National Suicide Research Foundation

Inquested deaths in Ireland: A study of routine data and recording procedures

Technical Report

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Commissioned by the HSE National Office for Suicide Prevention

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FOREWORD

Effective suicide prevention programmes depend on the quality of information regarding the extent and nature of the suicide problem. In Ireland, information on suicide deaths is routinely obtained from a number of official sources, including a statistical return called Form 104. This form was revised in 1998 and the National Suicide Research Foundation was then commissioned to research the extent of suicide and its associated factors based on the information being gathered.

Following the launch of Reach Out, the National Strategy for Action on Suicide Prevention, 2005-2014 and the establishment of the Health Service Executive National Office for Suicide Prevention in 2005, this research work was prioritised as part of Reach Out Action Area 25, which aims:

"To establish effective and integrated national information systems relating to suicidal behaviour in order to inform service development and to improve the availability and accessibility of information on where and how to get help".

Th work reported here will contribute to increased knowledge and understanding of the circumstances of deaths by suicide in Ireland. In addition, the research will help us to determine the efficacy of Form 104 as a tool for routinely gathering accurate sociodemographic and psychosocial data on deaths that lead to a coroner's inquest.

In terms of evaluating the impact of the ten year *Reach Out* strategy in Ireland, a reduction in the suicide rate is one of the main outcome measures. Therefore, access to reliable routine data on suicide deaths is a key priority. This important report will contribute significantly to meeting this priority.

Mr Geoff Day
Director, HSE National Office for Suicide Prevention
December 2007

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INTRODUCTION

Ireland's Central Statistics Office (CSO) and national statistics offices in other European countries classify the cause of every death according to the World Health Organization's International Classification of Diseases, Injuries and Causes of Death (ICD). Deaths not due to illness or disease are due to an external cause and generally comprise accidental falls, drownings and poisonings, suicides, road traffic accidents and homicides. The providers of the information used by national statistics offices to classify external causes of death varies across Europe.

In Ireland in the 1960s, coroners were the primary providers of such information to the CSO. At this time, suicide was considered a crime in Ireland and religious sanctions against suicide were in place. Ireland had one of the lowest official suicide rates in Europe, though significant underreporting of suicide was suspected.

In 1968, the CSO began classifying cause of death according to the eighth revision of the ICD (ICD-8). This revision introduced a new external cause of death category for deaths where it was undetermined whether the death was accidently or purposely inflicted, often called deaths of undetermined intent or undetermined deaths.

In the same year, the CSO and An Garda Siochana (the Irish police) made an arrangement to provide additional information to the CSO in respect of deaths that resulted in a coroner's inquest. The Form 104 was developed solely for the purpose of supplementing the information on the coroner's certificate for the better statistical classification of cause of death. The form provided the CSO with a garda opinion as to whether the death was accidental, suicidal, homicidal or undetermined. Since 1968, this opinion has been central to informing the CSO in respect of classifying the cause of deaths that resulted in an inquest.

The late 1960s also signalled the beginning of the period when reported Irish suicide rates increased steadily. For 10 years or so, increasing rates were observed in men and women and across different age groups. Since 1980, the male suicide rate continued to rise whereas the female rate remained stable. However, the suicide rate among young Irish women doubled in the last decade.

Suicide was decriminalised in Ireland in 1993, an act that precipitated Ireland's suicide prevention activities. In 1995, the Minister for Health and Children established a National Task Force on Suicide which published its recommendations in 1998. It recommended that Form 104 be expanded to include more information relating to the deceased and the circumstances of the death. Following a pilot phase, the expanded Form 104 went into operation at national level in October 1998.

The Task Force also recommended that a researcher be appointed as an Officer of Statistics to the CSO in order to analyse the information collected on Form 104. Form 104 is treated as strictly confidential in accordance with the Statistics Act, 1993. Exceptional access to the Forms 104 was granted by the CSO for the study.

The general objective of the study was to analyse the data recorded on Form 104. The primary reason for expanding the form was to know more about the profile of individuals who died by suicide. Consequently, it was a specific objective of the study to judge how the expanded Form 104 performed as a mechanism for routinely collecting sociodemographic and psychosocial data on individuals whose deaths led to an inquest and particularly on those who died by suicide. The study did not aim to quantify the extent to which suicide deaths had been misclassified as other causes of death. Such an aim would have required a broader and more extensive examination of the death registration and cause of death classification system.

The study focused on inquested deaths that occurred in 2002 and were registered in either 2002, 2003 or 2004. While data relating to these inquested deaths were analysed, particular attention was paid to the data relating to suicide deaths as this was the focus of the National Task Force on Suicide and of both agencies that commissioned the work – the National Suicide Review Group and, since September 2005, the HSE National Office for Suicide Prevention. Findings from the analysis of the Form 104 data are provided in detail in Section I of the Technical Report.

During the course of the study, the scope of the work broadened. This was in recognition of the fact that the Form 104 reporting procedure was just one part of the death registration and cause of death determination system. Interviews were carried out with representatives of the agencies involved in this system and a detailed description of the system is provided in Section II of the Technical Report. How the Form 104 reporting system performed in terms of forms being completed for all inquested deaths

in 2002 is described in detail in Section III of the Technical Report. Section IV then describes the completeness of the data recorded on Form 104 and, where possible, how consistently these data matched other data collected by the death registration and cause of death determination system. These sections contain detailed technical descriptions which require careful interpretation.

As mentioned above, the study focused on inquested deaths that occurred in 2002 and were registered in either 2002, 2003 or 2004. More recently, changes have been made to the death registration and cause of death determination system and specific efforts have been made to improve the Form 104 reporting system. This should be borne in mind when reading Sections II through IV of the Technical Report. The profile of individuals whose deaths result in inquest is unlikely to have changed significantly since 2002. Therefore, the findings from the analysis of the Form 104 data are likely to be valid for more recent years.

SUMMARY OF FINDINGS RELATED TO THE DEATH REGISTRATION AND CAUSE OF DEATH DETERMINATION SYSTEM

Registration of deaths

The death registration and cause of death determination system that operated in Ireland in respect of deaths that occurred in 2002 and led to a coroner's inquest generally involved the following chain of notifications and information transfers:

1. Gardai notified and provided information to coroners
2. After inquest, coroners recorded information on their certificate and transferred this to registrars thereby notifying them of the death
3. Registrars transcribed information from the coroner's certificate onto a death registration form (Form 102) and forwarded both to the CSO
4. The CSO used information from these documents to compile an electronic database of inquested deaths and also to complete some parts of the Form 104
5. The Form 104 was then sent to the gardai with a request for it to be completed, thereby providing an opinion as to whether the death was accidental, suicidal, homicidal or undetermined, and returned to the CSO
6. Informed by this opinion and the supplementary information on the Form 104, Form 102 and coroner's certificate, the detailed cause of death was then assigned in accordance with the ICD guidelines.

Time to inquest

Time from death to the completion or adjournment of inquest varied widely. Almost one in five (18%) inquests took place within three months of the death, almost half (48%) within six months, almost three-quarters (71%) within nine months and 85% within a year. Time to inquest varied by region. One in four (27%) Dublin-registered deaths were inquested more than 12 months after the death. This was the case for 8-11% of the deaths registered elsewhere. Time to inquest also varied by cause of death. Inquests taking place more than 12 months after the death included 8% of suicide deaths but 27% of deaths of undetermined intent.

Late registration

There were approximately 1,800 deaths in 2002 that resulted in an inquest of which 94% were registered on time (i.e. in 2002 or 2003) and included in routine mortality statistics while 6% were registered late (in 2004) and therefore excluded from routine mortality statistics. A small number of deaths would have been registered after 2004 though the study did not examine these. However, the findings indicate that late-registered deaths cause routine Irish mortality statistics to underestimate external causes of death by an average of at least 6%. The level of this underestimation varied by cause of death - 4% for suicides, 5% for accidental deaths and 12% for undetermined deaths.

Form 104 reporting and cause of death recording

The examination of how the Form 104 reporting system performed in terms of forms being completed for the inquested deaths that occurred in 2002 (described in detail in Section III of the Technical Report) indicated that the CSO were in receipt of appropriately completed forms for in excess of 90% of year 2002 inquested deaths. Dublin-registered deaths accounted for the majority of unreturned forms. The CSO have recently taken steps to improve both the traceability and rate of return of Form 104.

Suicide was recorded as the cause of death for just 5% of the deaths without a completed Form 104, and therefore with no garda opinion of the cause of death, compared to 29% of deaths with a Form 104. Either suicide deaths were associated with a higher rate of returned forms or suicide was underrecorded among deaths without a form. If the latter was true then Dublin was most affected by such underrecording of suicide. However, this could only partly explain the lower official suicide rate observed for Dublin in 2002 compared to the rest of Ireland.

In addition to the possible underrecording of suicide in Dublin due to unreturned Forms 104, there was evidence to suggest that when forms were returned, misclassification of suicides as deaths of undetermined intent was common in Dublin compared with the rest of the country. Such misclassification could explain most of the difference between Dublin's low suicide rate and the rate for the rest of the country.

The garda completing Form 104 was asked to select whether, in his/her opinion, the death was accidental, suicidal, homicidal or undetermined. None of these options were selected in 8% of the forms examined. In almost two-thirds of these cases, the garda had written a note, usually specifying that the death was by natural causes. The importance of the garda opinion in determining the cause of death

recorded by the CSO was clearly evident. Of the deaths indicated to be accidental or homicidal by the garda who completed the form, 90% were assigned the equivalent cause of death. Of 495 deaths indicated to be suicides by the garda, 485 (98%) were so recorded by the CSO. There were seven deaths recorded as suicides by the CSO when this was not indicated by the garda opinion. Decisions to override the garda's opinion would have been informed by an examination of the supplementary information on the Form 104, Form 102 and coroner's certificate and would have been in accordance with the ICD guidelines.

Data inconsistencies

As noted and described above, the death registration and cause of death determination system that operated in Ireland in respect of deaths that occurred in 2002 and led to a coroner's inquest involved a paper-based sequence of data transcription and transfer between gardai, coroners, registrars and officers of the CSO. During the course of the study, it was noted that the system had introduced some inconsistencies in the data recorded. Human error in the transcription of data was likely to have been the cause of these inconsistencies. The study did not seek to identify the source of the human error and did not attempt to apportion blame or fault specifically to any one of the agencies involved in the system. These inconsistencies are described in Section IV of the Technical Report. One of the most notable inconsistencies related to the year of death. In 4.5% of the 1,800 deaths examined, the year of death on the completed Form 104 differed from that on the CSO mortality database. Most data transfer between the agencies involved in the Irish death registration system is now done electronically, a measure that should eradicate inconsistencies introduced by human error.

Data completeness

The completeness of the data recorded on Form 104 is also reported in detail in Section IV of the Technical Report. Core reference information and information relating to the death were recorded on virtually all forms. There was also a high level of completeness in respect of the sociodemographic characteristics of the deceased, particularly on age (96%), marital status (99%) and employment status (96%) though less so on domestic living arrangement (88%) and occupation (76%). There was a low level of completeness in respect of medical history and contributing factors, provided in just 35% and 16% of the forms examined, respectively. Forms relating to suicide deaths more often contained information relating to medical history (54%) and contributing factors (34%). Across the majority of the items recorded on Form 104, Dublin-registered deaths were associated with the highest level of missing information.

SUMMARY OF FINDINGS ARISING FROM THE ANALYSIS OF DATA RECORDED ON FORM 104

Note: Rates were calculated using population data derived from the National Census 2002.

For 3% of the 1,800 inquested deaths, the deceased had resided outside of Ireland. Almost half of these individuals had resided in Northern Ireland and 20% in England. Men accounted for three-quarters (75%) of all inquested deaths but 80% of the suicide and homicide deaths.

For suicides and homicides, the peak number of deaths was in the age range 15-34 years. For accidental deaths, there was a secondary peak in deaths in the 15-34 year age group due to road traffic accident deaths but the primary peak was among over 65 year-olds and was due to accidental falls.

Marital status

Suicide rates calculated based on the marital status recorded on Form 104 showed separated men and women to have high suicide rates, several times higher than the rate of married persons. This was not evident from the rates calculated using the marital status recorded by the CSO from the coroners' certificates. It may be that persons legally married but separated from their spouse were generally classified as married by coroners and classified as separated by gardai completing Form 104.

Domestic living arrangement

For those who died by suicide, 85% were either living alone (23%), with their parent(s) (32%) or with their partner (30%). For men and women, living alone was associated with a marked increase in the rate of suicide whereas living with a partner was associated with a reduced rate.

Employment status

For both genders, unemployment was associated with a greatly increased rate of suicide. Unemployed men had a suicide rate (88.8 per 100,000) that was almost four times higher than the rate for men in employment (23.9 per 100,000). The suicide rate of women who were unemployed (27.1 per 100,000) was five times higher than that of the employed (5.2 per 100,000). Women engaged in home duties had a similar suicide rate (7.2 per 100,000) to the employed.

Circumstances of the death

Approximately half of the suicides and the undetermined deaths occurred at or around the home of the deceased compared to 26-30% of the accidents and homicides. The data indicated that a final communication (generally in the form of a written note) was made in 30% of the suicide deaths.

Temporal variation

An above average number of deaths occurred on Sundays and Mondays. Accidental deaths had their peak on Sundays whereas suicide deaths peaked on Mondays. For each, the rate was at least 20% higher than expected on these days. Suicide deaths were least common on Wednesdays and Thursdays, days with 17% fewer deaths than expected.

The occurrence of suicide deaths in 2002 showed greater monthly variation than other causes of death. There were 27%, 20% and 37% more suicide deaths than expected in April, May and June, respectively. This late Spring/early Summer peak in suicide rates has previously been reported for Ireland and many other countries. There was a fall in the rate of suicide in late Autumn/early Winter. Respectively, 10%, 25% and 15% fewer suicides than expected occurred in September, October and November.

Psychosocial factors

Of the four external causes of death, the lowest recorded prevalence of alcohol dependence was among those who died by suicide (15% vs. 21-23%). For accidental, homicidal and suicidal deaths, men had the higher prevalence of alcohol dependence.

The prevalence of drug dependence was lowest among those whose deaths were accidental (13%), followed by suicides (19%) and homicides (21%) and then undetermined deaths, of whom one in three (33%) were drug dependent. Drug dependence was twice as common in women who died by suicide as it was in men (34% vs. 16%). This gender difference was associated with prescription drugs.

As mentioned earlier, there was a low level of recording relating to medical history and contributing factors, being provided in just 35% and 16% of the forms examined, respectively. Forms relating to suicide deaths more often contained information relating to medical history (54%) and contributing factors (34%). Medical history information was provided for 80% of the female suicides but less than half (47%) of the male suicides. There were clear gender differences in the prevalence of the most commonly reported medical histories and contributing factors. Mental health problems were reported for 38% of the men but two-thirds (66%) of the women. Interpersonal/relationship problems were reported as a contributing factor in 20% of male suicides compared to 13% of female suicides.

RECOMMENDATIONS

Recommendations relating to new initiatives

It is recommended that another system be developed to collect and collate data on the medical and psychosocial characteristics of individuals whose deaths lead to inquest. In line with recommendations in Reach Out, the National Strategy for Action on Suicide Prevention, and based on existing templates in other countries, this could take the form of a national inquiry carried out in conjunction with coroners. Such a system could be implemented initially on a pilot basis in a defined region before consideration be given to national implementation.

Recommendations relating to the existing Form 104

It is recommended that the Form 104 reporting procedure be maintained and improved until a preferable alternative system has been developed.

Each item of data requested on the form should be reviewed and improvements made where possible.

A written protocol explaining the Form 104 reporting procedures should be provided to gardai who complete the Form 104 in order to support standardised reporting across the country. This should include guidelines explaining the nature of the information being sought by each data item on the form as well as criteria for determining what constitutes a suicide death.

Recommendations relating to the death registration system

Deaths resulting in a post mortem or inquest may not come to the notice of registrars until they receive the coroner's certificate. It is recommended that the coroner notify the registrar of such deaths at an early stage of the investigation.

For 15% of inquested deaths, more than 12 months elapsed before the inquest. Such delays have implications for the publication of statistics and may also impact on the bereaved. The reasons for such delays should be identified and improvements made to overcome them.

The obligation to register a death in the district where it occurs was removed in 2006. Consideration should be given to routinely providing mortality data by both county of occurrence and county of residence with the latter also classifying persons who were not resident in Ireland.

Recommendations relating to research

The study analysed data from inquested deaths that occurred in 2002. Data from the years since then should be analysed. The primary focus should be on the sociodemographic variables for which there were low levels of missing data. The analysis should further examine the question of suicide underrecording in Dublin. Consideration should also be given to carrying out spatial analysis including the identification of possible suicide clusters.

In the context of Reach Out, it is recommended to monitor changes in the incidence of suicide and associated factors using the Form 104 data.

SECTION I. ANALYSIS OF THE FORM 104 DATA

Introduction

This section reports the findings of the analysis of data recorded on the returned Forms 104. In general, the analysis is confined to the 1,798 Forms 104 that, on initial inspection, were completed in respect of inquested deaths that occurred in 2002 and were registered in 2002, 2003 or 2004. As detailed in Section IV of the report, there were 121 cases of inconsistency in date of death between the Form 104 and both the CSO mortality database and the coroner's certificate. In resolving these inconsistencies, it was found that 46 of the 1,798 forms related to deaths that did not occur in 2002. These were excluded from the calculation of incidence rates. Population data from the National Census 2002 were used in the calculation of rates.

Time to inquest

The number of months within which the inquest was adjourned or completed is illustrated in Figure 1. It can be seen that some inquests were completed within a month of the death while others took place more than two years later. Almost one in five (18%) inquests took place within three months of the death, almost half (48%) within six months, almost three-quarters (71%) within nine months and 85% within a year.

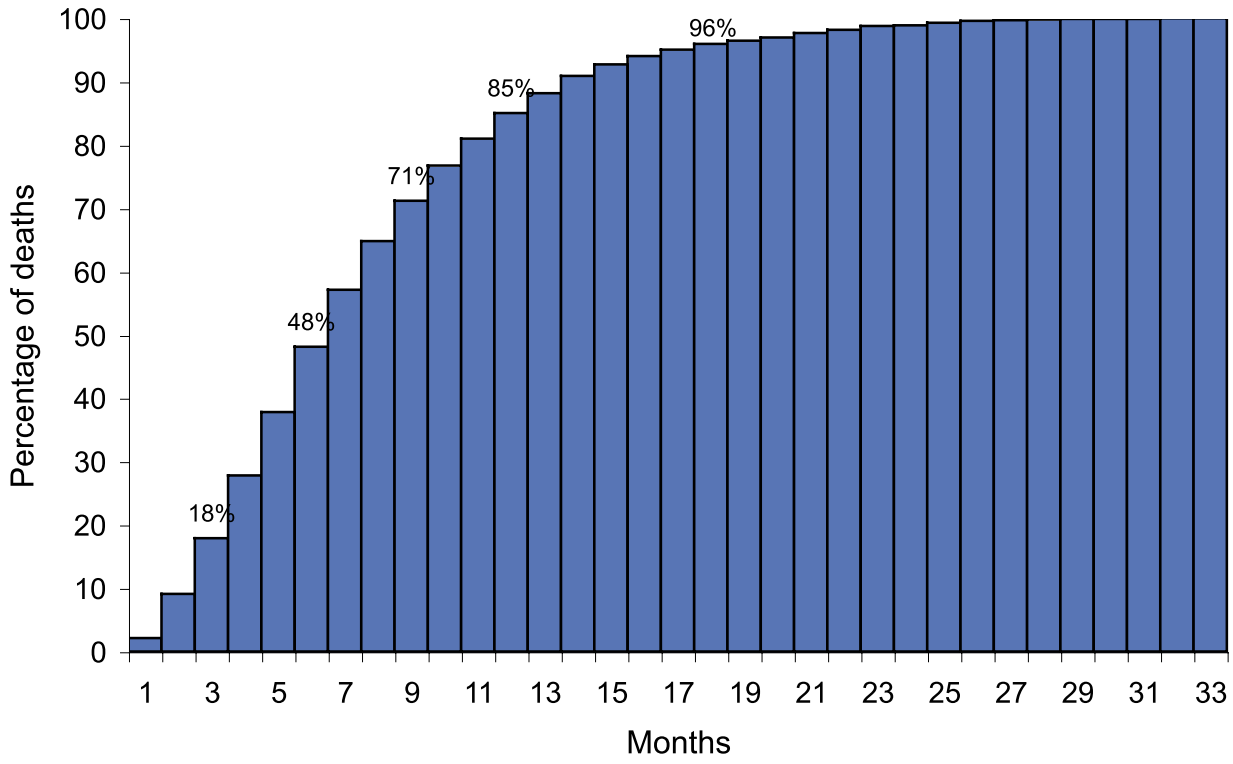


Figure 1. Adjournment/completion of inquests since date of death.

The time between the death and adjournment or completion of the inquest varied by region of registration (Chi-square = 155.50, df = 16, $p < 0.001$). One in three (34%) Dublin-registered deaths were inquested within six months, which was the case for almost half (47%) of the deaths registered in Ulster and 55-57% of the deaths registered in the other regions. The inquest took place more than 12 months after the death for one in four (27%) Dublin-registered deaths compared to 8-11% of the deaths registered elsewhere.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
<3 months	75	91	104	46	14	330
	(12.6%)	(23.5%)	(20.1%)	(19.7%)	(12.7%)	(17.9%)
3<6 months	127	131	180	81	38	557
	(21.3%)	(33.9%)	(34.8%)	(34.8%)	(34.5%)	(30.2%)
6<9 months	121	97	116	62	30	426
	(20.3%)	(25.1%)	(22.4%)	(26.6%)	(27.3%)	(23.1%)
9<12 months	113	36	70	21	16	256
	(18.9%)	(9.3%)	(13.5%)	(9.0%)	(14.5%)	(13.9%)
12 months+	161	32	47	23	12	275
	(27.0%)	(8.3%)	(9.1%)	(9.9%)	(10.9%)	(14.9%)

Table 1. Time to inquest adjournment/completion by region of registration.

The time between the death and adjournment or completion of the inquest varied by the cause of death (Chi-square = 79.17, df = 16, $p < 0.001$). Almost one in three (31%) deaths of undetermined intent in the opinion of the garda were inquested within six months, which was the case for almost half (46%) of the accidental deaths, 56% of suicides and two-thirds (65%) of homicides. For deaths by suicide, it was relatively rare for the time to inquest to exceed 12 months, particularly compared to undetermined deaths.

	Broad cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
<3 months	149	22	115	9	18	313
	(15.0%)	(42.3%)	(22.6%)	(9.2%)	(14.1%)	(17.6%)
3<6 months	308	12	170	21	36	547
	(31.0%)	(23.1%)	(33.4%)	(21.4%)	(28.1%)	(30.7%)
6<9 months	236	8	120	19	32	415
	(23.8%)	(15.4%)	(23.6%)	(19.4%)	(25.0%)	(23.3%)
9<12 months	145	2	61	23	17	248
	(14.6%)	(3.8%)	(12.0%)	(23.5%)	(13.3%)	(13.9%)
12 months+	154	8	43	26	25	256
	(15.5%)	(15.4%)	(8.4%)	(26.5%)	(19.5%)	(14.4%)

Table 2. Time to inquest adjournment/completion by garda opinion of broad cause of death.

Date on which death occurred

Variation in the number of deaths per calendar month did not reach statistical significance when all deaths were considered or when accidental, homicidal, suicidal and undetermined deaths were considered separately. The greatest variation by month was observed in suicide deaths (Figure 2). Adjusting for the different number of days in calendar months, there were 27%, 20% and 37% more suicide deaths than expected in April, May and June, respectively. This late Spring/early Summer peak in suicide rates has previously been reported for Ireland and many other countries. There was a fall in the rate of suicide in late Autumn/early Winter. Respectively, 10%, 25% and 15% fewer suicides than expected occurred in September, October and November

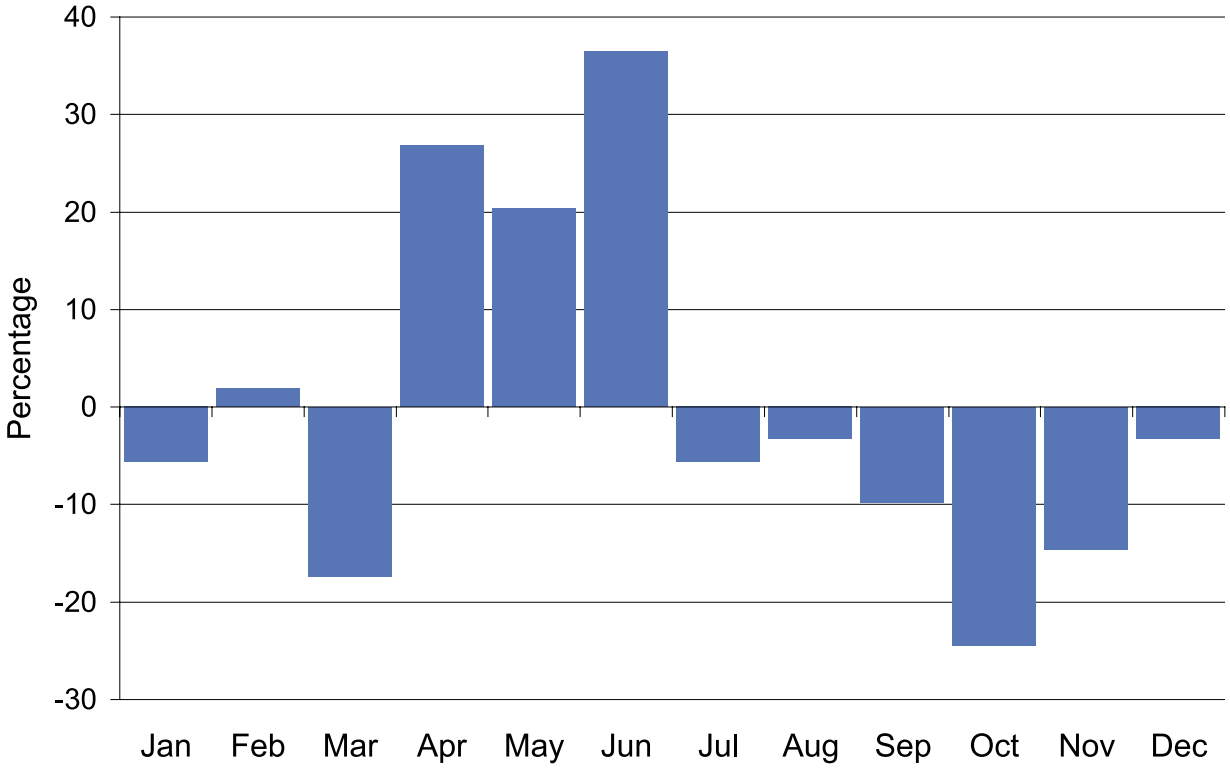


Figure 2. Percentage difference between observed and expected number of suicide deaths by month.

The occurrence of inquested deaths varied by day of the week (Chi-square = 21.03, df = 4, $p < 0.001$). The greatest number of deaths occurred on Sundays and fell in frequency over the course of the week.

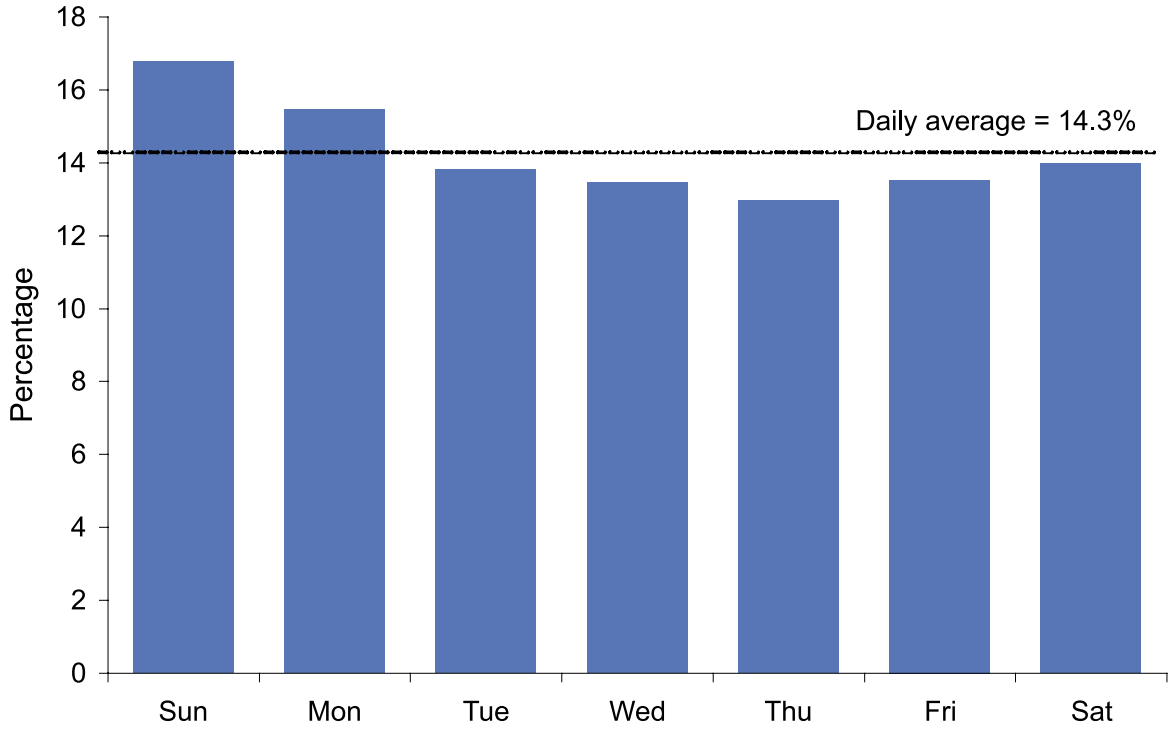


Figure 3. Occurrence of inquested deaths by weekday.

An above average number of deaths occurred on Sundays and Mondays. It was accidental deaths that had their peak on Sundays whereas suicide deaths were most common on Mondays. In each case, the rate of death was at least 20% higher than expected. Suicide deaths were least common on Wednesdays and Thursdays, days on which there were 17% fewer deaths than expected.

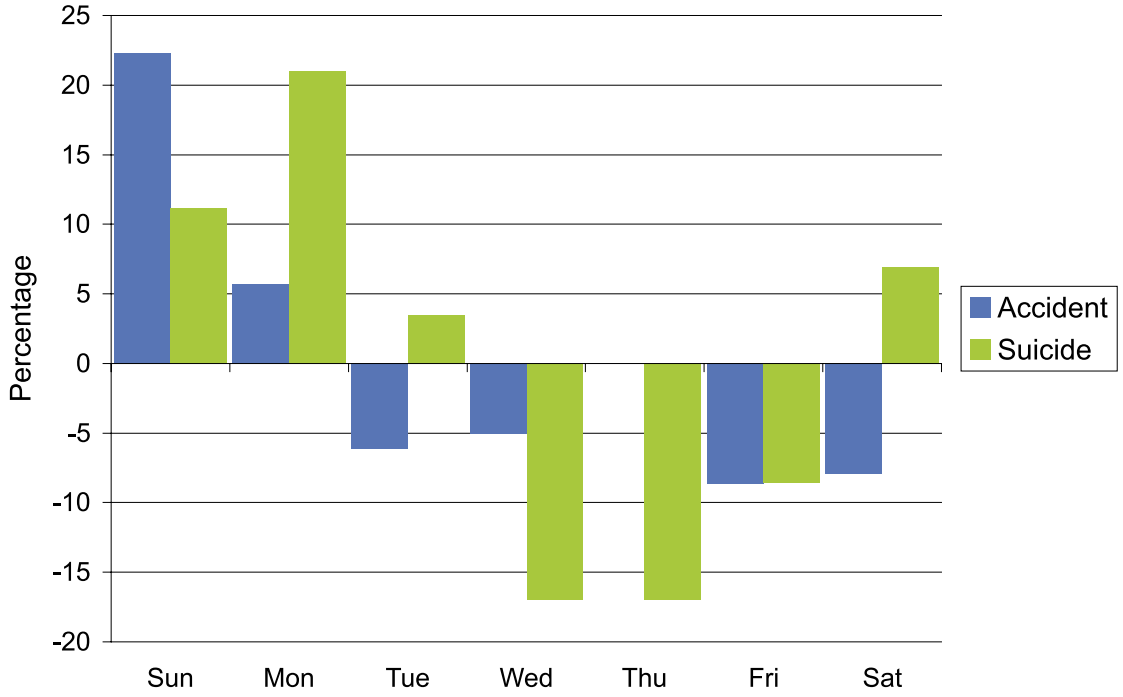


Figure 4. Percentage difference between observed and expected number of accidental and suicidal deaths by weekday.

County of registration and residence

Inquested deaths were registered in the county where the death occurred, irrespective of the county of residence of the deceased. The distribution of the inquested deaths by county of registration and county of residence is detailed in Table 3. As expected, the distributions are broadly in line with the distribution of the population. Based on the total 1,798 forms, there were also 59 cases (3.3%) where the address of the deceased was outside of Ireland. While Northern Ireland and England accounted for 27 (46%) and 12 (20%) of these cases, respectively, there were a total of 14 countries of residence recorded.

	Registration		Residence		Difference	
	N	%	N	%	N	%
Carlow	20	(1.1%)	26	(1.4%)	6	(+30.0%)
Dublin	545	(30.4%)	474	(26.4%)	-71	(-13.0%)
Kildare	55	(3.1%)	61	(3.4%)	6	(+10.9%)
Kilkenny	34	(1.9%)	32	(1.8%)	-2	(-5.9%)
Laois	30	(1.7%)	25	(1.4%)	-5	(-16.7%)
Longford	16	(0.9%)	19	(1.1%)	3	(+18.8%)
Louth	62	(3.5%)	54	(3.0%)	-8	(-12.9%)
Meath	38	(2.1%)	46	(2.6%)	8	(+21.1%)
Offaly	22	(1.2%)	23	(1.3%)	1	(+4.5%)
Westmeath	32	(1.8%)	28	(1.6%)	-4	(-12.5%)
Wexford	47	(2.6%)	47	(2.6%)	0	(0.0%)
Wicklow	28	(1.6%)	38	(2.1%)	10	(+35.7%)
Clare	35	(2.0%)	42	(2.3%)	7	(+20.0%)
Cork	235	(13.1%)	220	(12.2%)	-15	(-6.4%)
Kerry	55	(3.1%)	50	(2.8%)	-5	(-9.1%)
Limerick	91	(5.1%)	89	(4.9%)	-2	(-2.2%)
Tipperary	56	(3.1%)	62	(3.4%)	6	(+10.7%)
Waterford	48	(2.7%)	47	(2.6%)	-1	(-2.1%)
Galway	84	(4.7%)	82	(4.6%)	-2	(-2.4%)
Leitrim	26	(1.5%)	30	(1.7%)	4	(+15.4%)
Mayo	69	(3.9%)	78	(4.3%)	9	(+13.0%)
Roscommon	17	(0.9%)	19	(1.1%)	2	(+11.8%)
Sligo	35	(2.0%)	31	(1.7%)	-4	(-11.4%)
Cavan	27	(1.5%)	34	(1.9%)	7	(+25.9%)
Donegal	64	(3.6%)	61	(3.4%)	-3	(-4.7%)
Monaghan	20	(1.1%)	21	(1.2%)	1	(+5.0%)

Table 3. Distribution of the inquested deaths by county of registration and county of residence.

There were some notable differences between the number of deaths occurring, and therefore registered, in a county and the number of deaths of residents of the county. The number of inquested deaths of Dublin residents was 13% lower than the number of deaths registered in Dublin. The fact that the numbers involved are relatively small for some counties should be borne in mind when interpreting the percentage difference between the registration and residence figures.

The 499 deaths known to have occurred in 2002 and considered to have been suicides by the garda completing the form were examined in relation to county of registration and country of residence of the deceased. For 20 of the 26 counties, the figures based on registration and residence differed by no more that one death. There was a strong correlation between the ranking of counties suicide rates based on registration and residence (Spearman's rank correlation coefficient, rho = 0.875, $p < 0.001$).

Sex

After resolving the inconsistencies in relation to the sex of the deceased, it was found that men accounted for 1,339 (74.5%) inquested deaths and women accounted for 459 (24.5%) inquested deaths, a ratio of 2.9 to one.

The proportion of inquested deaths accounted for by each gender did not vary significantly by region of registration. Men accounted for 71-79% of the deaths. The gender balance did differ by cause of death (Chi-square = 22.65, df = 4, $p < 0.001$). Men accounted for approximately four times as many deaths by homicide and suicide, 74% of accidental deaths and 71% of undetermined deaths. Men accounted for 61% of the deaths in the residual category, generally deaths by natural causes or misadventure or cases where the garda did not provide his/her opinion.

	Cause of death					Total
	Accidental	Homicidal	Suicidal	Undetermined	Other	
Male	736	42	406	72	83	1339
	(73.7%)	(80.8%)	(79.8%)	(70.6%)	(61.0%)	(74.5%)
Female	263	10	103	30	53	459
	(26.3%)	(19.2%)	(20.2%)	(29.4%)	(39.0%)	(25.5%)

Table 4. Gender distribution of inquested deaths by garda opinion of cause of death.

Figure 5 illustrates the male, female and total crude rates of accidental, homicidal, suicidal and undetermined death calculated after excluding deaths that did not occur in 2002. There was a sharp contrast between the low rates of homicide and undetermined death compared to suicide and particularly compared to accidental deaths. For each cause of death, the far higher mortality rates among men is striking. There was a fourfold difference in male and female rates for suicide (20.5 vs. 5.1 per 100,000) and homicide (2.1 vs. 0.5 per 100,000) and a threefold difference for accidental deaths (37.0 vs. 13.0 per 100,000). The male rate of deaths of undetermined intent was 2.3 times the female rate (3.5 vs. 1.5 per 100,000).

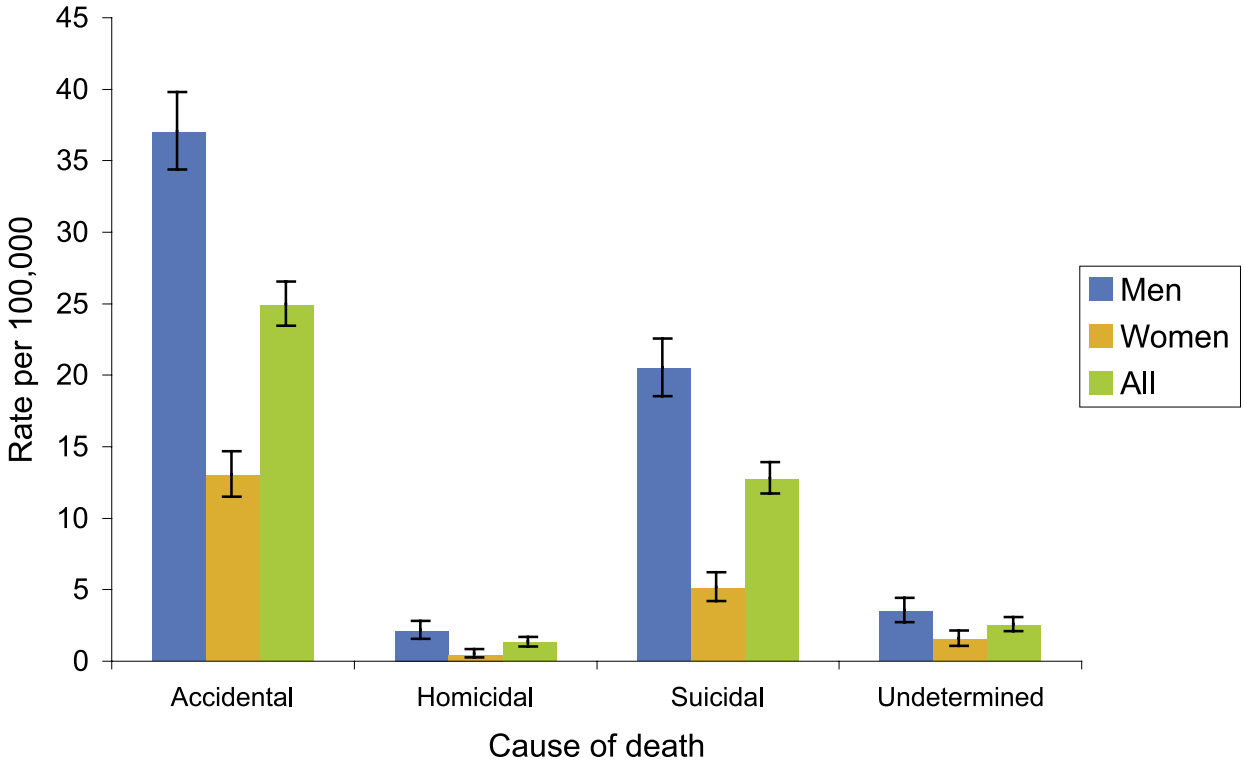


Figure 5. Rate of accidental, homicidal, suicidal and undetermined deaths for men, women and all (the error bars represent the 95% confidence intervals for the rates).

Age

Based on the 1,752 returned forms for deaths known to have occurred in 2002, there was significant evidence that the age profile of those who died differed depending on the cause of death (Chi-square = 142.59, df = 24, $p < 0.001$). For suicides and homicides, the peak number of deaths was in the age range 15-34 years. For accidental deaths, there was a secondary peak in deaths in the 15-34 year age group due to road traffic accident deaths but the primary peak was among over 65 year-olds and was due to accidental falls.

	Cause of death					
	Accidental	**Homicidal**	**Suicidal**	**Undetermined**	**Other**	**Total**
Under 15yrs	54	0	3	3	4	64
	(5.5%)	(0%)	(0.6%)	(3.1%)	(3.1%)	(3.7%)
15-24yrs	160	15	106	17	4	302
	(16.4%)	(30.0%)	(21.2%)	(17.3%)	(3.1%)	(17.2%)
25-34yrs	167	17	132	18	23	357
	(17.1%)	(34.0%)	(26.5%)	(18.4%)	(17.8%)	(20.4%)
35-44yrs	125	8	86	12	19	250
	(12.8%)	(16.0%)	(17.2%)	(12.2%)	(14.7%)	(14.3%)
45-54	118	8	77	12	19	234
	(12.1%)	(16.0%)	(15.4%)	(12.2%)	(14.7%)	(13.4%)
55-64yrs	113	2	52	14	21	202
	(11.6%)	(4.0%)	(10.4%)	(14.3%)	(16.3%)	(11.5%)
Over 65yrs	238	0	43	22	39	342
	(24.4%)	(0%)	(8.6%)	(22.4%)	(30.2%)	(19.5%)

Note: Age was not known for one case.
Table 5. Age distribution of inquested deaths by garda opinion of cause of death.

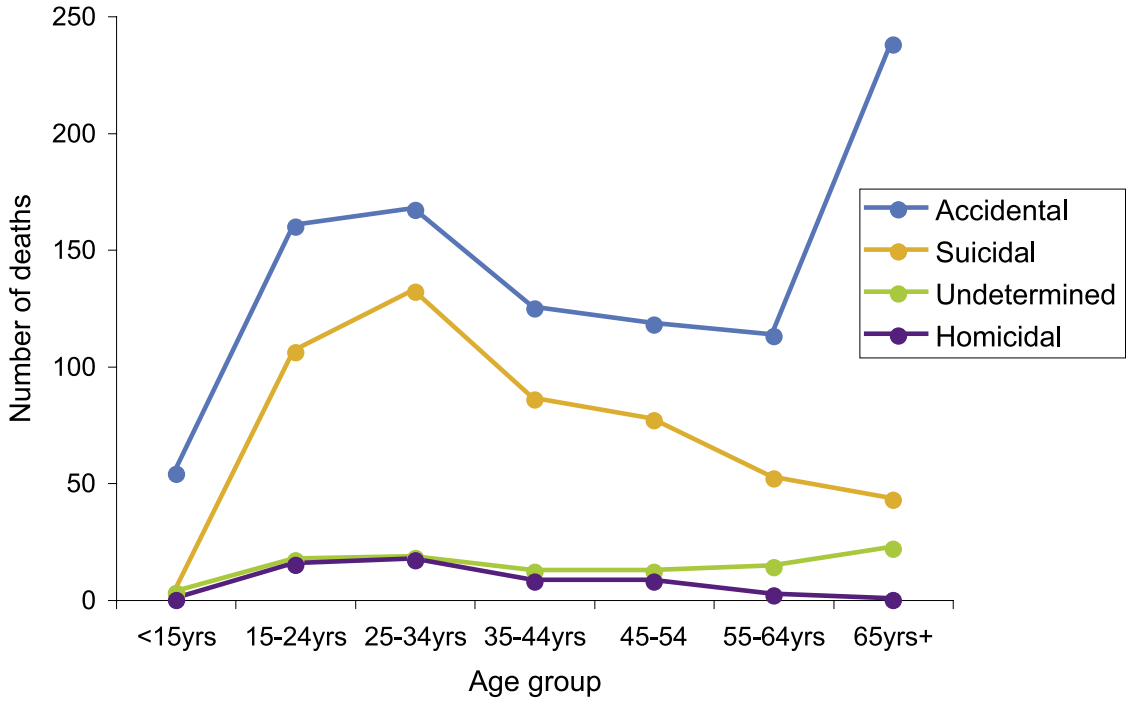


Figure 6. Age distribution of inquested deaths by garda opinion of cause of death.

The male rate of suicide far exceeded the female rate at each age group over 15 years. The male/female rate ratio was greatest, at 5.5 and 4.8, for the 15-24 and 25-34 year age groups, respectively. At 35.3 per 100,000, the peak rate of suicide for men was in the 25-34 year age group. Female suicide rates had a bimodal pattern, with one peak in 25-34 year-olds (7.4 per 100,000) and a second in 45-54 year-olds (8.8 per 100,000).

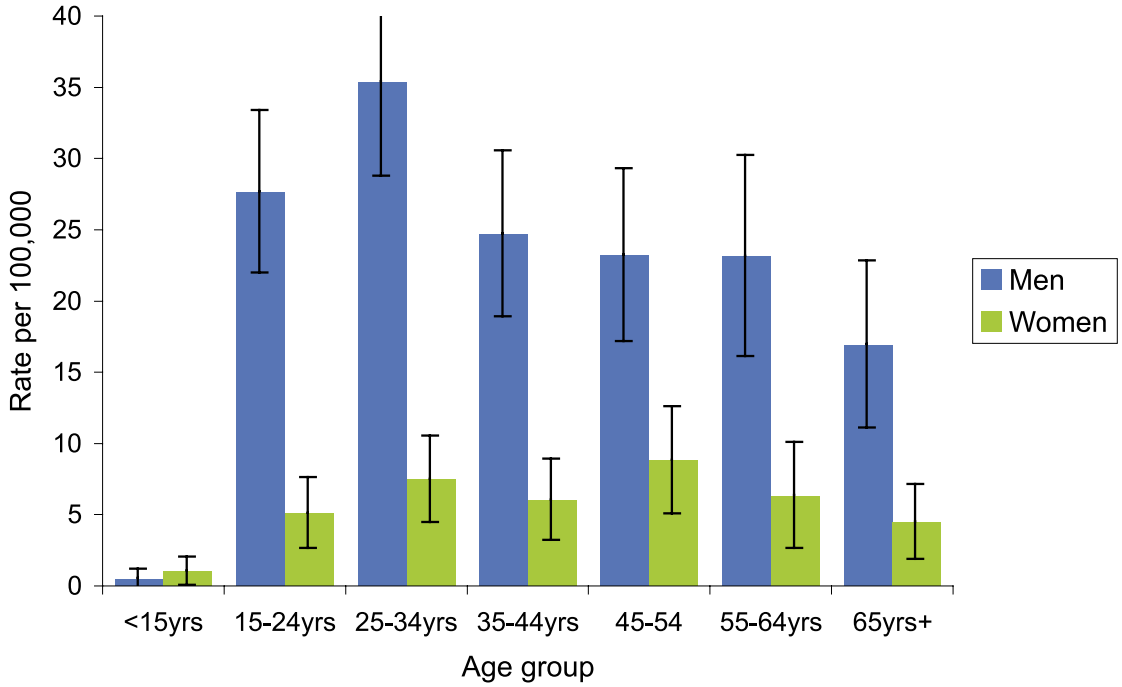


Figure 7. Male and female suicide rate by age group (the error bars represent 95% confidence intervals for the rates).

Marital status

The 88 cases where marital status recorded on Form 104 differed from that recorded by the CSO represented just 5% of the 1,718 cases compared. However, the extent of the discrepancy differed by category of marital status (Table 6). The total numbers of single, widowed and divorced persons according to the Forms 104 differed very little from the numbers arising from the CSO data. The discrepancy was marked in relation to separated people. The figure according to Form 104 was more than double that according to the CSO. Only 35 (37%) of the 94 persons recorded as separated on Form 104 were so recorded by the CSO. The vast majority of the others (47 of 59, 80%) were recorded as married by the CSO and coroner's certificate. It may be that persons legally married but separated from their spouse were generally classified as married by coroners and classified as separated by gardai completing Form 104.

		Marital status (per CSO)					
		Single	**Married**	**Widowed**	**Separated**	**Divorced**	**Total**
Marital	**Single**	1000	3	1	2	1	1007
status	**Married**	5	457	1	3	0	466
(per	**Widowed**	2	7	127	0	0	136
Form 104)	**Separated**	10	47	1	35	1	94
	Divorced	2	1	1	0	11	15
	Total	1019	515	131	40	13	1718

Table 6. Nature of inconsistent recording of marital status by Form 104 and CSO.

Among the 1,752 Forms 104 completed in respect of deaths known to have occurred in 2002, 496 related to persons aged over 15 years and indicated by the garda to have died by suicide. Suicide rates were calculated based on the Form 104 and the CSO recording of marital status. Based on the former, separated men and women had by far the highest suicide rate, about three times higher than their rate based on the latter which gave them a rate marginally lower than that of single and widowed persons. The contrast is striking even allowing for the fact that the calculated rates were based on relatively limited numbers of suicides.

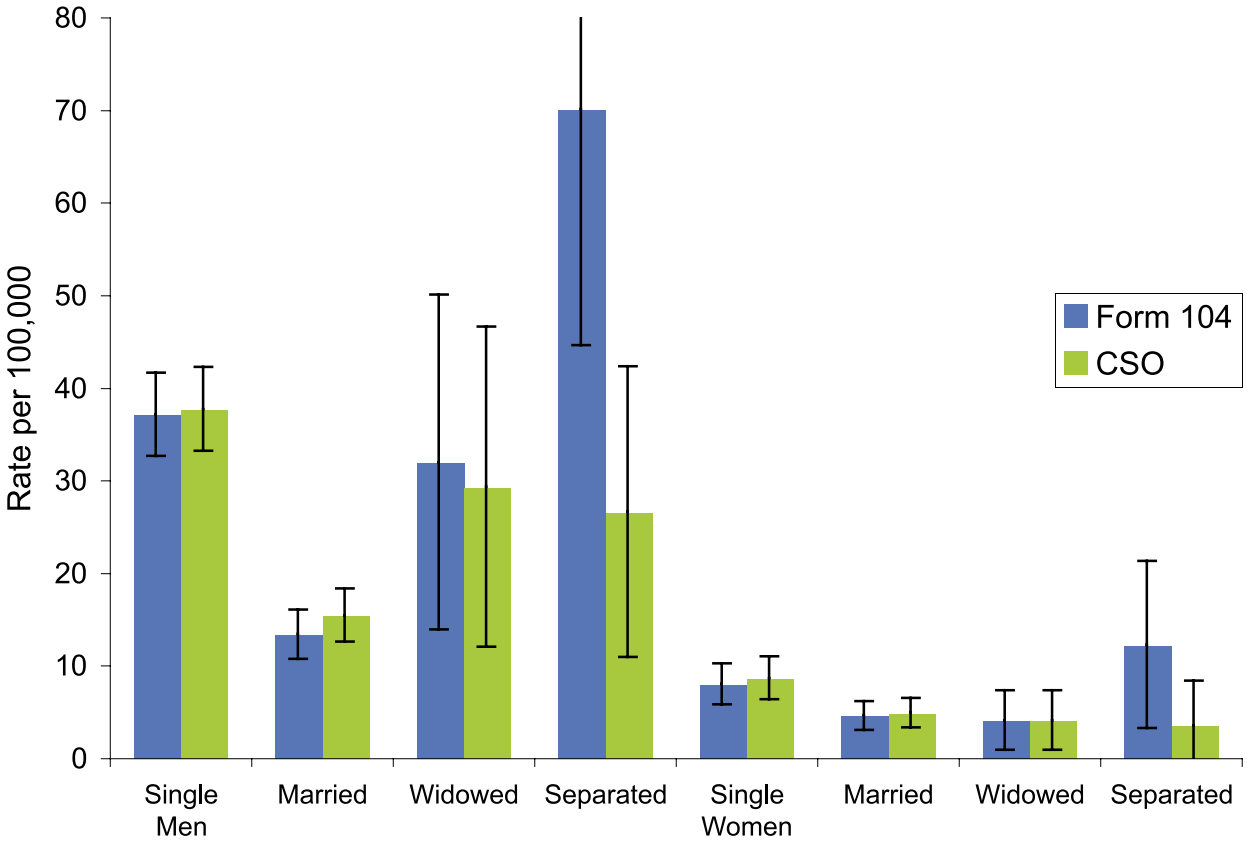


Figure 8. Male and female suicide rate by marital status as recorded by Form 104 and CSO (the error bars represent 95% confidence intervals for the rates).

Most recent domestic living arrangements

A coding frame was developed from the text description provided of the most recent domestic living arrangement of the deceased. The resultant profile of the individuals whose deaths led to inquest is illustrated in Figure 9. A total of 85% were either living alone (25%), with their parent(s) (29%) or with their partner (31%). Fewer than 5% lived in any other domestic arrangement. The profile was almost unchanged when only those who had, in the opinion of the garda, died by suicide. Still, 85% were either living alone (23%), with their parent(s) (32%) or with their partner (30%) and fewer than 5% lived in any other domestic arrangement.

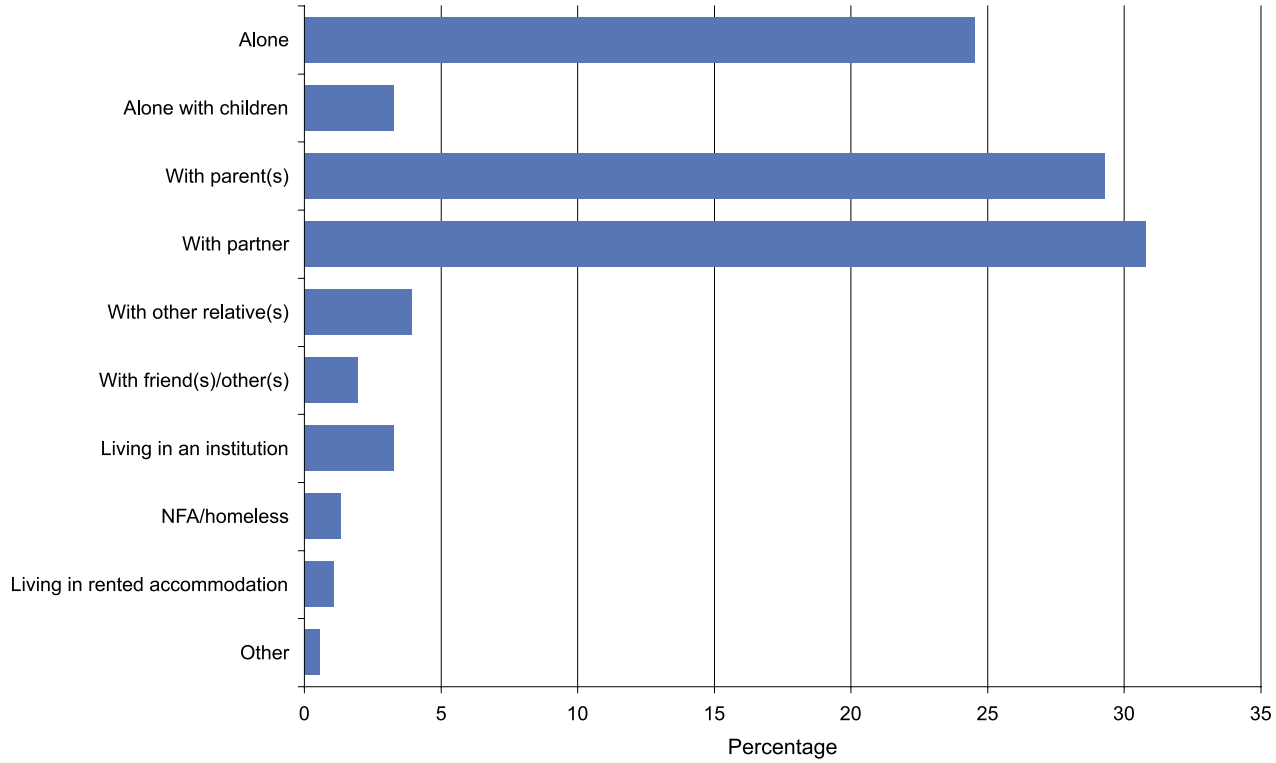


Figure 9. Most recent domestic living arrangements of persons whose deaths led to inquest.

For those aged over 15 years indicated to have died by suicide, an analysis was carried out to investigate the risk of suicide associated with the three common domestic situations of living alone or with parent(s) or partner. The exclusion of cases due to no domestic living arrangement being recorded (9%), another arrangement applying (15%) and an unknown age or age under 15 years (<1%) confined the analysis to 385 (77%) of the 499 suicide deaths known to have occurred in 2002.

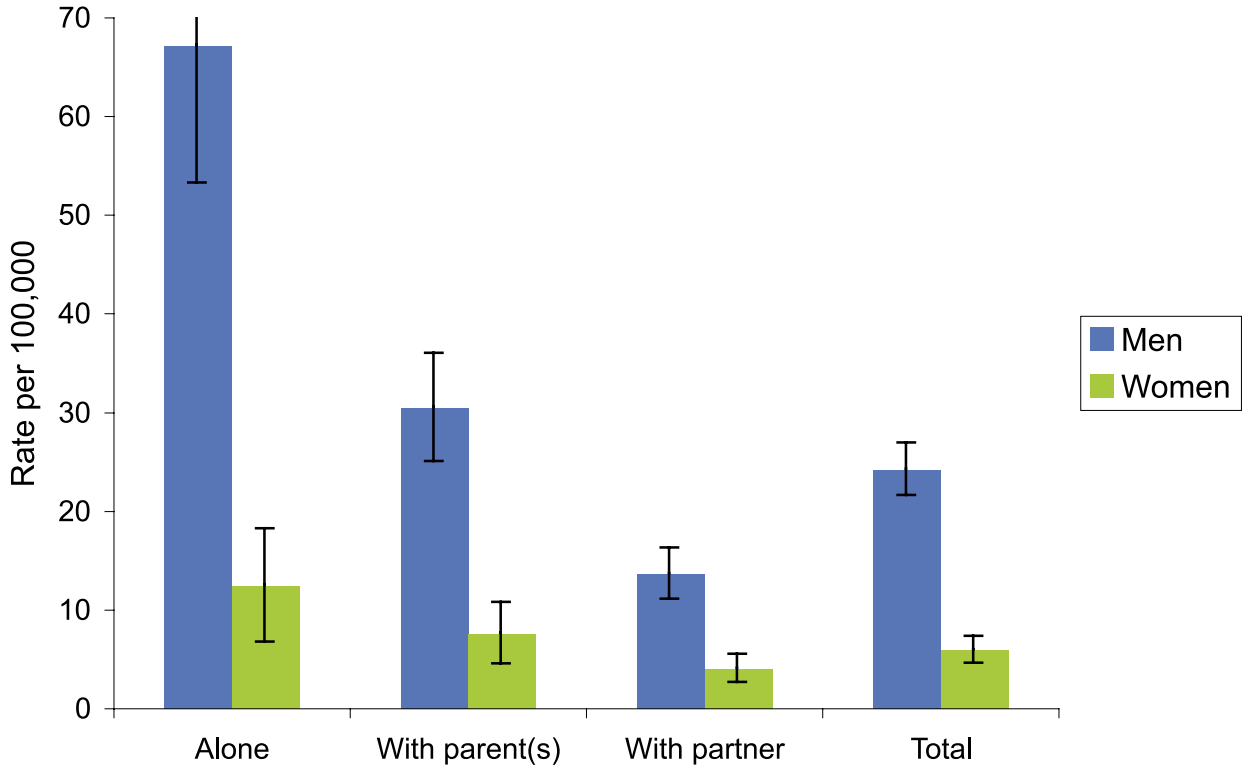


Figure 10. Suicide rate (persons aged over 15 years) by domestic living arrangement (the error bars represent 95% confidence intervals for the rates).

For men and women, living alone was associated with a marked increase in the rate of suicide whereas living with a partner was associated with reduced rates. The rate of suicide in men living with their parent(s) (30.5 per 100,000) was more than twice the rate for men living with a partner (13.6 per 100,000) but the rate for men living alone was five times higher (67.1 per 100,000). The female suicide rate for those living with their parent(s) (7.6 per 100,000) was almost double that of women living with a partner (4.0 per 100,000) whereas women living alone had a suicide rate that was three times higher (12.4 per 100,000). This indicates that living with a partner was associated with a greater reduction in suicide rates among men than women.

Age-specific analysis was limited by the relatively small number of suicides involved. However, it should be noted that the observed effect of domestic living arrangement on rates of suicide varied depending on age. Among men, the protective effect of living with a partner was more evident in middle-aged men than in young and elderly men. Among women, the numbers involved in the analysis were very limited but the protective effect of living with a partner was only observed in the young and middle-aged.

Employment status

Almost half (46%) of the individuals whose deaths led to an inquest had been in employment, 23% of whom were self-employed. Approximately one in five (21%) were unemployed, most (61%) of whom were known to have been unemployed for longer than 12 months. A further one in five (19%) were retired. Individuals engaged in home duties, students and people unable to work due to disability or illness accounted for 7%, 5% and 1% of those who died, respectively.

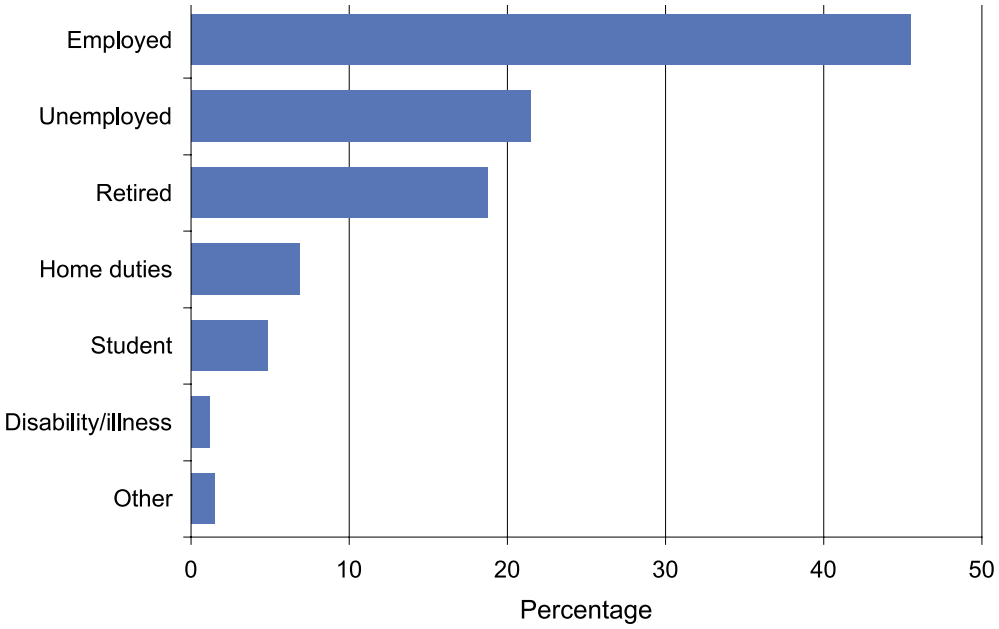


Figure 11. Employment status of persons (aged over 15 years) whose deaths led to inquest.

There were 365 men and 88 women aged 15-64 years who were indicated to have died by suicide in 2002. Respectively, employed and unemployed men accounted for 225 (62%) and 89 (24%) of the male suicides but 71% and 8% of the male population aged 15-64 years. A total of 74 (84%) of the women who died by suicide were either employed (35, 40%), unemployed (16, 18%) or engaged in home duties (23, 26%). The employed, unemployed and those engaged in home duties accounted for 51%, 5% and 24% of the female population aged 15-64 years, respectively. Figure 12 compares the male and female suicide rates for these categories of employment status.

For both genders, unemployment was associated with a greatly increased rate of suicide. Unemployed men had a suicide rate (88.8 per 100,000) that was almost four times higher than the rate for men in employment (23.9 per 100,000). The suicide rate of women who were unemployed (27.1 per 100,000) was five times higher than that of the employed (5.2 per 100,000). Women engaged in home duties had a similar suicide rate (7.2 per 100,000) to the employed.

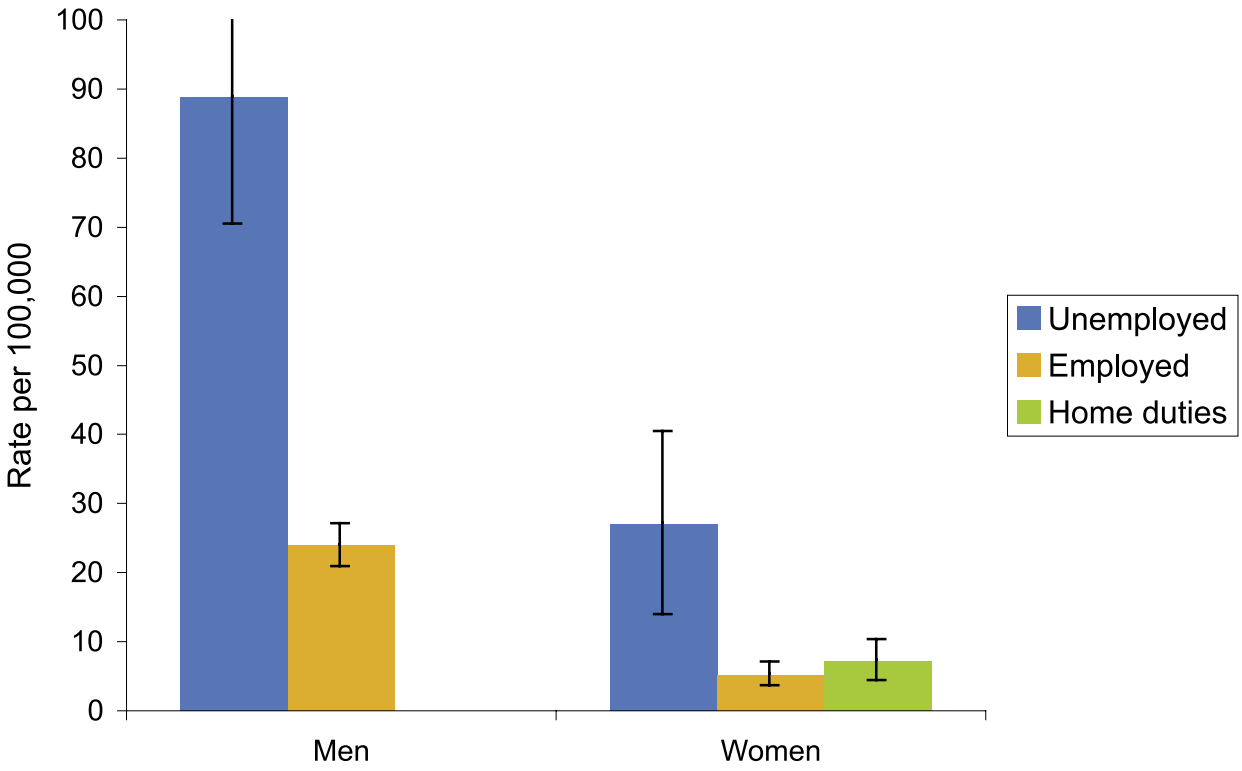


Figure 12. Suicide rate (persons aged over 15 years) by employment status (the error bars represent 95% confidence intervals for the rates).

Main occupation (If person was unemployed or retired, give last previous occupation)

Across the 1,096 forms relating to employed, unemployed or retired persons aged over 15 years for whom an occupation was provided, a total of 530 unique entries were recorded. These were examined in an effort to classify them according to the UK Standard Occupation Classification. This was possible for two-thirds (67%) of the 1,096 cases. In the remaining cases, the recorded occupation was too general to be coded. In total, 56 occupation categories were utilised. Table 7 summarises the frequency of the most common occupations.

Farm owner/worker	126	(11.5%)
Building labourer	122	(11.1%)
Factory/assembly line workers	49	(4.5%)
Drivers of road goods vehicles	35	(3.2%)
Builders & building contractors	26	(2.4%)
Bar staff	24	(2.2%)
Carpenters & joiners	23	(2.1%)
Sales assistants	20	(1.8%)
Nurses & midwives	18	(1.6%)
Security guards	17	(1.6%)
Sales representatives	17	(1.6%)
Maintenance fitters & welders	14	(1.3%)
Cleaners & domestics	14	(1.3%)
Primary & secondary teachers	12	(1.1%)
Mechanical plant drivers/operatives	12	(1.1%)
Engineers	11	(1%)
Plasterers	11	(1%)
Motor mechanics	11	(1%)
Army officer/soldier	11	(1%)
Fisherman	11	(1%)
Bricklayers & masons	10	(0.9%)
Chefs & cooks	10	(0.9%)
Taxi/cab drivers and couriers	10	(0.9%)
Publicans & managers	8	(0.7%)
Medical practitioners	8	(0.7%)
Office clerical staff	8	(0.7%)
Gardeners & groundsmen/women	8	(0.7%)
Other coded occupation	89	(8.1%)
Uncoded occupation	361	(32.9%)

Table 7. Occupation of the 1,096 employed, unemployed and retired persons over 15 years whose deaths led to inquest.

The National Census 2002, provided population data for persons, men and women aged 15 years or over in the labour force. For those known to have died in 2002, occupation was examined for employed and unemployed persons who died by suicide, in the garda's opinion. There were 368 such cases and occupation was recorded for 312 (85%) of them, 272 men and 40 women.

Nine occupations accounted for 122 (45%) of the 272 suicides by men, occupations that accounted for 26% of the male labour force. Estimated suicide rates for these occupations are presented in Figure 13. The relatively small number of suicides (the number in each occupational group ranged from 5 to 36) and relatively small population sizes must be borne in mind when interpreting the rates. However, there is evidence of very high suicide rates among men in some occupations.

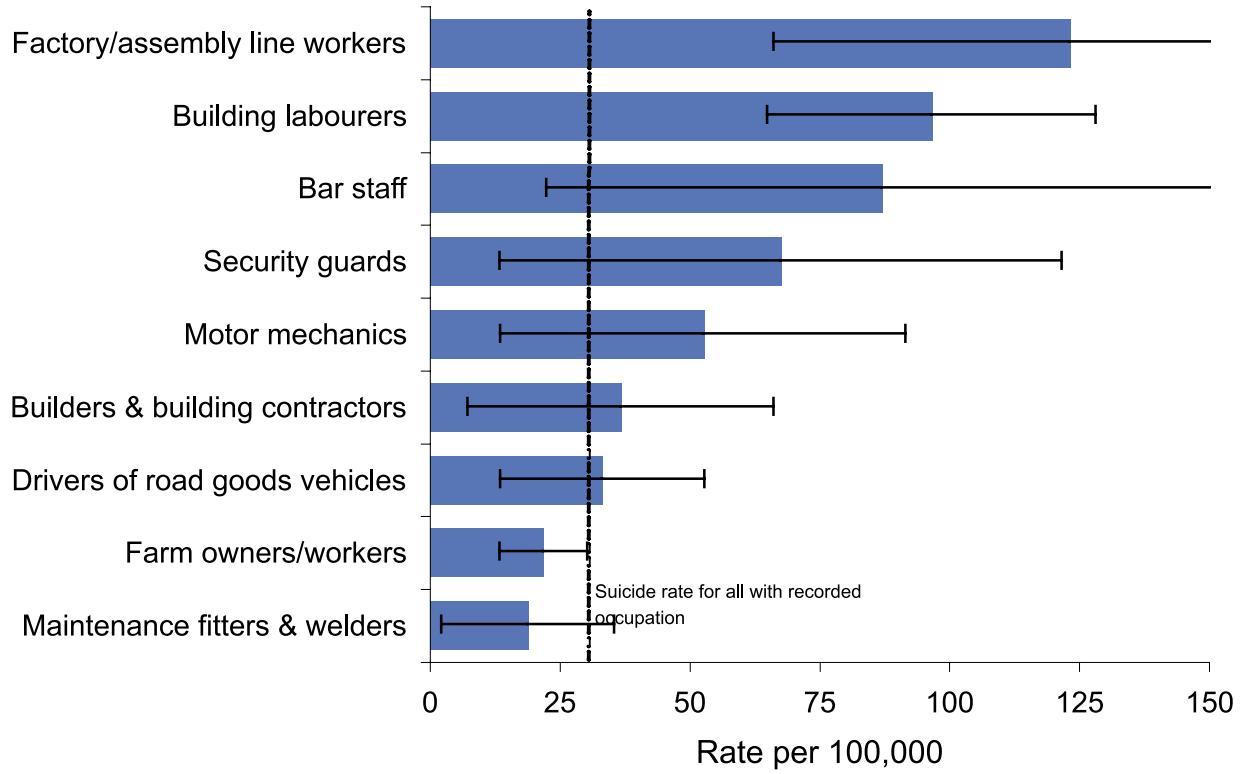


Figure 13. Suicide rate of employed/unemployed men in specific occupations (the error bars represent 95% confidence intervals for the rates).

Of the 40 employed/unemployed women with a recorded occupation who died by suicide, the numbers in any one occupation were very small. The occupations 'Nurses & midwives' and 'Secretaries, personal assistants, etc.' did account for nine (23%) of the 40 female suicides. These occupations account for 10% of the female labour force. The suicide rate for women in the labour force of known occupation was 5.4 per 100,000 (95% confidence interval (CI): 3.7 to 7.1 per 100,000). The estimated suicide rate of 'Nurses & midwives' and 'Secretaries, personal assistants, etc.' was 9.9 per 100,000 (95% CI: 0.2 to 19.6 per 100,000) and 16.5 per 100,000 (95% CI: 2.0 to 31.0 per 100,000). While the suicide rate in these occupations in high, the small numbers involved in the calculation prohibit the drawing of any conclusions.

Place where the incident occurred

From the information recorded on the form, the following coding frame was developed and applied: at home/around the home; at the residence of another person; in a residential institution (e.g. prison/detention centre, hospital, residential home, no fixed abode/hostel/sheltered accommodation, hotel/b&b/hostel); on or by a road; on a farm/agricultural area; on a work site; in a river/waterway; at sea; other.

Where the incident leading to death occurred varied by cause of death (Chi-square = 481.02, df = 32, $p < 0.001$). Approximately half of the suicides and the undetermined deaths occurred at or around the home of the deceased compared to 26-30% of the accidents and homicides. One in six (16%) homicides took place at the residence of another person whereas this was rarely the place of the incident for the other types of death. One in four (26%) of the deaths in the other category occurred in a residential institution (e.g. prison/detention centre, hospital, residential home, no fixed abode/hostel/ sheltered accommodation, hotel/b&b/hostel). This was due mainly to deaths that occurred in hospitals. Because of road traffic deaths, a relatively high proportion of accidental deaths took place on or by a road. This was also the case for one in three (31%) homicides. One in six (16%) suicides and 9% of undetermined deaths took place in a river/waterway.

	Cause of death					
	Accidental	**Homicidal**	**Suicidal**	**Undetermined**	**Other**	**Total**
At or around home	298 (30.0%)	13 (25.5%)	267 (52.5%)	47 (46.5%)	63 (53.4%)	688 (38.8%)
At residence of another person	27 (2.7%)	8 (15.7%)	12 (2.4%)	5 (5.0%)	3 (2.5%)	55 (3.1%)
Residential institution	76 (7.6%)	3 (5.9%)	30 (5.9%)	12 (11.9%)	31 (26.3%)	152 (8.6%)
On or by a road	408 (41.0%)	16 (31.4%)	12 (2.4%)	9 (8.9%)	9 (7.6%)	454 (25.6%)
Farm/agricultural area	23 (2.3%)	0 (0%)	29 (5.7%)	5 (5.0%)	1 (0.8%)	58 (3.3%)
Work site	40 (4.0%)	3 (5.9%)	7 (1.4%)	3 (3.0%)	3 (2.5%)	56 (3.2%)
River/waterway	44 (4.4%)	1 (2.0%)	80 (15.7%)	9 (8.9%)	0 (0%)	134 (7.6%)
At sea	36 (3.6%)	0 (0%)	23 (4.5%)	6 (5.9%)	2 (1.7%)	67 (3.8%)
Other	42 (4.2%)	7 (13.7%)	49 (9.6%)	5 (5.0%)	6 (5.1%)	109 (6.1%)

Table 8. Place of incident by garda opinion of cause of death.

Alcohol and drug dependence

Figure 14 illustrates the male, female and total prevalence of evidence of alcohol dependence among those who died by accidental, homicidal, suicidal and undetermined death. Of the four causes of death, the lowest prevalence of alcohol dependence was among those who died by suicide (15% vs. 21-23%). In general, men had the higher prevalence of alcohol dependence. The exception was among persons whose death was of undetermined intent in which case women had the higher prevalence rate.

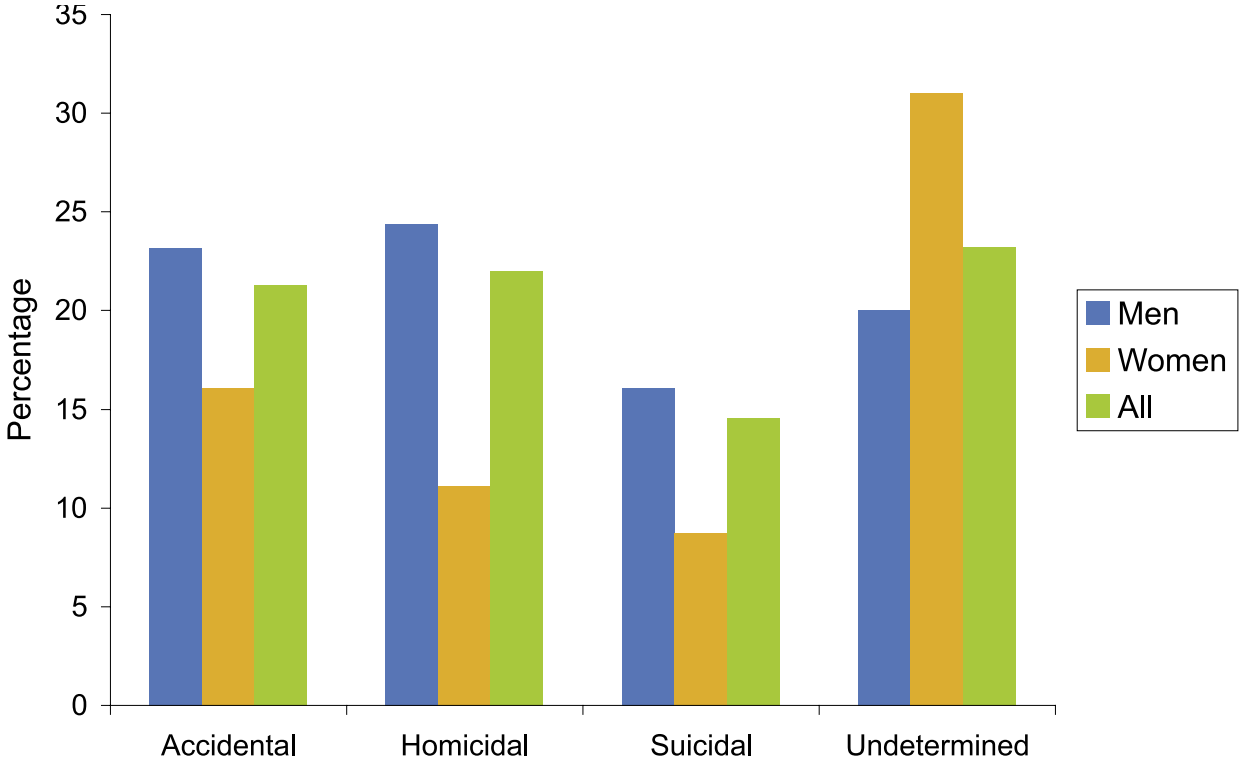


Figure 14. Male, female and total prevalence of alcohol dependence by cause of death.

The prevalence of drug dependence differed between those who died by accidental, homicidal, suicidal and undetermined death (Figure 15). The lowest prevalence was among those whose deaths were accidental (13%), followed by suicides (19%) and homicides (21%) and then undetermined deaths, of whom one in three (33%) were drug dependent. Drug dependence was twice as common in women who died by suicide as it was in men (34% vs. 16%). There was no gender difference among those whose deaths were accidental or of undetermined intent. One in four (25%) male victims of homicide were drug dependent compared to none of eight female homicide victims.

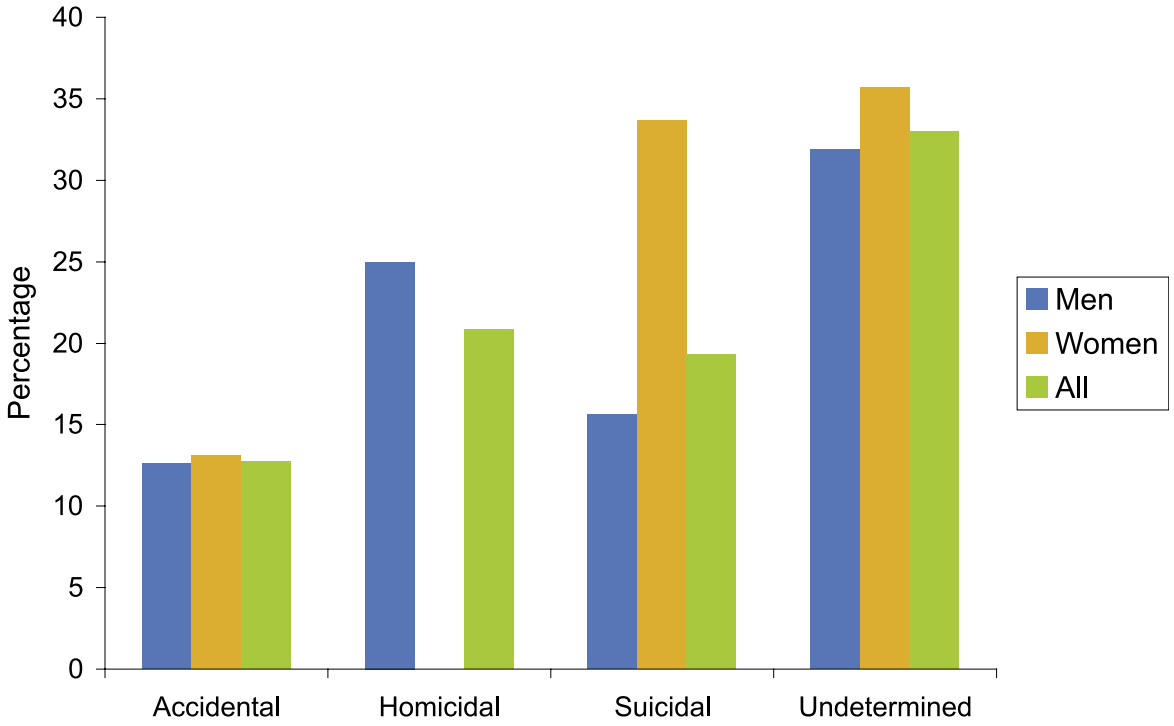


Figure 15. Male, female and total prevalence of drug dependence by cause of death.

There were also differences among those who were drug dependent. Approximately three-quarters (73-75%) of the drug dependent persons who died by suicide or undetermined death had been dependent on prescribed drugs only, compared to half (49%) of those who died by accidental death. In addition, there was a persistant gender pattern whereby women were more likely than men to be dependent on prescribed medicines.

Cases of shooting: How was the firearm obtained? Was it licensed/unlicensed?

Of the 1,798 deaths with a completed form 104, 46 (2.6%) had responses to the above questions. Of these, 20 (43.5%) of the deaths involved a firearm licensed or legally held by the deceased, another 20 (43.5%) deaths involved a firearm that was stolen or borrowed and the remaining 6 (13.0%) deaths involved a firearm but it was not specified whether it was licensed or legally held by the deceased. Three out of four (76%) of the 46 deaths involving a firearm were deemed to be suicides by the garda. A further 9 (20%) were homicides and 2 (4%) were of undetermined intent.

Please state if any written note etc. was left at the scene (For example suicide note)

Of the 1,680 forms with relevant information, it was indicated on 156 (9.3%) of them that a final communication was made. There was a striking association between the presence of a final communication and the garda's opinion of the cause of death (Chi-square = 377.14, df = 4, $p < 0.001$; Table 9). In 152 (97.4%) of the 156 cases where a final communication was made, the garda was of the opinion that the death was a suicide. The remaining four deaths with a final communication were deemed to be either accidental or undetermined. The table also indicates that a final communication (generally in the form of a written note) is made in 30% of Irish suicide deaths.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Final communication	2 (0.2%)	0 (0%)	152 (30.4%)	2 (2.1%)	0 (0%)	156 (9.3%)
No final communication	926 (99.8%)	46 (100%)	348 (69.6%)	94 (97.9%)	110 (100%)	1524 (90.7%)

Table 9. Presence of a final communication by garda opinion of cause of death.

Any known medical history (mental/physical, previous contact with medical or social services)

Information relating to medical history was provided in 636 (35.4%) of the 1,798 forms. Based on the details provided, the following coding frame was developed and applied: Physical health problem(s); Mental health problem(s); Unspecified health problem(s)/treatment; Alcohol problem(s); Drug problem(s); Suicidality.

Any other known contributing factors (For example stress, family/relationship problems, etc.)

Information relating to contributing factors was provided in 283 (15.7%) of the 1,798 forms. The following coding frame was applied: Alcohol; Interpersonal/relationship problems; Work/employment/unemployment problems; Money problems; Bereavement; Drugs; Isolation; Legal problems; Victim of crime; Stress (other/unspecified).

Figure 16 illustrates the frequency of the types of medical history and contributing factors after adjusting for the fact that alcohol and drug problems were included under medical history and contributing factors. Of the 1,798 deaths with a Form 104, a history of mental health problems was reported for 18% which was followed by physical health problems (13%), alcohol problems (9%) and interpersonal problems (7%).

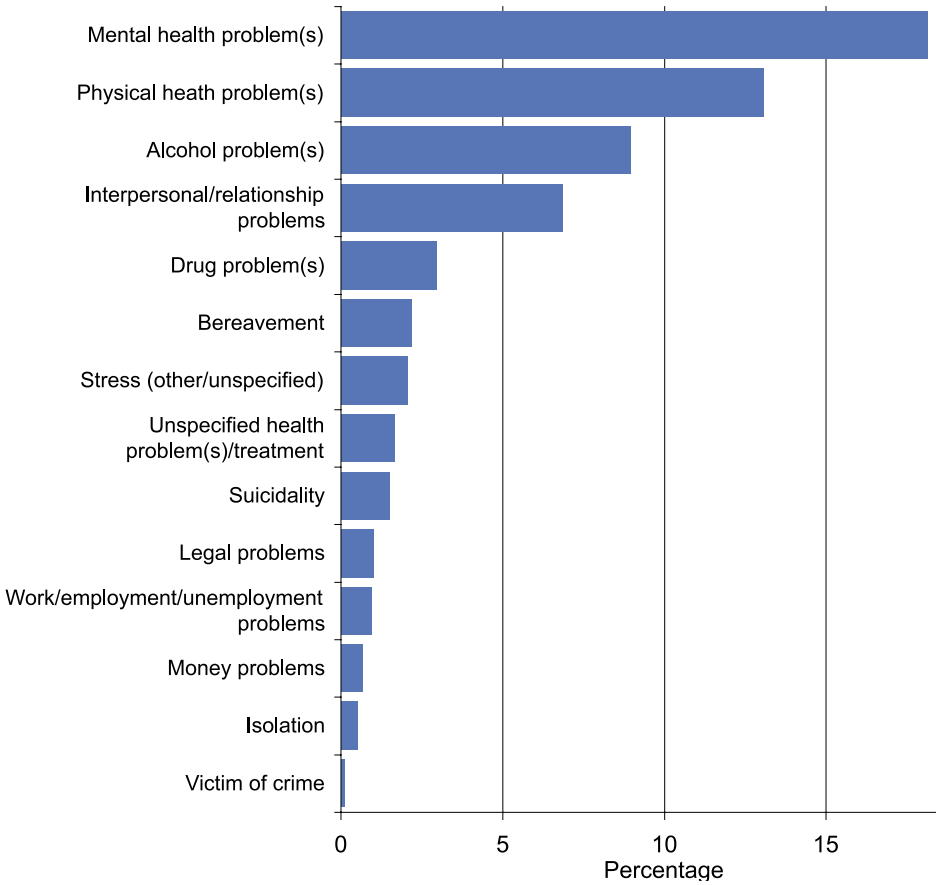


Figure 16. Frequency of the types of medical history and contributing factors reported for all 1,798 deaths with a completed Form 104.

Forms relating to deaths thought to be suicides more often contained information relating to medical history (273 of 509, 54%) and contributing factors (175 of 509, 34%). There were also gender differences in this regard. Medical history information was provided for almost half (191 of 406, 47%) of the male suicides but 80% (82 of 103) of the female suicides. At least one contributing factor was specified for more than one in three (150 of 406, 37%) men who died by suicide compared to one in four (25 of 103, 24%) of the women.

Figure 17 illustrates the frequency of the types of medical history and contributing factors reported for the 509 men and women who were thought to have died by suicide. There were clear gender differences in the prevalence of the most commonly reported medical histories and contributing factors. Mental health problems were reported for 38% of the men but two-thirds (66%) of the women. Interpersonal/ relationship problems were reported as a contributing factor in 20% of male suicides compared to 13% of female suicides. A previous history of suicidality was reported for 10% of the women and 4% of the men.

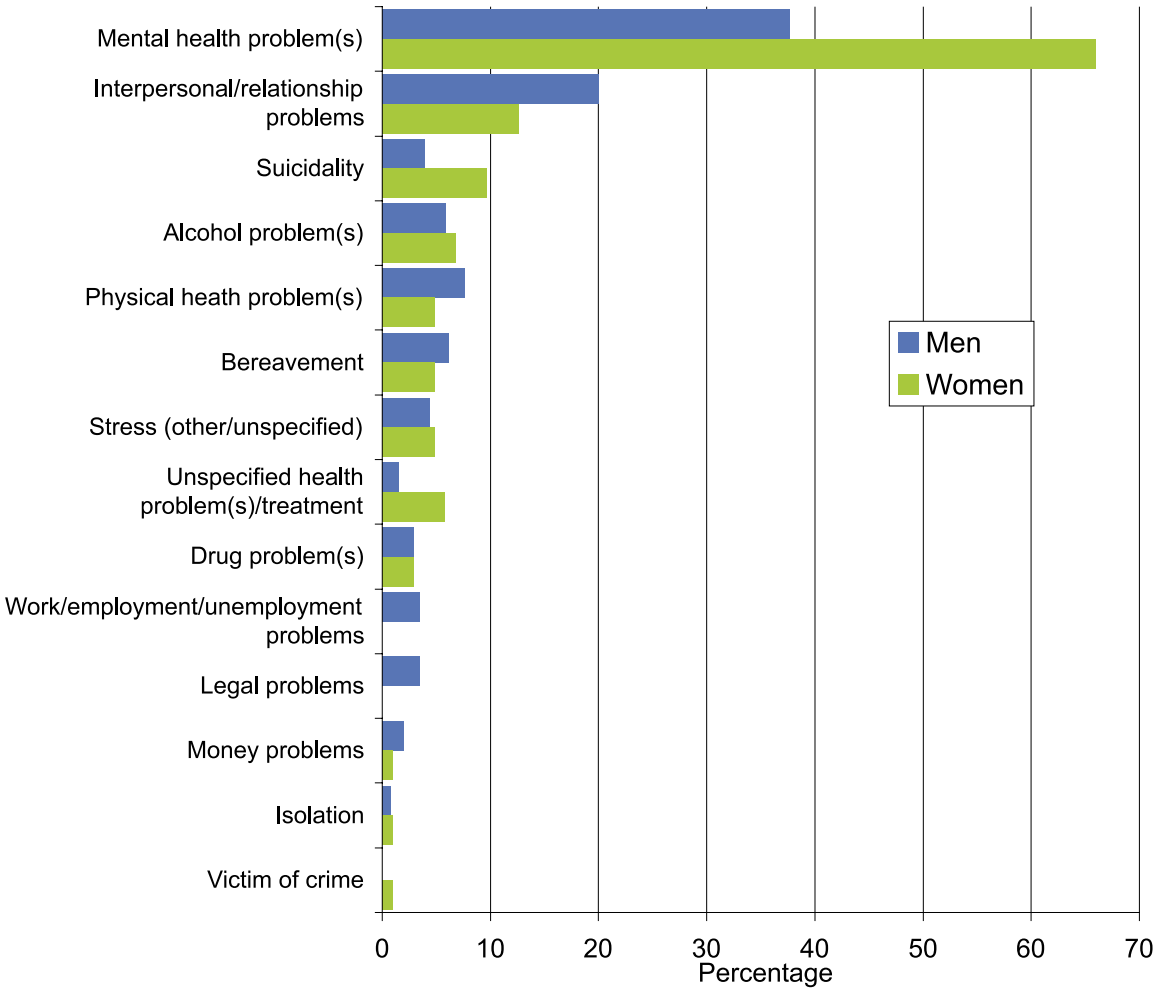


Figure 17. Frequency of the types of medical history and contributing factors reported for 509 deaths indicated to be suicide on the completed Form 104.

SECTION II. DEATH REGISTRATION AND CAUSE OF DEATH CLASSIFICATION IN IRELAND FOR DEATHS OCCURRING IN 2002

Introduction

This section of the report describes the procedures and protocols in place in Ireland for the registration of deaths that occurred in the year 2002 and the classification of the cause of such deaths by the Irish Central Statistics Office (CSO) according to the Ninth Revision of the International Classification of Diseases, Injuries and Causes of Death (ICD-9). Particular detail is given to deaths notified to coroners as these would include possible suicide deaths.

Greater detail on the holding of an inquest in Ireland is provided in the Coroners Act (1962) and The role of the coroner in death investigation (available from the Dublin City Coroner's Court).

The Registration of Births and Deaths Acts 1863 to 1996 provided that every death occurring in Ireland in 2002 should be registered in the registrar's district in which it occurred. At the time, the country was divided into approximately 340 registrar districts. The registrars notified the CSO of all deaths and fowarded to them the completed forms and certificates that provided the details needed by the CSO for the classification of cause of death and other statistical purposes.

There were four paths that could be taken in the registration of deaths that occurred in 2002 and their cause of death classification, illustrated in Figure 1. Essentially, the distinction between these four paths depended on the decisions of whether to notify the coroner of the death, whether a post mortem examination was to be held and whether an inquest was to be held.

Path A. Deaths not notified to the coroner

In general, if a person died from a natural illness or disease for which s/he received treatment by a doctor within one month prior to death, then the coroner was not notified of the death. In such cases, the doctor issued the medical certificate of cause of death to an appropriate person, such as an informed relative of the deceased (Step 1).

Step 2

The person wishing to register the death produced to the registrar the medical certificate of cause of death completed and signed by the doctor who treated the deceased within one month before the death (see Appendix 1, Page 45). This person also provided the registrar with additional information, including the marital status and occupation of the deceased.

Step 3

The registrar issued the death certificate to the person who submitted the completed medical certificate of cause of death and registered the death by adding an entry to the death register, thereby assigning the death with the registrar's stamp number, book and entry numbers and a date of registration.

Step 4

The registrar then completed Form 102 (see Appendix 2, Page 46), a confidential statistical form that the registrar sent, along with the medical certificate of cause of death, to the Vital Statistics Section of the CSO to notify them of the death.

Step 5

The relevant vital statistics officer coded the underlying cause of death according to ICD-9, using the rules and guidelines that apply to that classification, based on the information provided on the medical certificate of cause of death. All deaths received an ICD-9 physical cause of death code, a three-digit number in the range 001-999. An extra digit or extension code was also assigned to provide a finer level of specification, where this exists in the ICD-9.

In a small proportion of the deaths notified to the CSO with a completed Form 102 and medical certificate of cause of death, the information provided indicated that the death was not by natural causes but due to an external cause. In such cases, the vital statistics officer who coded the underlying cause of death assigned an additional ICD-9 code to the death, in accordance with the rules for ICD-9 coding, to specify its external cause. These external cause of death codes range from E800 to E999, with one- or two-digit extension codes available to provide finer classifications for some causes of death (see Appendix 3, Page 47).

Irrespective of whether the death was by natural causes or external causes, if the officer had a query relating to coding the cause of such a death, s/he would refer the query to the doctor who had signed the medical certificate of cause of death. The vital statistics officer recorded that the coding of the cause of death was based on the medical certificate of cause of death (certification=1). According to the Vital Statistics Annual Report for 2002, there were 25,079 deaths registered based on medical certificates of cause of death.

Path B. Deaths notified to the coroner but not requiring a post mortem examination or inquest

If the deceased was not seen by a doctor within one month of death or if s/he died as a result of an accident or in violent or mysterious circumstances including suicide, the death had to be referred to the coroner (see The role of the coroner in death investigation for a complete listing of the deaths that must be notified to the coroner).

Step 1. Notifying the coroner

While the coroner could be notified by an individual directly, in all likelihood notification was performed by an informed officer of the gardai. The gardai were generally notified when a body was discovered. In the first instance, the garda officer notified the coroner by telephone and subsequently forwarded a completed Form C71, the Report to Coroner Form (see Appendix 4, Page 48).

The garda may have acted in the capacity of coroner's officer at this stage, receiving direction from the coroner in relation to removal of the body to the mortuary, arranging for a family member of the deceased to identify the body to the garda and, if necessary, making arrangements for the post mortem examination including identifying the body to the pathologist.

Step 2. Coroner's inquiry

Once notified of a death, the coroner inquired into the circumstances of the death to ascertain if there was a doctor who was in a position to certify the cause of death. The doctor must have seen and treated the person in the month prior to death, the cause of death must have been known and due to natural causes. If these conditions were satisfied and there were no other matters to investigate, the coroner decided that it was not necessary to hold a post mortem examination.

Step 3

The coroner completed the coroner's certificate in accordance with section 50(2) of the Coroner's Act (1962) and forwarded it to the registrar (see Appendix 5, Page 50). The coroner also permitted the doctor to complete and issue the medical certificate of cause of death, described in path A, step 1.

The registration and cause classification of such deaths then took place as if they were never referred to the coroner, i.e. following path A, described above.

Paths C. Deaths notified to the coroner and requiring a post mortem examination but no inquest

If the coroner's inquiry (path B, step 2) established that the deceased was not treated by a doctor in the month prior to death or the cause of death was not known or the death was not by natural causes, then the coroner requested that a post mortem examination be held.

The results of a post mortem examination generally took several weeks to be received, several months if a toxicology (drug) screen was required. In this period, the coroner may have provided an Interim Certificate of the Fact of Death (see Appendix 6, Page 51).

If the coroner was able to ascertain from the results of the post mortem examination that the death was due to natural causes, the coroner may have decided not to hold an inquest.

Step 3

The coroner completed the coroner's certificate in accordance with section 50(1) of the Coroner's Act (1962), indicating that only a post mortem examination was held, and forwarded it to the registrar (see Appendix 7, Page 52).

Step 4

On receiving this coroner's certificate, the registrar registered the death thereby assigning it with the registrar's stamp number, book and entry numbers and a date of registration and issued a death certificate to the qualified informant.

Step 5

The registrar then completed a Form 102 and forwarded both the completed Form 102 and the coroner's certificate to the Vital Statistics Section of the CSO.

Step 6

Following receipt of the coroner's certificate and the completed Form 102, the relevant vital statistics officer of the CSO noted that an inquest was not held and coded the underlying cause of death according to ICD-9 rules and classification based on the information supplied to the CSO on the coroner's certificate. The officer also assigned an ICD-9 external cause of death code for some deaths in accordance with the ICD-9 rules. If the officer had a query relating to coding the cause of such a death, s/he would refer the query to the relevant coroner. The officer also recorded that the cause of death was coded based on a coroner's certificate completed following a post mortem examination and in the absence of an inquest (certification=3).

Paths D. Deaths notified to the coroner requiring a post mortem examination and an inquest

If the coroner was unable to ascertain from the results of the post mortem examination that the death was due to natural causes then an inquest was held.

Step 3

In general, a garda inspector was appointed to attend the inquest with the case file prepared by the garda station originally notified of the death.

Step 4

The attending garda inspector either received a copy of the abstract of verdict or recorded the verdict in the file and returned the file to the garda station.

Step 5

The coroner completed the coroner's certificate in accordance with section 50(1) of the Coroner's Act (1962), indicating that an inquest was held, and forwarded it to the registrar (see Appendix 7, Page 52).

Step 6

On receiving this coroner's certificate, the registrar registered the death thereby assigning it with the registrar's stamp number, book and entry numbers and a date of registration and issued a death certificate to the qualified informant.

Step 7

The registrar then completed a Form 102 and forwarded both the completed Form 102 and the coroner's certificate to the Vital Statistics Section of the CSO.

Step 8

Following receipt of the coroner's certificate and the completed Form 102, the relevant vital statistics officer of the CSO noted that an inquest was held, thereby requiring the preparation of the confidential Form 104 (see Appendix 8, Page 53). Using the information provided on the coroner's certificate and Form 102, the vital statistics officer generally completed most of the data items on the first page of the Form 104 before sending it to the relevant garda inspector who then forwarded it to the relevant garda subdistrict or station. The officer identified the garda inspector relevant to the case from the registrar's district.

If a Form 104 was not returned to the CSO within two months, the officer of the Vital Statistics Section sent a written reminder to the garda inspector, enclosing another copy of the Form 104 for completion.

Step 9

The garda subdistrict sergeant-in-charge was responsible for seeing that the Form 104 was completed. An appointed garda within the subdistrict completed the form using the information in the file returned by the garda inspector or garda officer who attended the inquest. The garda completing the form indicated whether, in his/her opinion, the death was an accident, a suicide, a homicide or undetermined. Once satisfied that the Form 104 was satisfactorily completed, the sergeant-in-charge signed the completed form and posted it to the CSO.

Step 10

When the CSO received completed copies of Form 104, the vital statistics officers identified the forms that they had sent out. Each returned form was examined by the relevant officer and if not satisfactorily completed, follow-up contact was made with the gardai to ensure completion of the form.

Satisfactorily completed forms were examined and cross-referenced with the coroners' certificates in order to identify the registrar's stamp and entry numbers and the month and year of registration previously assigned to the death. As forms were received, they were assigned a garda form reference code (a 4-digit, 1-letter code where the letter indicates the year in which the death was registered by the registrar).

An electronic file was maintained which recorded core data from returned forms, namely the name and address of the deceased, the date of death, the registrar's stamp and entry numbers and the month and year of registration assigned to the death by the registrar and the assigned garda form reference code.

Step 11

The vital statistics officer assigned the ICD-9 underlying cause of death code that was in accordance with the medical evidence of cause of death detailed on the coroner's certificate.

The officer then noted whether the death was by an external cause. In assigning the external cause code, the officer consulted the Form 104, particularly question 24 on the form where the garda gave his/her opinion as to whether the death was accidental, homicidal, suicidal or undetermined. If the garda stated that the death was an accident, homicide, suicide or undetermined then that is how the death was recorded by the vital statistics officer.

The officer used the information from the Form 104 and the coroner's certificate to assign the detailed external cause code that described the type and nature of the accident (E800-E929), homicide (E960-E969), suicide (E950-E959) or undetermined death (E980-E989) (see Appendix 3). In cases where a completed Form 104 was not returned, the cause of death was coded based solely on the coroner's certificate. The officer also recorded that the cause of death was coded based on a coroner's certificate completed following an inquest (certification=2).

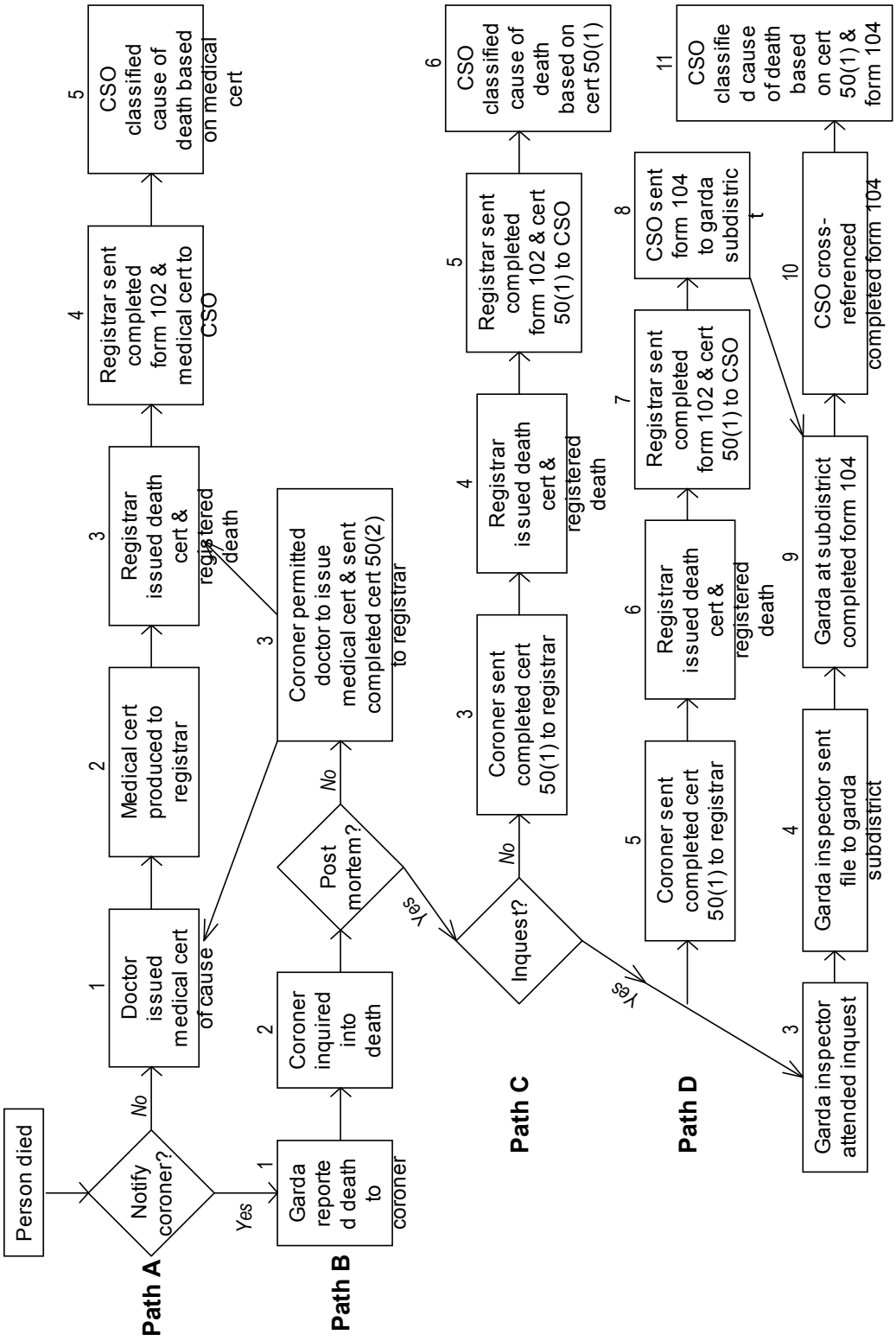


Figure 1. Schematic diagram describing the process of death registration and cause of death determination in Ireland

APPENDIX 1 – MEDICAL CERTIFICATE OF THE CAUSE OF DEATH

BIRTHS AND DEATHS REGISTRATION ACT (IRELAND), 1880.

S.R.D. .....
District .....
Entry No. .....

MEDICAL CERTIFICATE OF THE CAUSE OF DEATH

The certificate opposite should be completed and signed by the medical practitioner who personally attended the deceased during the last illness, and by no other person.

Name of deceased: ..... Age .....

Place of death: ..... Date of death: .....

Last seen alive by me on: .....

Whether seen after death by me (answer "yes" or "no" in all cases):

If a woman, was the deceased known to have been pregnant at the time of death or within the previous 42 days (answer "yes" or "no" in all cases):

Former Residence of Deceased

COUNTERFOIL

Name of Deceased .....

Age .....

Last seen .....

Died on .....

At .....

Cause of Death

I. (a) .....
(b) .....
(c) .....

II. .....

Signed .....

Date .....

CAUSE OF DEATH (please print clearly)	Approximate interval between onset and death
I	
Disease or Condition directly leading to death. (This does not mean the mode of dying, e.g. heart failure, asthenia etc. It means the disease, injury or complication which caused death.) (a)	.....
(b) ..... due to (or as a consequence of)	.....
Antecedent Causes (morbid conditions, if any, giving rise to the above cause, stating the underlying condition last) (c) ..... due to (or as a consequence of)	.....
II	.....
Other Significant Conditions contributing to the death but not related to the disease or condition causing it.	.....

Name of Medical Practitioner (block capitals): .....

Signature: ..... Registered Qualification: .....

Residence ..... Date: .....

When completed and signed, this certificate should be given to one of the qualified informants listed overleaf, who will bring it to the Registrar of Births and Deaths for the district in which the death occurred, and to no other person.

APPENDIX 2 – FORM 102

Form 102

DEATHS

Central Statistics Office

CONFIDENTIAL - This form is required for statistical purposes only and will be treated as strictly confidential. It should be filled in by the person requiring the death to be registered and handed to the Registrar in accordance with the Vital Statistics Regulations, 1954.

Registrar's Stamp 1 - 4

(To be filled in by Registrar) Entry No. in Register 5 - 7

	For Office use only.
Date on which death occurred ..... day of ..... year ..... 8 - 15	
Place at which death occurred *(full address)*	16
Name, surname and home address of deceased	17-19
Sex of deceased	21
Marital condition of deceased *(i.e. single, married, widowed, separated or divorced)*	22
Age of deceased *(in hours, if under one day; in completed days, if under one month; in completed months, if under one year; otherwise in completed years last birthday).*	23 24-25 26-27 28
Occupation of deceased *(in full detail)** If deceased was a child under 15 years give occupation of parent or guardian. If deceased was retired, state "Retired" and give previous occupation.	29-30
If deceased was a married, widowed or separated woman, not gainfully employed, give occupation of her husband *(in full detail)**	31-39
THIS PORTION TO BE FILLED IN BY REGISTRAR Cause of death — Duration of illness 1. (a) ..... (b) ..... (c) ..... 2. ..... State whether certified or uncertified, Inquest or post-mortem	40

Signature of informant .....

Qualification of informant .....
(i.e. whether widower, widow, son, daughter, etc).

Address of informant .....

Date of registration ..... 41-46 Signature of Registrar .....

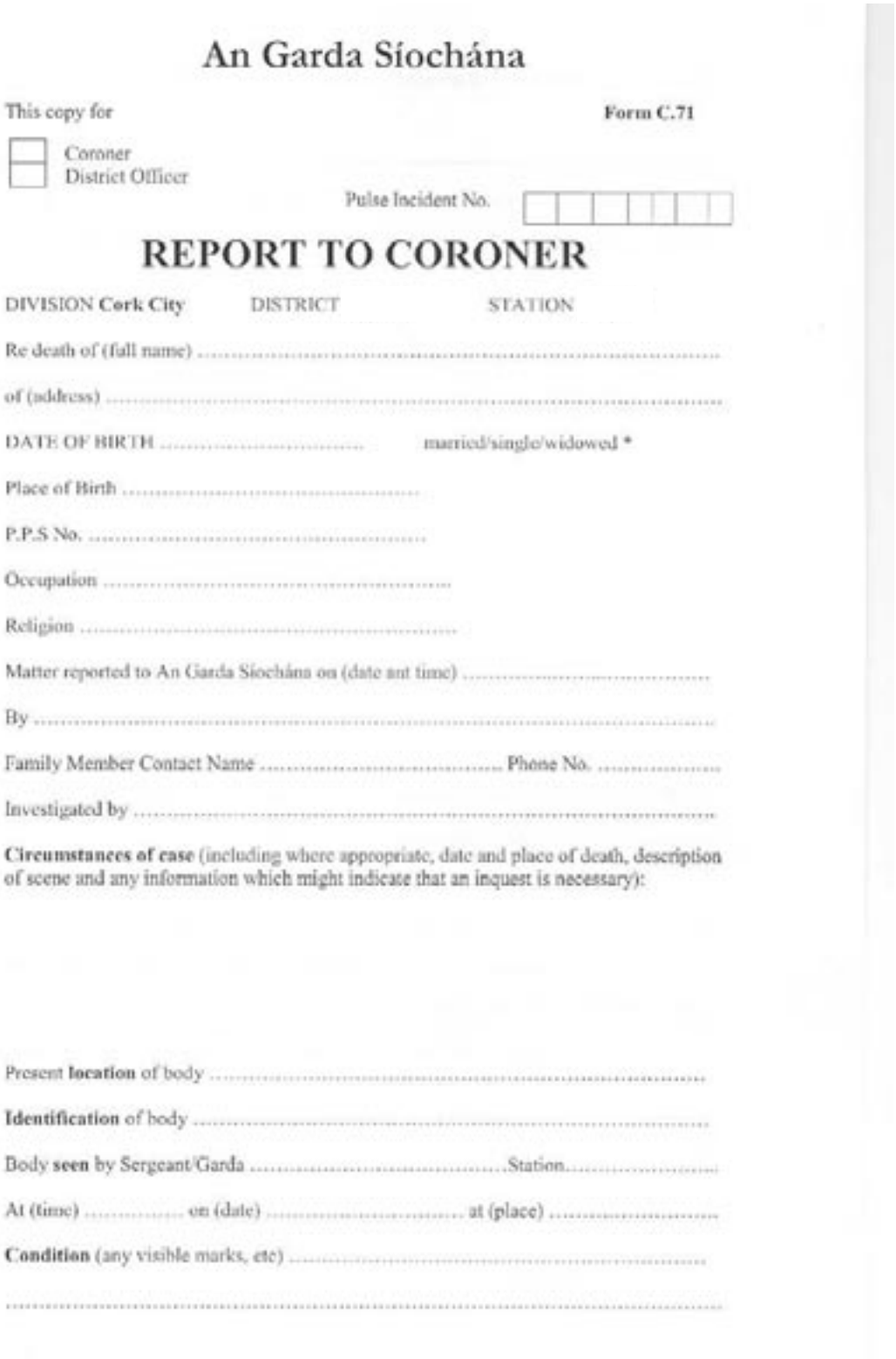
*For example:- Farmer; farm labourer; farmer's relative assisting on farm; foreman in hosiery factory; textile machinist; bricklayer; road worker; garage mechanic; radio mechanic; civil engineer; bank clerk; insurance clerk; solicitor's clerk; clerical officer - Civil Service.

APPENDIX 3 – INTERNATIONAL CLASSIFICATION OF DISEASES, NINTH REVISION EXTERNAL CAUSE OF DEATH CODES (ICD-9 E-CODES)

ICD-9-CM E-CODE CATEGORIES

ICD-9-CM E-CODE	DEFINITION
800-807	Rail
810-819	Motor Vehicle Traffic
820-825	Motor Vehicle Non-traffic
826-829	Other Road Vehicles
830-838	Water Transport
840-845	Air and Space Transport
846-848	Vehicle not elsewhere classified
849	Place of occurrence
850-858	Poisonings by drugs, medicinal/biological substances
860-869	Poisonings by other substances
870-876	Medical/surgical misadventures during procedure
878-879	Late Effects or reactions from medical/surgical procedures
880-888	Falls
890-899	Fire/flames
900-909	Natural/environmental factors
910-915	Submersion, suffocations, foreign bodies
916-928	Other accidents, struck by/against objects/persons, caught by objects/machinery, cutting/piercing instruments/objects, explosion/explosive material, firearm missile, hot/caustic/corrosive substances, electric current, radiation, over exertion/strenuous movement, other/unspec environmental/accidental causes
929	Late effects of injury
930-949	Adverse effects drugs, etc. in therapeutic use
950-959	Suicide and self inflicted injury
960-969	Homicide and purposely inflicted by other person
970-978	Legal interventions
980-989	Injury undetermined if accidental or purposely inflicted
990-999	Operations of war

APPENDIX 4 – GARDA REPORT TO CORONER (FORM C71), PAGE 1



An Garda Síochána

This copy for

Form C.71

☐ Coroner
☐ District Officer

Pulse Incident No. ☐☐☐☐☐☐☐

REPORT TO CORONER

DIVISION **Cork City** DISTRICT STATION

Re death of (full name) .....

of (address) .....

DATE OF BIRTH ..... married/single/widowed *

Place of Birth .....

P.P.S No. .....

Occupation .....

Religion .....

Matter reported to An Garda Síochána on (date ant time) .....

By .....

Family Member Contact Name ..... Phone No. .....

Investigated by .....

Circumstances of case (including where appropriate, date and place of death, description of scene and any information which might indicate that an inquest is necessary):

Present **location** of body .....

Identification of body .....

Body **seen** by Sergeant/Garda ..... Station.....

At (time) ..... on (date) ..... at (place) .....

Condition (any visible marks, etc) .....

.....

APPENDIX 4 (CONTINUED) – GARDA REPORT TO CORONER (FORM C71), PAGE 2

Previous health of deceased (if attended by doctor, state when and for what complaint):

List of persons who may be in a position to give evidence:

Name and Address **Nature of Evidence** (briefly)

A COPY OF THIS COMPLETED FORM C.71 HAS BEEN SUBMITTED TO THE SUPERINTENDENT AT ..... IN WHOSE JURISDICTION THE INCIDENT/DEATH OCCURRED.

Signed:.....STATION.....DATE.....

---

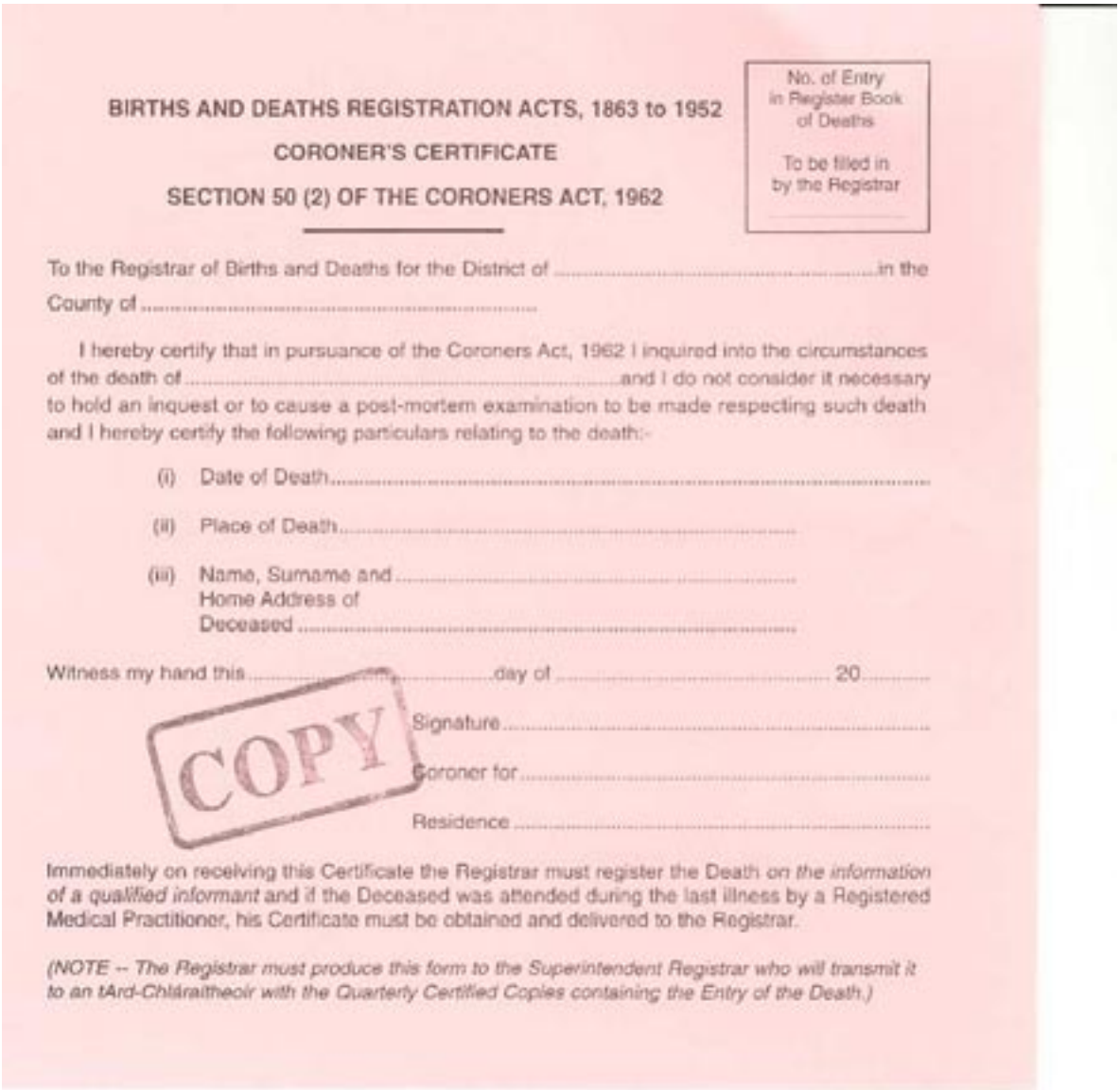
*Delete whichever are inapplicable.
†If deceased was: (a) "Retired" give previous occupation.
(b) A child or young person give name, address and occupation of parent or guardian.

Superintendent

Submitted.

_____ **Sergeant**

APPENDIX 5 –CORONER'S CERTIFICATE IN ACCORDANCE WITH SECTION 50(2) OF THE CORONER'S ACT (1962)



BIRTHS AND DEATHS REGISTRATION ACTS, 1863 to 1952

CORONER'S CERTIFICATE

SECTION 50 (2) OF THE CORONERS ACT, 1962

No. of Entry in Register Book of Deaths

To be filled in by the Registrar

To the Registrar of Births and Deaths for the District of .....in the County of .....

I hereby certify that in pursuance of the Coroners Act, 1962 I inquired into the circumstances of the death of .....and I do not consider it necessary to hold an inquest or to cause a post-mortem examination to be made respecting such death and I hereby certify the following particulars relating to the death:-

(i) Date of Death.....

(ii) Place of Death.....

(iii) Name, Surname and Home Address of Deceased .....

Witness my hand this .....day of ..... 20.....

Signature.....

Coroner for.....

Residence .....

Immediately on receiving this Certificate the Registrar must register the Death *on the information of a qualified informant* and if the Deceased was attended during the last illness by a Registered Medical Practitioner, his Certificate must be obtained and delivered to the Registrar.

(NOTE -- The Registrar must produce this form to the Superintendent Registrar who will transmit it to an tArd-Chláraitheoir with the Quarterly Certified Copies containing the Entry of the Death.)

APPENDIX 6 –CORONER'S INTERIM CERTIFICATE OF THE FACT OF DEATH

City Coroner

CORONER'S OFFICE

CORONER'S INTERIM CERTIFICATE OF THE FACT OF DEATH

REF NO:-

DEATH
Date and Place of Death: -

Name and Surname: **Sex:**

Address:-

Occupation:

Date of Birth:-

The cause of death has yet to be established. (/)

A death certificate will issue in due course ( )

An inquest will be held in the near future ( )

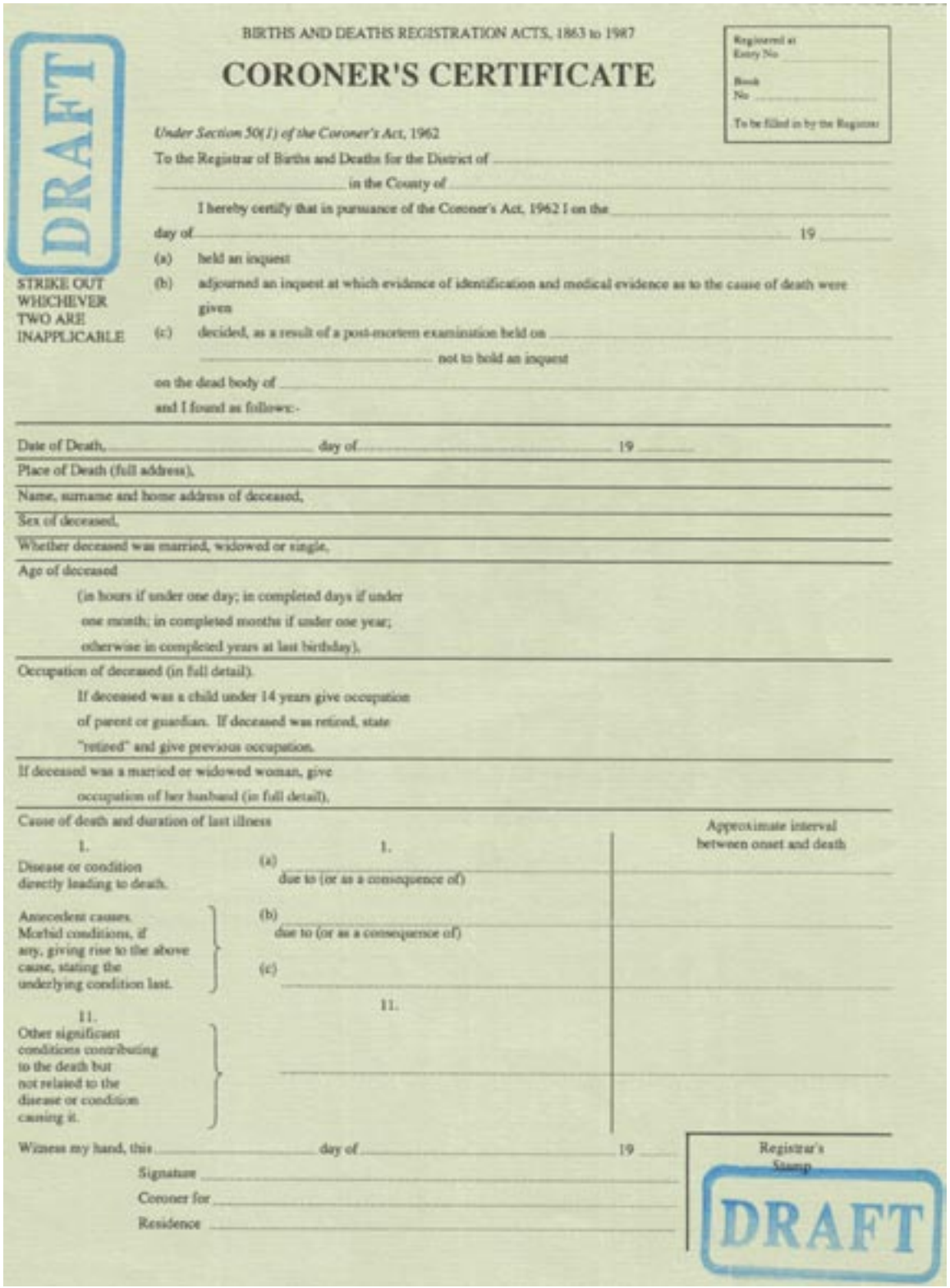
A decision will be made as soon as possible ( )

10 MAY 2006
CORONER'S OFFICE

Signed **Date:**

COPY

APPENDIX 7 –CORONER'S CERTIFICATE IN ACCORDANCE WITH SECTION 50(1) OF THE CORONER'S ACT (1962)



DRAFT

BIRTHS AND DEATHS REGISTRATION ACTS, 1863 to 1987

CORONER'S CERTIFICATE

Registered at
Entry No
Book
No
To be filled in by the Registrar

Under Section 50(1) of the Coroner's Act, 1962

To the Registrar of Births and Deaths for the District of _____

_____ in the County of _____

I hereby certify that in pursuance of the Coroner's Act, 1962 I on the _____

day of _____ 19 _____

STRIKE OUT WHICHEVER TWO ARE INAPPLICABLE

(a) held an inquest

(b) adjourned an inquest at which evidence of identification and medical evidence as to the cause of death were given

(c) decided, as a result of a post-mortem examination held on _____ not to hold an inquest

on the dead body of _____

and I found as follows:-

Date of Death, _____ day of _____ 19 _____

Place of Death (full address),

Name, surname and home address of deceased,

Sex of deceased,

Whether deceased was married, widowed or single,

Age of deceased
(in hours if under one day; in completed days if under one month; in completed months if under one year; otherwise in completed years at last birthday),

Occupation of deceased (in full detail).
If deceased was a child under 14 years give occupation of parent or guardian. If deceased was retired, state "retired" and give previous occupation.

If deceased was a married or widowed woman, give occupation of her husband (in full detail),

Cause of death and duration of last illness

		Approximate interval between onset and death
I. Disease or condition directly leading to death.	(a) _____ due to (or as a consequence of)	
Antecedent causes. Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last.	(b) _____ due to (or as a consequence of)	
	(c) _____	
II. Other significant conditions contributing to the death but not related to the disease or condition causing it.		

Witness my hand, this _____ day of _____ 19 _____

Signature _____

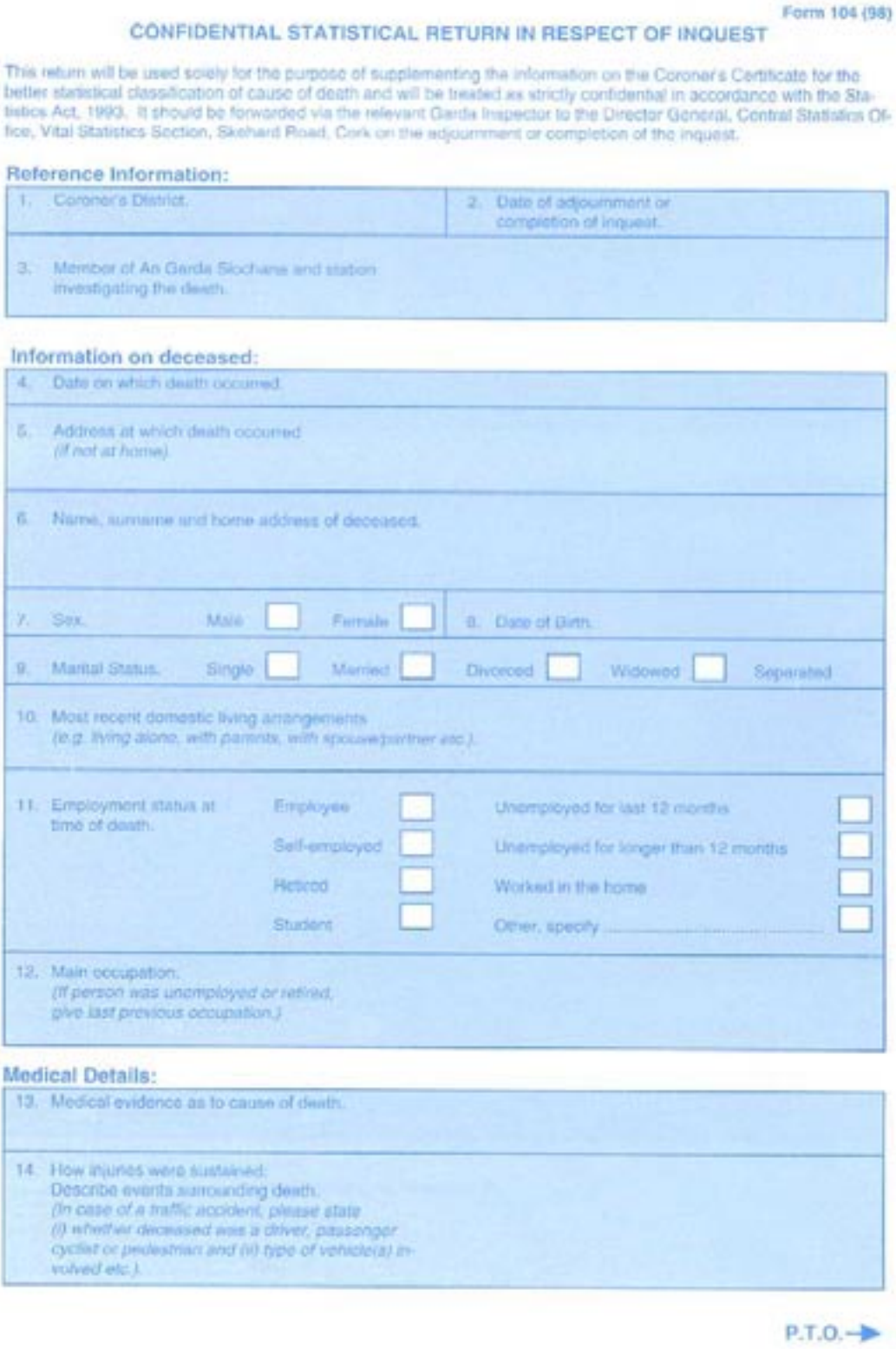
Coroner for _____

Residence _____

Registrar's Stamp

DRAFT

APPENDIX 8 – FORM 104, PAGE 1



Form 104 (98)

CONFIDENTIAL STATISTICAL RETURN IN RESPECT OF INQUEST

This return will be used solely for the purpose of supplementing the information on the Coroner's Certificate for the better statistical classification of cause of death and will be treated as strictly confidential in accordance with the Statistics Act, 1993. It should be forwarded via the relevant Garda Inspector to the Director General, Central Statistics Office, Vital Statistics Section, Skehard Road, Cork on the adjournment or completion of the inquest.

Reference Information:

1. Coroner's District.	2. Date of adjournment or completion of inquest.
3. Member of An Garda Síochána and station investigating the death.	

Information on deceased:

4. Date on which death occurred.								
5. Address at which death occurred *(if not at home)*								
6. Name, surname and home address of deceased.								
7. Sex.	Male ☐	Female ☐	8. Date of Birth.					
9. Marital Status.	Single ☐	Married ☐	Divorced ☐	Widowed ☐	Separated			
10. Most recent domestic living arrangements *(e.g. living alone, with parents, with spouse/partner etc.)*.								
11. Employment status at time of death.	Employee ☐	Self-employed ☐	Retired ☐	Student ☐	Unemployed for last 12 months ☐	Unemployed for longer than 12 months ☐	Worked in the home ☐	Other, specify ..... ☐
12. Main occupation. *(If person was unemployed or retired, give last previous occupation.)*								

Medical Details:

13. Medical evidence as to cause of death.
14. How injuries were sustained. Describe events surrounding death. *(In case of a traffic accident, please state (i) whether deceased was a driver, passenger cyclist or pedestrian and (ii) type of vehicle(s) involved etc.).*

P.T.O. →

APPENDIX 8 (CONTINUED) – FORM 104, PAGE 2

Medical details (contd.):

15. Please state the place where the incident occurred. *(For example, at home, residential institution, school, sports area, street/road, trade/service area, industrial/ construction area, farm, other).*

16. Is there any evidence of deceased being alcohol dependent? Yes ☐ No ☐

Is there any evidence of deceased being drug dependent? Yes ☐ No ☐
If drug dependent please specify:

(i) type of drug(s) .....

(ii) were the drugs prescribed? Yes ☐ No ☐

17. Deaths caused by poison:
Please state type of poison, how and where stored.

Other Information:

18. Cases of shooting: how was the firearm obtained?
(Was it licensed/unlicensed?)

19. Please state if any written note etc. was left at the scene *(for example, suicide note).*

20. Any known medical history *(mental/physical, previous contact with medical or social services).*

21. Any other known contributing factors *(for example stress, family/relationship problems etc.).*

22. Name and address of G.P., hospital doctor or medical attendant *(if known).*

23. Is Post Mortem report available? Yes ☐ No ☐

24. Please state, in your opinion, whether death was: accidental ☐ suicidal ☐ homicidal ☐ undetermined ☐

Signature of Sergeant in Charge _____

Sub District _____

Date _____

SECTION III. FORM 104 RETURNS FOR INQUESTED DEATHS THAT OCCURRED IN 2002

Introduction

This section details the number of inquested deaths that occurred in 2002 according to CSO records and describes the association between the cause of death recorded and the death being registered on time (in 2002 or 2003) or late (in 2004). The receipt of completed Forms 104 in respect of inquested deaths on the CSO database is presented. The extent to which Form 104 returns matched CSO records is reported by region and possible implications for regional suicide rates are considered. The section contains detailed technical descriptions which require careful interpretation. As described in the previous section of the report, the death registration and cause of death determination system that operated in Ireland in respect of deaths that occurred in 2002 and led to a coroner's inquest involved a paper-based sequence of data transcription and transfer between gardai, coroners, registrars and officers of the CSO. Any inconsistencies identified by the Form 104 study were likely to have been due to human error in the transcription of data. The study did not seek to identify the source of the human error and did not attempt to apportion blame or fault specifically to any one of the agencies involved in the system. It should also be borne in mind that, in recent years, the CSO have taken steps to improve both the traceability and rate of return of Form 104.

Inquested deaths that occurred in 2002

According to the Vital Statistics Annual Report for 2002, 29,673 certified deaths occurred in 2002 and were registered in either 2002 or 2003. For 25,079 (84.5%), the cause of death was classified based on the information provided on a medical certificate of cause of death, for 2,885 (9.7%), the cause of death was classified based on the coroner's certificate 50(1) completed following a post mortem examination alone and for 1,709 (5.8%), the cause of death was classified based on the coroner's certificate 50(1) completed following an inquest.

There were an additional 106 deaths registered late (in 2004) with cause of death classified based on the coroner's certificate 50(1) completed following an inquest, giving a total of 1,815 (1,709 + 106) inquested deaths that occurred in 2002 and were registered in 2002, 2003 or 2004.

The cause of death recorded by the CSO for these 1,815 inquested deaths by year of registration is outlined in Table 1. Over half (966, 53%) were accidental deaths, approximately one in four (497, 27%) were suicides and one in eight (211, 12%) were by natural causes. There was significant evidence of an association between the cause of death and year of registration (Chi-square = 31.32, df = 8, $p < 0.001$). Inquested deaths due to natural causes and those of undetermined intent were registered late more often than suicides, homicides and accidents.

	2002	2003	2004	Total
Natural	78	111	22	211
	(37.0%)	(52.6%)	(10.4%)	(100%)
Suicide	257	221	19	497
	(51.7%)	(44.5%)	(3.8%)	(100%)
Undetermined	41	44	12	97
	(42.3%)	(45.4%)	(12.4%)	(100%)
Homicide	25	18	1	44
	(56.8%)	(40.9%)	(2.3%)	(100%)
Accident	438	476	52	966
	(45.3%)	(49.3%)	(5.4%)	(100%)
Total	839	870	106	1815
	(46.2%)	(47.9%)	(5.8%)	(100%)

Table 1. Cause of death for 1,815 inquested deaths by year of registration.

Returned Forms 104

In line with the procedures described in the previous section of the report, a Form 104 should have been completed and returned to the CSO in respect of each of the 1,815 inquested deaths that, according to information held by the CSO, occurred in 2002 and were registered in 2002, 2003 or 2004.

Forms 104 were located within the CSO that were apparently completed in respect of inquested deaths that occurred in 2002 and were registered in 2002, 2003 or 2004 in order to compile an electronic file of Form 104 data. Data from these forms were recorded into an electronic datafile. Only one record was entered in cases where more than one Form 104 was completed in respect of a single death. After completion of the data entry, the Form 104 datafile contained 1,798 records.

A cross-matching exercise was undertaken to match each of the 1,798 Form 104 records to one of the records on the CSO database of 1,815 inquested deaths (Figure 1). In total, there was reference to 1,895 deaths:

- 1,718 (91%) deaths with a completed Form 104 that matched an entry on the CSO list of inquested deaths;
- 80 (4%) deaths with a completed Form 104 but with no entry on the CSO list;
- 97 (5%) deaths with an entry on the CSO list but without a completed Form 104.

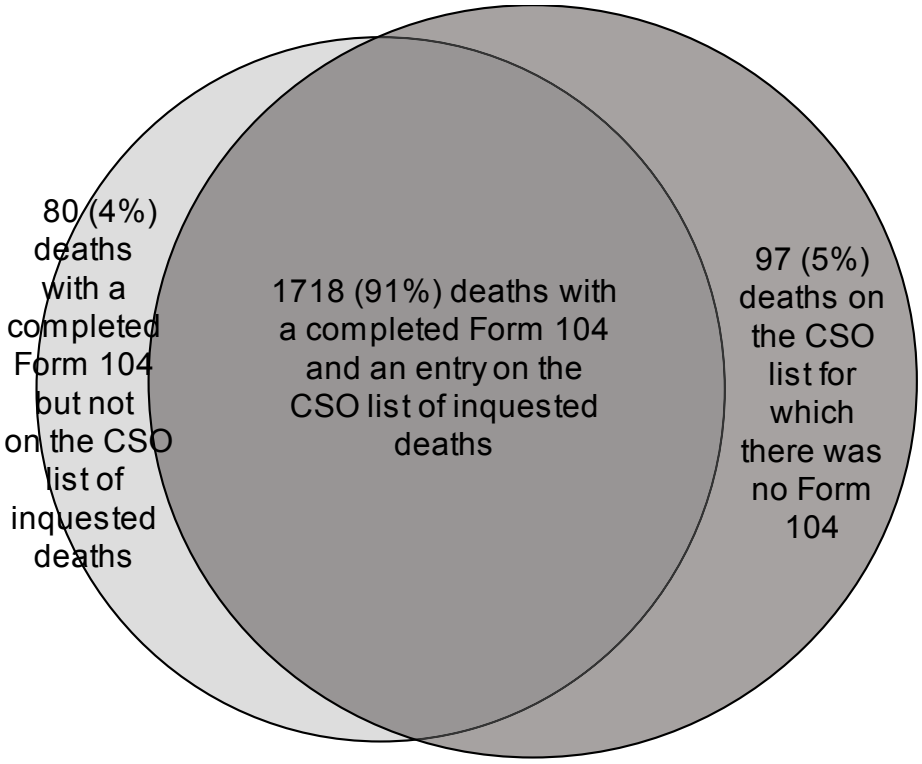


Figure 1. Matching of completed Forms 104 and CSO records of inquested deaths.

The 80 deaths with a completed Form 104 but not on the CSO list of inquested deaths comprised:

- 29 (36%) deaths that had resulted in an inquest but not according to the information held by the CSO
  - 13 were coded as if the death resulted in a post mortem only
  - 12 were coded as if based on a medical certificate of cause of death
  - 4 could not be found on the CSO system
- 29 (36%) deaths that had occurred in 2002 according to the Form 104 but occurred in another year according to the information held by the CSO. The year of death recorded by the CSO matched that on the coroner's certificate in 20 (69%) of these 29 cases.

- 15 were coded as occurring in 2003
- 13 were coded as occurring in 2001
- 1 were coded as occurring in 2000

- 17 (21%) deaths that had Forms 104 completed unnecessarily
  - 14 were deaths that resulted in a post mortem only
  - 2 were deaths that occurred outside of Ireland and were therefore not registered in Ireland. These forms contained no reference information.
  - 1 death was a stillbirth and stillbirths do not require the completion of a Form 104
- 5 (6%) deaths that had no reference information on the completed Form 104 and therefore could not be matched to one of the CSO records

Whether a completed Form 104 matched an entry in the CSO list of inquested deaths varied by region of registration (Chi-square = 13.15, df = 4, p = 0.011). Unmatched forms were less likely to arise from deaths registered in Dublin (14% of unmatched vs. 31% of matched) but were more likely to arise from deaths registered in Rest of Leinster (27% of unmatched vs. 21% of matched) and Connacht (22% of unmatched vs. 13% of matched). Connacht accounted for 11 (38%) of the 29 deaths that resulted in an inquest but were coded differently according to the information held by the CSO whereas Rest of Leinster accounted for eight (53%) of the 15 unnecessarily completed Forms 104.

	Region of registration					
	Dublin	**Rest of Leinster**	**Munster**	**Connacht**	**Ulster**	**Total**
Matched	535 (31.1%)	364 (21.2%)	498 (29.0%)	215 (12.5%)	106 (6.2%)	1718 (100%)
Unmatched	10 (13.7%)	20 (27.4%)	22 (30.1%)	16 (21.9%)	5 (6.8%)	73* (100%)

**The seven deaths for which a Form 104 was completed without reference information are excluded as they could not be assigned a region of registration.*
Table 2. Matched and unmatched completed Forms 104 by region of registration.

The 97 deaths on the CSO list of inquested deaths for which no completed Form 104 was received comprised:

- 71 (73%) deaths that did result in an inquest but no completed Form 104 was received
- 26 (27%) deaths did not result in an inquest and therefore no completed Form 104 should have been expected
    - 8 deaths had resulted in a post mortem only
    - 18 deaths had resulted in neither post mortem nor inquest

	Region of registration					
	Dublin	**Rest of Leinster**	**Munster**	**Connacht**	**Ulster**	**Total**
Returned	535 (31.1%)	364 (21.2%)	498 (29.0%)	215 (12.5%)	106 (6.2%)	1718 (100%)
Unreturned	60 (61.9%)	17 (17.5%)	5 (5.2%)	11 (11.3%)	4 (4.1%)	97 (100%)

Table 3. Returned and unreturned completed Forms 104 by region of registration.

Whether a completed Form 104 was received in respect of a death on the CSO list of inquested deaths varied by region of registration (Chi-square = 46.56, df = 4, $p < 0.001$). Dublin deaths accounted for twice as many unreturned forms as returned forms (62% of unreturned vs. 31% of returned). When deaths that did not result in an inquest were excluded from the calculations, Dublin accounted for three-quarters (54, 76%) of the 71 inquested deaths that went without a Form 104. Unreturned forms were relatively rare for deaths registered in Munster (5% of unreturned vs. 29% of returned).

	Broad cause of death					
	Natural	**Suicide**	**Undetermined**	**Homicide**	**Accident**	**Total**
Returned	184 (10.7%)	492 (28.6%)	76 (4.4%)	44 (2.6%)	922 (53.7%)	1718 (100%)
Unreturned	27 (27.8%)	5 (5.2%)	21 (21.6%)	0 (0%)	44 (45.4%)	97 (100%)

Table 4. Cause of death recorded for deaths with returned and unreturned Forms 104.

The broad cause of death recorded by the CSO varied depending on whether a completed Form 104 was received or not (Chi-square = 96.31, df = 4, $p < 0.001$). Suicide was rarely recorded in the absence of a Form 104. Of the 1,718 deaths with a Form 104, 492 (29%) were recorded as suicides, compared to only 5 (5%) of the 97 deaths without a form. Either suicide deaths were associated with a higher rate of returned forms or suicide was underrecorded among deaths without a form. If the latter was true then Dublin was most affected by such underrecording of suicide.

Official statistics show Dublin to have a lower rate of suicide than the rest of the country. According to the Vital Statistics Annual Report for 2002, 103 (22%) of the country's 478 suicide deaths were in Dublin, giving a crude suicide rate of 9.2 per 100,000. The crude suicide rate for the rest of the country was 46% higher, at 13.4 per 100,000. Any underrecording of Dublin suicides associated with unreturned Forms 104 could only partly explain this difference in suicide rates.

Official statistics show Dublin to have a higher rate of undetermined death than the rest of the country. According to the Vital Statistics Annual Report for 2002, Dublin accounted for 49 (56%) of the 78 deaths of undetermined intent. This gave Dublin a crude undetermined death rate of 4.4 per 100,000, three times the rate of 1.4 per 100,000 for the rest of Ireland.

Table 4 shows that undetermined deaths accounted for just 4% of the deaths with a Form 104 but 22% of those without a form. However, Dublin's high rate of undetermined death was not due to its lower rate of returned Forms104. Considering only deaths with returned forms, in Dublin, for every 14 recorded as suicide, six were recorded as being of undetermined intent. In the rest of Ireland, for every 14 recorded suicides, only one undetermined death was recorded. This suggests that misclassification of suicides as deaths of undetermined intent was common in Dublin compared with the rest of the country. Such misclassification could explain most of the difference between Dublin's low suicide rate and the rate for the rest of the country.

SECTION IV. COMPLETENESS AND CONSISTENCY OF FORM 104 DATA

Introduction

As stated earlier, a datafile with 1,798 records resulted from the entry of data from completed Forms 104 that initially appeared to have been completed in respect of inquested deaths that occurred in 2002 and were registered in 2002, 2003 or 2004. This section reports on the completeness of the data recorded from these forms. Where possible, data recorded on the Forms 104 were compared for consistency to those recorded by the CSO and/or on the coroners' certificates. Variation in completeness and consistency of recording data on Form 104 is examined across the regions in which the deaths were registered and across the causes of death indicated by the garda on the form.

As described in section II of the report, the death registration and cause of death determination system that operated in Ireland in respect of deaths that occurred in 2002 and led to a coroner's inquest involved a paper-based sequence of data transcription and transfer between gardai, coroners, registrars and officers of the CSO. Any inconsistencies identified by the Form 104 study were likely to have been due to human error in the transcription of data. The study did not seek to identify the source of the human error and did not attempt to apportion blame or fault specifically to any one of the agencies involved in the system. Most data transfer between the agencies involved in the Irish death registration system is now done electronically, a measure that should eradicate inconsistencies introduced by human error.

Cause of death

As described in section II of the report, the CSO use Form 104 in deciding the external cause of inquested deaths. Central to this is the last question on the form which asks the garda to state, in his/her opinion, whether the death was accidental, suicidal, homicidal or undetermined. Table 1 and Figure 1 detail the frequency that each of these was chosen in respect of the 1,798 Form 104 records.

	N	%
Accidental	999	55.6
Suicidal	509	28.3
Homicidal	52	2.9
Undetermined	102	5.7
Nothing ticked	136	7.6
natural causes written	50	2.8
death by misadventure written	20	1.1
medical misadventure written	7	0.4
something else written	11	0.6
item left blank	48	2.7

Table 1. Opinion of cause of death indicated by garda on completed Forms 104.

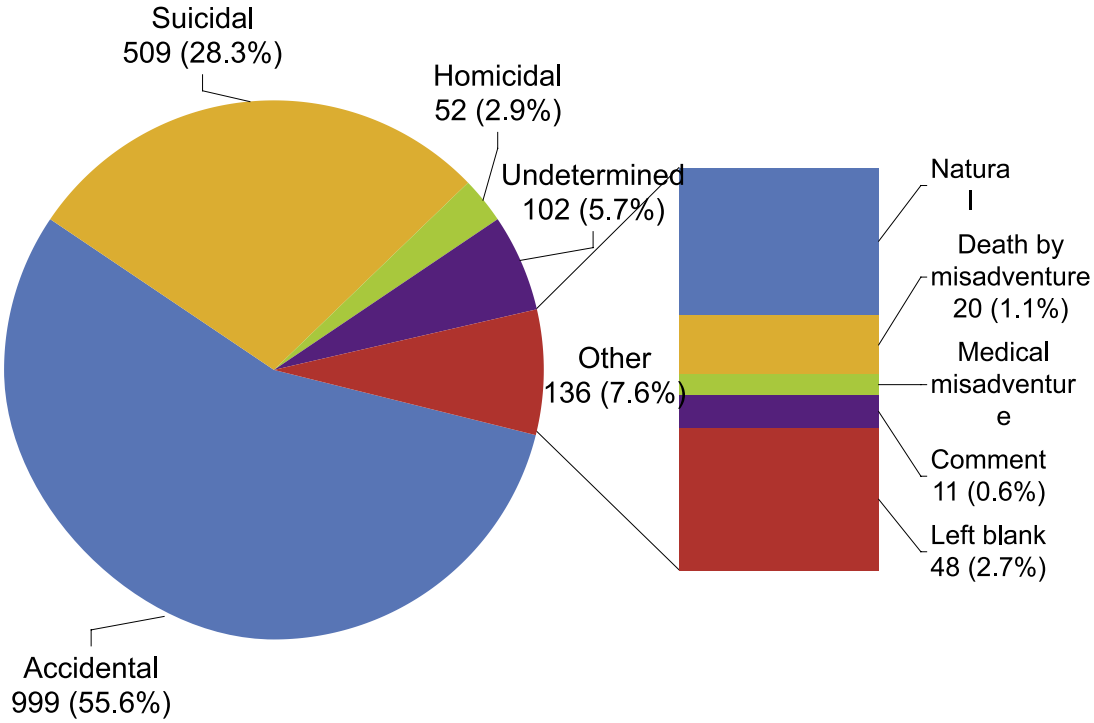


Figure 1. Opinion of cause of death indicated by garda on completed Forms 104.

On more than half of the forms, the garda's opinion was that the death was accidental, almost 30% were suicides, 3% homicides and 6% undetermined. Neither of these four options were selected by the garda in 136 cases (8%). In these cases, the garda had either noted that the death was by natural causes or by misadventure (medical or otherwise) or had left the item blank.

Based on the 1,718 deaths with a completed Form 104 and an entry on the CSO list of inquested deaths, there was a high level of agreement (88.2%) between the garda's opinion and the broad cause of death assigned by the CSO (Table 2). For 11% of the deaths, a natural cause of death code was assigned yet this option was not available to the garda completing the form.

Of the 495 deaths thought to be suicides by the garda, 485 (98%) were so recorded by the CSO. The other 10 deaths were either recorded as accidents or undetermined deaths with one exception recorded as a homicide. The CSO recorded seven deaths as suicides when this was not indicated by the garda. Decisions to override the garda's opinion would have been informed by an examination of the supplementary information on the Form 104, Form 102 and coroner's certificate and would have been in accordance with the ICD guidelines.

		Cause of death assigned by the CSO					
		Accident	**Suicide**	**Undetermined**	**Homicide**	**Natural**	**Total**
Garda opinion	**Accidental**	863 (90.2%)	1 (0.1%)	7 (0.7%)	0 (0%)	86 (9%)	957 (100%)
	Suicidal	4 (0.8%)	485 (98.0%)	5 (1.0%)	1 (0.2%)	0 (0%)	495 (100%)
	Undetermined	15 (15.6%)	3 (3.1%)	52 (54.2%)	0 (0%)	26 (27.1%)	96 (100%)
	Homicidal	3 (6.3%)	0 (0%)	2 (4.2%)	43 (89.6%)	0 (0%)	48 (100%)
	Other	37 (30.3%)	3 (2.5%)	10 (8.2%)	0 (0%)	72 (59.0%)	122 (100%)
	Total	922 (53.7%)	492 (28.6%)	76 (4.4%)	44 (2.6%)	184 (10.7%)	1718 (100%)

Table 2. Agreement between garda opinion of cause of death and cause assigned by the CSO.

FORM 104 DATA ITEMS

Reference Information:

The reference information comprises the stamp and entry numbers and the month and year of registration of the death as assigned by the registrars of deaths. This information was critical to the matching of returned Forms 104 to entries on the CSO list of inquested deaths. Consequently, the reference information was sourced from the CSO system when not on the Form 104 and inconsistencies between the reference information on the form and that on the CSO system were resolved. As mentioned in the previous section, there were 7 completed forms without reference information that consequently could not be found on the CSO system. The other 1,791 forms related to deaths registered in a total of 168 registrar districts, spread across all counties of the country. The distribution of these 1,791 returned Forms 104 by region of registration, detailed below, was similar to the population distribution.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Forms	545	384	520	231	111	1791
	(30.4%)	(21.4%)	(29.0%)	(12.9%)	(6.2%)	(100%)
Population	1,122,821	982,758	1,100,614	464,296	246,714	3,917,203
	(28.7%)	(25.1%)	(28.1%)	(11.9%)	(6.3%)	(100%)

Table 3. Completed Forms 104 and population distribution by region of registration.

1. Coroner's district

While titled 'coroner's district' on Form 104, it is the registrar's district that is recorded in respect of this data item. As mentioned above, the registrar's stamp number formed part of the reference information and this was used to identify the registrar's district. As a consequence, this data item was not recorded.

2. Date of adjournment or completion of inquest

Date of adjournment or completion of inquest was recorded on 1,758 (97.8%) of the 1,798 returned Forms 104. The level to which the inquest date was recorded on the forms did not vary by region of registration or by broad cause of death.

3. Member of An Garda Síochána and station investigating the death

The name of the individual garda and his/her station was not recorded. Every Form 104 is signed by a garda sergeant and the garda sergeant's sub district is specified. These were not recorded.

4. Date on which death occurred

Date of death was recorded on all 1,798 returned Forms 104. However, there were 81 cases (4.5%) where the year of death on the Form 104 differed from the year of death recorded on the CSO mortality database. The relevant coroners' certificates supported the accuracy of the Form 104 and the CSO database in 34 (42%) and 47 (58%) of these cases, respectively. In total, 121 (6.7%) forms were found to have specified a date of death that was inconsistent with both the CSO mortality database and the coroner's certificate. In some cases, this was because a range of dates were specified during which the death occurred. In more than half of the 121 inconsistencies (64, 52.9%), the dates differed by more than 7 days.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Consistent	531	354	475	208	102	1670
	(97.4%)	(92.2%)	(91.3%)	(90.0%)	(91.9%)	(93.2%)
Inconsistent	14	30	45	23	9	121
	(2.6%)	(7.8%)	(8.7%)	(10.0%)	(8.1%)	(6.8%)

Table 4. Consistency of date of death recorded on Form 104 with CSO and coroner's certificate by region of registration.

Whether the date of death on the Form 104 was consistent with both the CSO and the coroner's certificate varied by region of registration (Chi-square = 22.90, df = 4, $p < 0.001$). At 97%, the highest level of consistency was for Dublin-registered deaths, whereas the level ranged from 90% to 92% for forms arising from deaths in the other regions.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Consistent	943	50	454	100	130	1677
	(94.4%)	(96.2%)	(89.2%)	(98.0%)	(95.6%)	(93.3%)
Inconsistent	56	2	55	2	6	121
	(5.6%)	(3.8%)	(10.8%)	(2.0%)	(4.4%)	(6.7%)

Table 5. Consistency of date of death recorded on Form 104 with CSO and coroner's certificate by garda opinion of cause of death.

Whether the date of death on the Form 104 was consistent with both the CSO and the coroner's certificate also varied by the cause of death (Chi-square = 21.03, df = 4, $p < 0.001$). At 89%, the lowest level of consistency was for suicide deaths. Consistency ranged from 94% to 98% for the other causes of death.

5. Address at which death occurred (if not at home)

6. Name, surname and home address of deceased

Inquested deaths were registered in the county where the death occurred, irrespective of the county of residence of the deceased. The distribution of the inquested deaths by county of registration and county of residence is detailed in Section I of the report.

7. Sex

The sex of the deceased was recorded on all 1,798 returned Forms 104. For nine (0.5%) of the 1,718 forms with an entry on the CSO list of inquested deaths, the sex recorded on the form differed from that on CSO records. The form and the CSO were consistent with the coroner's certificate in four and five of these cases, respectively.

8. Date of Birth (age if date unknown)

Date of birth was recorded on just over half (924, 51.4%) of the 1,798 Forms 104. The age of the deceased was recorded on a further 799 (44.4%) forms. The completeness of recording date of birth varied markedly by region of registration (Chi-square = 397.34, df = 8, $p < 0.001$). The vast majority (81%) of forms relating to Dublin-registered deaths did not record date of birth whereas it was recorded on 59-75% of the forms from other regions. Neither age nor date of birth were recorded on 2-6% of forms.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Date of birth	103	225	347	174	71	920
	(18.9%)	(58.6%)	(66.7%)	(75.3%)	(64.0%)	(51.4%)
Age	430	144	145	44	34	797
	(78.9%)	(37.5%)	(27.9%)	(19.0%)	(30.6%)	(44.5%)
Nothing	12	15	28	13	6	74
	(2.2%)	(3.9%)	(5.4%)	(5.6%)	(5.4%)	(4.1%)

Table 6. Recording of date of birth on Form 104 by region of registration.

The recording of date of birth also varied markedly by cause of death (Chi-square = 58.17, df = 8, $p < 0.001$), from a low of 19% for homicide deaths to a high of 57% for suicides. At 6%, the highest level of missing age information was for deaths that the garda indicated were suicides.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Date of birth	523	10	291	37	63	924
	(52.4%)	(19.2%)	(57.2%)	(36.3%)	(46.3%)	(51.4%)
Age	438	42	188	64	67	799
	(43.8%)	(80.8%)	(36.9%)	(62.7%)	(49.3%)	(44.4%)
Nothing	38	0	30	1	6	75
	(3.8%)	(0%)	(5.9%)	(1.0%)	(4.4%)	(4.2%)

Table 7. Recording of date of birth on Form 104 by garda opinion of cause of death.

For the 75 forms with no age information, the age of the deceased was sourced from the relevant coroner's certificate or from the CSO records. Age according to the form was inconsistent with these sources and consequently amended for 108 (6.3%) of the remaining 1,723 deaths. Age was amended by one year in 80 (74%) of these cases but the maximum discrepancy was 34 years. Consistency of recording age did not vary by cause of death but varied significantly by region of registration (Chi-square = 27.84, df = 4, $p < 0.001$), from 89% for forms arising from inquested deaths registered in Connacht to 98% for those in Dublin.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Consistent	521	338	458	193	99	1609
	(97.7%)	(91.6%)	(93.1%)	(88.5%)	(94.3%)	(93.7%)
Inconsistent	12	31	34	25	6	108
	(2.3%)	(8.4%)	(6.9%)	(11.5%)	(5.7%)	(6.3%)

Table 8. Consistency of age information on Form 104 with CSO and coroner's certificate by region of registration.

9. Marital status

Marital status was recorded on 1,785 (99.3%) of the 1,798 Forms 104. The recording of marital status did not vary by region of registration or by cause of death. For the 13 outstanding forms, the marital status information was sourced from the relevant coroner's certificate.

Based on the 1,718 deaths with a completed Form 104 and an entry on the CSO list of inquested deaths, it was found that the marital status recorded on the form was consistent with that on the CSO database in 1,630 (94.9%) cases. The coroner's certificate agreed with the CSO database in all cases of inconsistent recording of marital status that were examined. Consistency of recording marital status did not vary by cause of death but varied by region of registration (Chi-square = 12.80, df = 4, p = 0.012), from 92% for forms arising from inquested deaths registered in Rest of Leinster to 98% for those from Ulster.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Consistent	513	334	478	201	104	1630
	(95.9%)	(91.8%)	(96.0%)	(93.5%)	(98.1%)	(94.9%)
Inconsistent	22	30	20	14	2	88
	(4.1%)	(8.2%)	(4.0%)	(6.5%)	(1.9%)	(5.1%)

Table 9. Consistency of marital status recorded on Form 104 with CSO and coroner's certificate by region of registration.

10. Most recent domestic living arrangements (e.g. living alone, with parents, with spouse/partner etc.)

Information relating to the most recent domestic living arrangements of the deceased were provided on 1,582 (88%) of the 1,798 Forms 104. The recording of such information varied significantly by region of registration (Chi-square = 52.95, df = 4, $p < 0.001$). At 96%, the highest level of recording was on forms arising from deaths registered in the Rest of Leinster region. The lowest level of recording was at 81% for Dublin-registered deaths.

	Region of registration					
	Dublin	**Rest of Leinster**	**Munster**	**Connacht**	**Ulster**	**Total**
Recorded	440	368	462	211	95	1576
	(80.7%)	(95.8%)	(88.8%)	(91.3%)	(85.6%)	(88.0%)
Not recorded	105	16	58	20	16	215
	(19.3%)	(4.2%)	(11.2%)	(8.7%)	(14.4%)	(12.0%)

Table 10. Recording of domestic living arrangement information on Form 104 by region of registration.

The recording of domestic living arrangement information also varied significantly by cause of death (Chi-square = 28.33, df = 4, $p < 0.001$). At 91%, the highest level of recording was on forms arising from suicide deaths and then accidental deaths (87%). The lowest level of recording was at 71% for homicide deaths.

	Cause of death					
	Accidental	**Homicidal**	**Suicidal**	**Undetermined**	**Other**	**Total**
Recorded	885	37	465	85	110	1582
	(88.6%)	(71.2%)	(91.4%)	(83.3%)	(80.9%)	(88.0%)
Not recorded	114	15	44	17	26	216
	(11.4%)	(28.8%)	(8.6%)	(16.7%)	(19.1%)	(12.0%)

Table 11. Recording of domestic living arrangement information on Form 104 by garda opinion of cause of death.

11. Employment status at time of death

Of the 1,798 Forms 104, 1,734 (96.4%) related to the deaths of individuals aged over 15 years. The employment status of the deceased was indicated on 1,679 (96.8%) of these forms. The recording of employment status varied by region of registration (Chi-square = 25.21, df = 4, $p < 0.001$), from 94% for deaths registered in Dublin and Ulster to 99% for deaths registered in Rest of Leinster and Munster.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Recorded	493	367	494	218	101	1673
	(94.1%)	(98.7%)	(98.8%)	(96.9%)	(94.4%)	(96.8%)
Not recorded	31	5	6	7	6	55
	(5.9%)	(1.3%)	(1.2%)	(3.1%)	(5.6%)	(3.2%)

Table 12. Recording of employment status on Form 104 by region of registration.

The recording of employment status also varied by cause of death (Chi-square = 38.51, df = 4, $p < 0.001$). It was recorded for 96-98% of accidental, homicidal, suicidal and undetermined deaths compared to 88% of the residual category, which were generally deaths by natural causes or misadventure or cases where the garda did not provide his/her opinion.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Recorded	921	51	496	95	116	1679
	(97.5%)	(98.1%)	(98.0%)	(96.0%)	(87.9%)	(96.8%)
Not recorded	24	1	10	4	16	55
	(2.5%)	(1.9%)	(2.0%)	(4.0%)	(12.1%)	(3.2%)

Table 13. Recording of employment status on Form 104 by garda opinion of cause of death.

12. Main occupation (If person was unemployed or retired, give last previous occupation)

Of the 1,798 Forms 104, 1,439 (80.0%) related to the deaths of individuals aged over 15 years and either employed, unemployed or retired. Occupation should have been recorded for each of these deaths and this was so for 1,096 (76.2%).

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Recorded	230	268	368	155	72	1093
	(53.0%)	(84.0%)	(88.9%)	(84.7%)	(84.7%)	(76.2%)
Not recorded	204	51	46	28	13	342
	(47.0%)	(16.0%)	(11.1%)	(15.3%)	(15.3%)	(23.8%)

Table 14. Recording of occupation on Form 104 by region of registration.

The recording of occupation varied by region of registration (Chi-square = 156.85, df = 4, $p < 0.001$). Occupation was specified for just over half (53%) of the Dublin-registered deaths compared to 84-89% of the deaths registered in the other regions. The completeness of recording occupation also varied by cause of death (Chi-square = 30.30, df = 4, $p < 0.001$). The highest level of recording was for suicide deaths (84%), followed by accidental (75%), other (69%), undetermined (65%) and homicidal (60%) deaths.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Recorded	593	27	358	53	65	1096
	(74.9%)	(60.0%)	(84.0%)	(64.6%)	(69.1%)	(76.2%)
Not recorded	199	18	68	29	29	343
	(25.1%)	(40.0%)	(16.0%)	(35.4%)	(30.9%)	(23.8%)

Table 15. Recording of occupation on Form 104 by garda opinion of cause of death.

The recording of occupation varied significantly depending on whether the deceased had been employed, unemployed or retired (Chi-square = 413.38, df = 2, $p < 0.001$). Occupation was recorded for 97% of cases where the deceased had been in employment, in two-thirds (65%) of cases where the deceased had been retired but in less than half of the cases where the deceased was unemployed (43%).

	Employment status of the deceased			
	Employed	Unemployed	Retired	Total
Recorded	737	155	204	1096
	(96.5%)	(43.1%)	(64.8%)	(76.2%)
Not recorded	27	205	111	343
	(3.5%)	(56.9%)	(35.2%)	(23.8%)

Table 16. Recording of occupation on Form 104 by employment status of the deceased.

13. Medical evidence as to cause of death

14. How injuries were sustained-describe events surrounding death...

These items were not recorded.

15. Please state the place where the incident occurred

Where the incident leading to death happened was described on 1,773 (98.6%) of the 1,798 Forms 104. The recording of place of incident did not vary by region of registration but did vary by cause of death (Chi-square = 152.35, df = 4, $p < 0.001$). It was recorded on at least 98% of the forms relating to accidental, homicidal, suicidal and undetermined deaths but on 87% of the forms relating to the residual category of death. This category included forms that were only partially completed.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Recorded	994	51	509	101	118	1773
	(99.5%)	(98.1%)	(100%)	(99.0%)	(86.8%)	(98.6%)
Not recorded	5	1	0	1	18	25
	(0.5%)	(1.9%)	(0%)	(1.0%)	(13.2%)	(1.4%)

Table 17. Recording of place of incident by garda opinion of cause of death.

16. Is there any evidence of the deceased being alcohol or drug dependent If drug dependent please specify type and if prescribed

Whether there was any evidence of the deceased being alcohol dependent was indicated on 1,745 (97.1%) of the 1,798 Forms 104. The level of recording did not vary by region of registration but did vary by cause of death (Chi-square = 101.64, df = 4, $p < 0.001$). It was recorded on at least 96% of the forms relating to accidental, homicidal, suicidal and undetermined deaths but on 83% of the forms relating to the residual category of death.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Recorded	982	50	501	99	113	1745
	(98.3%)	(96.2%)	(98.4%)	(97.1%)	(83.1%)	(97.1%)
Not recorded	17	2	8	3	23	53
	(1.7%)	(3.8%)	(1.6%)	(2.9%)	(16.9%)	(2.9%)

Table 18. Recording of presence of evidence that deceased was alcohol dependent by garda opinion of cause of death.

Whether there was any evidence of the deceased being drug dependent was indicated on 1,711 (95.2%) of the 1,798 Forms 104. The completeness of recording did not vary by region of registration but did vary by cause of death (Chi-square = 51.40, df = 4, $p < 0.001$). Again, it was the forms relating to the residual category of death that had the lower level of recording.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Recorded	956	48	497	97	113	1711
	(95.7%)	(92.3%)	(97.6%)	(95.1%)	(83.1%)	(95.2%)
Not recorded	43	4	12	5	23	87
	(4.3%)	(7.7%)	(2.4%)	(4.9%)	(16.9%)	(4.8%)

Table 19. Recording of presence of evidence that deceased was drug dependent by garda opinion of cause of death.

17. Deaths by poison: Please state type of poison. How and where stored.

The focus of this data item meant that it did not apply in the vast majority of cases. Some information was provided on 38 (2.1%) of the 1,798 forms. From the 1,718 deaths with a completed Form 104 and an entry on the CSO list of inquested deaths, there were 224 (13.0%) deaths coded as accidental or suicidal poisonings. The table below shows the extent to which a poison was specified on the Form 104 for deaths that were and were not coded as poisonings. No poison was specified on the Form 104 for the vast majority (87%) of deaths coded as poisonings.

		Accidental or suicidal poisoning?		
		No	Yes	Total
Poison specified?	No	1487 (99.5%)	194 (86.6%)	1681 (97.8%)
	Yes	7 (0.5%)	30 (13.4%)	37 (2.2%)

Table 20. Specification of poison on Form 104 for deaths that were and were not coded as accidental or suicidal poisonings.

18. Cases of shooting: How was the firearm obtained? Was it licensed/ unlicensed?

Some information was provided on 46 (2.6%) of the 1,798 forms. Across the 1,718 deaths with a completed Form 104 and an entry on the CSO list of inquested deaths, there were 44 (2.6%) deaths coded as involving firearms (whether accidental, homicidal, suicidal or undetermined). For each of these 44 deaths, a response was provided to the firearm questions on the Form 104.

19. Please state if any written note etc. was left at the scene (For example suicide note)

The focus of this item was broadened to include communications other than written notes left at the scene. Information on whether a final communication was made was available on 1,680 (93.4%) of the 1,798 forms. The availability of information did not vary by region of registration but did vary by cause of death (Chi-square = 56.70, df = 4, $p < 0.001$). Again, it was the forms relating to the residual category of death that had the lower level of recording whereas forms for suicide deaths had the highest level of recording.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Recorded	928 (92.9%)	46 (88.5%)	500 (98.2%)	96 (94.1%)	110 (80.9%)	1680 (93.4%)
Not recorded	71 (7.1%)	6 (11.5%)	9 (1.8%)	6 (5.9%)	26 (19.1%)	118 (6.6%)

Table 21. Availability of information relating to final communication by garda opinion of cause of death.

20. Any known medical history (mental/physical, previous contact with medical or social services)

Information relating to medical history was provided on 636 (35.4%) of the 1,798 forms. Whether medical history was specified on the form varied by region of registration (Chi-square = 36.36, df = 4, $p < 0.001$), being specified for almost half (46%) of the Dublin-registered cases but approximately one-third (30-35%) of the forms from other regions.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Specified	248	115	157	75	39	634
	(45.5%)	(29.9%)	(30.2%)	(32.5%)	(35.1%)	(35.4%)
Not specified	297	269	363	156	72	1157
	(54.5%)	(70.1%)	(69.8%)	(67.5%)	(64.9%)	(64.6%)

Table 22. Specification of medical history on Form 104 by region of registration.

Whether medical history was given on the form also varied by cause of death (Chi-square = 149.23, df = 4, $p < 0.001$), being given more often for suicides, undetermined deaths and the other category than for accidental and homicidal deaths.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Specified	247	6	273	49	61	636
	(24.7%)	(11.5%)	(53.6%)	(48%)	(44.9%)	(35.4%)
Not specified	752	46	236	53	75	1162
	(75.3%)	(88.5%)	(46.4%)	(52%)	(55.1%)	(64.6%)

Table 23. Specification of medical history on Form 104 by garda opinion of cause of death.

21. Any other known contributing factors (For example stress, family/ relationship problems, etc.)

Information relating to contributing factors was provided on 283 (15.7%) of the 1,798 forms. Whether any contributing factors were specified on the form varied by region of registration (Chi-square = 11.41, df = 4, $p = 0.022$), being given for one in five deaths registered in Rest of Leinster compared to just 9% for Ulster-registered deaths.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Specified	88	78	73	33	10	282
	(16.1%)	(20.3%)	(14.0%)	(14.3%)	(9.0%)	(15.7%)
Not specified	457	306	447	198	101	1509
	(83.9%)	(79.7%)	(86.0%)	(85.7%)	(91.0%)	(84.3%)

Table 24. Specification of contributing factors on Form 104 by region of registration.

Whether any contributing factors were specified on the form also varied significantly by cause of death (Chi-square = 196.38, df = 4, $p < 0.001$), being given for one in three cases of suicide and one in four homicides but fewer than 10% of the accidental, undetermined and other deaths.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Specified	80	12	175	10	6	283
	(8.0%)	(23.1%)	(34.4%)	(9.8%)	(4.4%)	(15.7%)
Not specified	919	40	334	92	130	1515
	(92.0%)	(76.9%)	(65.6%)	(90.2%)	(95.6%)	(84.3%)

Table 25. Specification of contributing factors on Form 104 by garda opinion of cause of death.

22. Name and address of GP, hospital doctor or medical attendant (if known)

A GP, hospital doctor or medical attendant was specified on 764 (42.5%) of the 1,798 forms, 'not known', 'no' or 'n/a' was recorded on a further 733 (40.8%) forms whereas the remaining 301 (16.7%) forms were left blank for this item. Level of recording the GP, hospital doctor or medical attendant varied significantly by region of registration (Chi-square = 58.11, df = 8, $p < 0.001$). The details were provided for 60% of the forms relating to Ulster-registered deaths, approximately half (52%) of those from Connacht and 38-41% from other regions.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Specified	225	146	207	120	66	764
	(41.3%)	(38.0%)	(39.8%)	(51.9%)	(59.5%)	(42.7%)
Not known/ No / N/A written	212	153	258	72	32	727
	(38.9%)	(39.8%)	(49.6%)	(31.2%)	(28.8%)	(40.6%)
Item left blank	108	85	55	39	13	300
	(19.8%)	(22.1%)	(10.6%)	(16.9%)	(11.7%)	(16.8%)

Table 26. Specification of GP, hospital doctor or medical attendant on Form 104 by region of registration.

Level of recording the GP, hospital doctor or medical attendant also varied significantly by cause of death (Chi-square = 72.43, df = 8, $p < 0.001$). The details were provided for over half (53-55%) of the forms relating to suicide and undetermined deaths, approximately 40% of accidental and other category deaths and just 19% of homicides.

	Cause of death					
	Accidental	Homicidal	Suicidal	Undetermined	Other	Total
Specified	374	10	268	56	56	764
	(37.4%)	(19.2%)	(52.7%)	(54.9%)	(41.2%)	(42.5%)
Not known/ No / N/A written	443	25	188	35	42	733
	(44.3%)	(48.1%)	(36.9%)	(34.3%)	(30.9%)	(40.8%)
Item left blank	182	17	53	11	38	301
	(18.2%)	(32.7%)	(10.4%)	(10.8%)	(27.9%)	(16.7%)

Table 27. Specification of GP, hospital doctor or medical attendant on Form 104 by garda opinion of cause of death.

23. Is Post Mortem report available?

Whether the post mortem report was available was known in 1,717 (95.5%) of the 1,798 cases, being available in 1,591 (88.5%) cases and unavailable in 126 (7.0%) cases. Availability of the post mortem report did not vary by cause of death but varied significantly by region of registration (Chi-square = 142.93, df = 8, $p < 0.001$). It was available in three out of four (76%) Dublin-inquested deaths compared to at least 90% of the inquested deaths registered elsewhere.

	Region of registration					
	Dublin	Rest of Leinster	Munster	Connacht	Ulster	Total
Available	415	347	495	218	110	1585
	(76.1%)	(90.4%)	(95.2%)	(94.4%)	(99.1%)	(88.5%)
Not available	92	19	11	3	1	126
	(16.9%)	(4.9%)	(2.1%)	(1.3%)	(0.9%)	(7.0%)
Unknown	38	18	14	10	0	80
	(7.0%)	(4.7%)	(2.7%)	(4.3%)	(0%)	(4.5%)

Table 28. Availability of post mortem report by region of registration.

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