

4 Burden of disease

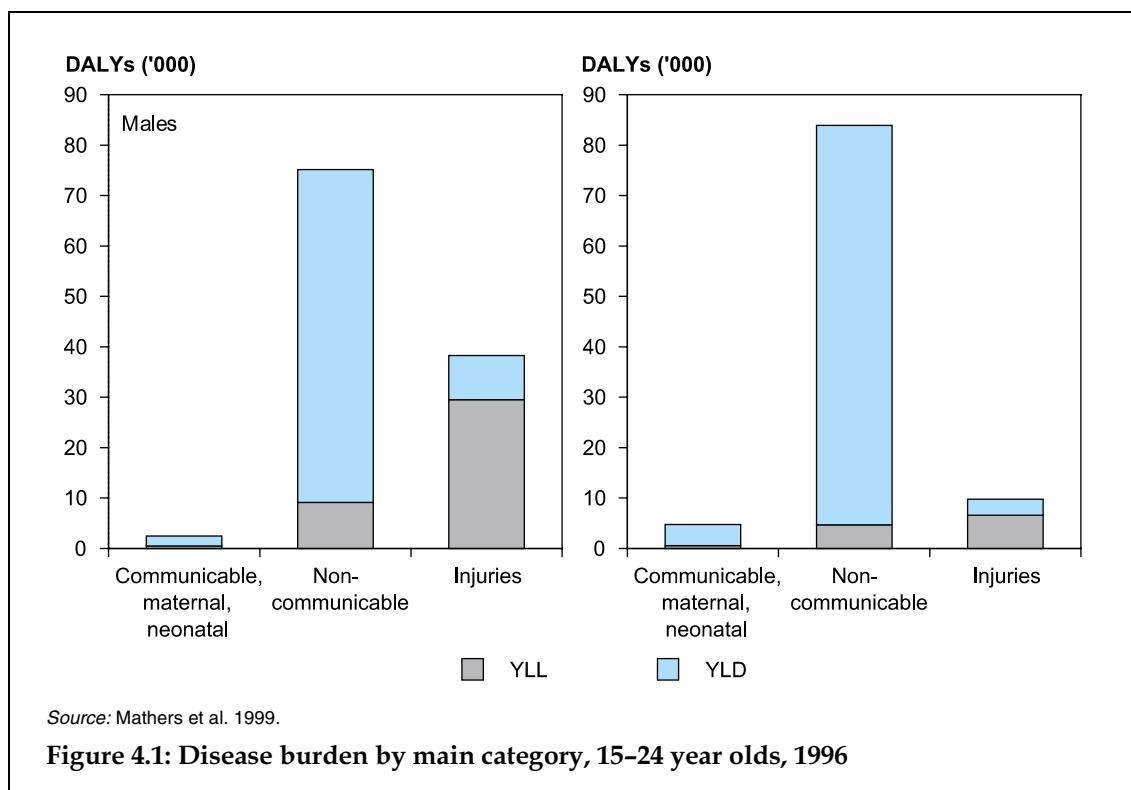
This chapter summarises the relevant subset of the Australian Burden of Disease and Injury Study on young people (Mathers et al. 1999). The study assessed the total 'burden' of disease/injury, by using a measure that included both mortality and disability components. This provided a means of combining information included in the next three chapters of this report on mortality, morbidity and disability. It also introduced the concept of premature death/disability, which is particularly relevant when making comparisons with other age groups.

The measure used in the Australian Burden of Disease and Injury Study is the disability-adjusted life year (DALY). It extends the commonly used measure of potential years of life lost due to premature death to also include years of healthy life lost due to disability in a population. Therefore, DALYs are calculated as the sum of years of life lost due to premature death (YLL) and years of life lost due to disability (YLD). One DALY is equal to one lost year of 'healthy' life. The methodology used in the Australian study is based on that used in the Global Burden of Disease Study (Murray & Lopez 1996). Detail on the methodology used in the Australian study can be found in Mathers et al. (1999). The results presented in this chapter relate to the relevant incident cases of disease/injury; that is, it provides a measure of the lifetime burden of new cases of disease and injury occurring among 15–24 year olds.

The information in this chapter provides a rich set of results that can be used to assess the main diseases/injuries affecting young people. Care needs to be taken when comparing results in this chapter with those in other parts of this report for two reasons: results in this chapter relate to 15–24 year olds (many results in other parts of this report relate to 12–24 year olds), and are based on 1996 (whereas other results in this report may relate to different years).

Burden of disease for young people

This section includes information on the burden of disease in 1996 in young people aged 15–24 years. Information is presented on premature mortality (years of life lost due to premature mortality: YLL) and the impact of disability (years of healthy life lost due to disability: YLD). As described above, the sum of YLL and YLD equals the total disability-adjusted life year (DALY).



- The major burden of disease for young people aged 15–24 years in 1996 was from non-communicable diseases, accounting for 65% of the burden in males and 85% of the burden in females. The majority of this burden is in the form of years lost due to disability (YLD), rather than years lost due to premature death (YLL).
- The category with the highest years of life lost is injury, representing 75% of YLL in 15–24 year old males and 56% of YLL in young females.
- The category ‘communicable diseases, maternal and neonatal conditions’ accounted only for a small component of the disease burden in young people.

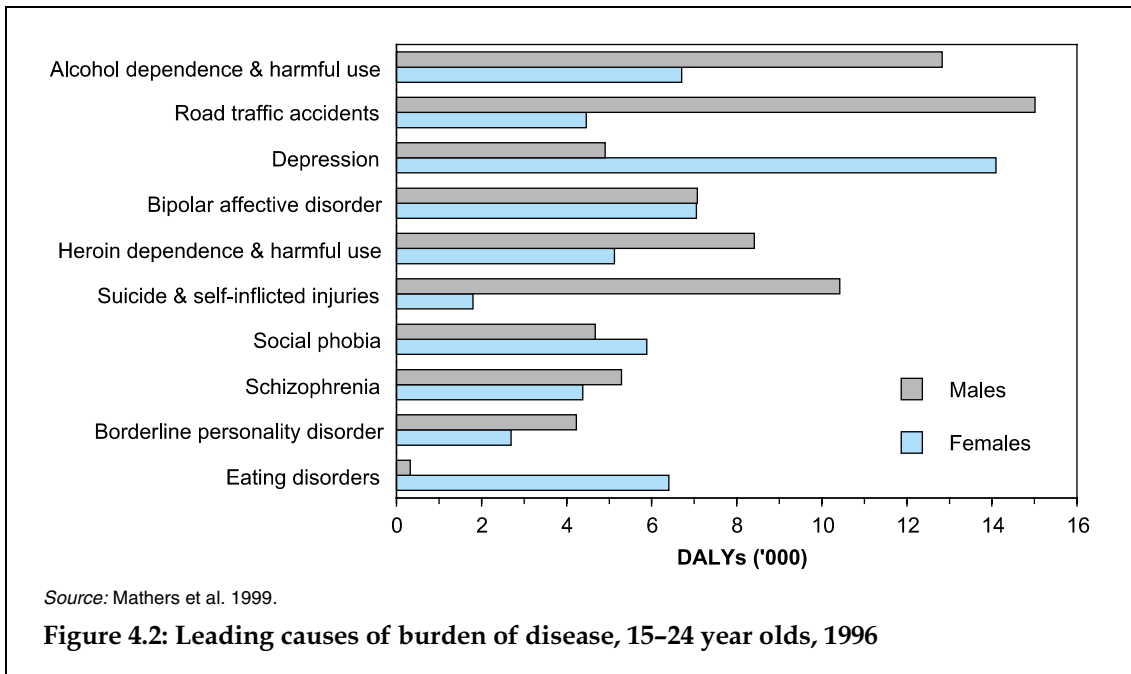
Burden of disease

Table 4.1: Burden of disease by category, 15–24 year olds, 1996

Category	Males			Females			Persons		
	YLL	YLD	DALY	YLL	YLD	DALY	YLL	YLD	DALY
<i>Communicable, maternal, neonatal</i>									
Infectious and parasitic diseases	430	1,022	1,452	391	1,634	2,026	821	2,656	3,478
Acute respiratory infections	58	804	862	120	760	880	178	1,564	1,742
Maternal conditions	..	..	..	30	985	1,015	30	985	1,015
Neonatal causes	..	..	..	—	—	—	—	—	—
<i>Non-communicable</i>									
Nutritional deficiencies	—	131	131	30	773	803	30	904	934
Malignant neoplasms	2,222	414	2,637	1,293	353	1,645	3,515	767	4,282
Other neoplasms	87	17	104	60	30	90	147	47	194
Diabetes mellitus	115	696	812	30	1,137	1,167	146	1,833	1,978
Endocrine and metabolic	404	256	660	451	207	658	856	462	1,318
Mental disorders	2,607	54,066	56,672	693	60,791	61,484	3,299	114,857	118,156
Nervous system/sense disorders	1,466	1,862	3,329	631	1,729	2,360	2,097	3,591	5,688
Cardiovascular disease	1,093	507	1,600	542	452	994	1,635	959	2,594
Chronic respiratory disease	461	912	1,373	361	5,320	5,681	822	6,232	7,054
Digestive diseases	115	1,645	1,760	120	1,922	2,042	234	3,567	3,802
Genitourinary diseases	28	1,337	1,366	—	2,718	2,718	28	4,055	4,083
Skin diseases	—	1,349	1,349	—	1,475	1,475	—	2,824	2,824
Musculoskeletal diseases	—	1,324	1,324	60	1,032	1,092	60	2,356	2,416
Congenital abnormalities	548	—	548	420	—	420	968	—	968
Oral health	—	1,465	1,465	—	1,408	1,408	—	2,873	2,873
Ill-defined conditions	—	184	184	—	654	654	—	838	838
<i>Injuries</i>									
Unintentional injuries	18,095	7,716	25,811	4,366	2,942	7,308	22,461	10,659	33,119
Intentional injuries	11,393	1,032	12,426	2,188	233	2,421	13,582	1,266	14,847
Total	39,122	76,739	115,861	11,786	86,555	98,341	50,908	163,294	214,202

Source: Mathers et al. 1999.

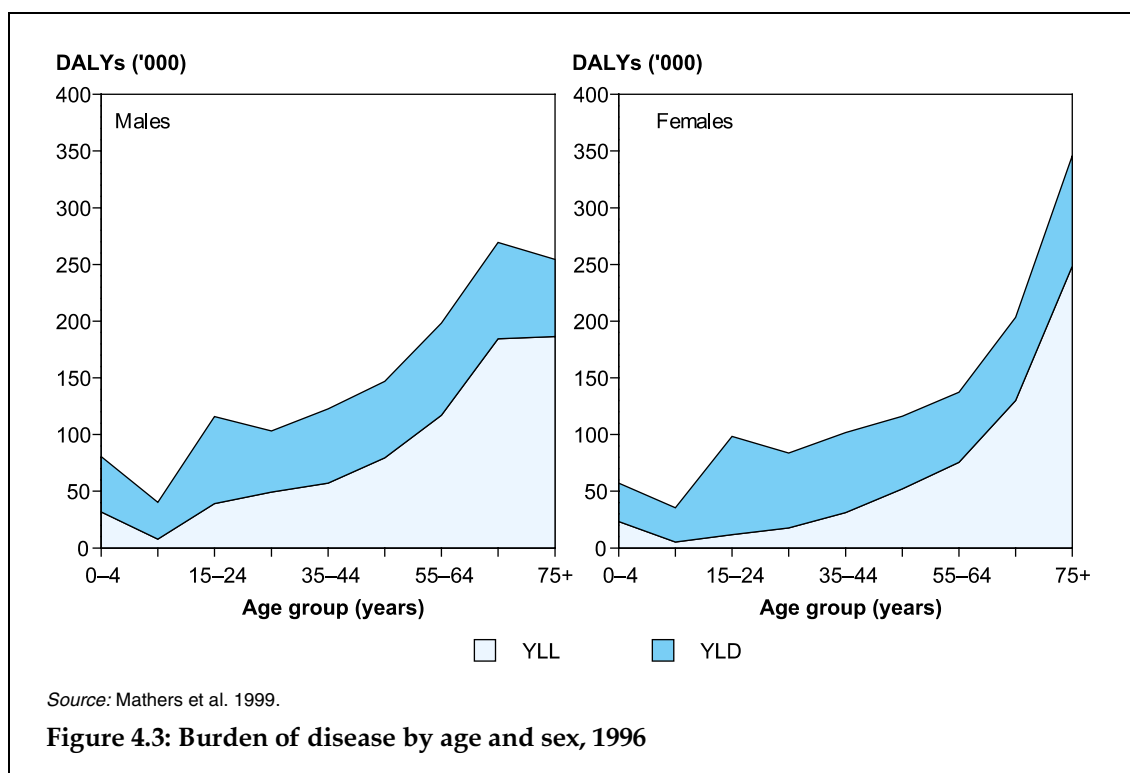
- Mental disorders dominate the burden of disease in young people, and account for most of the non-communicable disease burden shown in Figure 4.1. This is the case for both males and females. Mental disorders account for 74% of the non-communicable disease burden (males 75%, females 73%), and 55% of the total burden in young people (males 49%, females 63%).
- Injury was the next largest burden of disease/injury category in young people in 1996. In contrast to mental disorders, a higher component of the burden is from premature death than from disability. For males, injury accounted for 33.0% of the burden (22.3% from unintentional injury and 10.7% from intentional injury). For females, injury made up 9.9% of the total burden (unintentional 7.4%, intentional 2.5%).



- Figure 4.2 shows the ten leading causes of disease burden in 15-24 year olds. The majority of these fall into the mental disorders category (see Table 4.1) which includes drug dependence/harmful use. The remainder comes from either the unintentional injury (road traffic accidents) or intentional injury (suicide/self-inflicted injury) category.
- Alcohol dependence and harmful use was the leading cause of overall burden accounting for 11% of the burden in males and 7% of the burden in females. The second highest cause of burden was from road traffic accidents (13% of the burden for males, 5% for females).
- Depression was the third leading cause of burden overall, but by far the largest burden among females (15% of the burden). The other cause with a substantially larger burden in females than in males was from eating disorders.
- Suicide and self-inflicted injuries was the sixth highest cause of disease burden in young people, with a substantially larger burden in males than in females (9% of the male burden, 2% of the female burden).

Comparison with other age groups

Patterns of disease burden differ across age groups and between males and females. Information is provided on the total burden across age groups to allow comparisons in the burden between young people and other age groups.



- Total burden of disease varies by age group. For both males and females, the lowest burden occurred in the two youngest age groups, followed by the 25–34 year age group. Young people aged 15–24 years had the next lowest burden.
- Young people had one of the highest proportions of total burden coming from years lost due to disability (YLD) rather than from premature death (YLL). For young males, 66% of the burden was from YLD (second after 5–14 year olds with 81%). Young females had the highest proportion of total burden coming from YLD (88%) across age groups.

References

Mathers C, Vos T & Stevenson C 1999. Burden of disease and injury in Australia. AIHW Cat. No. PHE 17. Canberra: AIHW.

Murray CJ & Lopez AD 1996. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020. Harvard: Harvard School of Public Health.