6 | Undetermined | 1 |
| | | ALL | 43 |

Table 16 Permanent disability – neurological disease

| Type | No. | Type | No. |
|---------------------|-----|-----------------------|-----|
| Multiple sclerosis | 5 | Cerebral degeneration | 2 |
| Parkinson's disease | 1 | Neuropathy | 1 |
| Sensory disorders | 8 | Epilepsy | 4 |
| | | ALL | 21 |

Table 17 Permanent disability – psychiatric disorder

| Type | No. | Type | No. |
|-----------------|-----|------------|-----|
| Schizophrenia | 1 | Depression | 15 |
| Other psychoses | 7 | Neurosis | 1 |
| | | ALL | 24 |

Although the specific occupations/trades of most of the workers granted early retirement was established, insufficient baseline information was available to compare risks of early retirement on health grounds between occupations.

During the period of the study, a potential 5,351 years of working lives were lost due to early retirement on health grounds from the industry, an annual mean potential loss of 669 years (977 years) on health grounds. Table 18 indicates, for each occupation, the potential years of working life lost, the number of retirees and the percentage of retirees under the age of 50 years.

Table 18

Potential years of working lives lost in each occupation (PYWLL), number of retirees (No.) and percentage of retirees under the age of 50 (% < 50yrs)

| Occupation | PYWLL | No. | % < 50yrs |
|--------------------------|-------------|------------|-------------|
| Brick/block layer, mason | 277 | 31 | 22.6 |
| Carpenter | 582 | 63 | 23.8 |
| Electrician | 312 | 18 | 44.4 |
| Painter | 246 | 27 | 25.9 |
| Plasterer | 58 | 10 | 10.0 |
| Plumber | 196 | 13 | 30.8 |
| Machine operator/driver | 605 | 86 | 10.5 |
| Fitter | 319 | 36 | 8.3 |
| Welder | 60 | 11 | 9.1 |
| Foreman | 75 | 13 | 7.7 |
| General operative | 2121 | 200 | 25.0 |
| Other | 500 | 63 | 14.3 |
| ALL | 5351 | 571 | 21.2 |

Electrician is the occupation in which workers under the age of 50 years form a high proportion (44.4%) of those retiring on health grounds, 34.9% in the previous study. The numbers of sheet metal workers and floor layers (occupations also with high proportions retiring under the age of 50 in the previous study) is too small in the present study to calculate a meaningful percentage. Overall, those retiring before the age of 50 years (21.2%) accounted for 51.4% of the total potential working years lost. In the previous study the 17% retiring under 50 accounted for 45% of these years lost.

DEATHS IN THE CONSTRUCTION INDUSTRY

Death certificates of members of CWPS who died in the years 2001 to 2004 and whose kin had applied for any type of death benefit were examined. In addition, deaths which occurred in 2000, information on which was not available at the time of the previous study, were included.

In order to obtain a more comprehensive picture of deaths in the industry, data from this four-year period have been associated with the data in the previous study. The following analysis, then, refers to deaths in the 10-year period 1995 to 2004.

There were 3185 recorded deaths including one female, in this period; however death certificates were only available for scrutiny in 3114 (97.8%) of these, and the following data refers to these 3114 deaths (971 under the age of 65 years).

Types of benefit

Types of benefit associated with the deaths, mortality benefit (MB), widows pension including widows pension commuted (WP), funeral expenses (FE) and refund of contributions including two discretionary payments (RD), are shown in Table 19.

Table 19 Types of death benefit

| Year | MB | WP | FE | RD | TOTAL |
|------------|------------|-------------|------------|------------|-------------|
| 1995 | 34 | 138 | 112 | 15 | 299 |
| 1996 | 29 | 129 | 63 | 19 | 240 |
| 1997 | 29 | 143 | 57 | 56 | 285 |
| 1998 | 31 | 120 | 102 | 61 | 314 |
| 1999 | 37 | 134 | 102 | 31 | 304 |
| 2000 | 51 | 173 | 82 | 30 | 336 |
| 2001 | 70 | 150 | 74 | 47 | 341 |
| 2002 | 72 | 143 | 81 | 64 | 360 |
| 2003 | 67 | 156 | 75 | 42 | 340 |
| 2004 | 50 | 130 | 66 | 49 | 295 |
| ALL | 470 | 1416 | 814 | 414 | 3114 |

Trade or occupation

The trade or occupation of the deceased members was established in 75% of cases (2,347 cases). These are shown, for those dying under the age of 65 and for those aged 65 and over, in Table 20. The table is for descriptive purposes only and cannot be used for comparisons of deaths between trades/occupations.

Table 20 Trade or occupation

| Trade/occupation | Age under 65 | Age 65 and over | All |
|--------------------------|--------------|-----------------|-------------|
| Brick/block layer, mason | 54 | 83 | 137 |
| Carpenter | 91 | 246 | 337 |
| Electrician | 40 | 28 | 68 |
| Painter | 32 | 73 | 105 |
| Plasterer | 23 | 80 | 103 |
| Plumber | 16 | 23 | 39 |
| Machine operator/driver | 130 | 148 | 278 |
| Fitter | 34 | 28 | 62 |
| Welder | 11 | 12 | 23 |
| Foreman | 31 | 47 | 78 |
| General operative | 244 | 545 | 789 |
| Other | 131 | 197 | 328 |
| ALL | 837 | 1510 | 2347 |

Age at death

Table 21 compares the annual mean age of death in the study population with the mean age of death in the corresponding year for Irish males aged 20 years and over in the general population.

Table 21 Mean age at death

| | Mean age construction workers (S.D.) | Mean age general population (S.D.) | Statistically significant difference |
|-------------|--------------------------------------|------------------------------------|--------------------------------------|
| 1995 | 70.71 (12.0) | 71.83 (13.9) | No |
| 1996 | 69.72 (12.5) | 71.65 (14.5) | Yes |
| 1997 | 67.80 (13.6) | 71.61 (14.5) | Yes |
| 1998 | 69.08 (14.7) | 71.54 (14.6) | Yes |
| 1999 | 71.17 (14.1) | 71.86 (14.7) | No |
| 2000 | 69.63 (15.2) | 71.50 (15.0) | Yes |
| 2001 | 67.16 (16.6) | 71.53 (15.1) | Yes |
| 2002 | 69.91 (16.9) | 71.41 (15.2) | No |
| 2003 | 67.66 (16.7) | 71.78 (15.1) | Yes |
| 2004 | 68.49 (15.8) | 72.04 (14.8) | Yes |
| 1995 - 2004 | 68.6 (15.1) | 71.8 (14.9) | Yes |

The mean age at death in each year is less for construction workers, and except for three years, the difference is statistically significant. For the whole of the study period, the difference is statistically significant. The mean age of death for workers aged 20 to 64 is 50.7 years; in a large mortality study of construction workers in the UK, the mean age of death in this age group was 53.1 years.

Cause of death

Cause of death was established by examination of copies of death certificates, 2,898 held in CWPS records and 216 in the General Register Office records.

The causes of death were grouped according to the ICD-9 classification and are shown in Table 22.

Table 22 Causes of death

| ICD-9 group | No. | % | ICD-9 group | No. | % |
|-------------------------|------|------|--------------------------|-------------|------------|
| Infectious diseases | 33 | 1.1 | Respiratory diseases | 381 | 12.2 |
| Cancer (malignant) | 988 | 31.7 | Digestive diseases | 59 | 1.9 |
| Endocrine disorders | 2 | 0.06 | Genitourinary diseases | 40 | 1.3 |
| Blood diseases | 3 | 0.09 | Musculoskeletal diseases | 3 | 0.09 |
| Nervous system diseases | 57 | 1.8 | Ill-defined conditions | 7 | 0.22 |
| Circulatory diseases | 1283 | 41.2 | Injury and poisoning | 258 | 8.3 |
| | | | ALL | 3114 | 100 |

The following Tables 23 to 26 show the three principal causes of death; circulatory disease, malignant cancer and respiratory disease, as well as deaths from injury and poisoning, sub-grouped into the commoner causes, for those under the age of 65 and for those aged 65 and over.

Table 23 Circulatory disease (ICD-9 390-459)

| Circulatory disease | Age under 65 | Age 65+ | All |
|------------------------------|--------------|------------|-------------|
| Ischaemic heart disease | 224 | 565 | 789 |
| Cerebrovascular disease | 34 | 210 | 244 |
| Cardiomyopathy | 18 | 20 | 38 |
| Heart failure | 6 | 43 | 49 |
| Pulmonary heart dis. | 3 | 10 | 13 |
| Valvular disease | 0 | 8 | 8 |
| Aortic aneurysm | 9 | 40 | 49 |
| Dysrhythmia | 14 | 26 | 40 |
| Arterial embolism/thrombosis | 6 | 24 | 30 |
| Venous embolism/thrombosis | 3 | 0 | 3 |
| Other | 5 | 15 | 20 |
| ALL | 322 | 961 | 1283 |

Table 24 Malignant cancer (ICD-9 140-208)

| Cancer type | Age under 65 | Age 65+ | All |
|------------------------|--------------|------------|------------|
| Trachea/bronchus/lung | 102 | 201 | 303 |
| Prostate | 15 | 92 | 107 |
| Colon/rectum | 26 | 77 | 103 |
| Stomach | 23 | 36 | 59 |
| Oesophagus | 32 | 31 | 63 |
| Pancreas | 8 | 29 | 37 |
| Liver/gall bladder | 10 | 19 | 29 |
| Other digestive organs | 11 | 7 | 18 |
| Lip/mouth/pharynx | 7 | 16 | 23 |
| Brain | 13 | 19 | 32 |
| Mesothelioma | 6 | 10 | 16 |
| Lymphatic/blood | 32 | 36 | 68 |
| Kidney/bladder | 10 | 35 | 45 |
| Skin | 8 | 6 | 14 |
| Larynx | 5 | 7 | 12 |
| Unspecified site | 13 | 26 | 39 |
| Other | 11 | 9 | 20 |
| ALL | 332 | 656 | 988 |

Table 25 Respiratory disease (ICD-9 460-519)

| Respiratory disease | Age under 65 | Age 65+ | All |
|---------------------|--------------|------------|------------|
| Pneumonia | 11 | 195 | 206 |
| Br/asthma/emphysema | 4 | 21 | 25 |
| Pneumoconiosis | 2 | 15 | 17 |
| Other COAD* | 8 | 120 | 128 |
| Other | 2 | 3 | 5 |
| All | 27 | 354 | 381 |

* chronic obstructive airway disease

Table 26 Injury and poisoning (ICD-9 800-999)

| Injury/poisoning | Age under 65 | Age 65+ | All |
|---------------------------------|--------------|-----------|------------|
| Suicide | 58 | 2 | 60 |
| Traffic accidents | 59 | 1 | 60 |
| Fractures - head/neck/vertebrae | 13 | 0 | 13 |
| Drowning | 23 | 0 | 23 |
| Internal injuries | 3 | 1 | 4 |
| Accidental falls | 18 | 3 | 21 |
| Intracranial injury | 9 | 2 | 11 |
| Toxic gases/corrosives/other | 10 | 0 | 10 |
| Fire, burns/results of | 4 | 3 | 7 |
| Drug poisoning | 14 | 0 | 14 |
| Other | 30 | 5 | 35 |
| ALL | 241 | 17 | 258 |

A standardized mortality ratio (SMR) was calculated to compare all-cause deaths in the age group 20 to 64 years in the study population with those in the general population. Mortality from particular causes among the study population was compared with those of the general population using proportional mortality ratios (PMRs).

Using the average age-specific death rates for men in the general population in the 10-year period as a standard, the SMR for men in the age group 20 to 64 years was calculated. An SMR over or under 100 indicates a higher or lower than expected mortality in the construction worker population. For this age group the SMR was 86 (C.I. 80 - 91), in line with findings of studies in other countries.

For the purpose of this report, PMRs were calculated for malignant cancer, circulatory disease, injury and poisoning and respiratory disease, as well as for selected causes within these major groupings; they are shown in the following Tables 27 and 28. The ratios were obtained both for deaths in the age group 20 to 64 and for all deaths in the study population. Mean deaths in the four even years from 1996 to 2002 in the Irish male population for the appropriate age groups and causes were used in the calculations.

A PMR over or under 100 indicates a higher or lower than expected mortality in the study population from a particular cause. The confidence intervals (C.I.s) for the PMRs have been computed at the 95% level. Statistically significant findings are indicated with an asterisk.

Table 27 Proportional mortality ratios for major groups

| ICD-9 group | 20 - 64 age group | | All study population | |
|---------------------|-------------------|-----------|----------------------|-----------|
| | PMR | 95% C.I. | PMR | 95% C.I. |
| Malignant cancer | 119 * | 106 - 132 | 120 * | 113 - 128 |
| Circulatory disease | 100 | 89 - 111 | 101 | 95 - 106 |
| Respiratory disease | 57 * | 38 - 84 | 94 | 84 - 121 |
| Injury/poisoning | 125 * | 109 - 140 | 112 | 98 - 125 |

* Statistically significant

Table 28 Proportional mortality ratios for selected causes

| ICD-9 group | 20 – 64 age group | | All study population | |
|-----------------------------|-------------------|-----------|----------------------|-----------|
| | PMR | 95% C.I. | PMR | 95% C.I. |
| Ischaemic heart disease | 98 | 86 – 111 | 101 | 93 – 107 |
| Cerebrovascular disease | 97 | 67 – 136 | 121 * | 106 – 137 |
| Lung cancer | 152 * | 122 – 182 | 152 * | 135 – 169 |
| Stomach cancer | 138 | 88 - 208 | 131 | 100 – 177 |
| Ca of oropharynx/oesophagus | 144 * | 104 – 200 | 139 * | 111 – 172 |
| Suicide | 75 | 57 - 100 | 68 * | 52 - 88 |

* Statistically significant

DISCUSSION

The review of the literature undertaken for the Trust's previous investigation of patterns of ill-health in Irish construction workers clearly showed that construction workers are more at risk than those in other occupations to injury and to the development of certain diseases. The work is intrinsically dangerous; workers are exposed to potentially dangerous substances, to noise, vibration and to changes in the weather. They are also exposed to a "bystander effect" in which a worker may not only encounter the hazards of his own job, but may also be exposed as a bystander to hazards associated with the work of a different tradesman because of shared work spaces. Additionally it is known that many construction workers have unhealthy lifestyles and are obese or overweight.

Sickness absence has been defined as absence from work which employees attribute to sickness or injury and which the employer accepts as such; within this definition, sickness of other family members may be included as a reason for employee absence. However in this study all sickness or injury referred to employees. It was not possible to identify work-related sickness or injury, nor was it a purpose of the study; data on occupational injury and occupational disease in the building and construction industry are available in publications of the Irish Central Statistics Office.

Over the eight year period of the study, 15,408 absences were recognised by CWPS for sick pay, mostly (99.4%) involving male members. The mean age at time of absence was 39.4 years (median 38 years). Reflecting the larger proportion of younger workers in the study, 75% of absences were by men under the age of 50 years. The rate of absence each year varied little from between six and eight absences per 100 workers. Analysis of the age-specific rates of absence clearly showed for each year the rate of absence rising with age, with the rate of absence approximately three times higher in those aged 60 to 64 than those in the 20-29 age group. The mean duration of absence was 22.2 days (median 15 days) and was shown to increase with age. Small regional variations in the mean duration of absence, as well as mean age at absence, were noted, possibly due to ill-defined local factors.

The reasons for sickness absence were determined in nearly all cases. Injuries (31.4% of all absences), musculoskeletal disorders (22.8% of which more than three-quarters was due to back pain) and infectious disease (15.6%) accounted for most cases of sickness absence. Cardiovascular disease accounted for 4.1%. Hospital-related reasons, including hospital investigations, surgery for a variety of conditions and post-operative care, accounted for 14% of absences. Although the reasons for sickness absence were all categorised in terms of medical diagnoses, it is recognised that psychosocial factors both at home and the workplace can play a part in, and be predictive of, sickness absence.

The annual number of working days lost due to sickness absence totalled 592,592 days (an average of 74,074 days per year). As expected, the greatest number of working days lost was due to injury followed by musculoskeletal disorders and infectious diseases. Despite the comparatively low total number of days lost due to cancer it was ranked highest in mean days lost per absence.

Early retirement on grounds of ill-health is not only about the permanent disability suffered by the individual; the loss of expected productive years and the unprepared entry into retirement may have psychological and social consequences for the individual and the family. For the industry, it means the loss of experienced workers and the implications of employing and training new personnel. In the present study, the mean annual rate of such retirement was 1.45 per 1000 workers and the mean annual age was 55.6 years.

The identification of cardiovascular disease, musculoskeletal disorders and injury as the major causes of permanent disabilities leading to early retirement on the grounds of ill-health is a reflection not only of the prevalence of these conditions in the general population but of the environment and type of work involved in the construction industry. Psychiatric disorder comprised a small proportion of the grounds for early retirement corresponding to the low proportion of mental disorders as a reason for sickness absence.


The many potential years of working lives lost due to early retirement on health grounds (5,351 years) is an indication of the large impact of permanent disability on both individual workers and the industry. The impact is greater when such retirement occurs at a relatively young age; the study showed that 21.2% were under the age of 50 years, accounting for 51.4% of the potential years lost.

The mortality study is subject to certain limitations and as such the findings must be interpreted with care. It is recognised that death certificates may contain considerable inaccuracies in certifying causes of death. The study is limited to deaths for which death benefits are claimed, however there is no reason to think there is any difference in age or causes of deaths among eligible construction workers whose kin do not claim such benefits; nor would there be any reason to believe that the findings would be different for construction workers who were not members of the pension scheme.

The mean age at death was 68.6 years compared to 71.8 years in the general Irish male population aged 20 years and over. This difference is statistically significant and supports a generally held belief that "construction workers die younger."

For descriptive purposes only, the trade or occupation of the men in the study was established. The categories of general operative, carpenter, bricklayer and painter accounted for 58% of the total deaths.

The standardized mortality ratio which compared all-cause deaths in the age group 20 to 64 years in the study population with those in the general population, although somewhat surprisingly low (86) given the working conditions and lifestyle factors of construction workers, is supported by findings in other studies in Sweden and Germany which also find lower all-cause mortality in construction workers in this age group. This all-cause low mortality is possibly due to the "healthy worker survival effect", a selection process in which those who remain employed tend to be healthier than those who leave employment. However, the long term effects of work in the construction industry are reflected in the mean age at death described above. Proportional mortality ratios (PMRs) were used for comparison of particular causes between the study population and the Irish male population aged 20 years and above; although widely used in studies of occupational mortality, PMRs need to be interpreted with care especially when mortality is low in a particular group.



The study shows that construction workers experience an increased mortality from injury and poisoning, statistically significant in the working age group of 20 to 64 years. It also shows that construction workers experience a significantly increased mortality from malignant cancer. Lung cancer is significantly increased in both age groups and stomach cancer, although not reaching significance, is also increased in both groups. This is consistent with studies of construction worker mortality in other countries. Occupational hazards encountered at work as well as certain behavioural and socio-economic factors almost certainly contribute to this excess in mortality in comparison to the general population. An example of behavioural factors is that of cancers of the oropharynx and oesophagus which are known to be cause-related to the combined effect of smoking and alcohol intake; in the present study there was a high PMR (139) for these cancers which is statistically significant. A total of 16 deaths from mesothelioma (cancer of the pleural lining of the lung) was recorded in the present study; during the same six-year period as the study there were 108 deaths in the general male population, which figure includes the 16 deaths in the study. It should be noted that mesothelioma occurs mainly as a result of exposure to asbestos in several job groups not necessarily confined to the construction industry – it is known that vehicle body builders, boiler operators, chemical workers and upholsterers have significantly high PMRs for mesothelioma. There was a highly significant PMR (244) for mesothelioma in a U.K., and a mortality study of electrical workers in the construction industry in the U.S.A. showed a PMR of 356 for mesothelioma.

It would appear that work in the construction industry does not contribute to excess deaths from ischaemic heart disease and this reflects the findings in other similar studies. This may appear surprising given the high level of smoking and the degree of obesity among construction workers. However in this study, there was a significant PMR (121) for deaths from cerebrovascular disease in the whole study population. There was also a low PMR for respiratory disease, especially in those under the age of 65, again reflecting the experience in other studies.

Although there is concern over anecdotal reports of suicide in the industry, the study shows significantly less suicides proportional to those in the general population. Explanations may include the fact that unemployment is a contributory factor to suicide in the general population, while in the period under study there was a high demand for workers in the construction industry, and that in the main construction workers derive satisfaction and pride from the results of their work. The finding of decreased suicide compared to men in the general population was also found in large mortality studies of construction workers in the U.K. and in Germany. However the 60 cases of suicide, on average one occurring every nine weeks in the study population over the 10 years, warrant studies of the causes of suicide and methods of intervention into the psychosocial circumstances which lead to these events.

Although the number of deaths is small in this study compared to similar studies in the U.K. (15,000 death certificates examined in one study), in Japan (17,000 in one study) and the U.S.A. (31,000 in one study), it is sufficiently large that the findings can be extrapolated with a high degree of certainty to all construction workers and ex-construction workers in Ireland.

CONCLUSION

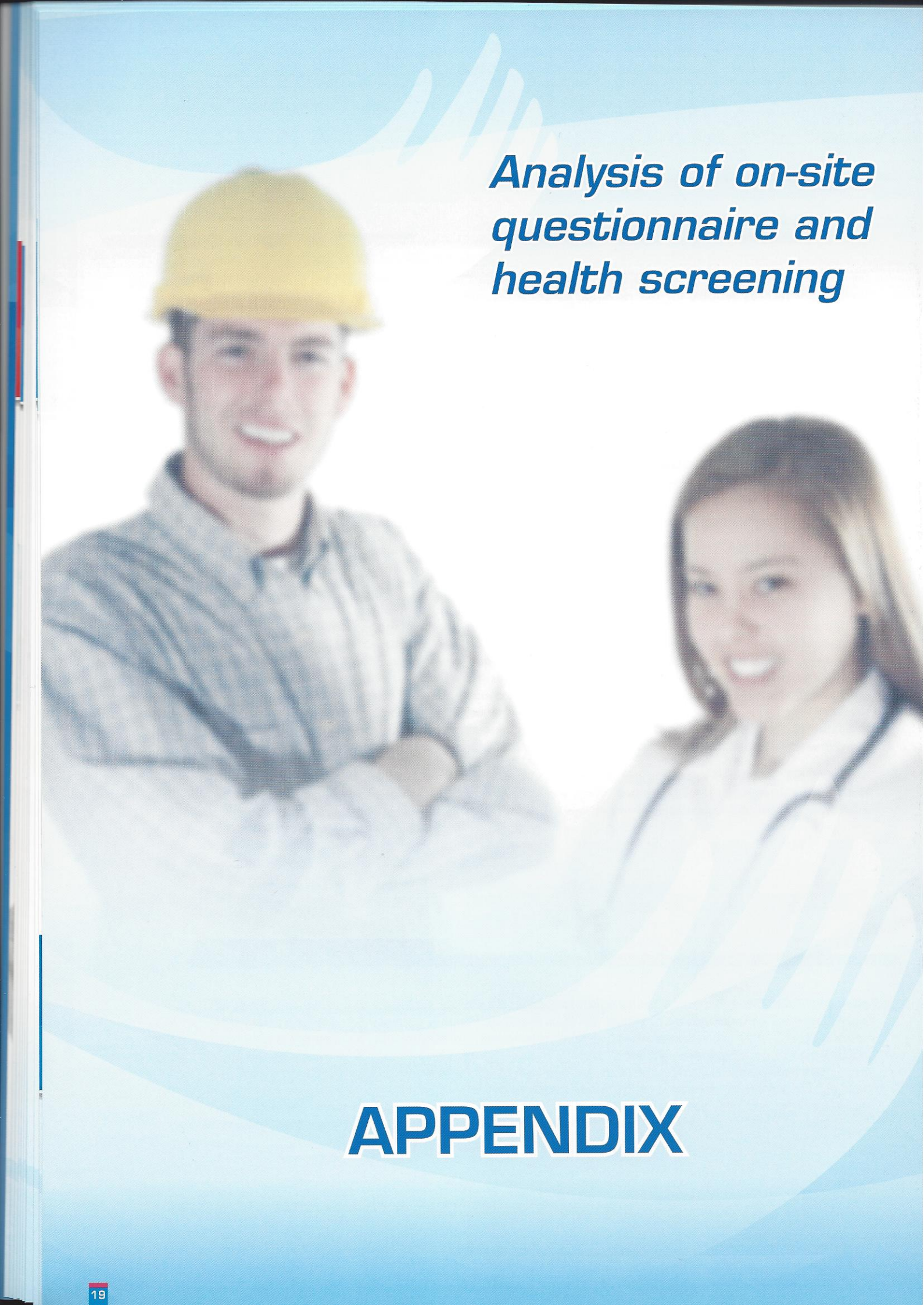
The three modules of this study have identified a number of major causes of morbidity and mortality among construction workers. It is generally accepted that much morbidity leading to sickness absence, early retirement on grounds of ill-health and premature death is preventable. Informed by the results of this study, CWHT pursues an aggressive on-site health promotion strategy which, if effective in the high-risk population of construction workers, can modify lifestyle, particularly relating to diet, smoking and exercise which are recognised risk factors in the development of cardiovascular disease, many cancers and diabetes. Legislation on Health and Safety at Work, together with voluntary codes of practice in the industry, should lead to a reduction of occupational hazards to health, particularly in relation death, injury and musculoskeletal disorders.

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REFERENCES

References to other studies mentioned in the text may be obtained from Dr. Harold Brenner, CWHT.



*Analysis of on-site
questionnaire and
health screening*

APPENDIX

ON-SITE QUESTIONNAIRE AND HEALTH SCREENING

Questionnaires

As part of the on-site health promotion and health screening by the CWHT occupational nurses, each worker completes a questionnaire which is designed both to help the nurse evaluate the worker's lifestyle in order to advise appropriately on health matters and issues that might arise, and in the longer term to help the Trust in its evolving health promotion strategies. The questionnaire results are analysed periodically without any possibility of individual identification.

From March 2005 to March 2007, 10,324 questionnaires completed by construction workers (including 87 females) were analysed, and a selection of the results are presented here; a further 2,000 questionnaires were completed by white collar workers, but are not included in this analysis.

Selected results from questionnaire analysis

(note: not all respondents answered all the questions)

Self-reported health rating

| | No. | % |
|------------|-------------|------|
| Excellent | 645 | 6.5 |
| Very good | 2975 | 30.1 |
| Good | 4996 | 50.5 |
| Fair | 1191 | 12.0 |
| Poor | 82 | 0.8 |
| ALL | 9889 | |

Experienced stress during the previous month

| | No. | % |
|-------------------|-------------|------|
| A lot | 943 | 9.5 |
| Moderate amount | 3246 | 32.9 |
| Relatively little | 3421 | 34.6 |
| Almost none | 2266 | 22.9 |
| ALL | 9876 | |

Exercise or play sports for at least 20 minutes daily

| Times Per Week | No. | % |
|----------------|-------------|------|
| 5 or more | 1288 | 13.0 |
| 3 to 4 | 2854 | 28.9 |
| 1 to 2 | 3071 | 31.1 |
| Less than once | 1119 | 11.3 |
| Seldom/never | 1547 | 15.7 |
| ALL | 9879 | |

Stress over previous year affecting health

| Times Per Week | No. | % |
|----------------|-------------|------|
| A lot | 269 | 2.7 |
| Some | 1938 | 19.6 |
| Hardly any | 2480 | 25.1 |
| Not at all | 5178 | 52.5 |
| ALL | 9865 | |

Eats breakfast

| | No. | % |
|------------------|-------------|------|
| Almost every day | 4516 | 45.7 |
| Sometimes | 1950 | 19.7 |
| Rarely or never | 3425 | 34.6 |
| ALL | 9891 | |

Last check-up by doctor

| | No. | % |
|--------------------|-------------|------|
| Within last 6 mths | 2382 | 24.3 |
| 6 to 12 months ago | 1816 | 18.5 |
| 1 to 2 years ago | 1765 | 18.0 |
| More than 2 years | 2242 | 22.9 |
| Never | 1596 | 16.3 |
| ALL | 9801 | |

**Working outdoors in the sun –
keep shirt on**

| | No. | % |
|------------|-------------|------|
| Yes | 8528 | 87.8 |
| No | 1180 | 12.2 |
| ALL | 9708 | |

**Working outdoors in the sun –
use sun screen**

| | No. | % |
|------------|-------------|------|
| Yes | 4768 | 49.4 |
| No | 4889 | 50.6 |
| ALL | 9657 | |

Smoking habit

| | No. | % |
|---------------|-------------|------|
| Never smoked | 3525 | 35.9 |
| Used to smoke | 2017 | 20.6 |
| Still smoke | 4267 | 43.5 |
| ALL | 9809 | |

**If used to smoke, how
long since quitting**

| | No. | % |
|-------------|-------------|------|
| 12m or less | 557 | 29.4 |
| 13 to 24 m | 249 | 13.1 |
| 25 to 36m | 207 | 10.9 |
| 37 to 48m | 131 | 6.9 |
| > 4 years | 750 | 39.6 |
| ALL | 1894 | |

Range: 1m. to 36 yrs. Av. 6yrs.

**If still smoking, how
many cigs. per day**

| Cigs per day | No. | % |
|--------------|-------------|------|
| 1 to 5 | 531 | 12.8 |
| 6 to 10 | 861 | 20.8 |
| 11 to 20 | 2074 | 50.1 |
| 21 to 30 | 539 | 13.0 |
| 31 to 40 | 124 | 3.0 |
| > 40 | 13 | 0.4 |
| ALL | 4142 | |

Range:1 to 65 Average:16

If smoker, plan to quit

| | No. | % |
|------------|-------------|------|
| Yes | 3327 | 79.7 |
| No | 846 | 20.3 |
| ALL | 4173 | |

Drink alcohol

| | No. | % |
|-------------|-------------|------|
| Yes | 9064 | 92.2 |
| Never drink | 762 | 7.8 |
| ALL | 9826 | |

Alcohol consumed (standard
drinks per week)
Range: 0.5 to 200 Average:17.5

**More than 5 drinks on at least
three occasion in last month**
5,564 respondents (61% of drinkers)

Health screening

A selection of the results of the on-site health screening of workers from March 2005 to March 2007 is presented here.

Blood pressure

1,528 workers out of 10,078 tested (15%) were found to have blood pressure above the accepted normal range

Cholesterol

2,121 workers out of 10,125 tested (21%) were found to have a total cholesterol higher than the accepted healthy upper limit

Body mass index (an indication of body weight taking height into consideration)

Out of 10,205 tested, 4,139 (41%) were within the healthy weight range, 4,453 (44%) were overweight, 1,585 (15%) were obese, 28 (0.3%) were underweight

CO level (smokers)

Tests were performed on 3,434 smokers – all had detectable levels of carbon monoxide in expired lung air, illustrating one of the toxic effects of smoking

Spirometry

Lung function tests were performed on 5,490 selected workers. 491 (9%) were found to have some degree of impaired lung function.

Referred to General Practitioner

Following screening tests, 3,464 workers (33%) were referred to their GPs for further evaluation.

Referred for counselling

Following upon the health promotion discussion with the occupational nurse, 104 workers were referred for counselling, initially to the Trust's counselling supervisor.



COMMENT

The questionnaires revealed a profile of the lifestyle of construction workers including the critical health issues of diet, exercise, stress and personal habits in relation to smoking and drinking.

Dietary experts stress the importance of starting the day with a good breakfast, but 35% of workers revealed they rarely or never ate breakfast. Although not shown in the above analysis, the recommended four or more portions daily of fruit and vegetables was taken by only 46% of workers; 26% ate red meat four or more times weekly, 78% ate fish once or not at all per week and 23% ate fries three or more times weekly.

Although the work of construction workers is physically hard, from the health perspective it is exercise or participation in sport that is important for fitness and optimum body weight. The recommended level of 20 minutes daily at least five times per week was achieved by only 13% of workers while 16% seldom or never exercised.

Stress is increasingly recognized as a cause of ill-health. In the previous month, a lot of stress had been experienced by 10% of workers, however 58% had experienced relatively little or none. For three percent of workers, stress over the previous year had affected their health a lot, while 20% stated that it had affected their health to some degree.

The dangerous effects on health of smoking, including increased risks of cardiovascular disease, respiratory disease and cancer, are well known. The analysis shows the high level of smoking among construction workers, 44% compared to less than 30% in the general population. CWHT is preparing to introduce a strategy in the on-site programme in an attempt to reduce this level of smoking, especially to help those 80% of smokers who claim they want to quit.

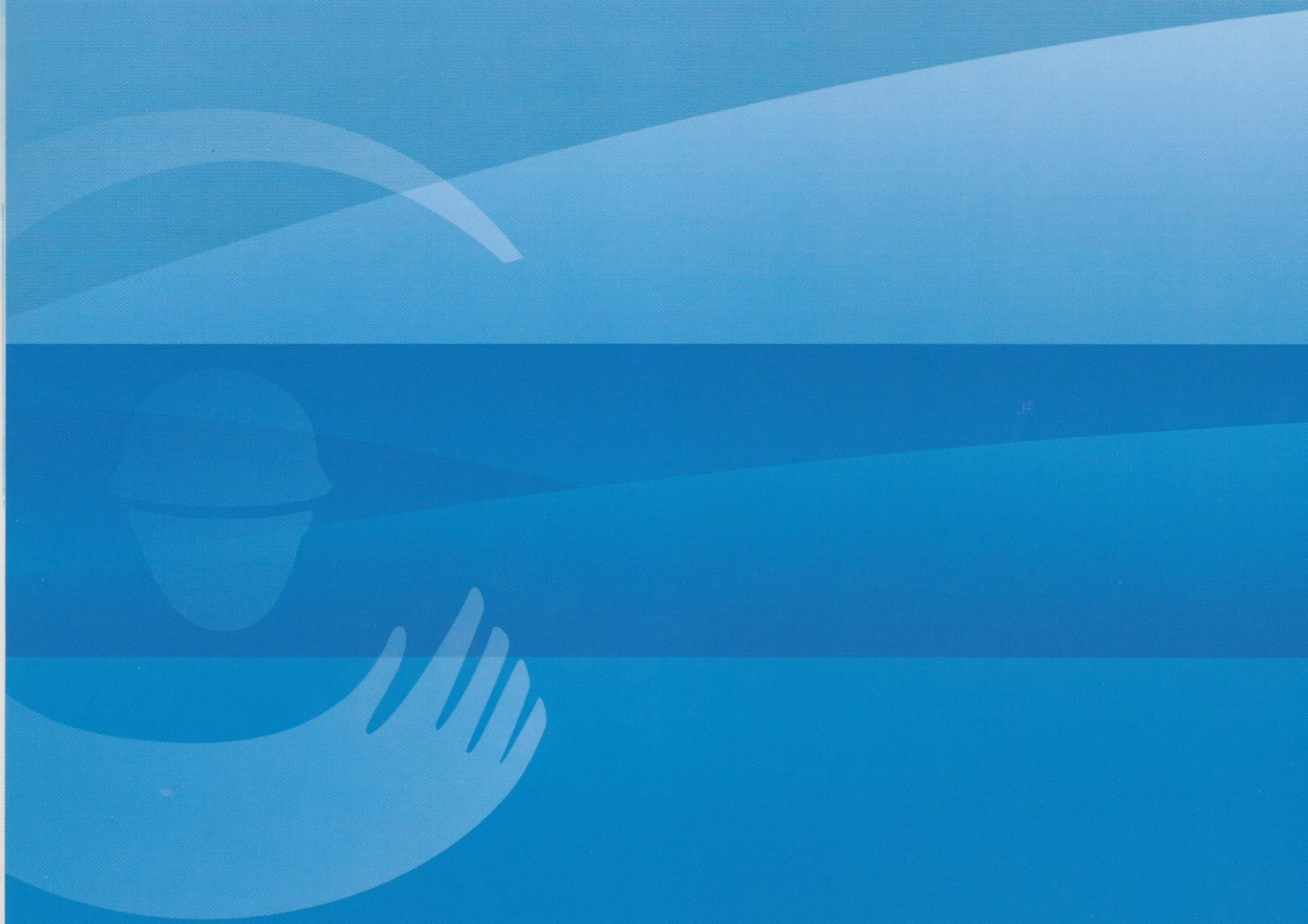
Drinking is an acceptable social part of adult life. However binge-drinking, defined as five or more drinks on one occasion, and which can lead to a variety of health and social problems, had been indulged in on three or more times over the previous month by 61% of those workers who drink, and of these, one-fifth, over 1,000 workers, had indulged on 10 or more times.

Health professionals place much emphasis on the prevention of skin cancer. Much of the work of construction workers is outdoors with exposure to the sun. In spite of frequent campaigns and widespread information, 12% of workers do not keep their shirt on in these conditions, and 51% do not use a sun screen.

The questionnaires revealed that 16% of workers have never seen a doctor for a health check-up. A self-reported health status showed 37% of workers in excellent or very good health, however 13% reported only fair or poor health. Interestingly, of those reporting fair or poor health, 23% had never seen a doctor for a check-up.

Arising out of the on-site health screening, 33% of workers were referred to their general practitioners for further evaluation. The cost of the first visit to the GP in relation to this is borne by the Trust. In addition 104 workers were referred for counselling in relation to personal situations, such as bereavement, stress and addiction issues.

The importance of CWHT's on-site, one-to-one, health promotion and screening initiative is emphasised by recent studies which show that more than two-thirds of the recent falls in coronary heart disease deaths in Ireland can be attributed to primary prevention, with improvements in population levels of the main cardiovascular risk factors (smoking, cholesterol and blood pressure). It follows that smoking reduction, healthier diets and physical activity should be prioritised in focused health promotion strategies such as that of CWHT, as well as in national strategies.



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