What is Dementia?

Dementia in Australia - Australian Institute of Health and Welfare 2012

Dementia is not a single specific disease. It is an umbrella term describing a syndrome associated with more than 100 different diseases that are characterised by the impairment of brain functions, including language, memory, perception, personality and cognitive skills. Although the type and severity of symptoms and their pattern of development varies with the type of dementia, it is usually of gradual onset, progressive in nature and irreversible.

The most common types of dementia are Alzheimer disease, vascular dementia, dementia with Lewy bodies, and frontotemporal dementia (which includes Pick disease). See Box 1 for a description of each.

The literature is inconsistent in terms of how common the various types of dementia are, with the proportions shown in Box 1 taken from the *World Alzheimer Report* (ADI 2009). This inconsistency may be partially explained by the lack of distinct borders between the different types of dementia. Another explanation may be that a definitive diagnosis cannot be made until autopsy evidence is available. Also, rather than having a single form of dementia, many people have mixed forms (for example, Alzheimer disease and vascular dementia, or Alzheimer disease and dementia with Lewy bodies) (ADI 2009).

Note that the coexistence of Alzheimer disease and vascular dementia is sometimes referred to as 'mixed dementia', but there is no consensus on the definition and diagnostic criteria for this form (Seeher et al. 2011).

Box 1: Description of the most common types of dementia

Alzheimer disease is the most common type of dementia, accounting for about 50% to 75% of dementia cases worldwide. It is characterised by short-term memory loss, apathy and depression in the early stages. Onset is gradual and decline is progressive. This form is most common among older people with dementia, particularly among women.

Vascular dementia is generally considered to be the second most common type of dementia, with about 20% to 30% of dementia cases thought to be this type. It is caused by cerebrovascular conditions (for example, stroke). Symptoms in the early stages are similar to Alzheimer disease, but memory loss is not as great and mood fluctuations are more prominent. Physical frailty is also evident. Onset can be sudden. The course of the disease is less predictable than Alzheimer disease, with decline more likely to be stepwise.

Frontotemporal dementia is thought to account for about 5% to 10% of cases and is relatively more common in males with a younger onset of dementia. Early symptoms include personality and mood changes, disinhibition and language difficulties.

Dementia with Lewy bodies accounts for up to 5% of cases and is associated with the development of abnormal cells, called Lewy bodies, in the brain. Characteristic symptoms include marked fluctuation in cognitive ability and visual hallucinations, as well as symptoms similar to Parkinson disease (for example, tremor and rigidity). Progression tends to be more rapid than Alzheimer disease.

Sources: ADI 2009; Draper 2011; Seeher et al. 2011.

In addition to the four most common types of dementia, there are many other less common types including dementia in other diseases (such as Parkinson disease, Huntington disease and Creutzfeldt-Jakob disease), alcohol-related dementia, HIV/AIDS-related dementia, and dementia due to metabolic causes or trauma.

Stages of Dementia

The course of dementia is often characterised as occurring in three stages:

a) Mild or early-stage dementia
b) Moderate or middle-stage dementia
c) Severe or late-stage dementia.

Box 2 presents a general overview of these stages based on the Clinical Dementia Rating (CDR) scale (Morris 1993) and a review of the topic by Draper (2011). As noted by Draper, there are overlaps between the three stages and identifying the stage that a person has reached is not always straightforward.

Box 2: An overview of the stages of dementia

Mild or early: Deficits are evident in a number of areas (such as memory and personal care) but the person can still function with minimal assistance.
Symptoms include: moderate memory loss especially for recent events, some disorientation in time, moderate difficulties with problem solving, reduced interest in hobbies, and the need for prompting regarding personal care tasks.

Moderate or middle: Deficits become more obvious and severe, and increasing levels of assistance are required to help the person maintain their functioning in the home and community.
Symptoms include: severe memory loss, considerable difficulty orienting to time and place, obvious difficulties in finding words, severe impairment of judgment and problem solving, need for assistance with personal care tasks, and emergence of behavioural difficulties (for example, wandering, aggression, sleep disturbance and disinhibited behaviour).

Severe or late: Characterised by almost total dependence on the care and supervision by others.
Symptoms include: very severe memory loss, very limited language skills, unable to make judgements or solve problems, regularly not recognising familiar people, frequent incontinence, requires substantial assistance with personal care, and increased behavioural difficulties.

Sources: Draper 2011; Morris 1993.

Impact of dementia on life expectancy

One frequently raised question is the impact of dementia on life expectancy and what factors influence the survival of people with dementia. This is an important issue for individuals, families and clinicians, as well as for health policy. While studies consistently show that there is an increased risk of dying among people with dementia compared with those without, and that dementia is a major cause of death, estimating the probable survival time is more difficult. A recent review of this topic by Brodaty et al. (2012) noted that

average survival times varied considerably from one study to another (ranging from 3 to 10 years).

Factors that have been found to influence reported survival times are:

a) Characteristics of the individual (such as age, sex and other co-existing conditions)
b) Nature of the dementia (for example, type of dementia and severity at diagnosis)
c) Differences in study design, such as whether time from onset of symptoms or from diagnosis was considered, the diagnostic criteria used and the scope of the sample (community, clinics, institutions, etc.) (Brodaty et al. 2012; Guehne et al. 2005; Rait et al. 2010; Xie et al. 2008).

The literature also notes that studies about survival estimate *average* survival time. Survival for any one individual may be longer or shorter, depending on their unique circumstances (Brodaty et al. 2012).

Number of people with dementia is expected to increase markedly

An estimated 298,000 Australians had dementia in 2011, of whom 62% were women, 74% were aged 75 and over, and 70% lived in the community.

Dementia poses a substantial challenge to health, aged care and social policy. Based on projections of population ageing and growth, the number of people with dementia will reach almost 400,000 by 2020. Although projection methods vary, the number of people with dementia is projected to triple between 2011 and 2050, to reach around 900,000 by 2050.

Dementia is a leading cause of death and burden of disease

Dementia was the third leading cause of death in 2010 (accounting for 6% of all deaths), with an average of 25 people dying from dementia every day that year. Twice as many women as men died from dementia (6,083 and 2,920 respectively).

The number of deaths due to dementia increased 2.4 times between 2001 and 2010 (from 3,740 to 9,003 deaths). Some of this increase is due to population ageing and growth, but some may be due to changes in how dementia is recorded on death certificates. Dementia was recorded as the underlying or an additional cause of 14% of deaths in 2010.