



Multiple causes of death for selected chronic diseases

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Aim

To explore multiple causes of death in Australia.

Background

Mortality statistics are usually compiled using the underlying cause only. However, in most cases, more than one disease contributes to death. Multiple causes refers to the underlying cause and all other causes contributing to the death.

Methods

Multiple causes were examined for all 'natural' and selected chronic disease deaths using the Australian Institute of Health and Welfare's National Mortality Database for 1997–2007.

The rates of selected chronic diseases were calculated by underlying cause of death and all causes of death.

The most common contributing causes of death were identified for deaths involving selected chronic diseases.

Results

Some chronic diseases were more likely than others to be reported as associated causes of death, for example, chronic and unspecified kidney failure, diabetes, asthma, dementia and Alzheimer disease, and chronic obstructive pulmonary disease (see Figure 1).

Other chronic diseases were more likely to be reported as the underlying cause, for example, prostate, breast, colorectal, liver and lung cancers (see Figure 1).

Coronary heart disease, hypertensive diseases and diabetes often featured as leading contributory causes for deaths involving the selected chronic diseases (see Figure 2).

Nearly one-quarter (24%) of deaths involving dementia and Alzheimer disease also involved influenza and pneumonia (see Figure 2).

Figure 1: Deaths involving selected chronic diseases, per cent as underlying cause of death and associated cause of death, 2007

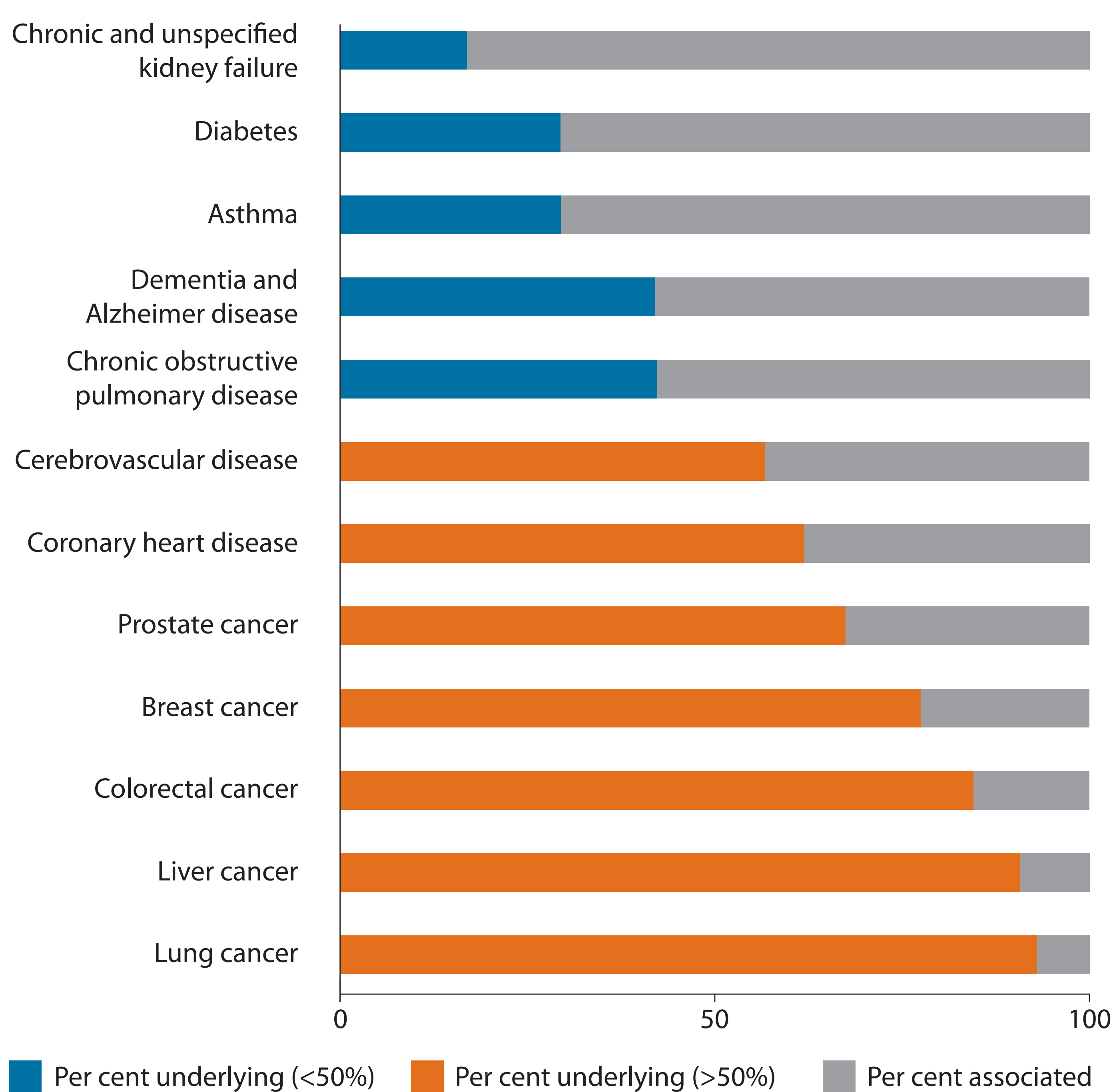


Figure 2: Most common contributing causes of death for selected chronic diseases reported as multiple causes, 2005–2007

Reported as any cause	Most common contributing causes (per cent of deaths)				
	1st	2nd	3rd	4th	5th
Colorectal cancer	19	12	7	7	6
Liver cancer	31	11	8	8	7
Lung cancer	15	15	11	10	9
Breast cancer	20	10	9	7	7
Prostate cancer	22	13	12	10	10
Diabetes	47	30	21	21	20
Dementia and Alzheimer disease	25	24	23	15	14
Coronary heart disease	24	20	16	15	13
Cerebrovascular disease	25	24	19	15	13
Chronic obstructive pulmonary disease	34	23	21	13	12
Asthma	34	25	23	18	16
Chronic and unspecified kidney failure	39	33	20	17	12

- Coronary heart disease
- Cerebrovascular disease
- Hypertensive diseases
- Heart failure
- Cardiac arrhythmias
- Influenza and pneumonia
- Chronic obstructive pulmonary disease
- Dementia and Alzheimer disease
- Cancers of unknown primary site
- Mental and behavioural disorders due to psychoactive substance use
- Diabetes
- Kidney failure
- Cirrhosis of the liver

Notes
1. For each chronic disease recorded as either an underlying or associated cause of death, the figure shows the commonly reported contributing causes.
2. Deaths for 2006 and 2007 are based on preliminary data and are subject to revision.

Conclusions

These analyses highlight the underestimation of the contribution of chronic diseases to mortality when cause of death is described using only the underlying cause, particularly for:

- chronic and unspecified kidney failure
- diabetes
- asthma
- dementia and Alzheimer disease
- chronic obstructive pulmonary disease.

The use of multiple cause data gives a more complete picture of all diseases contributing to deaths, which can also:

- support targeted prevention, treatment and service planning
- inform surveillance
- guide research investments
- enhance health measures that rely on cause of death information, such as estimates of burden of disease.

For more details see the full report at www.aihw.gov.au

Multiple causes of death: an analysis of all natural and selected chronic disease causes of death 1997–2007. Bulletin no. 105.

Contact us

For more information about the National Mortality Database or the Population Health Unit, visit our website at www.aihw.gov.au or email us at info@aihw.gov.au or mortality_info@aihw.gov.au