

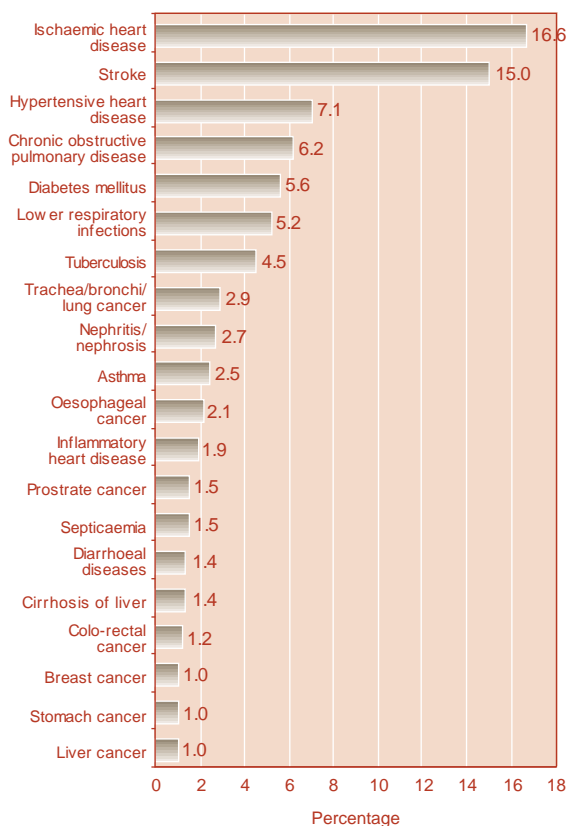
# HEALTH OF OLDER PERSONS



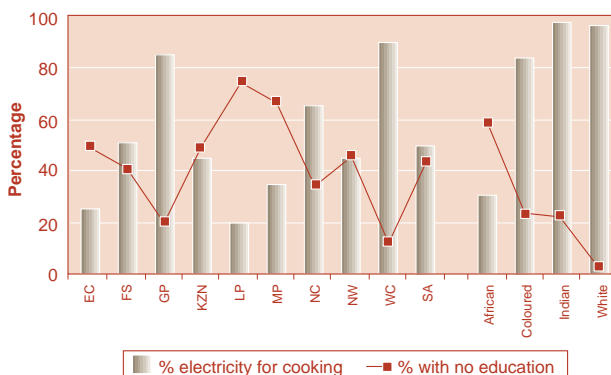
Jané Joubert and Debbie Bradshaw

South African Medical Research Council

## Leading single causes of death in persons 60+, 2000



## Percentage of persons 60+ with no education and using electricity for cooking, 2001



## Key Messages

- ◇ The population in SA is ageing, and the older population ( $\geq 60$  years) is expected to continue growing, which will require far-reaching social and economic planning.
- ◇ The availability of health and related data to monitor the needs of older persons, and the extent to which they are being met, is an area of great need in SA.
- ◇ In general, living conditions are worst for older Africans and older persons in the EC, LP and KZN.
- ◇ There is a large non-communicable disease burden among older persons, requiring comprehensive health care to manage these conditions, and health promotion targeting younger people to avoid these conditions.

## Framework for Monitoring and Evaluation

### Global:

- ◇ WHO Minimum Data Set on Ageing and Older Persons

### South Africa:

- ◇ DoH Guidelines covering various aspects of health related to ageing
- ◇ SA Minimum Data Set for Ageing (provisional indicators)
- ◇ Health Goals, Objectives and Indicators 2001-2005

## Key Indicators

Population % by age

Percentage of individuals 60+ with access to water and sanitation, electricity and communication media

Causes of death

Prevalence of disability (%)

Cataract surgery rate

## Key References and Data Sources

- ◇ South African Demographic and Health Survey 1998
- ◇ South African National Burden of Disease Study (NBD) 2000
- ◇ South African Population Census 2001
- ◇ Ageing in South Africa. Report on the minimum data set on ageing 2002

## Introduction

Global population ageing<sup>a</sup> was one of the most distinctive demographic events of the 20<sup>th</sup> century.<sup>1</sup> For the next two to three decades, the older population is expected to continue growing more rapidly than other age groups, requiring far-reaching social and economic adjustments.<sup>1, 2, 3</sup> Population ageing has the potential to become a major issue in developing countries with resource scarcities.<sup>4, 5</sup> Developed nations have had time to gradually adjust to a changing age structure along with or after substantial socio-economic development, but many developing nations are experiencing rapid increases in their older populations without sufficient levels of socio-economic development. For example, while it took France and Sweden about 100 years for the proportion of the population 65+ to double from 7% to 14%, it is expected that it will take Tunisia and Brazil less than 25 years to double their older populations.<sup>2, b</sup>

The health of older persons is generally overshadowed by more explicit needs to enhance women's and reproductive health, infant and child health, and youth and adolescent health. This points to a particular need to monitor older persons' health status, their access to health services, and equity in service delivery.

This chapter focuses on available data relating to older persons' health and well-being, and highlights the need for equity across population groups and provinces, as well as equity across age groups in access to and quality of health-related services and resources.

## Framework for Monitoring and Evaluation

### Policy and Legislation Initiatives: International, Regional and National

The international response to ageing has been guided by a number of United Nations (UN) and World Health Organization (WHO) initiatives, some of which offer a framework for monitoring and evaluating older persons' health and well-being (Table 1). These initiatives work in conjunction with the more general international instruments, such as the *UN Universal Declaration of Human Rights* and the *UN Declaration on the Right to Development*, to promote fundamental freedoms, dignity, care, protection, security, respect, and fair treatment of older people. One regional framework and some national instruments have been identified that focus on older persons. Combined with broader perspectives in instruments such as the *Bill of Rights*, *Operation Dignity*, the *Patients' Charter*, the *White Paper for the Transformation of the Health System in South Africa*, and the *White Paper for Social Welfare*, the national instruments mentioned below are aimed at promoting healthy ageing, which includes enhancing aspects of well-being in older persons such as their health status and service delivery to them.

### Health Goals, Objectives and Indicators

The Department of Health's *2001-2005 Health Goals, Objectives and Indicators*<sup>6</sup> includes a section with indicators related to chronic diseases, disability and geriatrics. However, while the chronic disease indicators are relevant to healthy ageing, there is currently only one indicator with a direct bearing on the health of older persons, i.e. the cataract surgery rate. Following on the WHO's four-country *Minimum Data Set on Ageing* initiative that aims at bridging the scarcity of data related to ageing and older persons in sub-Saharan Africa, the national Department of Health (NDoH) identified provisional indicators appropriate to the local setting to enable the South African government to monitor the health and well-being of older persons.<sup>7-9</sup>

The Directorate of Chronic Diseases, Disabilities and Geriatrics has compiled a report that highlights data and data sets available for use, as well as shortcomings in available data sets. In some cases, the data sets to populate the necessary indicators still need to be set up.<sup>8</sup> Available data for the indicator-domains of demography, social and economic status, health

a Population ageing refers to an increase in the proportion of older people (aged 60 years or older) in a population, coinciding with a decline in the proportions of the young (under age 15) in the same population. Population ageing is a by-product of a population's demographic transition, resulting in a changing age structure in the population and a higher median age.

b With AIDS and the timeline-uncertainties around antiretroviral therapy and vaccine development, it is not ideal to model population issues such as fertility, mortality and life expectancy – which all impact on population ageing – beyond the short term.

status, life style and risk factors, health service delivery, and social integration / well-being are presented in this chapter.

**Table 1: Selected international, regional and national strategies and frameworks**

Year	International initiatives
1991	United Nations Principles for Older Persons (UN) <a href="http://www.un.org/esa/socdev/iyop/iyoppop.htm">http://www.un.org/esa/socdev/iyop/iyoppop.htm</a>
1999	World Health Organization Minimum Data Set on Ageing and Older Persons <a href="http://www3.who.int/whosis/menu.cfm?path=whosis,mds">http://www3.who.int/whosis/menu.cfm?path=whosis,mds</a>
2002	Madrid International Plan of Action on Ageing (UN), follow-up of the Vienna Plan of Action (1982) <a href="http://www.un.org/esa/socdev/ageing/waa/a-conf-197-9b.htm">http://www.un.org/esa/socdev/ageing/waa/a-conf-197-9b.htm</a>
2002	Political Declaration adopted at the Second World Assembly on Ageing (UN) <a href="http://www.un.org/esa/socdev/ageing/waa/a-conf-197-9a.htm">http://www.un.org/esa/socdev/ageing/waa/a-conf-197-9a.htm</a>
2002	Active Ageing: A Policy Framework (WHO) <a href="http://www.who.int/hpr/ageing/ActiveAgeingPolicyFrame.pdf">http://www.who.int/hpr/ageing/ActiveAgeingPolicyFrame.pdf</a>
2002	The Toronto Declaration on the Global Prevention of Elder Abuse (WHO, University of Toronto, Ryerson University, INPEA) <a href="http://www.who.int/hpr/ageing/TorontoDeclarationEnglish.pdf">http://www.who.int/hpr/ageing/TorontoDeclarationEnglish.pdf</a>
Regional initiatives	
2003	African Union Policy Framework and Plan of Action on Ageing (African Union) <a href="http://www.helpage.org/images/pdfs/AUFrameworkBook.pdf">http://www.helpage.org/images/pdfs/AUFrameworkBook.pdf</a>
National initiatives, mainly by the Departments of Health and Social Development	
1999	National Guideline on the Prevention of Falls in Older Persons (NDoH) <a href="http://www.doh.gov.za/docs/factsheets/guidelines/falls/falls.pdf">http://www.doh.gov.za/docs/factsheets/guidelines/falls/falls.pdf</a>
2000	National Guideline on the Prevention, Early Detection and Intervention of Physical Abuse of Older Persons at Primary Level (NDoH) <a href="http://www.doh.gov.za/docs/factsheets/guidelines/abuse/abuse.pdf">http://www.doh.gov.za/docs/factsheets/guidelines/abuse/abuse.pdf</a>
2000	Guideline for the Promotion of Active Ageing in Older Adults at Primary Level (NDoH) <a href="http://www.doh.gov.za/docs/factsheets/guidelines/ageing/ageing.pdf">http://www.doh.gov.za/docs/factsheets/guidelines/ageing/ageing.pdf</a>
2001	National Guideline on the Management of Osteoporosis at Hospital Level and Preventative Measures at Primary Level (NDoH) <a href="http://www.doh.gov.za/docs/factsheets/guidelines/geriatrics.html">http://www.doh.gov.za/docs/factsheets/guidelines/geriatrics.html</a>
2002	National Guideline on the Prevention of Blindness in South Africa (NDoH) <a href="http://www.doh.gov.za/docs/factsheets/guidelines/blindness.pdf">http://www.doh.gov.za/docs/factsheets/guidelines/blindness.pdf</a>
1998	The Aged Persons Amendment Act, 1998, updating the Aged Persons Act, 1967 (Dept. of Social Development)
2003	Draft Older Persons Bill, 2003, following on the draft SA Policy for Older Persons (Dept. of Social Development) <a href="http://www.welfare.gov.za/Legislation/2003/Older%20Persons/b68-03.pdf">http://www.welfare.gov.za/Legislation/2003/Older%20Persons/b68-03.pdf</a>

## Indicator Definitions

### Demographic profile

**Population:** Total number of people aged 60 years or older (60+)

**Percentage of South African population aged 60+**

**Percentage female in population 60+**

**Ageing index:**

Ratio of people aged 60+ to every 100 children (0-14 years)

**Age dependency ratio:**

The ratio of the combined child population (0-14 years) and the aged population (65 years or over) - persons in the so-called dependent ages - to every 100 people of the intermediate age population (15-65 years, the so-called economically active ages).

### Socio-economic conditions

**Education Level:**

Percentage of the population 60+ with no education

**Employment:**

Percentage of the population 60+ who worked in 7 days prior to Census 2001

**Housing:**

Percentage of the population 60+ who live in informal housing

Percentage of the population 60+ who live in traditional housing

**Water and Sanitation:**

Percentage of the population 60+ with access to piped water

Percentage of the population 60+ with no toilet

Percentage of the population 60+ with a pit / bucket toilet

**Electricity:**

Percentage of the population 60+ who uses electricity for cooking

**Communication:**

Percentage of the population 60+ with no phone at home

Percentage of the population 60+ with a radio

Percentage of the population 60+ with a television

**Older Persons Grant:**

Percentage of eligible older persons who receive an Older Persons Grant

### Health Status

**Cause of death profile:** Percentage of deaths in the population 60+ attributable to specified diseases from the National Burden of Disease list

**Prevalence of disability (%):** Percentage of people 60+ with moderate to severe disability (defined in the 2001 census as "a physical or mental handicap which has lasted for six months or more, or is expected to last at least six months, which prevents the person from carrying out daily activities independently, or from participating fully in educational, economic or social activities".)

### Lifestyle and Risk Factors

**Percentage of people 60+ sampled with reported or measured lifestyle or risk factor:**

**Hypertension:** Blood pressure > 140/90 mm/Hg, or on medication for hypertension

**Smoking:** Currently smoking tobacco on a daily basis at the time of survey

**Alcohol dependent:** Positive answer to two or more questions of the CAGE questionnaire

**Overweight:** A body mass index (BMI) between 25 and 29.9 kg/m<sup>2</sup>

**Obese:** BMI ≥30 kg/m<sup>2</sup>

**Underweight:** BMI <18.5 kg/m<sup>2</sup>

### Access to health services

**Medical Aid Coverage:** Proportion of population 60+ covered by medical schemes

**Cataract surgery rate:** Number of cataract surgeries done per year per 1000 public sector dependent population

## Data and Analysis

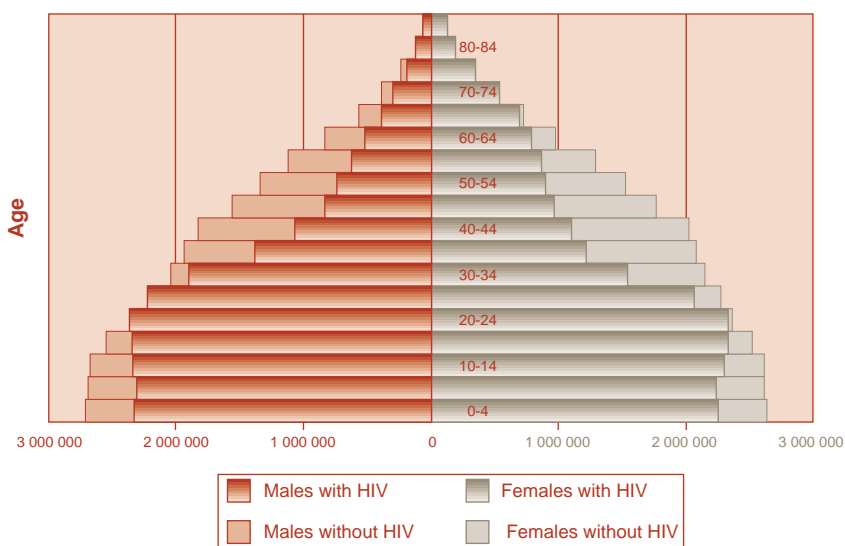
### Demographic profile

The South African population is ageing, mainly through a confluence of declining fertility rates and pre-AIDS increases in life expectancy. South Africa has one of the most rapidly ageing populations in Africa,<sup>13</sup> and the proportion of older persons (7.3% in 2001),<sup>14</sup> although lower than in the developed nations, is higher than in any of the African regions, and among the highest of African countries. Persons 70+<sup>c</sup> and 80+, respectively, constituted 3.2% and 1% of the South African population.

In 2000, SA had an ageing index of 20 older persons for every 100 children aged 0-14 years. Even taking HIV/AIDS into account, this ratio is projected to increase to 31:100 in 2015, indicating a large increase in the number of older persons relative to the number of children.<sup>d</sup> Figure 1 shows that AIDS is projected to affect the population size in most age groups but that the older age groups will be affected least. Despite the impact of AIDS, it is projected that by 2015 both the number and proportion of persons 60+ are projected to increase to 4.24 million and 9.5% respectively.<sup>15, 16</sup>

Among the country's four population groups<sup>e</sup> there is considerable diversity in ageing patterns. The age structure of the African population corresponds with that of demographically young populations in the early stages of demographic transition with a broad base and a large proportion of children under age 15 (34%), and a narrow top with a small proportion of older persons (6%). Compared to that of Africans, the White's age structure has a narrower base of children younger than 15 (19%), and wider apex with 16% of persons 60+. The Indians and Coloureds have a pattern between these two groups.<sup>17</sup> These differences are mainly attributable to different stages of each group's fertility and mortality transitions.

Figure 1: Population age structure projected with and without HIV/AIDS, 2015



Source: Actuarial Society of South Africa, 2000

- c 60+, 70+, etc. refers to persons aged 60 years or older, persons 70 years or older, etc.
- d These figures were calculated taking into account the estimated impact of HIV/AIDS as modelled by the Actuarial Society of South Africa (ASSA), using the *lite* version of the ASSA2000 suite of models. A change scenario in the model has been used with specific intervention assumptions in respect of mother-to-child-transmission (MTCT), treatment of sexually-transmitted diseases (STDs), condom usage, and the number of new sexual partners. It is acknowledged that a countrywide antiretroviral treatment programme is being initiated, however, no antiretroviral therapies were assumed in the scenario.
- e The population group classification is in accordance with the Population Registration Act of 1950. The classification is used to assist in bridging of historical imbalances, and the authors do not subscribe to this classification for any other purpose.

**Table 2: Socio-demographic profile of older persons (60 years or older), 2001**

	% of total SA population 60+	Age dependency ratio	% female	% with no education	% who worked in last week	% live in informal housing	% live in traditional housing	% with piped water	% with no toilet	% with pit/bucket toilet	% electricity for cooking	% with no phone	% with radio	% with television
<b>Province</b>														
EC	9.18	75.7	63.44	48.70	5.76	4.62	47.13	55.07	33.62	35.85	25.13	71.87	65.87	38.15
FS	7.31	55.4	61.17	40.20	10.87	14.22	7.73	96.80	4.95	39.89	50.70	53.98	82.14	63.40
GT	6.16	38.1	57.92	19.97	16.79	8.30	1.29	98.68	1.61	6.14	84.80	28.35	84.21	81.64
KZN	6.92	64.8	64.73	48.07	8.04	4.69	35.26	65.75	18.60	36.70	44.98	57.47	77.12	51.64
LP	7.74	81.8	66.85	74.17	6.02	2.65	21.39	75.58	17.28	69.85	19.80	75.37	73.14	40.61
MP	6.28	64.6	60.96	66.04	10.37	8.61	16.41	84.04	8.03	57.08	34.64	62.46	76.84	53.71
NC	8.24	56.4	57.38	33.95	10.69	7.20	3.11	97.02	5.88	19.36	65.06	45.02	73.89	66.62
NW	7.34	57.0	58.67	45.19	8.23	11.04	6.12	86.61	5.03	60.13	44.91	63.72	74.16	60.38
WC	7.80	48.2	57.34	11.81	12.07	3.91	1.57	99.01	2.36	2.74	89.52	19.88	86.76	87.37
SA	7.32	58.7	61.74	42.94	9.64	6.32	20.56	79.42	13.74	34.92	49.81	53.76	76.79	58.52
<b>Population Group</b>														
African	6.37	62.2	63.75	58.28	7.82	8.62	29.22	70.60	19.34	49.49	30.23	72.57	70.82	43.97
Coloured	6.35	53.4	58.93	22.70	9.45	3.71	2.50	97.95	3.64	9.29	83.83	35.95	78.06	79.41
Indian / Asian	7.84	39.2	57.28	21.97	11.77	0.85	1.42	99.12	0.66	1.23	97.23	9.34	91.38	93.61
White	15.88	43.1	56.71	2.36	15.48	0.40	1.10	99.19	0.66	0.57	95.89	3.82	94.19	94.42
Total	7.32	58.7	61.74	42.94	9.64	6.32	20.56	79.42	13.74	34.92	49.81	53.76	76.79	58.52
SA (all ages)			52.20	17.90	33.70									

Source: Statistics South Africa: Census 2001

Although ageing is more pronounced in the White population, it is important to recognise that the large majority of the country's persons 60+, i.e. 69% or 2.26 million, are African. In the same way Africans constitute the largest proportions in the oldest old, with increased proportions at each of the subsequent major age cut-offs, i.e. constituting 71% of those 80+, and 90% of those 100+ (data not presented).

Over 60% of older persons are women. While 57-59% of the non-African older population are female, 64% of African older persons are female. Older women often suffer multiple disadvantages arising from biases of gender, widowhood and old age.<sup>18</sup> Given the lifelong gender disadvantages experienced by women, for example through lower wages; less access to assets and income-generating opportunities; a greater burden of providing care for the sick, frail and disabled; the greater likelihood of being widowed and the often greater likelihood of being dependent upon social support, the gender profile of the population can impact the social and material well-being of older persons.<sup>18, 19</sup>

The proportions of older persons vary between the provinces, with the Eastern Cape, Northern Cape and Western Cape having the highest proportions, and Gauteng, Mpumalanga and KwaZulu-Natal having the lowest (Table 2). The pattern of more females than males is consistent over all provinces, ranging from 57% in the Western Cape to 67% in Limpopo, with the highest proportions in Limpopo, KwaZulu-Natal and the Eastern Cape. The higher than average proportions in these three provinces may reflect excessive male mortality at younger ages, larger sex differentials in life expectancy at birth, or disproportionate male out-migration from these provinces compared to the others.

## Socio-economic Conditions of Older Persons

The African Union's (AU) *Policy Framework and Plan of Action on Ageing* highlights that older persons consistently count among the poorest of the poor in nations, but that their needs are seldom acknowledged in poverty reduction initiatives. They are systematically denied access to credit, employment, training and other services that could improve their income.<sup>20</sup> Most of SA's older persons have lived through apartheid rule. Despite commitments and successes to redress the inequalities, a report on poverty and older persons has found that, during 1999, 30% of persons 50+ lived in households earning less than R800.00 per month. A further quarter were chronically poor, meaning

that they lived in households earning less than R400.00 per month, and that they were least likely to experience the benefits of development initiatives and growth. Of Africans 50+, 33% were identified as being chronically poor compared to 7% of Whites, a bigger differential than is the case for poverty generally.<sup>13</sup>

In terms of economic vulnerability, Eastern Cape's and Limpopo's high proportion of older persons raises concern, in particular when combined with the high proportion of children under age 15, while about half of these provinces' people in the economically-active age group 15-64 are unemployed. The proportions of older persons and children vary across provinces and population groups. These variations can be expressed in the so-called *age dependency ratio*, which represents the ratio of the younger (0-14 yrs) and older (65+) population to the population of intermediate ages (15-64 yrs).<sup>f</sup> At 82 and 76, Limpopo and the Eastern Cape, respectively, have particularly high ratios, followed by KwaZulu-Natal and Mpumalanga, implying high levels of 'dependency' in these provinces. Among the population groups, the highest ratio is among Africans, followed by Coloureds, Whites and Indians (Table 2). Given the high levels of unemployment in the country, and considering the norm of grant-sharing and the vulnerabilities of older women receiving a social grant, and the demands on many older women to take on care giving responsibilities of their children or grandchildren, there is a need for provinces with high proportions of older women, e.g. Limpopo, KwaZulu-Natal and the Eastern Cape, to give particular attention to the challenges facing older women (Table 2).

A large proportion of older persons (43%), most prominent in Africans (58%), has had no formal education (Table 2). This has implications for planning in terms of health promoting activities and access to health information, social services and health care. In Limpopo, 74% and in Mpumalanga, 66% of the older population have had no education.

Many older Africans do not live in formal housing, and do not have access to basic facilities such as water and sanitation. While 20% of older persons do not have piped water and 14% have no toilet facility, older Africans are worse off. Conditions are particularly bad for the older people in the Eastern Cape where 45% have no piped water and a third have no toilet facility, as well as for older people in Limpopo where 17% have no toilet, and of those who have a toilet facility, the majority make use of a pit or bucket system. Ethnic and provincial disparities are furthermore apparent in older persons' access to electricity.

<sup>f</sup> The age cut-offs can vary according to specific practice or policy in a country, but these cut-offs are useful for international comparisons. In more detailed analyses, it may be useful to calculate the child-dependency ratio and the older-age dependency ratio separately. The measure's value is limited by high unemployment levels in the country, and the fact that children and 'working age' adults at times depend on older persons' social grant.

High proportions in the Western Cape and Gauteng use electricity for cooking purposes (Table 2), compared to 35%, 25% and 20%, respectively, in Mpumalanga, the Eastern Cape and Limpopo. Housing and environmental characteristics have implications for exposure to disease and often reflect economic status and ability. Collecting water from off-site sources poses practical concerns for older persons such as the physical efforts in fetching and lifting water, and carrying containers over uneven surfaces. The fetching of wood, paraffin or coal for cooking purposes, as well as the increased health hazards generally associated with using these energy sources, are of concern due to the large numbers of older persons exposed.

Communication is of particular importance to older persons. Access to a phone may be useful in sickness, emergency or loneliness, while having a radio or television may mean access to information and some form of leisure or recreation. Given the large proportion of older persons without formal education, these media may serve useful purposes in disseminating health information. Over half (54%) of older persons have no phone at home – neither a landline, nor a cell phone – with particularly high proportions without a phone in Limpopo and the Eastern Cape (Table 2). While over 90% each of Indians and Whites have access to each of a radio and television, just less than 80% of Coloureds have access to either, compared to 71% of Blacks having access to a radio, and, much less than any other group, only 44% having access to a television.

The 2001 census indicates that 14% of people aged 60-69 years worked in the seven days preceding the census. This proportion decreases as age increases, and varies between population groups and provinces (Table 2). Being able to work, may have positive effects such as ensuring an income, or adding to existing income, or may give a sense of usefulness and meaning in life. However, it may also have negative effects such as affecting older persons' health and well-being adversely, especially in jobs requiring a high level of physical activity and / or stress.<sup>57</sup>

Social protection for men 65+ and women 60+, in the form of the non-contributory Older Persons Grant (Old Age Pension), is currently the largest of the social grant programmes in the country, providing R13.2 billion to over 1.9 million beneficiaries in the year 2001/02.<sup>21, 22</sup> In addition, there is a Grant-in-Aid which contributes towards enabling incapacitated older persons to obtain the assistance of a carer. By 2002, the Older Persons Grant reached 68% of all persons 60+, and the estimated coverage of the target population was 80% of the eligible population.<sup>23</sup> The Older Persons Grant has played a role in poverty alleviation and has been an effective form of income

redistribution. However, it has lost value through the years due to inflation, and research and public hearings have repeatedly confirmed that the money often is not for individual use, but rerouted to provide for familial or household needs.<sup>24, 25, 26, 27</sup> Hence, although the availability of the grant may induce positive health effects in older persons, pension-sharing which is the norm rather than the exception, means that the basic needs of many older persons are not met, contributing to many recipients' frustrations and perception that they are 'poor'. The quote below from a rural Eastern Cape older woman, summarises such frustration:

*"Although my daughters are married, their children spend most of the time here, because the husbands don't have reliable jobs. ... It becomes my responsibility to help them as well. ... One has to buy shoes, T-shirts and other things...I have raised them, clothed them and put them in school. I manage to feed them with my pension grant. I am really struggling. I also try to add to my pension money with other things, because these children are so many, they are just so many." (Grandmother, widowed, over 80 years old, living with 5 children, 6 grandchildren, 1 great-grandchild.)<sup>27</sup>*

The population group and provincial disparities for older persons according to the mentioned socio-demographic indicators based on the 2001 census, reflect the general inequalities experienced in SA. Generally, older Africans are worse off than older non-Africans, and those living in the Eastern Cape or Limpopo are worse off than those in other provinces.

## Health status

There is a scarcity of reliable information about the health status, health risks and causes of mortality in the older population. Equally scarce are sources of information on the use and satisfaction of health services by older persons, and the provision of geriatric health services.

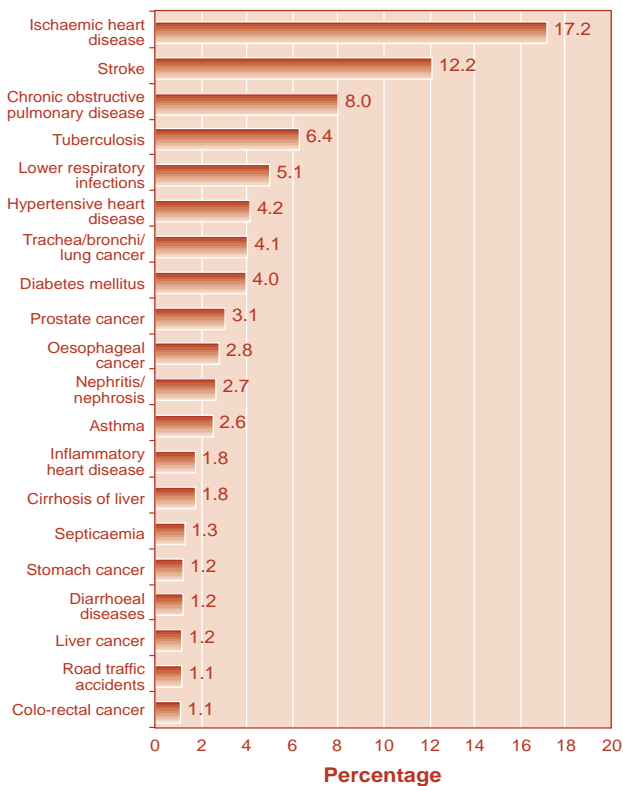
## Causes of death

Estimates of the causes of death have been extracted from the South African National Burden of Disease study (NBD), indicating that 145 115 deaths occurred among persons 60+ in 2000. Of these, 71 641 were male, and 73 474 female deaths. Noncommunicable diseases (NCDs) are responsible for 84% of deaths in the population 60+; communicable diseases and nutritional deficiencies for 13%; injuries for 3%; and HIV/AIDS for 0.4%.<sup>28, 9</sup>

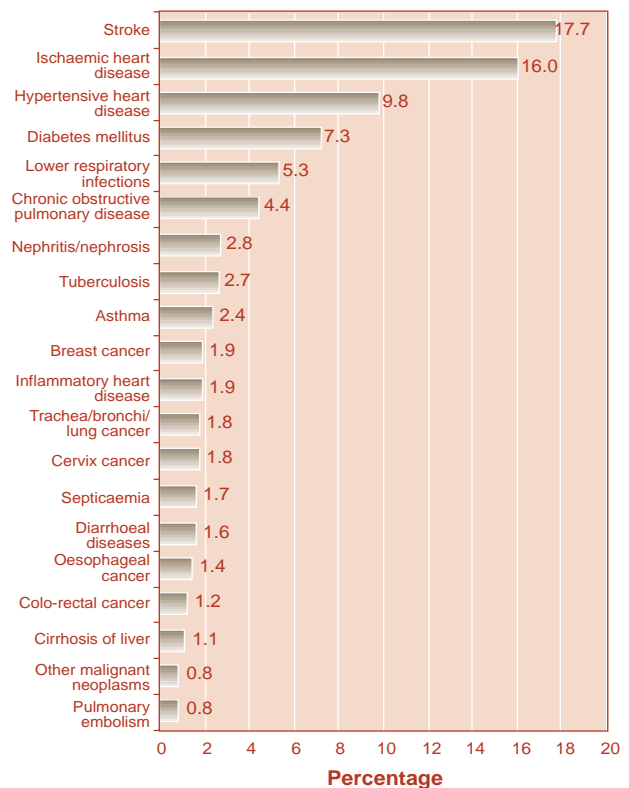
---

g There is a need for careful analysis of mortality data to assess the extent of AIDS as a cause of death in older persons.

**Figure 2: Leading 20 single causes of death in males 60+, 2000 (n=71 641)**



**Figure 3: Leading 20 single causes of death in females 60+, 2000 (n=73 474)**



The leading 20 single causes of death in men and women 60+ are shown in Figure 2 and Figure 3, respectively. Ischaemic heart disease and stroke are the two leading single causes of death, accounting for almost one-third of deaths, with the order for men and women reversed. Hypertensive heart disease is responsible for more than double the proportion of deaths among women compared to men. Chronic obstructive pulmonary disease, however, accounts for almost double the proportion of deaths among men compared to women. Malignant neoplasms are responsible for large numbers of deaths in older persons. The ranking for specific cancers differ between men and women. In men, lung cancer is the leading cancer, followed by prostate, oesophageal, stomach, liver and colo-rectal cancer. In women, breast cancer leads, followed by lung, cervix, oesophageal and colo-rectal cancer.

Injuries account for 3% of older persons' deaths, of which road traffic accidents are responsible for the largest share (33%), followed by homicide / violence (28%) and suicide (12%). International comparison of South Africa's injury death rates shows differences of concern. Road traffic accident death rates for the year 2000 in the South African male and female population 65+, respectively, are 63 and 30 per 100 000 compared with rates in the United States of 28 and 15 per

100 000. The homicide / violence rate is 57 per 100 000 men, and 21 per 100 000 women, compared with United States rates of 4 and 2 per 100 000.<sup>29, h</sup>

### Morbidity and disability

The SADHS study<sup>30</sup> included selected indicators of morbidity. Asthma / airflow limitation was the most common respiratory condition experienced by persons 65+, and the symptoms of chronic bronchitis was reported by about one in every 20 persons. Peak expiratory flow rate was measured during the SADHS, and a similar proportion was found to have abnormally low performance, showing signs of poor lung function (Table 3).

In the population 60+, about 16% reported having a disability. The most common disabilities are sight and physical disability, followed by hearing, emotional, intellectual and communication conditions (Table 3). The prevalence of disability increases with age, with 13% among persons 60-69, 17% of persons 70-79, and 27% of persons 80+ being disabled. About 18% of Africans, 14% of Coloureds, and 12% each of Indians and Whites reported disabilities (data not presented here). Unfortunately, such statistics do not include an objective measure of cognitive functioning or the competency to perform activities of daily living. Furthermore, although provincial health departments and Age-in-Action

h These USA figures refer to an average rate for an 8-year period, 1990-1997.

**Table 3: Illness and disability in the older population in South Africa (%)**

	Older population		All ages	
	Men	Women	Men	Women
Symptoms of lung disease 65+ reported in SADHS 1998			(≥15 years)	
Asthma/Airflow limitation	11.1	14.2	6.7	8.6
Chronic bronchitis	4.3	5.6	2.3	2.8
Abnormal peak flow rate	5.8	7.8	4.0	4.1
Disability 60+ reported in Census 2001			All ages	
Sight	4.8	5.3	1.3	
Hearing	2.2	2.2	0.7	
Communication	0.4	0.3	0.2	
Physical	4.6	4.2	1.2	
Intellectual	0.5	0.5	0.5	
Emotional	1.1	1.1	0.6	
Multiple	2.3	2.8	0.6	
Any disability	<b>16.0</b>	<b>16.4</b>	5.0	

Source: SA Demographic and Health Survey 1998  
 Statistics South Africa: Census 2001

provide assistive devices such as wheelchairs, walking frames, bedpans, urinals, and canes to older persons, there is little data to assess the extent to which assistive devices are available for those who need them.

### Life style and risk factors

Chronic conditions associated with risk factors such as hypertension, high cholesterol, obesity, tobacco use, and alcohol abuse are among the leading causes of death in older South Africans. The DHS provides some indicators of lifestyle and risk factors that are shown in Table 4. Although the multi-causal nature of disease may provide difficulty in addressing them, a multiple risk approach offers great potential benefit from simultaneous interventions. For example, modest reductions in

blood pressure, obesity, tobacco use and cholesterol would more than halve cardiovascular disease incidence, if these reductions were population-wide and simultaneous.<sup>32</sup>

### Hypertension

High levels of hypertension are evident in the older population (Table 4) which is combined with poor levels of awareness, monitoring, treatment and control of the condition. Only a third of the hypertensives were controlled, only half had had their blood pressure measured in the last 12 months, and a mere 12% of male and 20% of female hypertensives were aware that their blood pressure was high (data not presented). This is a serious situation, considering scientific evidence that high blood pressure causes increased risk of ischaemic heart disease,

**Table 4: Lifestyle and risk factor profile of persons 65+ (%)**

	Older population		All ages (≥15 years)	
	Men	Women	Men	Women
Hypertension (>140/90 mm/Hg)	52.0	60.4	22.9	24.6
Currently smoking daily	35.4	6.6	36.7	9.4
Alcohol dependant (per CAGE measurement)	22.6	12.0	27.6	9.9
Overweight	28.5	26.5	19.8	26.1
Obese	13.9	33.3	9.3	30.1
Underweight	<b>9.9</b>	<b>7.4</b>	12.9	5.6

Source: SA Demographic and Health Survey 1998

stroke, hypertensive heart disease, other cardiovascular and renal disease,<sup>31</sup> while the former three conditions are the three leading causes of death in older South Africans.

### Overweight and obesity

Overweight and obesity have been found to lead to adverse metabolic effects on blood pressure, cholesterol, triglycerides and insulin resistance with a range of poor health outcomes. In men 65+, 29% were overweight and 14% obese, while the corresponding figures for women 65+ were 27% and 33%. Although, generally, the body mass index (BMI) increases among middle-aged and older people,<sup>32</sup> the rate of obesity in men decreased from age 55, while underweight increased from age 65. A similar pattern is identified in the women's data, with underweight increasing sharply in women 65+.

### Tobacco use and exposure to environmental tobacco, smoke, dust and fumes

There is evidence that smoking causes substantially increased risk of mortality from lung cancer, upper aero-digestive cancer, several other cancers, all vascular diseases, heart disease, chronic obstructive pulmonary disease and other respiratory diseases. Additionally, the extent of disease burden is consistently higher among groups known to have smoked the longest.<sup>31, 32</sup>

Among men and women aged 65+, 35% of men and 7% of women were current daily smokers. Fairly high proportions of male never-smokers (15%) and ex-smokers (14%), and high proportions of female never-smokers (23%) and ex-smokers (30%) reported exposure to environmental tobacco smoke (ETS). Over one-fifth of all men 65+, and over one-quarter of all women 65+ lived with smokers in their home. Of all men and women 65+, respectively, 43% and 14% reported that they worked in an environment with dust and fumes. For both men and women 65+, the mean number of years exposed to dust and fumes at work were 18 years. (Data not presented.)

### Alcohol consumption

A little less than half of men 65+ and a fifth of women 65+ reported that they were current consumers of alcohol. About 7% of men and women each reported risky drinking on weekdays. Much higher rates of risky drinking over weekends, 21% in older men and 30% in older women, were reported. About 23% of men and 12% of women reported alcohol dependence per the CAGE Questionnaire.<sup>i</sup> The dependence rate for older women was higher than that for all adult women.

The higher rate of current alcohol consumers in the older population than in the total adult population, and the high rates of risky drinking and alcohol dependency are matters of concern, inter alia in light of certain mobility issues, the assumed greater and more widespread consumption of medication in older people, and the direct and indirect impact alcohol has on disease and injury.

### Access to health services

During the SADHS, 13% of persons 65+ reported having access to a medical aid, while about half of the population 65+ were taking 2 or 3 prescribed, listed drugs for chronic conditions. While wealthier and formally-employed people are often able to privately provide for health and related needs associated with older age, the majority of the population rely on the public sector. Older persons can access free primary health care at over 3 500 primary health care clinics, including prevention, care and treatment of diseases of older persons. Older persons in receipt of a social grant, receive secondary health care services free of charge at public hospitals. Eight medical schools in SA are directly linked to tertiary hospital complexes, offering specialised tertiary care services to older persons. Three geriatric departments exist in the country, but limited resources means that only one is operational.<sup>23</sup>

The value and benefits of these services are acknowledged. NDoH statistics show that there has been an increase in the number of cataract operations provided in the public sector and that the national cataract surgery rate now exceeds the basic target rate of 1 per 1 000 population.<sup>33</sup> The surgery rate in the Eastern Cape (0.57), Mpumalanga (0.69) and North West (0.83) are substantially below the target. While the value of such services are recognised, it can not be ignored that, in transforming health care in SA to affect a shift to primary health care, dedicated geriatric services have been marginalised. Examples of such marginalisation include the preventive, curative and rehabilitative needs of older clients that have for the main part been integrated into general sessions at community clinics at the primary care level, and numerous community nurses that have been redeployed from geriatric services to assist, for example, in child immunisation programmes. Funds allocated to establish luncheon clubs and dietary supplementations for older persons have been withdrawn and redirected to children and pregnant and lactating women.<sup>34, 35</sup>

i C - Has anyone ever felt you should Cut down on your drinking?

A - Have people Annoyed you by criticizing your drinking?

G - Have you ever felt Guilty about your drinking?

E - Have you ever had a drink first thing in the morning (Eye-opener) to steady your nerves or to get rid of a hangover?

There is a lack of statistics on the quality of health services delivered to older people. Dissatisfaction by older persons with the situation in public health care services has been reflected in several studies.<sup>36, 37, 38, 39, 40</sup> Complaints include inefficient appointment systems, long waiting times, client overloads, understaffed facilities, shortages of medication, unavailability of assistive devices, and health personnel who were perceived as not doing thorough examinations, not explaining older persons' health problems to them, and not treating them with respect.

## Social integration

### Abuse and Violence against Older Persons

Like in many other societies, elder abuse in SA tends to be a hidden and under-reported issue. However, hundreds of shared experiences during the national inquiry of the Ministerial Committee on Abuse, Neglect and Ill-treatment of Older Persons, increasing evidence from research studies, and thousands of calls received by the Halt Elder Abuse Line (HEAL), a toll-free national help-line set up by Age-in-Action, are evidence of neglect, exploitation, desertion and otherwise abusive and violent conduct through which older persons' health and well-being are compromised. For example, in the first two years of HEAL's operation, the line received over 3 400 calls of which almost two-thirds were to report suspected or observed incidences of abuse.<sup>41, 42</sup> Over the subsequent two and a half years, calls to HEAL have increased, and at the end of 2003, just under 10 000 calls had been received. The ministerial committee, HEAL and selected research studies bear testimony to numerous instances of physical harm and injury such as beatings, assault, eviction, under- and malnutrition, rape, setting older persons' houses on fire, and being locked up in backyard shacks.<sup>38-40, 43, 44</sup> The detrimental effects hereof on older victims' physical and mental health, albeit not measured nor quantified, can not be denied.

No reliable data are available on the prevalence of elder abuse in SA, nor any empirical studies on the health consequences of mistreatment. Internationally, a few empirical studies have reported long-term physical and psychological health consequences of elder mistreatment.<sup>45</sup>

### Older Persons Critical Contribution in the AIDS Epidemic

As the AIDS epidemic matures in SA, increasing attention need to be directed at the impact on non-infected family members. Much attention in the literature and mass media and the focus by international agencies such as UNICEF, the World Bank and UNAIDS, has been on the children of persons with AIDS. In

contrast, the impact of the epidemic on older persons in general, and parents of adults with AIDS in particular, has been largely overlooked and received very little research attention.<sup>46-48</sup>

Research in Thailand, Uganda and Zimbabwe has shown that older persons are commonly involved with the living and caregiving arrangements of persons with AIDS.<sup>47, 49, 50, 51</sup> In SA, the AIDS epidemic has brought added responsibility to many of the country's affected older persons who are often left with little choice but to look after and support their children, grandchildren and other relatives infected or affected by the epidemic.<sup>52-55</sup>

The epidemic has the potential to affect older persons' health and well-being in various direct and indirect ways. By being mainly excluded from prevention and treatment education efforts, older persons are at some risk of contracting HIV themselves through caregiving activities. Additionally, caregiving strains and a greater burden of household work – at a time when many older people themselves need care and tend to reduce their household workload – have been found to effect stress, anxiety, swollen limbs, extreme frustration, and burnout. Psycho-social impacts are felt through the strains of having, or caring for, or living with a child / other relative with a terminal and stigmatised disease; disruption of social relations due to caregiving responsibilities and community reaction to persons with AIDS; verbal abuse from the terminally-ill child; and coping with the eventual loss of a child. Indirect means of affecting older persons' health and well-being include financial demands on older carers' income or savings related to the health care costs of their sick offspring; the provision of material support to their AIDS-ill children and their dependants; funeral costs; and suffering the loss of current and future financial support which the ill child or deceased would have provided.<sup>46, 47, 56</sup>

## Conclusion and Recommendations

Current numbers of older persons in the population call for increased attention to the country's older population, and an increased response towards the changing age structure. Despite the demographic impact of AIDS, it is expected that the population will continue ageing and the numbers will continue growing. Local and provincial policies need to include the concerns of older persons and to ensure that their basic needs are met. Older Africans and older persons in the Eastern Cape, Limpopo and KwaZulu-Natal are worst off.

j P Lindgren, Action on Elder Abuse (South Africa), Age-in-Action, Cape Town, personal communication.

The social security offered to older South Africans through the Older Person's Grant and the continued efforts to increase the amount is exceptional.<sup>k</sup> Attention is needed to ensure that the grant meant to benefit older persons themselves, is given and utilised as such and is not diminished through its use as a general poverty alleviation tool. The challenges associated with accessing the grant, and the potential impact these challenges exert on older person's physical and mental health and well-being, urges careful planning and urgent intervention. The database to monitor access to the grant needs to be strengthened.

The older population's main burden of disease is reflected in the large number of noncommunicable diseases (NCDs). Many NCDs are preventable, manageable or can be postponed, and the failure to reduce NCDs results in large costs for the health service.<sup>57</sup> Many chronic conditions have their origins in childhood, adolescence and adult life.<sup>58-60</sup> The high prevalence of chronic conditions among older persons highlights the importance of, on the one hand, having strategies and policies in place to manage these conditions, and on the other hand, planning for and implementing preventive health measures in both the younger and unaffected older population. The Directorate for Chronic Diseases, Disabilities and Geriatrics has shown increased awareness of the need for healthy ageing, and has produced valuable chronic-disease-management and health-promoting guidelines. At service delivery level there is a need for implementing these and a strong health promotion strategy to ensure a comprehensive healthy ageing programme.

Low priority is generally given to older persons' health, chronic care, and geriatric services, while, in general, it is in the older population where the greatest per capita health needs are generated, where the heavier consumers of health care are, and where the health of the great majority has been compromised due to discriminatory policies. This points towards a particular need to include *equity across age groups* as another dimension in equity discussions.

Reliable disability and morbidity data should form an important part of a population's epidemiological database as they contribute substantially to the burden of disease, particularly in older ages. Some conditions such as blindness, depression and Alzheimer's disease can cause substantial burden, but are not reflected by mortality statistics. With a shifting focus towards healthy ageing, it is also important to collect population-based statistics on the limitations to activities of daily living and cognitive functioning. In addition, information on reproductive health among older persons is needed.

AIDS adds a further challenge to meeting the needs of older persons. While older persons are largely overlooked in the context of the epidemic, it is clear that they fulfil a critical resource role by providing care to AIDS-sick persons and providing in the material and social needs of AIDS-sick people and their dependents, thereby reducing the demands at already overcrowded and under-resourced care facilities. The material, physical and emotional demands of the epidemic will take their toll on older persons, particularly women who traditionally take on the caring role. There is an urgent need for comprehensive research about the impact of HIV/AIDS on the health and well-being of older persons in the country, including an assessment of the needs and concerns of older caregivers of AIDS-sick and AIDS-affected persons.

A United Nations review of elder mistreatment highlighted different types of interventions to respond to this problem in both developed and developing countries, including awareness and education within a human rights approach; legislation, protective mechanisms and legal intervention; community-based, institutional and residential intervention and prevention programmes; as well as interventions to treat the social, economic and political factors leading to abuse and violence against older persons.<sup>61</sup> Those responses not yet utilised or implemented in SA, should be considered to supplement the current initiatives.

Recognising the differential impact of ageing on women and men is important in ensuring gender equality and in developing effective and efficient measures to address the issue. It is important to ensure the integration of a gender perspective into policies, programmes and legislation related to older person's health and well-being.

The low priority given to older persons in social transformation programmes stands in contrast to the many social policies targeted at the situations of the youth, women, young children and adults of 'working age'.<sup>62</sup> Despite often being referred to as a vulnerable segment of society, and despite the large majority living through 45 years of marginalising policies not conducive to healthy ageing, ten years since remarkable social and political changes were initiated, the country's older persons still lack official protection and enhancement of their situation through an official policy that considers older persons *per se*, and the effects of population ageing. A strong political will and high-level commitment are continuously needed towards the elimination of unequal opportunities and biased services, and the active promotion of human rights for people of all ages. Additionally, an active, prominent, intersectoral policy community

k Only three countries in sub-Saharan Africa, i.e. SA since 1928, Namibia since 1949 while still under South African administration, and Botswana, since 1997, provide non-contributory social grants for their older citizens. SA currently serves 1.9 million older persons, each receiving R700 per month, Namibia serves about 85 000, receiving N\$250, and Botswana serves about 80 000 persons with 110 Pula per month.<sup>26</sup>

that promotes and monitors both the responsibility of individuals to maintain quality of life into older age, and the responsibility of government to ensure a supportive environment, are needed.

The Second World Assembly on Ageing (WAA), its resultant plan of action on ageing, and the dedication of the Minister of Social Development and his delegation during and after this high-level global forum explicitly concerned with and promoting the cause of older persons, appear to have created a new opportunity to develop consensus among stakeholders, and give renewed impetus to policy development and implementation.

## Acknowledgements

Mr Desmond Booysen and Ms Brenda Ramokgadi of Statistics South Africa, and Dr Tom Moultrie of UCT's Centre for Actuarial Research are thanked for their assistance in obtaining data from the 2001 Census. Ms Desiree Pass and Ms Elize de Kock of the MRC's Burden of Disease Research Unit are thanked for their technical support.

## References

- 1 United Nations. World population ageing: 1950-2050. New York: Department of Economic and Social Affairs, Population Division, United Nations; 2002.
- 2 Kinsella K, Velkoff VA. An ageing world: 2001. US Census Bureau, Series P95/01-1. Washington, DC: United States Government Printing Office; 2001.
- 3 Kalache A. Ageing worldwide. In: Ebrahim S, Kalache A, editors. Epidemiology in old age. London: BMJ Publishing; 1996:22-31.
- 4 Obaid TA. Foreword. In: UNFPA. Situation and voices. The older poor and excluded in South Africa and India. New York: UNFPA; 2002.
- 5 United Nations. Report of the Second World Assembly on Ageing: Madrid, 8 - 12 April 2002. New York: United Nations; 2002.
- 6 Department of Health. Health Goals, Objectives and Indicators 2001-2005. Pretoria: Department of Health; 2001.  
URL: <http://www.doh.gov.za/docs/misc/indicators.html>.
- 7 World Health Organization. Report on a WHO Workshop: MDS Version 1.0 on ageing and adult mortality data in sub-Saharan Africa. Geneva: World Health Organization; 2003.  
URL: <http://www3.who.int/whosis/menu.cfm?path=whosis,mds>
- 8 Pillay U, editor. Ageing in South Africa. Report on the minimum data set on ageing, March 2002. Pretoria: Human Sciences Research Council (HSRC); 2003.
- 9 Department of Health. Written communication from the Directorate Chronic Diseases, Disabilities and Geriatrics. 30 October 2003.
- 10 Kowal PR, Dowd JE, Aboderin IAG, Madzingira N. Data for older adult populations in sub-Saharan Africa. Correspondence. Lancet. 2002; 360: 91.
- 11 Kowal PR, Wolfson LJ, Dowd JE. Creating a Minimum Data Set on ageing in sub-Saharan Africa. Southern African Journal of Gerontology. 2000;9(2):18-23.  
URL: [http://www3.who.int/whosis/mds/mds\\_publications/sajg.pdf](http://www3.who.int/whosis/mds/mds_publications/sajg.pdf)
- 12 Kowal P, Chalapati Rao PV, Mathers C. Report on a WHO Workshop: Minimum Data Set Version 1.0 on Ageing and Adult Mortality Data in sub-Saharan Africa: Pretoria, South Africa: 12-14 February 2003. World Health Organization; 2003.  
URL: [http://www3.who.int/whosis/mds/mds\\_activities/Reports.zip](http://www3.who.int/whosis/mds/mds_activities/Reports.zip)
- 13 May J. Chronic poverty and older people in South Africa. Chronic Poverty Research Centre Working Paper 25 [online].  
URL: <http://www.chronicpoverty.org/pdfs/JMay.pdf>
- 14 Statistics South Africa. Census 2001 Database [online].  
URL: <http://www.statssa.gov.za/> [Accessed on 29/12/03].
- 15 Actuarial Society of South Africa (ASSA). ASSA AIDS and Demographic Models [online].  
URL: <http://www.assaorg.za/AidsModellist.asp> [Accessed on 03/03/03].
- 16 Joubert JD, Nannan N, Bradshaw D. Causes of death among older persons in South Africa. Poster presented at the Conference of the Public Health Association of South Africa, 24-26 March, Cape Town; 2003.

- 17 Mostert WP, Hofmeyr BE, Oosthuizen JS, Van Zyl, JA. Demography: Textbook for the South African student. Pretoria: Human Sciences Research Council; 1998.
- 18 HelpAge International. The ageing and development report: Poverty, Independence and the World's Older People. London: Earthscan; 1999.
- 19 HelpAge International. State of the world's older people 2002. London: HelpAge International; 2002.
- 20 HelpAge International Africa Regional Development Centre. African Union Policy Framework and Plan of Action on Ageing. Nairobi: HelpAge International Africa Regional Development Centre; 2002.
- 21 Committee of Inquiry into a Comprehensive System of Social Security for South Africa. Transforming the present-protecting the future. Draft consolidated report. Pretoria: Government Printer; 2002.
- 22 Dekker A. The role of informal social security in an inter-generational society. Paper presented at the 4<sup>th</sup> International Research Conference on Social Security. Antwerp, 5-7 May 2003 [online].  
URL: <http://www.issa.int> [Accessed on 03/09/2003].
- 23 Department of Social Development. 2002. National report on the status of older persons. Report to the Second World Assembly on Ageing. Pretoria: Department of Social Development; 2002.
- 24 Institute of Development and Policy Management (IDPM) & HelpAge International. Non-contributory pensions and poverty prevention: A comparative study of Brazil and South Africa. London: IDPM & HelpAge International; 2003.
- 25 Moller V, Sotshongaye A. "My family eat this money too": Pension sharing and self-respect among Zulu grandmothers. *Southern African Journal of Gerontology*, 1996; 5(2): 9-19.
- 26 Devereux S. Future uncertain: Social pensions in Southern Africa; 2002 [online].  
URL: <http://www.globalaging.org/pension/world/safrica.htm> [Accessed on 14/05/2003].
- 27 Joubert JD, Lindgren P. Health and well-being risks of elder abuse in South Africa. Paper presented at the Geriatric Africa '03 Conference, 06-08 March, Cape Town; 2003.
- 28 Bradshaw D, Groenewald P, Laubscher R, Nannan N, Nojilana B, Norman R, Pieterse D, Schneider M. Initial burden of disease estimates for South Africa, 2000. Technical Report. Cape Town: Medical Research Council; 2003.  
URL: <http://www.mrc.ac.za/bod/bod.htm>
- 29 Stevens JA, Hasbrouck LM, Durant TM, Dellinger AM, Batabyal PK, Crosby AE, Valluru BR, Kresnow M-j, Guerrero JL. Surveillance for injuries and violence among older adults. In: CDC Surveillance Summaries, December 17. *Morbidity and Mortality Weekly Report* 1999; 48(SS-8):27-50.
- 30 Department of Health, Medical Research Council & Measure DHS+. South Africa Demographic and Health Survey 1998, Full Report. Pretoria: Department of Health; 2002.  
URL: <http://www.doh.gov.za/facts/1998/sadhs98/>
- 31 Ezzati M, Lopez AD, Rodgers A, Van der Hoorn S, Murray CJL, Comparative Risk Assessment Collaborating Group. Selected major risk factors and global and regional burden of disease. *Lancet*. 2002; 360: 1347-60.
- 32 World Health Organization. World Health Report 2002. Geneva: World Health Organization; 2003.  
URL: <http://www.who.int/whr/>
- 33 Department of Health. Cataract surgeries: Comparison 2002/2003. Documentation received electronically from Ms M Viljoen at the Directorate: Chronic Diseases, Disabilities and Geriatrics; 12/02/04.
- 34 Charlton KE. Health, health care and ageing in Africa: Challenges and opportunities. Editorial. *Southern African Journal of Gerontology*. 1998; 7(2):1-3.
- 35 Charlton KE. Geriatric nutrition services-whose responsibility? Editorial. *The South African Journal of Food Science and Nutrition*. 1996; 8(4): 121-122.
- 36 Ferreira M, Charlton KE. Towards an integrated, community-based social and health care programme for older residents of Mitchell's Plain: A study report. Cape Town: HSRC/UCT Centre for Gerontology; 1996.
- 37 Ferreira M, Charlton KE, Mosaval Y. Retired farm workers, farm evictions and the 'dop' system: An exploratory study in three towns in the Western Cape Province. Study report. Cape Town: HSRC/UCT Centre for Gerontology; 1998.
- 38 Joubert JD, Swart D, Reddy P. Knowledge, perceptions and needs of older persons with reference to 1999, the International Year of Older Persons: A qualitative study in KwaZulu-Natal. Unpublished research report. Cape Town: Medical Research Council; 1998.
- 39 Joubert JD, Swart D, Reddy P. Knowledge, perceptions and needs of older persons with reference to 1999, the International Year of Older Persons: A qualitative study in the Eastern Cape. Unpublished research report. Cape Town: Medical Research Council; 1998.
- 40 Swart D, Joubert JD, Reddy P. Knowledge, perceptions and needs of older persons with reference to 1999, the International Year of Older Persons: A qualitative study in the Western Cape. Unpublished research report. Cape Town: Medical Research Council; 1998.
- 41 Bryan W, Joubert JD, Lindgren P. Hear, Help, HEAL. Report on two years of the Halt Elder Abuse Line (HEAL). Unpublished research report. Cape Town: South African Council for the Aged & Medical Research Council.
- 42 Joubert JD, Lindgren P. HEAL: An intervention project addressing elder abuse in South Africa. *Intercom, Newsletter of the International Federation on Ageing*; August 2003, 10(3): 4-6.
- 43 Department of Social Development. Mothers and fathers of the nation: The forgotten people? Report of the Ministerial Committee on Abuse, Neglect and Ill-treatment of Older Persons. Volumes 1 and 2. Pretoria: Department of Social Development; 2001
- 44 Keikelame J, Ferreira M. Mpathekombi ya bantu abadala: Elder abuse in black townships on the Cape Flats. Research report. Cape Town: University of Cape Town; 2000.
- 45 United Nations. Abuse of older persons: Recognizing and responding to abuse of older persons in a global context. Report of the Secretary-General. New York: United Nations; 2002.
- 46 Knodel J, VanLandingham M. Children and older persons: AIDS' unseen victims. *Am J Public Health*. 2000; 90(7):1024-1025.
- 47 World Health Organization. Impact of AIDS on older people in Africa: Zimbabwe case study. Geneva: World Health Organization; 2002.

- 48 Brabant S. An overlooked AIDS affected population: The elderly parent as caregiver. *J Gerontol Soc Work*. 1994; 22(1-2):131-145.
- 49 Knodel J, VanLandingham M, Saengtienchai C, Im-em W. Older people and AIDS: Quantitative evidence of the impact in Thailand. *Soc Sci Med*. 2001; 52:1313-1327.
- 50 Knodel J, Saengtienchai C. Parental caregiving to adult children with AIDS: A qualitative analysis of circumstances and consequences in Thailand. Population Studies Center Research Report No 01-481. Michigan: University of Michigan; 2001.
- 51 Ntozi J, Nakayiwa S. AIDS in Uganda: how has the household coped with the epidemic? In: Orubuloye IO, Caldwell JC, Ntozi J, editors. *The Continuing HIV/AIDS Epidemic in Africa: Response and Coping Strategies*. Canberra: Health Transition Centre, Australian National University; 1999: 155-180.
- 52 Department of Social Development. South African policy for older persons. Eleventh draft. Pretoria: Department of Social Development; 2003.
- 53 Ferreira M, Keikelame MJ, Mosaval Y. Older women as carers to children and grandchildren affected by AIDS: A study towards supporting the carers. Cape Town: Institute of Ageing in Africa, University of Cape Town; 2001.
- 54 Ferreira M, Brodrick K. Towards supporting older women as carers to children and grandchildren affected by AIDS: A pilot intervention project. Cape Town: Institute of Ageing in Africa, University of Cape Town; 2001.
- 55 Johnson S, Schierhout G, Steinberg M, Russell B, Hall K, Morgan J. AIDS in the household. In: Ijumba P, Ntuli A, Barron P, editors. *South African Health Review 2002*. Durban: Health Systems Trust; 2003: 203-216.
- 56 Legido-Quigley H. The South African old age pension: Exploring the role on poverty alleviation in households affected by HIV/AIDS. Paper presented at the 4th International Research Conference on Social Security, Antwerp, 5-7 May 2003 [online].  
URL: <http://www.issa.int/> [Accessed on 03/09/03].
- 57 World Health Organization. *Active Ageing: A Policy Framework*. Geneva: World Health Organization; 2002.  
URL: <http://www.who.int/hpr/ageing/ActiveAgeingPolicyFrame.pdf>
- 58 Kuh D, Ben-Shlomo Y, editors. *A life course approach to chronic disease epidemiology*. Oxford: Oxford University Press; 1997.
- 59 Elo IT, Preston SH. Effects of early-life conditions on adult mortality: A review. *Population Index*. 1992; 58(2):186-212.
- 60 World Health Organization. *A life course perspective of maintaining independence in older age*. Geneva: World Health Organization; 1999.
- 61 United Nations. *Abuse of older persons: Recognizing and responding to abuse of older persons in a global context*. New York: United Nations; 2002.
- 62 Ferreira M. Older persons and new social policies in South Africa. *Journal of the International Institute on Ageing (BOLD)*, 1998; 8(4): 5-15.