WHO-FAMILY OF INTERNATIONAL CLASSIFICATIONS NETWORK MEETING 2005

16-22 October
Tokyo Japan

Co-morbidity of suicides in Australia

CY Choi and LT Ruzicka
Australian Institute of Health & Welfare

P1-8

Abstract The introduction of multiple causes of death coding in Australia in 1997 provides an opportunity to examine health problems recorded on suicide deaths. Data for 1997-2001 shows that a large proportion of suicide death records does not contain additional information indicating health problems. Regardless of this shortcoming, existing data shows that mental health problems and behavioural disorders play an important part in suicides.

Introduction

Health problems, in particular mental health problems and terminal illnesses, are often suggested to be proximate causes of suicidal behaviour. The extent of this can be investigated through the use of multiple causes of death data that are now available from the Australian Bureau of Statistics.

This study investigates the adequacy of Australian official causes of death statistics for the examination of this question and attempts to identify the particular health problems that are associated with suicides in Australia.

A comparison is also made with health problems listed as additional causes of accidental deaths

Methods & Materials

Causes of death are coded by the Australian Bureau of Statistics from the standard Medical Certificate of Cause of Death. All external causes are dual coded, ie underlying causes as well as types of injury. Underlying cause codes are ICD 9 E codes and ICD10 Chapter XX codes. Examples of underlying causes are car collision, discharge of gun, etc. Type of injury codes are in the main ICD9 N codes and ICD 10 Chapter XIX codes. Examples are spinal cord injuries etc.

Other causes in both Part 1 and Part 2 of the Certificate are also coded, and these give the additional causes.

The method use to identify health problems associated with suicide is simple tabulation of additional causes of suicide deaths. The method used to examine the difference in co-morbidity between suicide and accidental deaths is logistic regression. Odds ratios are used to quantify differences.

Results

General quality of 1997-2001 data:

The ratio of indeterminate (intention undecided) deaths to suicide deaths is low, indicating good quality - 3% males and 5% females. Much improved from 1989-1991 period - 5% males and 12% females.

Almost all (98%) suicide deaths have the required dual coding.

But

Proportion of suicide deaths that have additional causes of death information is low - 38% males and 50% females.

Additional causes

	Mental health (55%)	Others (45%)
Males –	22% mood disorder	15% CVD
	15% alcohol use	6% respiratory
	9% drug use	6% cancers
	5% schizophrenia	1% HIV/AIDS
Females-	**Mental health (57%)**	**Others (43%)**
	31% mood disorder	12% CVD
	9% drug use	7% respiratory
	5% alcohol use	4% cancers
	5% schizophrenia	7% digestive

Additional causes by age

	Mental health	Others
	Males	
Under 30	74 %	26%
30-59	65%	35%
60+	43%	57%
	Females	
Under 30	71%	29%
30-59	67%	33%
60+	43%	57%

Odds ratios for selected conditions between suicides and accidental deaths (age and sex standardised)

Condition	Odds ratio
Mood disorders (incl depression)	7.4
Schizophrenia	2.8
Other mental diseases	2.7
Cancers	1.9
Drug use	0.8
All other diseases	less than 0.50

Conclusions

Based on data that are available:

- 38% of male and 50% of female suicide records have information on additional causes.
- There are slightly more mental health conditions recorded in suicide deaths than other health conditions.
- Among those under 30, mental health conditions are more prominent - 74% for both males and females, but non-mental health conditions become more prominent at ages 60 and over (71%).
- Mood disorder (including depression) is the major additional conditions, followed by circulatory conditions.
- Schizophrenia constitutes 5% of all additional conditions.

Comparing with accident deaths:

- Mental health problems are more important co-morbidities of suicides than of accidental deaths, in particular mood disorders (including depression)
- Drug use is also an important co-morbidity
- Among health conditions other than mental health, only cancers showed an odds ratio of more than 1.0.
- Alcohol and drug use is not different between suicide and accident deaths, although their frequencies are high.

But how good are the multiple causes of death data?

- All accident and sudden deaths in Australia are investigated by coroners who certify the cause of death.
- But less than 50% of suicide deaths have additional conditions coded seem very low. Should this be interpreted as indicative of the level of importance of health problems in suicides?
- Are there information held by coroners that are not accessible for coding by the Australian Bureau of Statistics.
- Coroners' notes/records are an important source of information not yet studied.