Substance use and mood disorders as a cause of death in Australia

Overview

Mental health is a major policy focus in Australia and there is a growing need for more comprehensive, high quality information in this field. Analysis of Causes of Death data can help to highlight the impact of mental health conditions across urban and rural areas, and therefore may assist in better targeting of health services.

Introduction

The most recent National Survey of Mental Health and Wellbeing (2007) found almost half of all Australians had a mental disorder during their lifetimes. This highlights the importance of understanding the impact of these conditions on health outcomes. The ABS’ mortality dataset provides both information about people who die of a condition (underlying cause of death), and also about those who die with a condition (multiple cause of death). Multiple cause of death data can provide additional insight into mental and behavioural disorders, which are less commonly identified as an underlying cause. When combined with detailed geographic information, this dataset can shed light on the impacts of specific mental health conditions across urban and rural areas.

The analysis presented below focuses on two groups of disorders from the Mental and Behavioural Disorder chapter (F00-F99) of the International Classification of Diseases (ICD). Substance use disorders (F10-F19) and mood disorders (including depression) (F30-F39) have been recorded as a multiple cause of death in large numbers between the years of 2006 and 2010. The analysis does not focus on Dementia (F00-F09) which is most commonly associated with older people and different areas of health policy. Small numbers of deaths precluded inclusion of other mental and behavioural disorders as well as schizophrenia, anxiety, behavioural and personality disorders.

To assist in understanding the impact of these disorders in rural areas, data are shown by region (capital cities, other urban areas, and balance of state), sex, and age at death. Rates presented are standardised death rates (SDRs) per 100,000 people, averaged over the five years and age standardised to the 2001 estimated resident population.

Results

Cause of death

There were approximately 850,000 deaths registered in Australia over the five years from 2006-2010. Over this period 30.7% people (28.2%) had mental and behavioural disorders recorded as an underlying cause of death, with almost 28,000 attributed to dementia. While 1,942 deaths were attributed to Substance use disorders as an underlying cause (F10-F19) over 10 times this number (20,507) occurred where a substance use disorder was recorded as a multiple cause of death. Similarly, while 342 deaths were attributed to Mood disorders (F30-39), over 25 times this number (9,051) were recorded with a mood disorder present. Where a mood disorder was recorded, the pattern of deaths by age and region differs. The proportion of deaths that occurred between the ages of 15 and 65 was more in line with that for all causes of death. For those aged 65 and over, the death rate is higher in rural areas and balance of state regions.

Age at death

For deaths where a substance use disorder was recorded, approximately 40% occurred between the ages of 15 and 64. In comparison, for deaths from all causes, only 19% occurred between these ages. Where a mood disorder was recorded, the pattern of deaths by age and region differs. The proportion of deaths that occurred between the ages of 15 and 65 was more in line with that for all causes of death. For those aged 65 and over, the death rate is higher in capital cities than in other urban and balance of state regions.

Underlying causes

Further analysis of the multiple cause dataset can be conducted by examining underlying causes for deaths where a particular condition was found to be present. Among deaths where substance use disorders were present, Mental and behavioural disorders due to use of alcohol (F10) and due to tobacco (F17) were highly represented. The underlying causes associated with these deaths show clear differences in death rates from external causes (accidents, suicides and assaults) and cancers.

In relation to alcohol use disorder, death rates from external causes were particularly high among young males in rural areas. For tobacco use disorders, death rates were particularly high from cancers among those over 65, with the highest rates observed in rural areas (see Table 1).

Sex of person

Death rates for males with substance use disorders present were considerably higher in other urban and balance of state regions (32.9 and 38.9 deaths per 100,000) compared to capital cities (23.5). While the same pattern exists across regions for females, the death rates are comparatively much lower. Death rates where mood disorders are present are almost identical for males and females and across regions.

Data interpretation

There are many factors that can impact on the information which is captured at the time of death. A person’s place of usual residence is captured on a death certificate. However, access to services can become a critical issue when people require specialised medical treatment. This may result in changes to a person’s place of usual residence prior to death.

Regional factors may also impact on whether or not a mental health condition is diagnosed prior to death. Conditions can only be analysed if they are recorded on a death certificate or in the findings of a coroner. Analysis of multiple causes of death data has the potential to shed light on patterns of mortality across different regions of Australia. However, the correlations between conditions within the dataset are complex and should be interpreted with caution. The analysis presented here provides an insight into some mental health conditions and should be viewed as a platform for further research.

Definitions

Underlying cause of death – The condition or disease which started the morbid train of events leading to death.

Multiple cause of death – all conditions or diseases listed on a death certificate or mentioned in coroners findings, including the underlying cause of death.

Mental and behavioural disorders (F00-F99) – disorders of psychological development. Mental and behavioural disorders due to psychoactive substance use (F10-F19) substances can include alcohol, opioids, cannabinoids, sedatives, cocaine, tobacco and solvents.

Mood [affective] disorders (F30-39) – disorders in which the fundamental disturbance is a change in affect or mood to depression.

External causes of morbidity and mortality (V01-Y98) – includes deaths resulting from accidents, intentional self-harm and assaults.

Neoplasms (C00-D48) – Cancers, both malignant and benign.

Footnotes

1. National Survey of Mental Health and Wellbeing: Summary of Results, 2007 (cat. no. 4366.0).
2. Capital city, ‘other urban’ and Balance of state categories are derived from the statistical district structure (SDS). The ‘other urban’ category is generally composed of urban centres with a population of 25,000 or more. ‘Balance of state’ incorporates geographical codes not otherwise included in capital city or other urban areas.
4. For more information on suicides, see the ABS publication Suicides, Australia, 2010 (cat. no. 3309.0).