

# Aged disability and community care in Australia: issues for southern Africa

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## Abstract

*Disability among the aged is an issue of growing importance to southern Africa as it is throughout the world. New methods and debates about disability and ageing are illustrated by a discussion of the Australian situation. First, trends in mortality and life expectancy are outlined, and the debate about the compression of mortality critically examined. Second, the same techniques of analysis are applied to disability and handicap rates derived from national surveys. The hypothesis of compression of morbidity or illness is also critically examined. Third, the impact on the community of disability is discussed, and expectations of life "free of community services" and "free of institutionalization" are calculated. Finally, trends in health-risk factors and the contributions of various diseases to health expectations are outlined. Southern African countries are also part of the movement to measure quality-of-life years – not only quantity – and need to develop their population monitoring of disability and demands for community care. The development will facilitate policy planning to improve the management of community services provided for the elderly by families, the community and formal providers.*

## Introduction

Many countries of the southern African region share with Australia a British colonial past where similar traditions and policies have influenced the countries' development. However similarities are matched by differences in population mix and the ways that different institutions have developed. For example, Australia is a multicultural society with around a third of the people aged 70+ years not speaking English well because they were immigrants from a variety of non-English-speaking countries after World War II. There is also a small number of indigenous aboriginal Australians. The South African political legacy and multicultural mix is not strictly comparable despite the similarities to Australia. The purpose of introducing a discussion of Australian data into this article is to bring ideas and methods recently developed internationally into local discussions. Strict comparability is not necessary for this.

The key argument is that the health of the elderly relates not only to length of life but even more importantly to quality of life. Although average life expectancy is increasing at older

ages, there is generally less information available on trends in sickness and disability in the elderly population. This lack of information is being redressed by an increased focus on chronic illness and disability in national health surveys. This article reviews Australian trends in disability and handicap, expectation of health, and demand for personal services and community care. The central question asked is: Have improvements in life expectancies been accompanied by parallel decreases in disability and morbidity?

## Trends in mortality and life expectancy

Australia's population at 30 June 1991 was estimated to be 17,3 million. Of these people, 1 976 000 were 65 years and older. This figure represents 11,4 % of the population. According to long-term projections of the Australian Bureau of Statistics (ABS) (1990), the proportion of the population aged 65 years and over is projected to increase to 12,3 % in 2001 and to exceed 20 % in another 30 years. Older females far outnumber old males in Australia's population, with 75 males for every 100 females among people aged 65 years or older in 1991 (McCallum, 1990).

Life expectancy at birth in Australia has risen continuously during the 20th century, with the exception of a period during the 1960s, when death from cardiovascular disease increased, particularly for men (Table 1). Between 1905 and 1990, life expectancy at birth increased by 19 years for men and 21 years for women. Life expectancy from age 65 years, by contrast, increased only marginally in the first six decades of the century: 0,9 years for men and 2,5 years for women. Over the past two decades the rate of increase has been greater: increases of three years for men and 3,3 years for women.

The increases in life expectancy that occurred in the first half of the century were the result of rapid declines in infant and maternal mortality, particularly the lessening impacts of the infectious diseases associated with childhood and early adulthood. During the 1940s and 1950s, gains in life expectancy slowed; for some age groups, they reversed. This was due to the progress of the epidemics of cardiovascular disease, which peaked in the mid-1960s, and tobacco-caused lung cancer, which has peaked for men but not for women.

Since the 1960s a new development has been evident. The gains in life expectancy have been concentrated among the middle-aged and older population. There have been dramatic

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declines in death due to some causes. Between 1968 and 1988, for example, age-adjusted death rates from cardiovascular disease declined by 49 % for men and 50 % for women (Australian Institute of Health, 1990).

Aborigines (taken here to include both Australian Aborigines and Torres Strait Islanders) have not shared in the recent marked improvements in mortality rates in Australia (Australian Institute of Health and Welfare, 1992). Overall, the standardized death rate for Aboriginal males is 3,1 times that of the total Australian male population. For Aboriginal females, it is 3,2 times that of the total female population. Reflecting these higher death rates, the expectation of life at birth for Aboriginal males and females is 15 to 17 years less than those for the total Australian population. Whilst the survival rates match those of less developed countries, the actual causes of death show that diseases of affluence, such as cardiovascular diseases, are disproportionate killers of indigenous Australians.

**Table 1**

Life expectancy at birth and at age 65, 1905-90, Australia

Average life expectancy in years					
	1905	1921	1947	1966	1990
<b>At birth</b>					
- Men	55,2	59,2	66,1	67,6	73,9
- Women	58,8	63,3	70,6	74,2	80,0
<b>At age 65</b>					
- Men	11,3	12,0	12,3	12,2	15,2
- Women	12,9	13,6	14,4	15,7	19,0
Annual percentage increase in life expectancy					
	1905-21	1921-47	1947-66	1966-90	
<b>At birth</b>					
- Men	0,43	0,43	0,12	0,37	
- Women	0,46	0,42	0,26	0,31	
<b>At age 65</b>					
- Men	0,38	0,08	0,04	0,92	
- Women	0,34	0,23	0,44	0,80	

Source: Australian Bureau of Statistics, 1990.

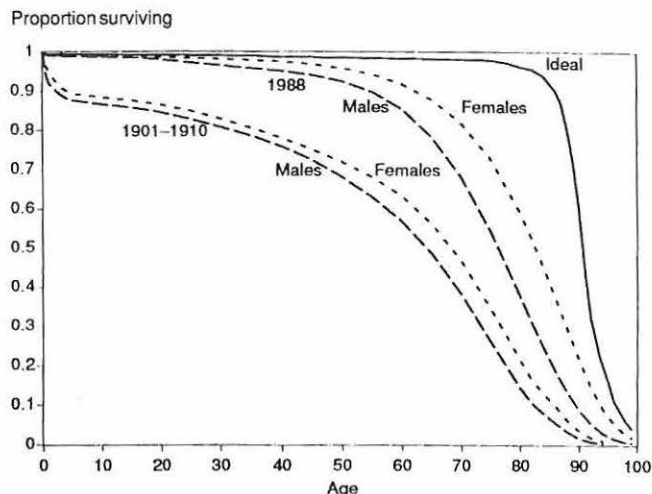
### The compression of mortality hypothesis

Fries (1980, 1983, 1989) has argued that the maximum life expectancy of humans is fixed by biological limits at around 85 years and that life expectancy is fast approaching this limit. This leads to a "rectangularization of the survival curve" shown in Figure 1 by the curve labelled "ideal", so that, apart from small losses at younger ages due to trauma, nearly everyone will die around the biological limit. Survival curves plot the probability of survival to any age using probability estimates derived from life tables for specific years. There has been considerable debate about Fries' hypothesis and, in particular, whether the life expectancies of populations of developed countries are sufficiently close to the biological limit. We are now starting to see compression of mortality and narrowing of the male-female gap in consequence.

Comprehensive work on US life expectancy and death has found no evidence of compression of mortality around the maximum average life-span limit (Guralnik & Schneider, 1987; Manton, 1982). Similarly, in Australia the recent increase in maximum average life expectancy and the substantial declines in mortality rates occurring at older ages show

**Figure 1**

Survival curves for Australians, 1901-10 and 1988, and ideal curve after "compression of mortality"



Source: Australian Bureau of Statistics, 1990.

that biological limits to life have not been reached. Between 1967 and 1989, the average age at death of women aged 65 years or older in the Australian period life table increased from 81 years to 84 years, whereas the standard deviation of the average age at death remained unchanged at 8,5 years. If biological constraints were operating, we would have expected to see absolute increases in mortality rates at extreme older ages, or at least stable rates, rather than the decreases observed. We would also have expected to see a compression of the death distribution by age. There is thus no evidence that compression of mortality is yet occurring in Australia.

Olshansky, Carnes and Cassel (1990) calculate that for life expectancy at birth to increase to 85 years in the US, mortality rates would need to decline at ages 50 and over by 60 %. Since these are massive, unachievable declines, there is at least an effective limit to life, if not a biological one.

### Expectations of disability and handicap in Australia

This increase in the number of remaining years for Australians may have been associated with improvements, stability or decrements in the health quality of the remaining years. Health quality for older people is often measured in terms of impairment, disability and handicap as defined by the World Health Organization (1980). Impairment is any loss or abnormality of psychological, physiological, or anatomical structure or function. Disability is any restriction or lack resulting from impairment of ability to perform an activity within the range considered normal for a human being. Handicap is the social, economic or cultural cost arising from a disability. These differences are also reflected in the responses of the health-care system. Impairments are primarily the concern of medicine, disabilities of rehabilitation, and handicaps of social welfare programmes. Disabilities and handicaps are further addressed by education, employment and housing programmes. Physicians are appropriate specialists for evaluating impairments but not disabilities because of the non-medical factors involved.

Sullivan (1971) developed a life-table method for combining mortality and disability data into a single composite index of disability-free life expectancy. This method has been applied in an increasing number of countries (cf. Robine & Ritchie, 1991). Despite differences in the definition and measurement of disability, the results of most recent studies sug-

gest disability-free life expectancy in developed countries to be around 60 years for men (range 56-64 years) and around 64 years for women (range 60-69 years). For both males and females, expected years of disability account for around 20 % of total life expectancy at birth and around 50 % of life expectancy at age 65 years. There is some suggestion that women spend a slightly greater proportion of their life disabled (Robine & Ritchie, 1991). However female disability-free life expectancy at birth is around five years higher than that of males for most of the countries; at age 65 years it is around one to two years higher.

Mathers (1991) has estimated health expectancies of Australians using data from population surveys which classified persons as not disabled, disabled or handicapped, on the basis of self-reported answers to a standard survey instrument. Those handicapped persons who stated that they required personal help or supervision in activities relating to self-care, mobility or verbal communication were classified as severely handicapped.

In 1988, total life expectancy at age 65 was 14,8 years for Australian males and 18,7 years for Australian females. Disability-free life expectancy at age 65 was 6,7 years for males and 8,6 years for females (Table 2). The difference between these two sets of figures is the expectation at age 65 of years of disability: eight years for men and 9,6 years for women. In other words, for both men and women, approximately half of their remaining years of life will be lived with disability on average, if death rates and disability prevalence rates at all subsequent ages remain constant at their 1988 levels. Females experience more years of handicap from age 65: 9,1 years, with 4,9 of these years being severe handicap – more than double that for males (2,3 years).

**Table 2**

Health expectancy (years) by age and sex, Australia, 1988

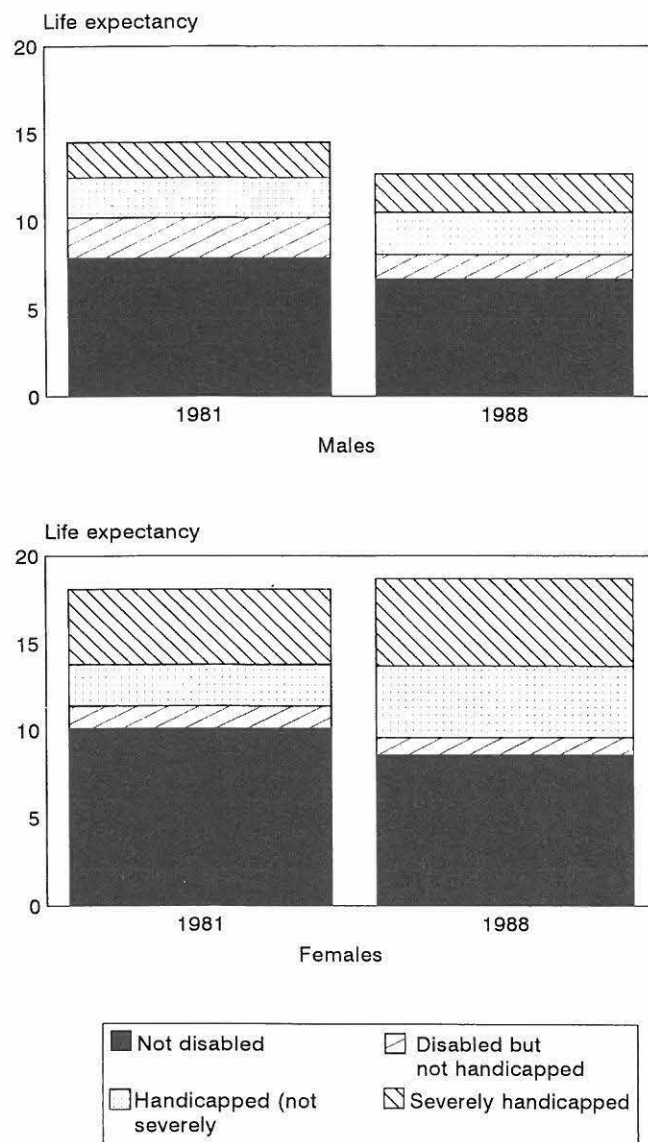
Sex	Age (years)	Total life expectancy (years)	Health expectancy (years)		
			Free of severe handicap	Free of handicap	Free of disability
Males	0	73,1	69,9	61,0	58,4
	65	14,8	12,5	8,0	6,7
	75	8,9	6,8	3,9	3,3
Females	0	79,5	73,4	65,5	63,4
	65	18,7	13,8	9,6	8,6
	75	11,4	6,7	4,2	3,7

Source: Mathers, 1991.

Changes in Australian health expectancies between 1981 and 1988 reflect the rising proportion of Australians who reported themselves as having limitations in functions and activities of daily living. Between 1981 and 1988, the number of people identified as handicapped in the two surveys increased from 8,6 to 12,9 %. Over this seven-year period, total life expectancy at age 65 increased by 0,9 years for men and 0,6 years for women, whereas handicap expectancy increased by 2,4 years, almost three times the increase in total life expectancy. Disability-free life expectancy at age 65 decreased by 15 % for both men and women.

**Figure 2**

Health expectancies at age 65, males and females, Australia, 1981 and 1988



**Compression or expansion of morbidity**

Fries (1980, 1989) argued that the decline in mortality is due to a decreasing incidence of disease which also results in the delayed onset of chronic disease and the “compression of morbidity” into a shorter period at the end of life. Dramatic declines in heart disease mortality over the last two decades resulted from decreases in the incidence of heart attacks (Martin, Hobbs, Armstrong & de Klerk, 1989). However other chronic diseases, such as diabetes, are not declining but the fatal consequences are. Manton (1982) argued that both maintaining lives of frail people who in earlier periods of history would have died and declines in disease incidence have played roles in causing mortality declines. Olshansky, Rudberg, Carnes, Cassel and Brody (1991) have argued that there is as yet no evidence that compression of morbidity is occurring. Verbrugge (1989:334) posed the question: “Have the longevity gains increased the number and percentage of very ill, frail people, who require protracted and expensive medical care and whose well-being is severely compromised? If so, is the price for more years of life too high for society and also for many individuals?”

Disability-free life expectancy time series have been published only for Canada, the US, England and Wales, and



Australia (Robine & Ritchie, 1991; Mathers, 1991). Although the definitions and data collection methods differ, these time series are all consistent with rising total life expectancy but essentially stationary disability-free life expectancy from the mid-1970s to the mid-1980s.

Although Australian health expectancies show greater declines (1981 to 1988) than the other time series, the overall picture from the international data is of rising total life expectancy and stationary or falling health expectancies. Disability and related handicap are heterogeneous phenomena unlike the homogeneous concept death. A number of hypotheses have been put forward to explain these results related to a range of historical changes which occurred through the 1980s:

- The ability to keep ill people alive longer
- Increasing health and leisure expectations among the aged
- Improved and earlier diagnosis of disabling conditions
- Identification of new conditions and illnesses such as osteoporosis
- Changing perceptions of disability and handicap.

Any or all of these changes may be implicated in increasing rates of disability and handicap. Thus the increasing rates may indicate, contradictorily, an improvement in the health of the aged, rather than trading death for disability.

The relative importance of changes in perception and awareness of disability and health versus changes in the underlying prevalence of chronic illness is still an open question – for Australia and other countries. Changes in the reported prevalence of disability and handicap vary considerably according to the type of disability, age and sex. For example, the prevalence of sight loss declined in males and females aged 75 or more years, whereas that of hearing loss increased. For these reasons, one should be cautious in attributing all trends to changes in reporting behaviour.

We simply do not yet have the data or methodologies to resolve this issue. What we can say is that all the gains in increased years of life are increased years of perceived disability and handicap, with a consequent demand for social and health services. People may be living longer but be sicker; they may have higher expectations of good health; or they may be adjusting behaviour more by restricting activity. In any case, what matters is that they have in all probability increased their expectations of need for personal and community care, and increased their use of health care in order to monitor their condition.

### **Community care of the disabled elderly**

Disability among the elderly is largely borne by caregivers at home. According to the Australian Bureau of Statistics' Survey of Disabled and Aged Persons (1988), only a small proportion of disabled persons aged 70 years and over (16,7 %) lived in health and residential care facilities, as did even fewer non-disabled persons of that age group (1,7 %). Among those living in the community, a third of both disabled and non-disabled persons of 70+ years lived alone. Among the elderly disabled living in the community, 50,4 % lived at home with others, while among the non-disabled, 67,7 % lived with others. The figures reflect both the higher probability of disabled persons not having a surviving spouse and of being in need of professional care; they also indicate that disability in old age is a major community-care issue.

Formal care was defined by the Australian Bureau of Statistics as that provided to disabled persons by organizations, profit or non-profit, government or private, as well as persons who are not family, friends or neighbours, e.g. volunteers or

landlords, or family, friends or neighbours if they receive payment for care. About two-thirds of disabled persons living at home are cared for by informal carers in the community, with only a third being serviced by formal-care providers. While the proportions of men and women of 70+ years receiving formal care are similar at around a third, there are significant differences between men and women in terms of whether their care is provided within the household or by persons not in the household. Some 45 % of men, compared to 28 % of women of 70+ years, were mainly cared for by persons in the household who were not paid. This difference is reflected in the proportions of men (26 %) and women (36 %) who received informal care from people outside the household who were their main carers.

These differences also show the domination of informal care provision by spouses of the disabled (McCallum, 1990), a typical characteristic of developed societies. In less developed societies and in some ethnic groups within developed societies, children assume greater burdens of care. For disabled persons aged 70-74 years in Australia, only 10 % of main carers were daughters, while husbands and wives were split equally, providing together more than 80 % of carers. Above age 75 years, the proportions decline to 30 % for wives and 20 % for husbands, while daughters rise to about 30 % of all main carers. Sons constitute less than 10 % of main carers for disabled persons aged 75+ years.

Around three-quarters of all categories of care, excepting health care, comes from informal sources. The three areas for which informal help was most often received from co-residents were home maintenance, home help and transport. The two main areas for which informal help was received from non-residents were home maintenance and transport. The two activities most often provided by formal carers were home maintenance and health care. Health care was the only activity which was more likely to be provided by formal carers than informal carers.

A survey in the inner-southern area of the South Australian capital city of Adelaide (Kalucy & Baum, 1992) provides a carer's perspective on disability to add to that of the disabled elderly. About 27 % of resident carers reported that they "often experienced" arthritis, as did a lower proportion (16 %) of non-resident carers. These rates were higher than those reported for "stress", which is more normally associated with the caring role. A further 18 % of the resident carers and 19 % of the non-resident carers had regular back trouble. For resident carers the most frequently reported conditions were arthritis, stress, back trouble and worries about weight. Clearly, disabling conditions such as musculoskeletal ones are of major concern, not only for dependent older people but also for their carers. As the authors conclude, "... carers are doubly jeopardised if they have health problems of their own to contend with as well as their caring responsibilities" (Kalucy & Baum, 1992:7).

To summarize, the disabled elderly are much more likely to live in the community than in residential and health institutions. They are most likely to receive care in the community from informal providers in the household. However informal providers not in the household were the major providers of care to disabled women of 70+ years. Since spouses are the major providers of care, they are also likely to be disabled themselves. The major interest in the disability status of the elderly then is for the community – in particular, families that provide care to disabled elderly persons. This problem requires a population analysis of disability status of the type presented here, rather than a study of it within clinical or specific disease settings.

**Expectations of life free of services and institutionalization**

As well as "health" expectations, we can calculate expectations of years of life without needing or receiving assistance with activities of daily living (referred to below as years free of services). We can also calculate the expectation of years of life for non-institutionalized and for institutionalized persons (Table 3). Women have longer life expectancy and life free of services and institutionalization than men. However they have fewer expected years free of handicap and disability. The expectation of being institutionalized tracks close to the expectation of survival. The expectation of being free of a need for services tracks with the handicap curve for men but is different for women who have a longer expectation of life free of services than free of handicap.

**Table 3**  
Life, health and service expectations in years at age 70 years

	Expectations in years	
	Males	Females
Alive	11,6	14,8
Non-institutionalized	11,0	12,8
Service-free	10,1	11,6
Handicap-free	10,1	9,8
Disability-free	9,9	9,7

Source: McCallum, 1990.

While we can talk about historical changes in disability and handicap, we do not have data about how need and acceptance of services have changed relative to the apparent changes in disability and handicap. The policies surrounding institutionalization and formal service delivery have themselves dramatically changed over the 1980s, independently of changes in disability rates. The multiple factors that affect levels of need for home and residential services are:

- Levels of disability and handicap among the aged
- Policy settings allowing entry into formal services
- Availability of alternative informal support services
- Expectations and motivations of disabled elderly to provide self care
- Availability of age-friendly built environments, aids and appliances.

Since all these factors have changed, it is not possible to distinguish the effects of any one factor in the changes over the 1980s.

**Trends for risk factors**

Do the health behaviours of Australians offer a more positive future for disability?

Between the Australian National Heart Foundation Surveys of 1983 and 1989, the age-specific rates of overweight (kg/m<sup>2</sup> 25-30) and obesity (kg/m<sup>2</sup> >30) increased for both men and women. In 1983, 42 % of women aged 55 to 59 years were overweight, compared to 52 % in 1989. For women aged 60 to 64 years, there was an increase from 44 to 53 %. Men aged 55 to 59 years increased from 58 to 61 %, and men aged 60 to 64 years, from 56 to 60 %. Overweight people are more likely to develop arthritis (Felson, Anderson, Naimark, Walker & Meenan, 1988) and heart disease (Simons, Friedlander & McCallum, 1991). Among people with these diseases,

overweight exacerbates disability (Verbrugge, Gates & Ike, 1991). A relationship was found in the Australian National Health Survey (Australian Bureau of Statistics, 1991) between overweight, obesity and musculoskeletal conditions. A higher proportion of people classified with musculoskeletal conditions were overweight – 54,5 % of persons aged 45 years or older, compared to 51,9 % for the population in that age bracket. Of all females 45 years and older who were overweight or obese, 41,5 % reported arthritis, compared to 36,6 % of those in the same age bracket classified as having acceptable body mass indices. These changing body mass index calculations show areas of concern for future rates of disability.

**Potential changes in health expectancy from the elimination of disease**

Reduction or elimination of specific diseases can be considered hypothetically, regardless of risk factors. According to the International Classification of Impairment, Disability and Handicap (ICIDH) model of the disability process, underlying disease or impairment may result in disability and handicap; however there may also be disability and handicap which are not directly attributable to an underlying disease or impairment (WHO, 1980). The Australian disability surveys classified disabled and handicapped persons according to the type of primary condition and the underlying cause of the condition. Where an underlying cause of disease, injury or congenital condition was specified, this was used to classify the disabled or handicapped person into an ICD-9 (International Classification of Diseases, version 9) Chapter category. Other disabled and handicapped persons were classified according to the type of primary disabling condition. The resulting composite classification was used to estimate the contribution of the various disease groups to the overall health expectancies of Australians at age 65 in 1988 (Table 4).

**Table 4**  
Health expectancies at age 65 by cause/type of primary condition, Australia, 1988<sup>a</sup>

	Cause/type of primary condition	Disability		Handicap		Severe handicap	
		M	F	M	F	M	F
1	Infective diseases	0,06	0,21	0,04	0,18	0,01	0,06
2	Neoplasms	0,19	0,20	0,17	0,17	0,08	0,08
3	Endocrinological/metabolic/nutritional	0,24	0,26	0,18	0,22	0,07	0,11
4	Mental disorders	0,28	0,93	0,25	0,85	0,18	0,69
5	Nervous system	1,28	1,90	1,04	1,63	0,33	0,79
6	Circulatory system	1,65	1,81	1,41	1,65	0,59	0,95
7	Respiratory system	0,56	0,29	0,46	0,26	0,14	0,12
8	Digestive system	0,12	0,21	0,11	0,18	0,05	0,06
9	Genito-urinary system	0,03	0,10	0,03	0,10	0,01	0,07
10	Skin and subcutaneous	0,02	0,06	0,02	0,05	0,01	0,02
11	Musculoskeletal	1,04	2,47	0,91	2,31	0,32	1,26
12	Congenital conditions	0,13	0,31	0,10	0,29	0,02	0,13
13	Perinatal conditions	0,00	0,00	0,00	0,00	0,00	0,00
14	Injuries	2,23	1,02	1,74	0,90	0,33	0,46
15	Other/unspecified	0,23	0,37	0,20	0,35	0,09	0,24
	Total	8,07	10,13	6,64	9,07	2,22	4,96

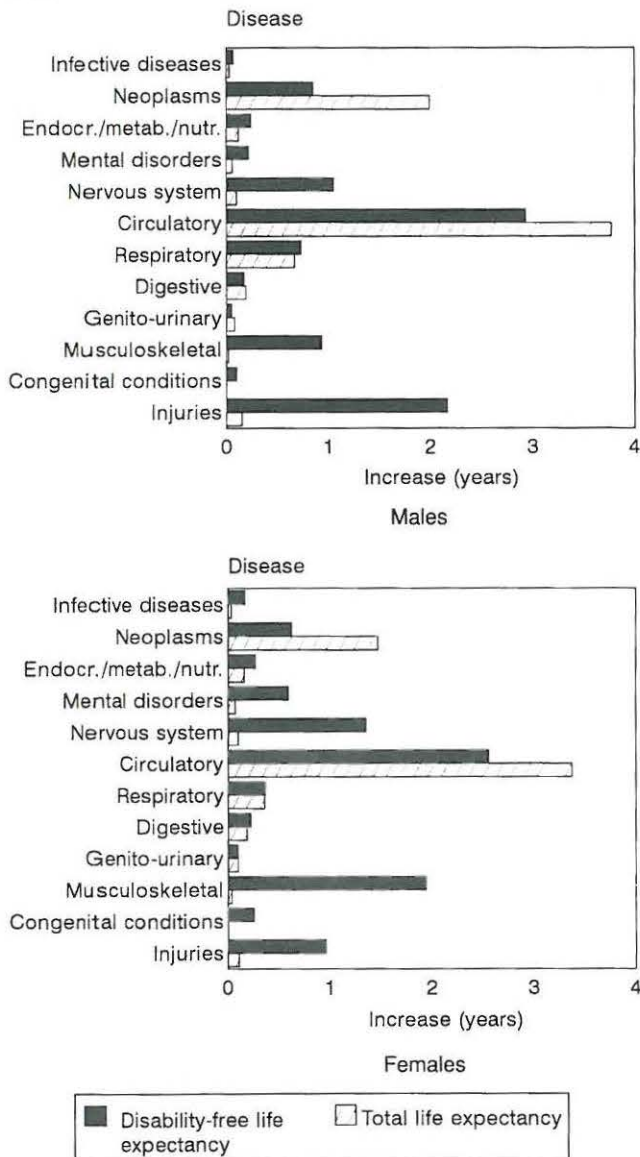
<sup>a</sup>ICD-9 expected years of chapter.



Figure 3 shows the gains in health expectancies at age 65 resulting from the total elimination of each of the major disease groups (defined by the ICD-9 Chapter level). For each disease group, life expectancy with and without disability is calculated from a cause-deleted life table (Tsai, Lee & Hardy, 1978), with cause-deleted disability prevalence rates according to the Sullivan method (Mathers, 1992). These gains cannot be added across disease groups because they have been calculated on the assumption that a given disease group is eliminated with no change in mortality or morbidity due to other disease groups. The gains are average gains in health expectancies averaged across the entire population; not the gains actually accruing to the people with the particular diseases eliminated.

### Figure 3

Increase in health expectancies at age 65, resulting from elimination of major disease groups, Australia 1988



For those disease groups which cause significant disability but little mortality, e.g. musculoskeletal conditions, there are significant gains in disability-free life expectancy offset by comparable reductions in expectation of life with disability. For disease groups which cause relatively little prevalent disability but considerable mortality, e.g. neoplasms, there are significant gains in life expectancy both with and without disability; those persons whose deaths are averted live longer

lives and experience disability from other causes. For disease groups such as circulatory conditions which result in significant mortality and disability, there are gains in life expectancy both with and without disability but the latter substantially outweighs the former.

If cancers were eliminated, women could expect a gain of 1,5 years disability-free and 1,3 years with disability, and men 1,6 years disability-free and 1,5 with disability. By contrast, if musculoskeletal diseases were eliminated, women could expect 2,8 years disability-free and they would gain those years from years with disability. For men the gains are about half those of women, 1,5 years, and again they are deducted from the years with disability. Other major disease elimination produces gains in the quantity of life along with more disease and handicap. Thus health quality improvements will be achieved most effectively through elimination of musculoskeletal diseases. However, realistically disease elimination is likely to be only partially successful.

### Conclusion

There is no evidence that Fries' "compression of mortality" hypothesis has yet commenced in Australia or the United States. The lack of improvement in Australian health expectancies in recent decades probably reflects greater sensitivity in societal perceptions of disability, handicap and rising expectations of good health, as well as successes in secondary prevention. Indeed, these factors are probably all interrelated. If significant advances in primary prevention occur in the future, we may hope to see falling incidence rates for chronic and disabling conditions, and improving health expectancies. At present and in the near future, we may expect to see increasing numbers of frail older people (saved from death by secondary prevention) and increasing numbers of independent and vigorous older people (saved from ill-health by primary prevention). The same processes, with variations within ethnic groups, could reasonably be expected in southern Africa, with significant implications for community care.

The prevalence of disability and handicap appear to be increasing in Australia but our understanding of these phenomena is limited; these changes need considerable interpretation and further research. Whilst the importance of these changes cannot yet be determined, there is also a concern with other observations, such as the increasing prevalence of overweight and obesity at older ages that is a known risk for disability. Some diseases such as cancers have an impact on mortality, rather than physical disability, whereas others such as musculoskeletal diseases do not kill but cause extensive physical disability. It follows that a focus on the elimination of the latter disease has more of an impact on the level of disability than does the elimination of cancer. Thus a disability prevention programme will have a different focus to a disease prevention one.

Since the impacts of disabling diseases among the elderly are mainly borne in the community by informal care providers, there is a need to strengthen the ties between that sector and professionalized health and long-term care services. This is most simple at the level of dealing with severe disability or in tertiary prevention. However there is a need for greater attention to primary and secondary prevention. The entire care of older people cannot ever be borne by the public sector; it is therefore important that we continue to co-ordinate, educate and ration, according to function and need, the scarce resources that are available. The community caregiver will necessarily bear the main burdens but with public support.

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