

# **Cape Town Mortality, 2001**

## **Part I**

### **Cause of death and premature mortality**

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CITY OF CAPE  
TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD



Burden of Disease Research Unit



University of Cape Town

**November 2003**

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**Copies of the report can be downloaded from:** [www.mrc.ac.za/bod/bod.htm](http://www.mrc.ac.za/bod/bod.htm)

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## **Preface**

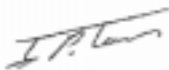
Mortality patterns are crucial for the management of health services. Information on age at death, cause of death, gender and area of residence are all important to assist with defining health priorities and areas of focus. Premature and preventable deaths are of particular concern.

In 1999, the Metro Information Group and the Burden of Disease Research Unit of the Medical Research Council and staff from University of Cape Town's Public Health Department started working together on evaluating the death data of the City Health Directorate of the City of Cape Town. This partnership has led to an improved way of coding cause of death. City health coders were trained and the system of collation of death data was monitored more closely. Recently, the same teams with the addition of the UWC Equity Gauge Project have looked at analysing the death data resulting from this improved coding system. This report is one of the results.

We would like to thank the MRC/UCT/UWC team who have assisted us. The recommendations that the team have made have always been quite practical and, where possible, they have assisted us with implementation and advocacy. They have at all times consulted with City Health officials regarding their findings and the reports. This is the kind of relationship that City Health would like to have with researchers in general.

The results shown here are very valuable and shocking in certain instances. They provide additional information to guide management on priority areas of focus. They provide the additional motivation needed for the ongoing action on TB, HIV and violence.

In the light of the above the City Council has set as a priority project in the Integrated Development Plan (IDP) to step up, through effective partnerships, efforts aimed at turning the tide on HIV/AIDS, TB, infant mortality and substance abuse (because of the close link between alcohol abuse and violence). This exemplifies the positive way research can inform and influence service delivery to improve the health of communities in the City of Cape Town.



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Dr I Toms

Director: City Health

## **Executive Summary**

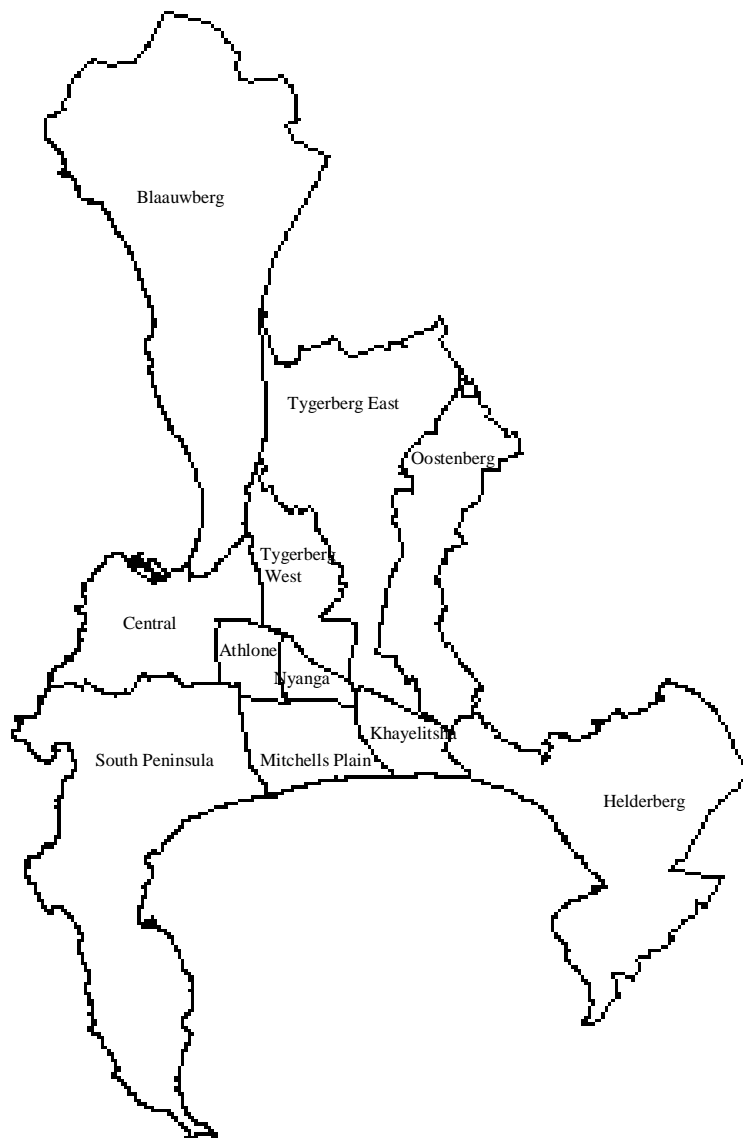
Cape Town has a well established system for compiling death statistics. The quality of the cause of death coding was reviewed in 2000, which resulted in the development of a short list that would meet the public health needs and improve the standardisation of coding between the municipalities. The cause of death statistics for 2001 are analysed, and the burden due to premature mortality (years of life lost) for Cape Town and eleven health sub-districts are compared.

The cause of death is classified into three main groups: Group I, the pre-transitional causes, include communicable diseases, maternal causes, perinatal conditions, and nutritional deficiencies; Group II, the non-communicable causes; and Group III, the injuries. Years of life lost are estimated using age weighting, discounting of future years (3% per annum) and standard life expectancies based on the West model levels 25 and 26.

A total of 23185 deaths were reported in Cape Town in 2001. The majority (54%) are due to non communicable diseases, with injuries and pre-transitional causes accounting for 19% each. Deaths due to ill defined causes account for 8%. The top cause of death in Cape Town is homicide followed by ischaemic heart disease and HIV/AIDS. Males and females have very different cause of death profiles. The leading cause of death in males is homicide and in females it is HIV/AIDS. The use of YLLs changes the ranking of cause of death. Homicide remains the leading cause while HIV/AIDS, tuberculosis and road traffic accidents move above ischaemic heart disease in the ranking, since these deaths occur in younger people. In order to reduce the burden of premature mortality in Cape Town intersectoral strategies are urgently required to prevent violence and homicide and road traffic accidents. Additional interventions, including the provision of anti-retrovirals to HIV positive patients, are required to strengthen the HIV/AIDS programme. Tuberculosis control must be improved. Healthy lifestyles must be promoted in order to reduce the burden of non communicable diseases.

There are striking differences in the cause of death profile amongst the eleven sub-districts. Injuries and pre-transitional causes, especially HIV/AIDS, feature prominently in the township areas. By contrast, non communicable diseases account for the majority of deaths in the more affluent sub-districts. A comparison of the age standardised death rates by cause reveals huge disparities between sub-districts. The health priorities are thus very different in different sub-districts therefore different intervention strategies will be required. This study highlights the importance of analysing mortality statistics at district level for district health managers.

# Cape Town



## **Introduction**

Cape Town has a well established system for compiling death statistics that was set in place more than 100 years ago. Local authorities used ICD-9 to capture mortality data until 1999 when ICD-10 was implemented at a national level. At this time the MRC Burden of Disease Research Unit was invited to assess the quality of the Cape Metropole death statistics and to determine whether the coding system should be changed. The main finding of this appraisal showed that variations in coding practices exist between Metropolitan Local Councils (MLCs) (Bradshaw et al, 2000). Secondly, there was no standard approach to identifying underlying medical cause of death, and thirdly, the ICD-9 and ICD-10 classification of cause of death is beyond the extent of detail of information specified on some death certificates and more than is required for public health surveillance. In the light of this, the team developed a short list compatible with ICD-10, for coding the cause of death at local level. It was based on the causes most prevalent in Cape Town and the causes of public health importance and is shown in Appendix 1. In addition, the list includes a selected combination of prevalent diseases, which are difficult to attribute to a single underlying cause. The motivation for this was to simplify the task of coding and allow the decision to be made during the analysis. The short list was implemented in July 2000 with a training session for all coders from all MLCs. Feedback from the coders suggested that the list worked well. The assessment also revealed that a small proportion of forms were getting lost in the system and a more rigorous monitoring of the numbers of forms received and processed was introduced to reduce this loss.

Subsequent to this, the MRC Burden of Disease Research Unit was asked to re-assess the quality of the Cape Town mortality statistics and describe the cause of death profile in Cape Town. This report aims to describe the cause of death profile in Cape Town and the eleven health sub-districts. In addition, the premature mortality (years of life lost) is estimated.

## **Methods**

The 2001 mortality data were obtained electronically from the Metropolitan Health Information Group for each of the six MLCs. Microsoft Excel was used to clean and analyse the data. Stillbirths (n = 706) and duplicate records (n = 196) were excluded. For duplicate records, where two different causes of death had been assigned to the same person, the most likely cause of death, based upon available data, was selected by the coders with one of the researchers. Where the code for cause of death was unknown or blank, the cause of death was coded to ill defined natural (code



2799). Where the cause of death code was inappropriate for age or gender, either the age was changed to age unknown or the cause was changed to ill defined natural, based upon available data. The data was analysed for Cape Town and for each of the eleven sub-districts within Cape Town.

After cleaning the data, the shortlist codes were reclassified into the burden of disease classification used for the 2000 South African National Burden of Disease Study (NBD), as shown in Appendix 2. An adapted version of the 1990 Global Burden of Disease (GBD) list of causes of death (Murray and Lopez, 1996) was developed for the NBD (Bradshaw et al, 2003). Overall mortality is divided into three broad groups of causes of death: Group I, the pre-transitional causes, include communicable diseases, maternal causes, perinatal conditions, and nutritional deficiencies; Group II, the non-communicable causes; and Group III, the injuries. In accordance with the GBD list, each group is divided into several major categories of causes of death such as the respiratory infections, cardiovascular diseases and intentional injuries. These categories are further disaggregated into more specific causes of death. For the purposes of this study the code 1020 (TB and HIV/AIDS combined) was reclassified to HIV/AIDS as the underlying cause. The code for diabetes and hypertension (code 1302) was reclassified to diabetes mellitus.

The deaths with unknown ages were redistributed proportionally by age and sex for each cause of death. The ill defined cardiovascular deaths (heart failure) were redistributed by age and sex across rheumatic heart disease, ischaemic heart disease, hypertensive heart disease, pulmonary heart disease and other cardiovascular diseases. The ill defined respiratory deaths (respiratory failure) were redistributed proportionally by age and gender across chronic obstructive pulmonary disease, asthma and other respiratory diseases. The deaths coded to ill defined natural causes were redistributed proportionally by age and sex across all pre-transitional and non communicable causes. The ill defined injury deaths were redistributed proportionally by age and sex across all intentional and unintentional injuries.

In order to assess the completeness of reporting, the number of deaths processed for Cape Town in 2001 was compared with deaths registered by Home Affairs and ASSA estimates for Cape Town for the same year (Dorrington, 2000). In addition the number of injury deaths reported was compared with those reported by the National Injury Mortality Surveillance System (NIMSS), which covers both Tygerberg and Salt River mortuaries, for 2001 ( Matzopoulos R, 2001).

Age specific and age standardised death rates were calculated using population estimates obtained from the Equity Gauge project at University of the Western Cape, see Appendix 3. These estimates

are based upon projections from the Census 1996 with adjustments for deficiencies (Dorrington R, 2000). Dorrington has projected populations for each of the 11 old health sub-districts from 1996 until 2005, based upon migration, fertility and mortality patterns. He has not taken his projections down to suburb level. Equity Gauge have therefore adapted Dorrington's work to project populations for the suburbs. In consultation with sub-district health managers, they redefined the boundaries of the 11 health sub-districts so that they contain whole suburbs. The Census 96 population for each suburb were corrected using the correction factors Dorrington used for each old Health subdistrict. These corrected populations were projected to 2004 using Dorrington's annual projection factors for each health sub-district. While some error may have been introduced at suburb level, the total populations for 1996 until 2004 at sub-district level are true to Dorrington's model.

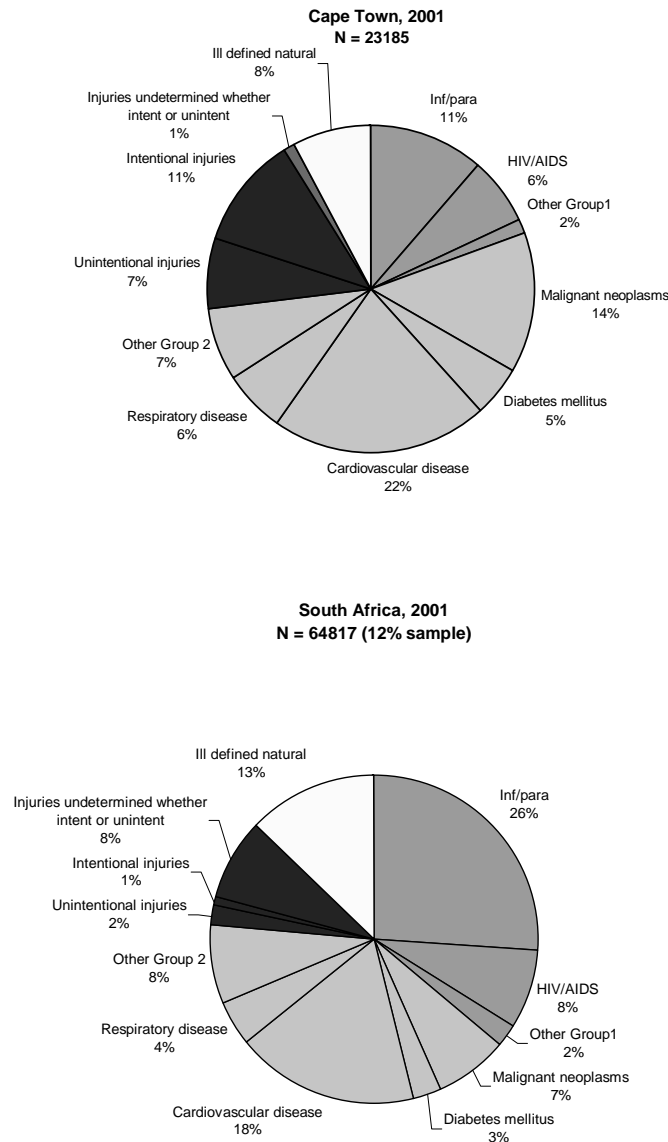
Premature mortality was estimated using the standard GBD approach to calculate years of life lost (YLLs). Age weighting, time discounting of 3% per annum and standard life expectancies based on the West model levels 25 and 26 (considered to a maximum life expectancy) were used, to be consistent with national estimates. The sensitivity of YLLs to various combinations of discounting, age weighting and life expectancies were explored before deciding to use the standard GBD approach, see Appendix 4. While the actual number of YLLs varied considerably (Figure 4.1), the relative proportions by cause did not (Figure 4.2). It was therefore decided to use the standard GBD approach that was also used for the South African NBD study so as to enable comparison.

## **Results**

There were 24087 deaths recorded in the Cape Town in 2001. After excluding the stillbirths (706) and duplicate records (196), 23185 deaths remained for analysis. Of these 13 had unknown or blank codes for cause of death, 38 had unknown age, 67 were duplicate records with differing causes of death and in 19 the cause of death was inappropriate for the age or gender. These 23185 deaths account for 89% of the deaths reported by the Department of Home Affairs for the same period. Details are given in Appendix 5. Similarly, the total injury deaths accounted for 90% of those reported for the Tygerberg and Salt River mortuaries for NIMMS for the same period. It is thus estimated that the deaths reported for the Cape Town in 2001 are approximately 90% complete.

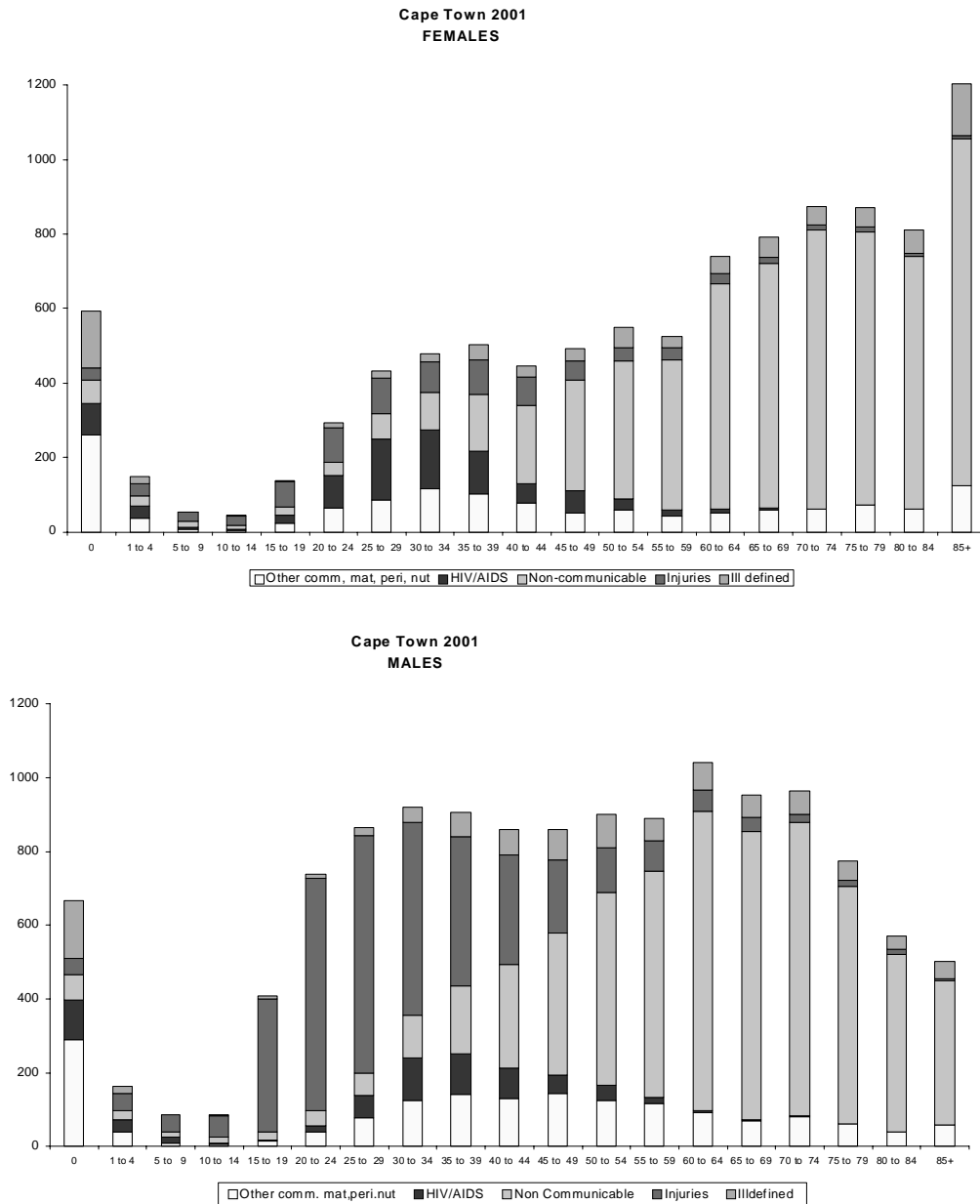
The cause of death profile for Cape Town prior to redistribution of the ill defined causes of death, is compared with the national profile for 2001 in Figure 1. Ill defined deaths accounted for 8%, lower than the national average of 12.7% for 2001 of the sample data (Stats SA, 2002). The majority of

deaths in Cape Town were due to non communicable diseases (54%) with injuries (19%) and pre-transitional causes (19%) accounting for similar proportions. In South Africa overall, however, non communicable diseases and injuries account for lower proportions of the deaths, 40% and 11% respectively, while pre-transitional causes account for a larger proportion (36%) than in Cape Town.



**Figure 1: Cause of death profile: Cape Town mortality data, 2001 and South Africa Stats SA sample data, 2001**

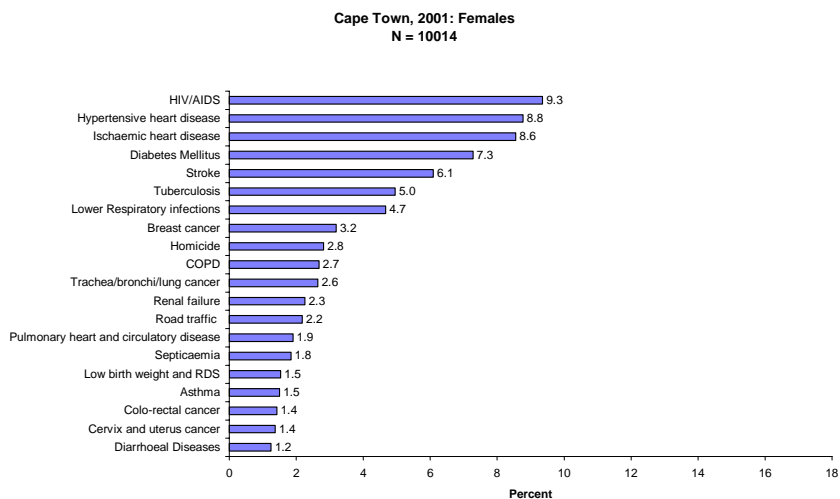
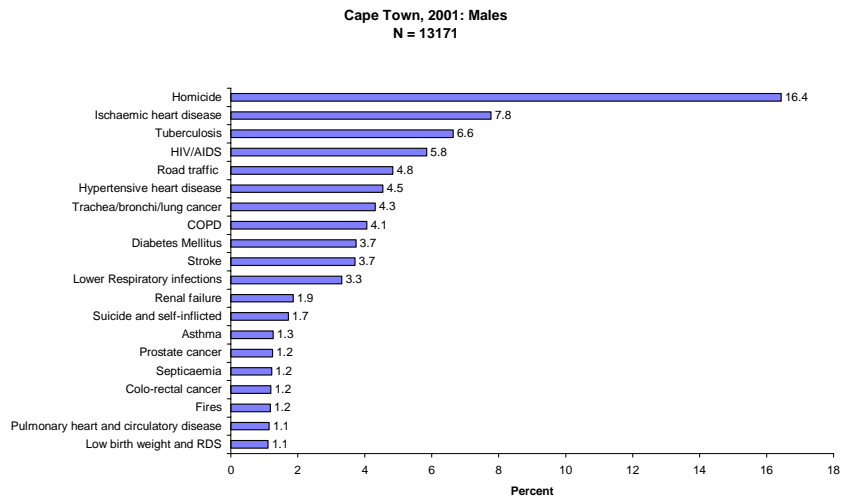
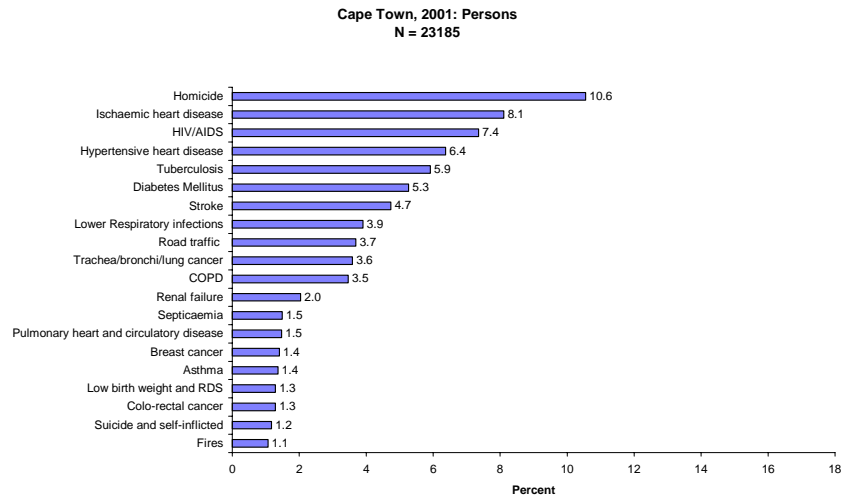
The age distribution of deaths by cause group and HIV/AIDS is shown for males and females in Figure 2. There are large differences between males and females with young adult males experiencing much larger numbers of deaths than females, mainly due to injuries. HIV/AIDS accounts for a large proportion of deaths in young women.



**Figure 2: Age distribution of deaths by cause group and gender, Cape Town 2001**

The top twenty single causes of death are ranked in Figure 3. The leading cause of death is homicide (10.6%) followed by ischaemic heart disease (8.1%) and HIV/AIDS (7.4%). For males, the top cause is homicide (16.4%) followed by ischaemic heart disease (7.8%) and tuberculosis (6.6%), with HIV/AIDS (5.8%) ranked fourth. For females, however, HIV/AIDS (9.3%) ranks first followed by hypertensive heart disease (8.8%) and ischaemic heart disease (8.6%).

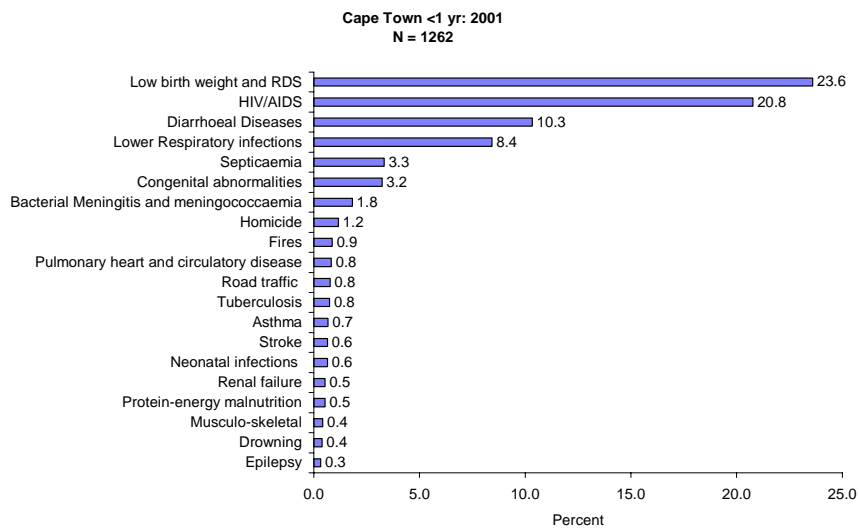
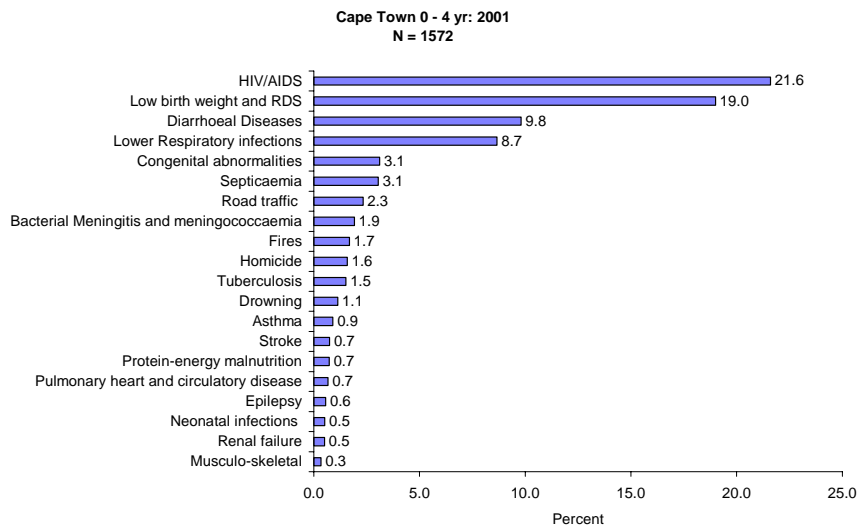
The number of deaths (after redistribution of ill defined deaths) by age, cause and sex in the Cape Town in 2001, are set out in Appendix 6. As mentioned earlier, deaths attributed to both HIV and TB are included in HIV/AIDS. These have been listed separately in this table to enable TB managers to access this information. Similarly, where cause of death was code 1302 (DM and hypertension and/or stroke and or heart disease) the death was classified with diabetes mellitus but the deaths due to code 1302 have been listed separately in this table. The code 1020 (HIV and TB) accounted for 36% of the total person deaths due to HIV/AIDS. For males it accounted for 35% and females 37%. Diabetes and hypertension (code 1302) accounted for 68% of the deaths attributed to diabetes mellitus. For males, it accounted for 69% and females 68% of the diabetes mellitus deaths.



**Figure 3: Top twenty causes of death for persons, males and females, Cape Town 2001**

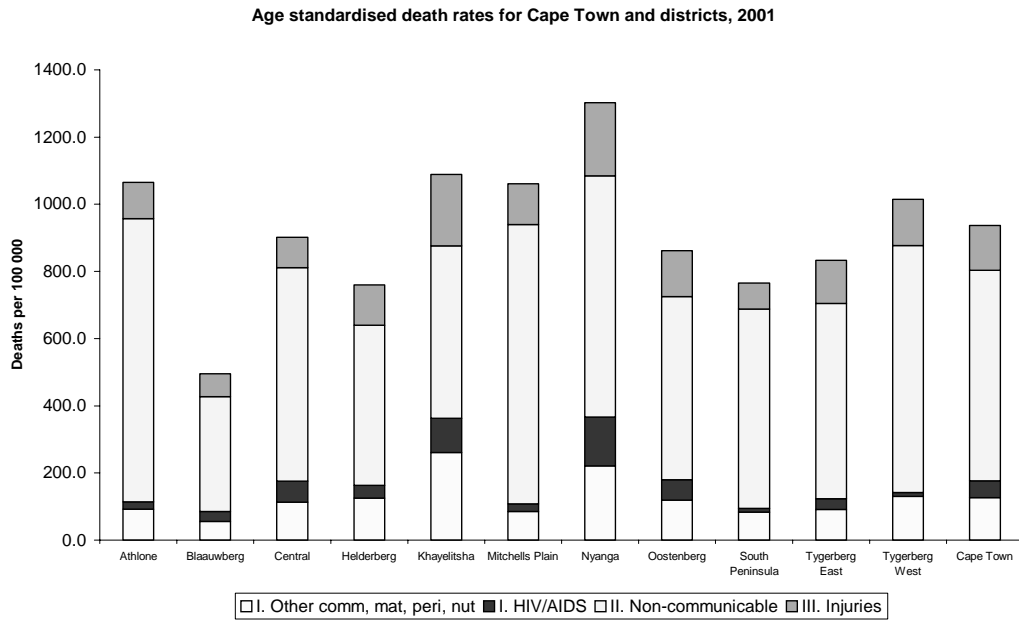
The leading causes of death in children under 1 year and between 0 and 4 years are shown in Figure 4. In the 0 – 4 year age-group HIV/AIDS (21.6%) is ranked top followed by low birth weight (19%) and then diarrhoea (9.8%). Low birth weight (23.6%) is the leading cause of infant mortality followed by HIV/AIDS (20.8%), diarrhoea (10.3%) and lower respiratory infections (8.4%).

The age and sex specific death rates are set out in Appendix 7, Table 7.1. These rates are presented with a note of caution, as the Cape Town mortality data is only approximately 90% complete. This means that the rates are probably a bit low. The cause specific age standardised death rates for persons, males and females are set out by sub-district in Appendix 7, Tables 7.2 -7.4. There are large variations in these rates across sub-districts (Figure 5). In the poorer sub-districts such as, Khayelitsha and Nyanga, HIV/AIDS, pre-transitional causes and injuries predominate, whereas in the more affluent sub-districts, such as South Peninsula, non communicable diseases account for the majority of deaths (Figure 6). A more detailed cause of death profile by disease category for each sub-district and Cape Town is shown in Figure 7. The top ten single causes of death in each sub-district are shown in Table 1.

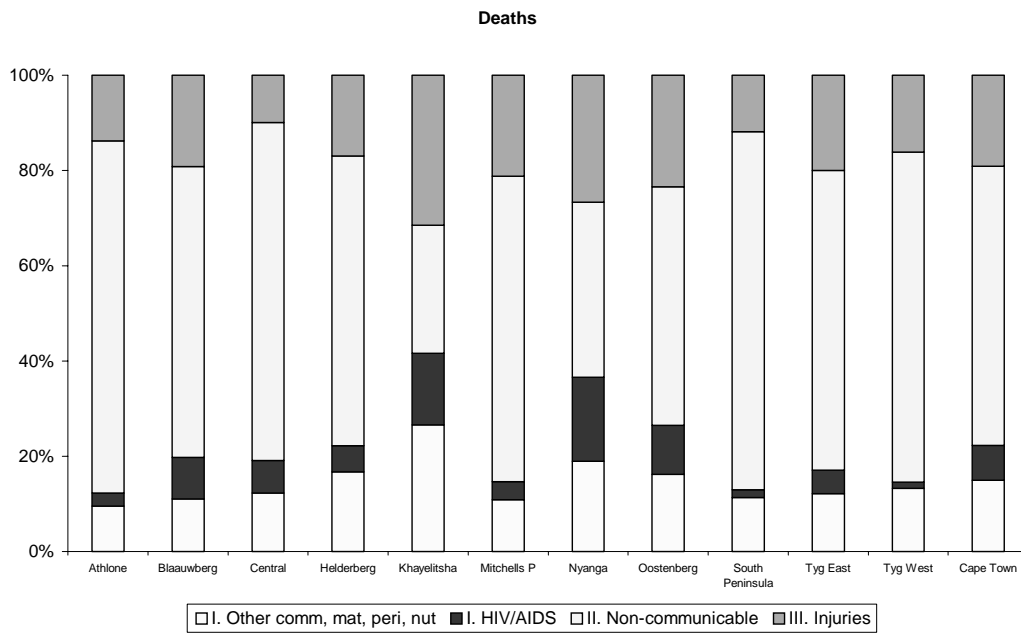


**Figure 4: Top causes of death among children 0 - 4 yrs and infants < 1 yr, Cape Town 2001**

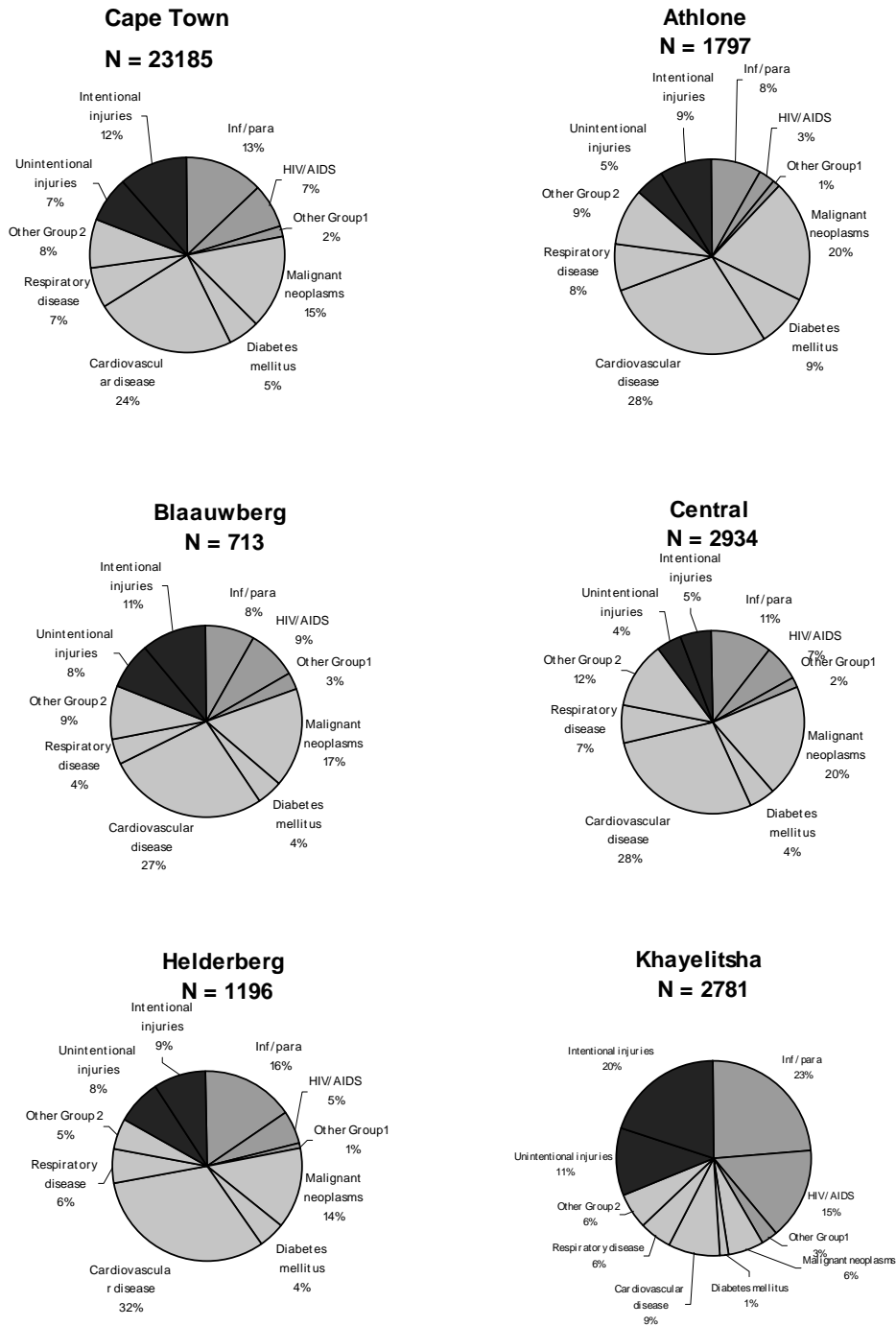




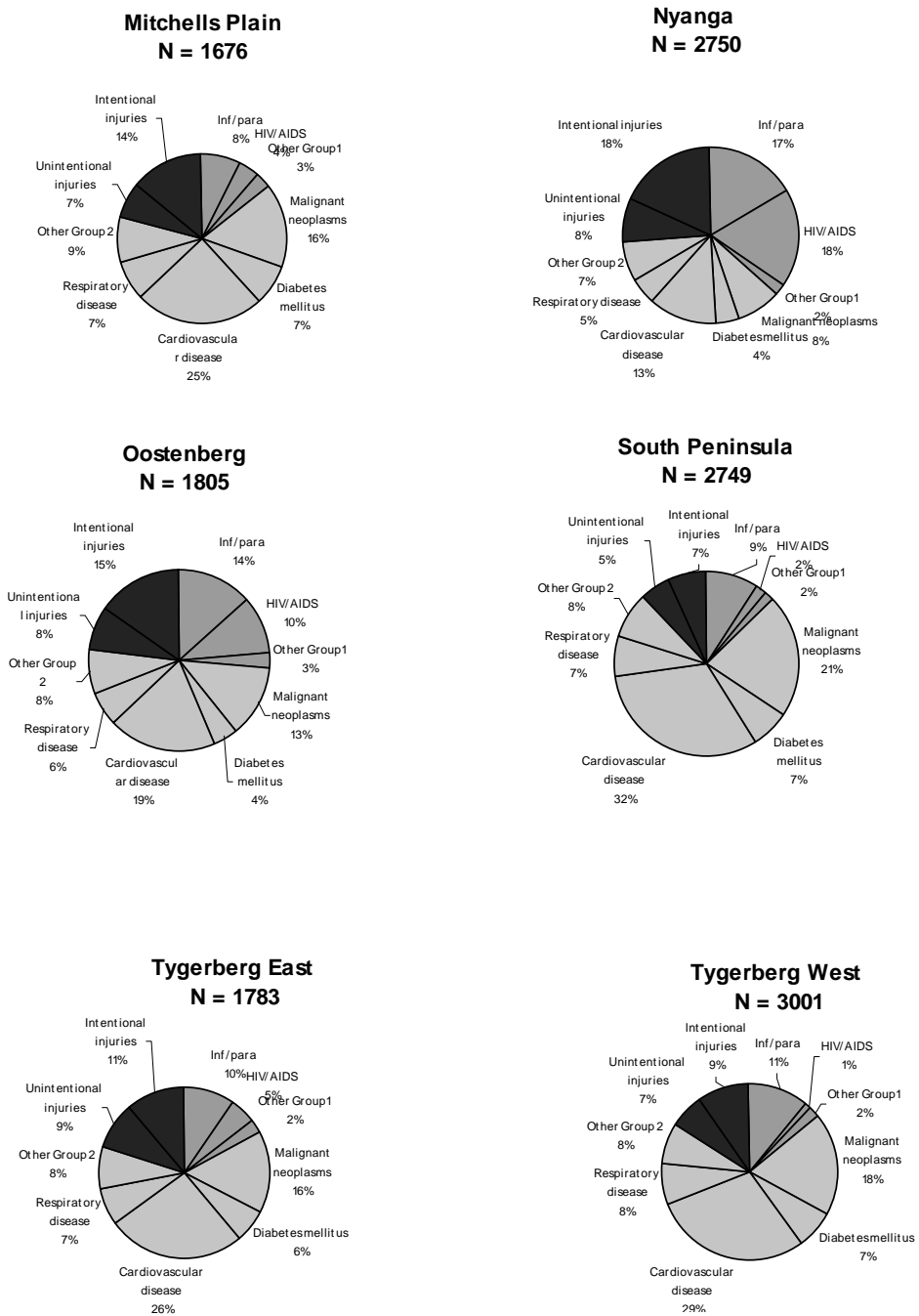
**Figure 5: Age standardised death rates by cause group and HIV/AIDS for Cape Town and sub-districts, 2001**



**Figure 6: Cause of death profile by cause group and HIV/AIDS for Cape Town and sub-districts, 2001.**



**Figure 7a: Cause of death profile after redistribution of ill defined deaths, Cape Town and sub-districts, 2001**



**Figure 7b: Cause of death profile after redistribution of ill defined deaths, Cape Town and sub-districts, 2001**

**Table 1: Top 10 causes of death for Cape Town and sub-districts for persons, 2001**

Rank	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East	Tygerberg West	Cape Town
1	Hypertensive heart disease (9.4%)	Ischaemic heart disease (13.8%)	Ischaemic heart disease (9.2%)	Ischaemic heart disease (16.2%)	Homicide (18.7%)	Homicide (13.3%)	HIV/AIDS (17.6%)	Homicide (13.1%)	Ischaemic heart disease (12.8%)	Ischaemic heart disease (9.8%)	Ischaemic heart disease (11.4%)	Homicide (10.6%)
2	Diabetes Mellitus (9.1%)	Homicide (9.4%)	Stroke (6.8%)	Homicide (7.1%)	HIV/AIDS (15%)	Hypertensive heart disease (9.3%)	Homicide (17.5%)	HIV/AIDS (10.3%)	Hypertensive heart disease (7.8%)	Homicide (9.1%)	Homicide (7.9%)	Ischaemic heart disease (8.1%)
3	Homicide (7.9%)	HIV/AIDS (8.7%)	HIV/AIDS (6.8%)	Tuberculosis (6.4%)	Tuberculosis (14%)	Diabetes Mellitus (7.5%)	Tuberculosis (9.8%)	Ischaemic heart disease (8.3%)	Diabetes Mellitus (6.9%)	Hypertensive heart disease (8.3%)	Diabetes Mellitus (7%)	HIV/AIDS (7.4%)
4	Ischaemic heart disease (7.8%)	Stroke (5%)	Hypertensive heart disease (5.8%)	Hypertensive heart disease (6.1%)	Lower Respiratory infections (5.2%)	Ischaemic heart disease (5.9%)	Hypertensive heart disease (5.1%)	Tuberculosis (5.9%)	Homicide (5.7%)	Diabetes Mellitus (6.1%)	Stroke (6.6%)	Hypertensive heart disease (6.4)
5	Stroke (6%)	Diabetes Mellitus (4.5%)	Homicide (4.9%)	Lower Respiratory infections (5.7%)	Road traffic (4.9%)	Stroke (5.2%)	Road traffic (4.4%)	Hypertensive heart disease (5.9%)	Stroke (5.2%)	Road traffic (5.1%)	Hypertensive heart disease (6%)	Tuberculosis (5.9)
6	Trachea/bronchi/lung cancer (5.2%)	Road traffic (3.5%)	Lower Respiratory infections (4.8%)	HIV/AIDS (5.5%)	Hypertensive heart disease (4.2%)	Road traffic (4.4%)	Diabetes Mellitus (3.7%)	Road traffic (5.4%)	COVD (5.2%)	HIV/AIDS (5%)	Trachea/bronchi/lung cancer (5.4%)	Diabetes Mellitus (5.3%)
7	Tuberculosis (4.4%)	Tuberculosis (3.5%)	Diabetes Mellitus (4.2%)	Stroke (4.9%)	Fires (2.8%)	Trachea/bronchi/lung cancer (4.3%)	Stroke (3.4%)	Diabetes Mellitus (4.4%)	Trachea/bronchi/lung cancer (4.8%)	COVD (4.9%)	COVD (5.2%)	Stroke (4.7%)
8	COVD (4.4%)	Hypertensive heart disease (3.4%)	Trachea/bronchi/lung cancer (3.8%)	COVD (4.3%)	Diarrhoeal Diseases (2.4%)	HIV/AIDS (3.8%)	Diarrhoeal Diseases (2.7%)	Lower Respiratory infections (3.9%)	Lower Respiratory infections (4.4%)	Trachea/bronchi/lung cancer (4%)	Lower Respiratory infections (4.4%)	Lower Respiratory infections (3.9%)
9	Road traffic (3.2%)	Trachea/bronchi/lung cancer (3.2%)	Tuberculosis (3.6%)	Diabetes Mellitus (4.2%)	Renal failure (2.3%)	Tuberculosis (3.8%)	Lower Respiratory infections (2.6%)	COVD (3.3%)	Colo-rectal cancer (2.4%)	Tuberculosis (3.8%)	Tuberculosis (4.3%)	Road traffic (3.7%)
10	HIV/AIDS (2.7%)	Lower Respiratory infections (3.1%)	COVD (3.1%)	Road traffic (3.9%)	Stroke (2%)	COVD (3.7%)	Oesophagus cancer (1.7%)	Trachea/bronchi/lung cancer (3.3%)	Renal failure (2.2%)	Lower Respiratory infections (3.4%)	Road traffic (3.8%)	Trachea/bronchi/lung cancer (3.6%)

The ranking for single cause of death is compared with the ranking for YLLs for persons, males and females in Tables 2-4. While the leading cause of YLLs is the same as that for deaths, in the subsequent rankings pre-transitional and injury causes (HIV/AIDS, tuberculosis, lower respiratory infections, homicide and road traffic accidents) move up for YLLs in comparison with deaths, as these deaths affect younger people. The use of premature mortality accentuates the burden due to injuries, HIV/AIDS and pre-transitional causes since these occur in younger ages, see Figures 8 and 9. The top ten causes of premature mortality based on YLLs are shown in Table 5 for the sub-districts.

The cause of death profile, age distribution of deaths by gender, top twenty causes of death for persons, males and females, and top causes of death in children 0 to 4 years and infants for each sub-district are set out in Part III, and the implications for equity in Cape Town are presented in Part II of the report.

**Table 2: Comparison of the estimate of deaths and YLLs for all persons in Cape Town, 2001**

Deaths				Years of Life Lost			
Rank	Disease	Total	%	Rank	Disease	Total	%
1	Homicide	2446	10.6	1	Homicide	70935	18.4
2	Ischaemic heart disease	1880	8.1	2	HIV/AIDS	47002	12.2
3	HIV/AIDS	1707	7.4	3	Tuberculosis	29584	7.7
4	Hypertensive heart disease	1477	6.4	4	Road traffic	22194	5.7
5	Tuberculosis	1371	5.9	5	Ischaemic heart disease	15131	3.9
6	Diabetes Mellitus	1224	5.3	6	Lower Respiratory infections	13749	3.6
7	Stroke	1096	4.7	7	Hypertensive heart disease	12713	3.3
8	Lower Respiratory infections	904	3.9	8	Diabetes Mellitus	11210	2.9
9	Road traffic	857	3.7	9	Low birth weight and RDS	9952	2.6
10	Trachea/bronchi/lung cancer	833	3.6	10	Stroke	9786	2.5
11	COPD	803	3.5	11	Trachea/bronchi/lung cancer	9222	2.4
12	Renal failure	472	2.0	12	COPD	7044	1.8
13	Septicaemia	345	1.5	13	Suicide and self-inflicted	6851	1.8
14	Pulmonary heart and circulatory disease	342	1.5	14	Fires	6743	1.7
15	Breast cancer	325	1.4	15	Diarrhoeal Diseases	6587	1.7
16	Asthma	317	1.4	16	Renal failure	5991	1.6
17	Low birth weight and RDS	300	1.3	17	Asthma	5129	1.3
18	Colo-rectal cancer	300	1.3	18	Septicaemia	5006	1.3
19	Suicide and self-inflicted	272	1.2	19	Pulmonary heart and circulatory disease	4103	1.1
20	Fires	248	1.1	20	Breast cancer	3956	1.0
	<b>All causes</b>	<b>23185</b>			<b>All causes</b>	<b>386433</b>	

**Table 3: Comparison of the estimate of deaths and YLLs for all males in Cape Town, 2001**

Deaths				Years of Life Lost			
Rank	Disease	Total	%	Rank	Disease	Total	%
1	Homicide	2164	16.4	1	Homicide	63263	26.5
2	Ischaemic heart disease	1023	7.8	2	HIV/AIDS	20524	8.6
3	Tuberculosis	875	6.6	3	Tuberculosis	17695	7.4
4	HIV/AIDS	770	5.8	4	Road traffic	16524	6.9
5	Road traffic	638	4.8	5	Ischaemic heart disease	9513	4.0
6	Hypertensive heart disease	599	4.5	6	Lower Respiratory infections	6816	2.9
7	Trachea/bronchi/lung cancer	568	4.3	7	Trachea/bronchi/lung cancer	6387	2.7
8	COPD	535	4.1	8	Hypertensive heart disease	5622	2.4
9	Diabetes Mellitus	494	3.7	9	Suicide and self-inflicted	5617	2.4
10	Stroke	487	3.7	10	COPD	4902	2.1
11	Lower Respiratory infections	437	3.3	11	Low birth weight and RDS	4835	2.0
12	Renal failure	246	1.9	12	Diabetes Mellitus	4757	2.0
13	Suicide and self-inflicted	227	1.7	13	Stroke	4708	2.0
14	Asthma	167	1.3	14	Fires	4231	1.8
15	Prostate cancer	164	1.2	15	Diarrhoeal Diseases	3232	1.4
16	Septicaemia	161	1.2	16	Renal failure	3166	1.3
17	Colo-rectal cancer	158	1.2	17	Asthma	2774	1.2
18	Fires	155	1.2	18	Septicaemia	2582	1.1
19	Pulmonary heart and circulatory disease	151	1.1	19	Epilepsy	2388	1.0
20	Low birth weight and RDS	146	1.1	20	Drowning	2109	0.9
	<b>All causes</b>	<b>13172</b>				<b>238519</b>	

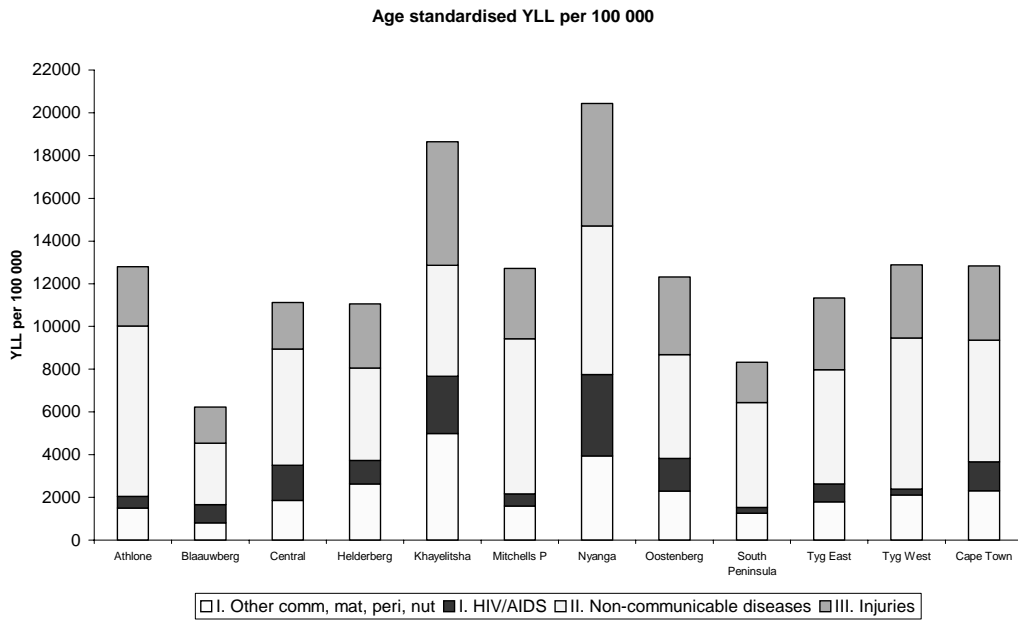
**Table 4: Comparison of the estimate of deaths and YLLs for all females in Cape Town, 2001**

Deaths				Years of Life Lost			
Rank	Disease	Total	%	Rank	Disease	Total	%
1	HIV/AIDS	936	9.3	1	HIV/AIDS	26478	17.9
2	Hypertensive heart disease	878	8.8	2	Tuberculosis	11889	8.0
3	Ischaemic heart disease	856	8.6	3	Homicide	7673	5.2
4	Diabetes Mellitus	730	7.3	4	Hypertensive heart disease	7092	4.8
5	Stroke	608	6.1	5	Lower Respiratory infections	6933	4.7
6	Tuberculosis	496	5.0	6	Diabetes Mellitus	6452	4.4
7	Lower Respiratory infections	468	4.7	7	Road traffic	5670	3.8
8	Breast cancer	320	3.2	8	Ischaemic heart disease	5618	3.8
9	Homicide	282	2.8	9	Low birth weight and RDS	5117	3.5
10	COPD	268	2.7	10	Stroke	5078	3.4
11	Trachea/bronchi/lung cancer	265	2.6	11	Breast cancer	3909	2.6
12	Renal failure	226	2.3	12	Diarrhoeal Diseases	3355	2.3
13	Road traffic	219	2.2	13	Trachea/bronchi/lung cancer	2834	1.9
14	Pulmonary heart and circulatory disease	191	1.9	14	Renal failure	2825	1.9
15	Septicaemia	185	1.8	15	Fires	2512	1.7
16	Low birth weight and RDS	154	1.5	16	Septicaemia	2424	1.6
17	Asthma	150	1.5	17	Asthma	2355	1.6
18	Colo-rectal cancer	142	1.4	18	Pulmonary heart and circulatory disease	2189	1.5
19	Cervix and uterus cancer	138	1.4	19	COPD	2142	1.4
20	Diarrhoeal Diseases	125	1.2	20	Cervix and uterus cancer	1828	1.2
	<b>All causes</b>	<b>10013</b>			<b>All causes</b>	<b>147913</b>	

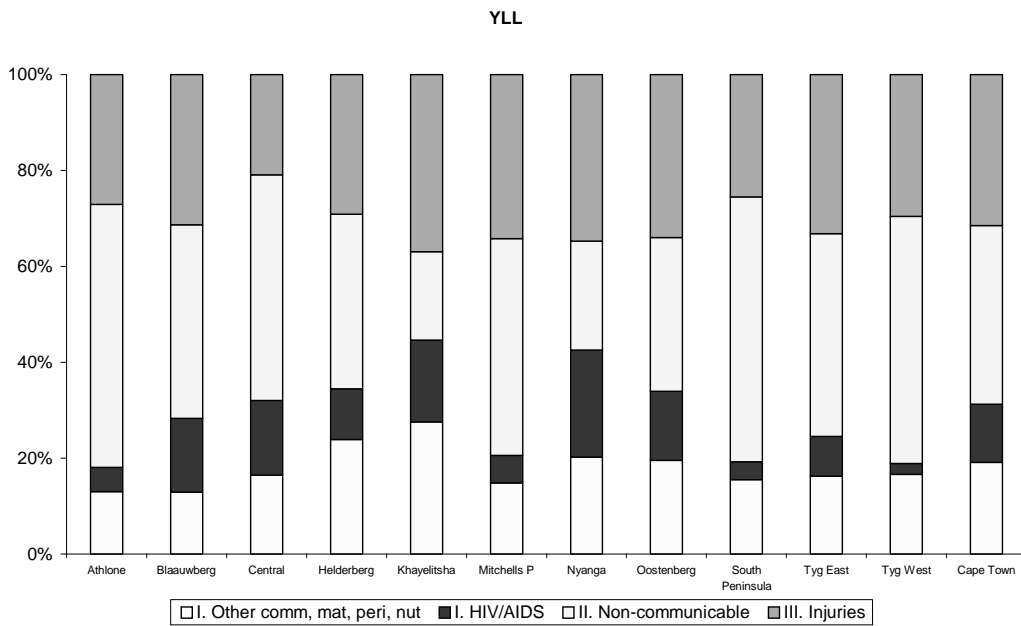
**Table 5: Top 10 causes of premature mortality (YLLs) for Cape Town and sub-districts for persons, 2001**

Rank	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East	Tygerberg West	Cape Town
1	Homicide (16.6%)	Homicide (15.8%)	HIV/AIDS (15.6%)	Homicide (12.7%)	Homicide (22.3%)	Homicide (22.3%)	Homicide (23.4%)	Homicide (19.7%)	Homicide (13.9%)	Homicide (16.2%)	Homicide (15.9%)	Homicide (18.4%)
2	Tuberculosis (6.2%)	HIV/AIDS (15.4%)	Homicide (11.2%)	HIV/AIDS (10.6%)	HIV/AIDS (17%)	Road traffic (6.7%)	HIV/AIDS (22.4%)	HIV/AIDS (14.4%)	Ischaemic heart disease (7.3%)	HIV/AIDS (8.3%)	Ischaemic heart disease (6.8%)	HIV/AIDS (12.2%)
3	Diabetes Mellitus (5.9%)	Ischaemic heart disease (7.3%)	Tuberculosis (5.9%)	Tuberculosis (8.8%)	Tuberculosis (13.3%)	HIV/AIDS (5.7%)	Tuberculosis (9.7%)	Road traffic (7.4%)	Diabetes Mellitus (4.7%)	Road traffic (8.2%)	Road traffic (6.8%)	Tuberculosis (7.7%)
4	Road traffic (5.7%)	Road traffic (5.7%)	Ischaemic heart disease (4.6%)	Lower Respiratory infections (6.9%)	Road traffic (5.4%)	Hypertensive heart disease (4.9%)	Road traffic (5.3%)	Tuberculosis (7.2%)	Hypertensive heart disease (4.4%)	Tuberculosis (5.6%)	Tuberculosis (5.5%)	Road traffic (5.7%)
5	Ischaemic heart disease (5.6%)	Tuberculosis (4.2%)	Road traffic accidents (4.5%)	Ischaemic heart disease (6.8%)	Lower Respiratory infections (5.3%)	Diabetes Mellitus (4.5%)	Diarrhoeal Diseases (3.3%)	Ischaemic heart disease (4.5%)	Trachea/bronch hi/lung cancer (4%)	Ischaemic heart disease (4.9%)	Diabetes Mellitus (4.7%)	Ischaemic heart disease (3.9%)
6	Hypertensive heart disease (5.4%)	Low birth weight (3.4%)	Stroke (3.9%)	Road traffic accidents (6.4%)	Fires (3.2%)	Ischaemic heart disease (4.3%)	Lower Respiratory infections (2.4%)	Low birth weight (3.6%)	HIV/AIDS (3.7%)	Hypertensive heart disease (4.4%)	Trachea/bronch hi/lung cancer (4.2%)	Lower Respiratory infections (3.6%)
7	HIV/AIDS (5.1%)	Diabetes mellitus (3%)	Lower Respiratory infections (3.8%)	Diarrhoeal Diseases (4.2%)	Diarrhoeal Diseases (2.9%)	Tuberculosis (4.2%)	Hypertensive heart disease (2.1%)	Lower Respiratory infections (3.2%)	Tuberculosis (3.7%)	Diabetes Mellitus (3.4%)	Stroke (4.0%)	Hypertensive heart disease (3.3%)
8	Stroke (4%)	Stroke (3%)	Low birth weight (3.4%)	Fires (3.8%)	Hypertensive heart disease (2.5%)	Low birth weight (4%)	Stroke (1.6%)	Hypertensive heart disease (3.1%)	Low birth weight (3.6%)	Low birth weight (3.2%)	Lower Respiratory infections (3.8%)	Diabetes Mellitus (2.9%)
9	Trachea/bronch i/ lung cancer (3.9%)	Suicide (2.7%)	Hypertensive heart disease (3.4%)	Hypertensive heart disease (3.4%)	Low birth weight (1.9%)	Trachea/bronch hi/lung cancer (3.2%)	Diabetes Mellitus (1.6%)	Suicide (2.8%)	Lower Respiratory infections (3.5%)	Suicide (3.1%)	COPD (3.4%)	Low birth weight (2.6%)
10	COPD (2.7%)	Pulmonary heart and circulatory disease (2.6%)	Trachea/bronch i/ lung cancer (3.3%)	Stroke (3.2%)	Renal failure (1.7%)	Stroke (3.1%)	Fires (1.6%)	Diabetes Mellitus (2.1%)	COPD (3.2%)	Lower Respiratory infections (2.9%)	Hypertensive heart disease (3.3%)	Stroke (2.6%)





**Figure 8: YLLs per 100 000 by cause group and HIV/AIDS for the Cape Town and subdistricts, 2001**



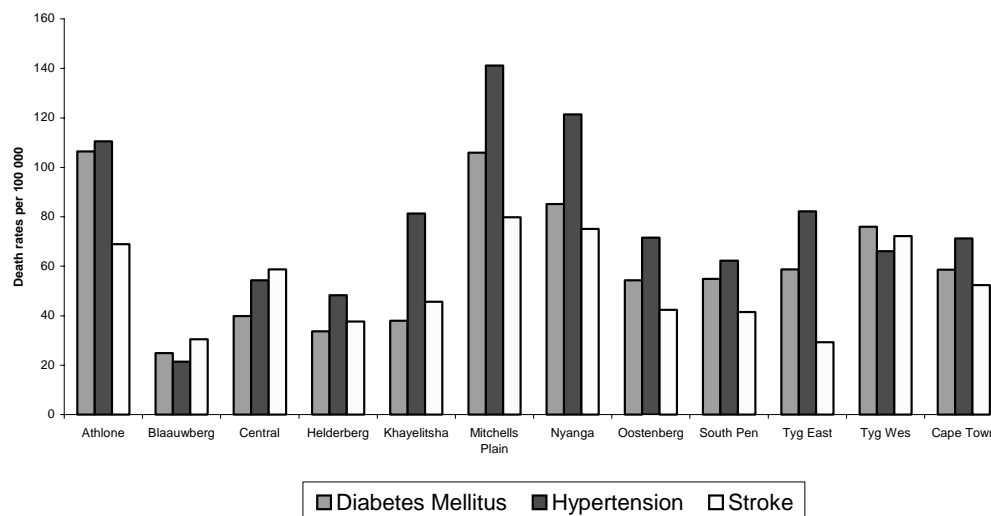
**Figure 9: YLL burden by cause group and HIV/AIDS for Cape Town and sub-districts, 2001**

## Discussion

Cape Town has a well established system for compiling death statistics and much interest is shown by health managers in improving and using this information to monitor public health. This study has shown that the quality of the Cape Town death data for 2001 is generally good, with no apparent variations in coding practice between the large MLCs of Cape Town and Tygerberg. Trained clerical staff were responsible for coding deaths with medical personnel sometimes available to assist when the cause of death was not clear. A minor degree of misclassification may have been introduced as a result. The data is estimated to be 90% complete, which suggests that the reported death rates are probably slightly low. However, the ranking of causes of death and premature mortality are unlikely to be affected. This study did not attempt to verify the cause of death information on the death certificate, which is completed by a medical doctor. Some doctors may prefer not to list HIV/AIDS as the underlying cause of death on the death certificate and select the immediate cause of death (eg. pneumonia, diarrhoea or tuberculosis etc.) in order to avoid this. Thus it is probably reasonable to assume that deaths due to HIV/AIDs are likely to be underestimated in these data. In addition doctors differ in the degree to which details of cause of death are listed and this may have affected the distribution of cause of death at the detailed level but less so at the grouped level.

There are striking differences in the age standardised all cause death rates between sub-districts, ranging between 496 per 100 000 in Blaauwberg and 1302 per 100 000 in Nyanga, see Figure 6. The mortality in Blaauwberg is particularly low compared with the other areas. In a comparison of the infant mortality rates (IMR) for 2002 between sub-districts, however, the IMR in Blaauwberg (18/1000 live births), while being lower than the average for Cape Town (25/1000 live births), is not the lowest by sub-district. These range from 13/1000 live births in South Peninsula to 44/1000 live births in Khayelitsha (David Blease, personal communication). The completeness of death reporting in Blaauwberg thus needs to be investigated further.

The high homicide, HIV/AIDS and tuberculosis rates are particularly striking in Khayelitsha and Nyanga. In Tygerberg West and Helderberg, the high ischaemic heart disease mortality is noteworthy. Mortality rates due to stroke, hypertension and diabetes mellitus follow a similar pattern with Mitchells Plain, Athlone, Nyanga and Tygerberg West experiencing the highest rates, see Figure 10.



**Figure 10: Age standardised death rates for diabetes mellitus, stroke and hypertension by district, Cape Town 2001**

This report serves to inform programme managers and decision makers on the major causes of premature mortality experienced in the Cape Town. This is important to guide efforts to reduce premature mortality. There are striking differences in the burden of premature mortality between sub-districts. Nyanga and Khayelitsha are experiencing the highest burden of premature mortality with South Peninsula and Blaauwberg experiencing the lowest. However, it is sobering to note that homicide is the leading cause of premature mortality in all sub-districts, with the exception of Central where it ranks second. In the majority of sub-districts, including Tygerberg East, the second leading cause of premature mortality is HIV/AIDS. The ranking thereafter is different for different sub-districts. HIV/AIDS appears in the top ten causes of premature mortality for all health districts except Tygerberg West. This is a rather unexpected finding when one considers that the prevalence of HIV in antenatal women in Tygerberg West (12.7%) is higher than Tygerberg East (10.4%) (Shaik N and Abdullah F, 2003). However, when one compares the death rates for pre-transitional causes, the age standardised death rates for tuberculosis, septicaemia and lower respiratory infections are higher in Tygerberg West than in Tygerberg East, see Table 7.2. This may suggest misclassification of HIV/AIDS deaths as indicator conditions on the death certificate, or an earlier stage of the HIV/AIDS epidemic in Tygerberg West, and needs further investigation.

While useful variations between sub-districts are demonstrated in this report, it should be noted that intra- sub-district variations exist. Preliminary analysis of the Central sub-district has shown that Langa has a cause of death profile more similar to Nyanga and Khayelitsha than to the pattern found in the rest of the Central sub-district.

## **Conclusion and recommendations**

Cape Town is facing a quadruple burden of disease: a combination of the pre-transitional diseases and conditions related to poverty, the emerging chronic diseases, an extremely high burden of injuries and the HIV/AIDS epidemic. The profile varies markedly by area and will require different responses in different areas.

Injury prevention is a priority in order to reduce the burden of premature mortality in Cape Town. Violence and homicide are currently the biggest cause of premature mortality and intersectoral efforts to foster safe communities and reduce the levels of crime and violence are urgently required. Alcohol abuse plays a major role in violence and Cape Town has already focused programmes on reducing alcohol misuse in certain poorer areas. Road safety is another area that requires urgent intersectoral intervention. The Departments of Safety and Security, Education, Transport and Social Development need to be informed of these results and, together with the community, urged to take action.

It must be expected that the burden due to HIV/AIDS and tuberculosis has increased since 2001 and efforts to contain these epidemics must be strengthened. Strategies to reduce the burden due to HIV/AIDS must follow a two-pronged approach including prevention and treatment. It is important to continue efforts to prevent the spread of HIV by reducing transmission through improving the treatment of sexually transmitted infections, improving voluntary counselling and testing services, promoting safe sex and preventing mother to child transmission. Effectively preventing mother to child transmission should halve the child mortality rates. Delaying the onset of AIDS and mortality through the provision of anti-retrovirals to HIV positive patients who require it, improved nutrition and immune boosters is essential to reduce the mortality burden due to HIV.

Tuberculosis, HIV/AIDS and STI management have been prioritised in Cape Town for the past three years. Multisectoral action teams have been set up in all sub-districts to tackle HIV and tuberculosis and 12 million condoms have been distributed within the city during the past financial year. In addition, STI management has been improved through training in the syndromic management and implementation of the DISCA tool, a management audit tool to monitor the services. Prevention of mother to child transmission and voluntary counselling and testing services have been rolled out throughout the city for more than a year. At least 50% of clinics are able to manage opportunistic infections in HIV clients. Antiretroviral provision will be implemented as soon as the national department of health approves the implementation plan. The impact of these efforts need to be monitored. There is a well established system to monitor the tuberculosis programme and cure rates have increased from 65% to 73% during the past year. While the City has done much to tackle these diseases, existing interventions to combat HIV/AIDS and tuberculosis need to be expanded and strengthened.

Non communicable diseases are increasing amongst poorer communities and efforts aimed at promoting healthier lifestyles especially with regard to smoking, alcohol, diet, and exercise are required to combat this. At the same time it is essential to maintain programmes that ensure the relatively low child mortality experienced in Cape Town. However, in districts where low birth weight is amongst the top twenty causes of premature mortality, these programmes may need to be enhanced.

There are striking differences in disease burden and profile between sub-districts. Each sub-district should look at their data, identify their own health priorities and define strategies to combat these. Future analyses of the Cape Town mortality data can then be used to evaluate the impact of these efforts. The Cape Town Metropolitan Health Information Group is to be commended for their system of compiling mortality statistics, which enables such analyses to be done.

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## APPENDICES

### Appendix 1: Cape Metropole Mortality Short List Version 2

28th July 2000

	Code	Disease/Condition	Comment
	<b>Certain infectious and parasitic diseases</b>		
	<b>(N.B. Deaths due to notifiable conditions should be followed up through the notification system)</b>		
1	1001	Diarrhoea and gastro-enteritis, presumed infectious	
2	1002	Schistosomiasis / Bilharzia	
3	1009	Other Intestinal infectious diseases	includes typhoid, salmonella, shigellosis
4	1011	Pulmonary tuberculosis	
5	1013	TB meningitis	
6	1019	Other TB	includes pleural effusion
		SYNONYMS FOR HIV/AIDS:Immuno-deficiency syndrome/disease, Retroviral disease	
		Acquired Immune Deficiency Syndrome	
7	1020	HIV/AIDS and TB	
8	1021	HIV/AIDS and other infectious disease	includes pneumonia with HIV /AIDS and pneumocystis carinii pneumonia
9	1022	HIV/AIDS and cancer	includes Kaposi's sarcoma, lymphoma with HIV/AIDS
10	1023	HIV/AIDS and other chronic disease	
11	1024	HIV/AIDS	
12	1030	Malaria	
13	1040	Meningococcal infection	includes meningococcal septicaemia and meningococcal meningitis
14	1050	Septicaemia	
15	1099	Other Infectious and parasitic diseases	includes measles, hepatitis
	<b>Neoplasms</b>		
16	1101	Malignant neoplasm of the oesophagus	
17	1102	Malignant neoplasm of the stomach	
18	1103	Malignant neoplasm of colon, rectum and anus	
19	1104	Malignant neoplasm of liver and intrahepatic bile ducts	
20	1105	Malignant neoplasm of pancreas	
21	1110	Malignant neoplasms of the trachea, bronchus and lung	
22	1120	Malignant melanoma of skin	
23	1130	Malignant neoplasm of breast	
24	1131	Malignant neoplasm of cervix uteri	
25	1132	Malignant neoplasm of ovary	
26	1140	Malignant neoplasm of prostate	
27	1141	Malignant neoplasm of bladder	
28	1150	Malignant neoplasm of meninges, brain and other parts of central nervous system	
29	1160	Leukaemia	
30	1169	Other malignant neoplasm of lymphatic and haematopoietic system	includes Hodgkins lymphoma, non-Hodgkins lymphoma, multiple myeloma
31	1170	Malignant neoplasm of kidney	
32	1190	Remainder malignant neoplasms	includes primary site unknown
33	1195	Benign neoplasms	
34	1199	Other neoplasms, not elsewhere classified	
	<b>Diseases of blood and blood forming organs and certain disorders involving the immune mechanism (excludes HIV)</b>		
35	1299	Anaemias and other diseases of blood and blood forming organs	
	<b>Endocrine , nutritional and metabolic diseases</b>		
36	1301	Diabetes mellitus	includes with renal failure
37	1302	Diabetes and hypertension and/or stroke/CVA, and/or heart disease	
38	1310	Malnutrition	includes kwashiorkor, marasmus
39	1399	Remainder of endocrine, nutritional and metabolic disorders	

<b>Mental and behavioural disorders</b>			
40	1401	Mental and behavioural disorders due to substance abuse	includes alcoholism
41	1499	Remainder of mental and behavioural disorders	
<b>Diseases of the nervous system</b>			
42	1501	Meningitis	excludes TB and meningococcal meningitis
43	1510	Alzheimers disease	
44	1520	Parkinsons disease	
45	1530	Epilepsy	
46	1599	Remainder of diseases of nervous system	
<b>Diseases of the eye and adnexa</b>			
47	1699	Diseases of the eye and adnexa	
<b>Diseases of the ear and mastoid process</b>			
48	1799	Diseases of the ear and mastoid process	
<b>Diseases of the circulatory system</b>			
49	1801	Acute rheumatic fever and chronic rheumatic heart disease	
50	1810	Hypertensive disease	includes hypertension with heart disease or renal failure
51	1811	Hypertension and CVA	
52	1830	Ischaemic heart disease	includes myocardial infarction, atherosclerosis, coronary heart disease, angina
53	1840	Heart failure	
54	1850	Pulmonary heart and circulatory disease	includes pulmonary embolism
55	1869	Other heart disease	includes cardiomyopathy
56	1870	Cerebrovascular diseases	includes stroke/CVA/intracerebral haemorrhage/bleeding
57	1899	Remainder of the diseases of circulatory system	
<b>Diseases of the respiratory system</b>			
58	1901	Pneumonia	excludes Pneumocystis carinii pneumonia
59	1910	Bronchitis	includes chronic and acute
60	1920	Chronic obstructive airways disease	
61	1930	Asthma	
62	1940	Emphysema	
63	1950	Respiratory failure	
64	1999	Other diseases of the respiratory system	
<b>Diseases of the digestive system</b>			
65	2001	Gastric and duodenal ulcer	
66	2010	Cirrhosis of the liver	
67	2020	Diseases of liver	
68	2030	Diseases of the pancreas	
69	2040	Diseases of the oesophagus	
70	2099	Remainder of diseases of the digestive system	
<b>Diseases of the skin and subcutaneous tissue</b>			
71	2199	Diseases of the skin and subcutaneous tissue	
<b>Diseases of the musculoskeletal system and connective tissue</b>			
72	2299	Diseases of the musculoskeletal system and connective tissue	
<b>Diseases of the genitourinary system</b>			
73	2301	Renal failure	
74	2399	Remainder of diseases of the genitourinary system	
<b>Pregnancy, childbirth and the puerperium</b>			
75	2499	Pregnancy, childbirth and the puerperium	all maternal related deaths



<b>Certain conditions originating in the perinatal period</b>			
76	2501	Short gestation and low birthweight	
77	2510	Respiratory distress syndrome	includes hyaline membrane disease
78	2520	Infections in the perinatal period	excludes HIV
79	2599	Other perinatal conditions not elsewhere classified	
<b>Congenital malformations, deformations and chromosomal abnormalities</b>			
80	2699	Congenital malformations, deformations and chromosomal abnormalities	
<b>Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified</b>			
81	2799	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	includes senility, sudden death, natural causes cot death / SIDS
<b>External causes of morbidity and mortality</b>			
82	2801	Motor vehicle accidents involving pedestrians	
83	2809	Motor vehicle accidents other	
84	2810	Railway	
85	2829	Other transport	
86	2830	Accidental drowning	
87	2840	Exposure to smoke, fire or flames or explosion	excludes homicide
88	2850	Suicide/intentional self-harm	
89	2860	Assault by firearm	
90	2861	Assault by sharp object	
91	2869	Assault by other/unspecified	
92	2880	iatrogenic/misadventures during surgical and medical care	
93	2890	Injury unspecified means, undetermined cause	includes unnatural death
94	2899	Other external causes	includes falls, undetermined at autopsy

## Appendix 2: Burden of disease classification

Group	Disease category	#	Disease	CT short codes
<b>Group 1:</b>	<b>Communicable diseases, maternal, perinatal and nutritional conditions</b>			
	<b>Infectious and parasitic</b>	1	Tuberculosis	1011,1013,1019
		2	HIV/AIDS	1020,1021,1022, 1023, 1024
		3	Diarrhoeal Diseases	1001,1009
		4	Bacterial Meningitis and meningococcaemia	1040,1501
		5	Malaria	1030
		6	Schistosomiasis	1002
		7	Septicaemia	1050
		8	Other infectious and parasitic	1099
		9	Lower Respiratory infections	1901, 1910
	<b>Maternal conditions</b>	10	Maternal Conditions	2499
	<b>Perinatal conditions</b>	11	Low birth weight and RDS	2501, 2510
		12	Neonatal infections	2520
		13	Other perinatal	2599
	<b>Nutritional deficiencies</b>	14	Protein-energy malnutrition	1310
<b>Group 2:</b>	<b>Non communicable diseases</b>			
	<b>Malignant neoplasms</b>	15	Oesophagus cancer	1101
		16	Stomach cancer	1102
		17	Colo-rectal cancer	1103
		18	Liver cancer	1104
		19	Pancreas cancer	1105
		20	Trachea/bronchi/lung cancer	1110
		21	Melanoma	1120
		22	Breast cancer	1130
		23	Cervix and uterus cancer	1131
		24	Ovary cancer	1132
		25	Prostate cancer	1140
		26	Bladder cancer	1141
		27	Kidney cancer	1170
		28	Brain cancer	1150
		29	Leukaemia	1160
		30	Other malignant neoplasm of lymphatic and haematopoetic system	1169
		31	Other malignant neoplasms	1190, 1199
	<b>Benign Neoplasms</b>	32	Benign neoplasms	1195
	<b>Diabetes mellitus</b>	33	Diabetes Mellitus	1301, 1302
	<b>Endocrine and metabolic disorders</b>	34	Anaemias and other diseases of blood and blood forming organs	1299
		35	Remainder of endocrine, nutritional and metabolic disorders	1399
	<b>Mental disorders</b>	36	Substance abuse (alcohol and drugs)	1401
		37	Remainder of mental and behavioural disorders	1499
	<b>Nervous system disorders</b>	38	Alzheimer's disease	1510
		39	Parkinsons disease	1520

	40	Epilepsy	1530
	41	Remainder of nervous system disorders	1599
<b>Sense organ disorders</b>	42	Diseases of eye and adnexa	1699
	43	Diseases of the ear and mastoid process	1799
<b>Cardiovascular diseases</b>	44	Rheumatic heart disease	1801
	45	Ischaemic heart disease	1830
	46	Stroke	1870
	47	Hypertensive disease	1810,1811
	48	Pulmonary heart and circulatory disease	1850
	49	Remainder of diseases of circulatory system	1899
	50	Other cardiovascular	1869
<b>Respiratory diseases</b>	51	COPD	1920, 1940
	52	Asthma	1930
	53	Other respiratory	1999
<b>Digestive system disorders</b>	54	Peptic ulcer	2001
	55	Cirrhosis of liver	2010
	56	Diseases of the pancreas	2030
	57	Remainder of diseases of digestive system	2040, 2099, 2020
<b>Genito-urinary</b>	58	Renal failure	2301
	59	Other genito-urinary	2399
<b>Skin disease</b>	60	Skin disease	2199
<b>Musculo skeletal</b>	61	Musculo-skeletal	2299
<b>Congenital abnormalities</b>	62	Congenital abnormalities	2699

### Group 3: Injuries

<b>Unintentional Injuries</b>	63	Road traffic accidents	2801, 2809
	64	Other transport accidents	2810, 2829
	65	Drowning	2830
	66	Fires	2840
	67	Surgical / medical misadventure	2880
	68	Other unintentional injuries specified	2899
<b>Intentional Injuries</b>	69	Suicide and self-inflicted	2850
	70	Homicide	2860, 2861, 2869
	70a	Homicide and violence with firearm	2860
	70b	Homicide and violence without firearm	2861, 2869

### Ill defined

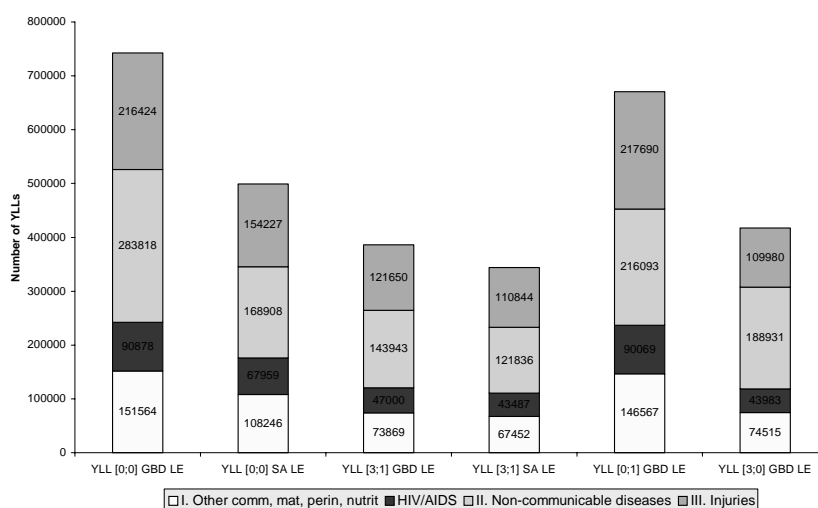
	71	<i>Ill defined natural injury undetermined whether intentional or unintentional</i>	2799
	72	<i>Ill-defined cardiovascular (heart failure)</i>	1840
	73	<i>Ill defined resp (Respiratory failure)</i>	1950

### Appendix 3: Equity Gauge population estimates for Cape Town, 2001

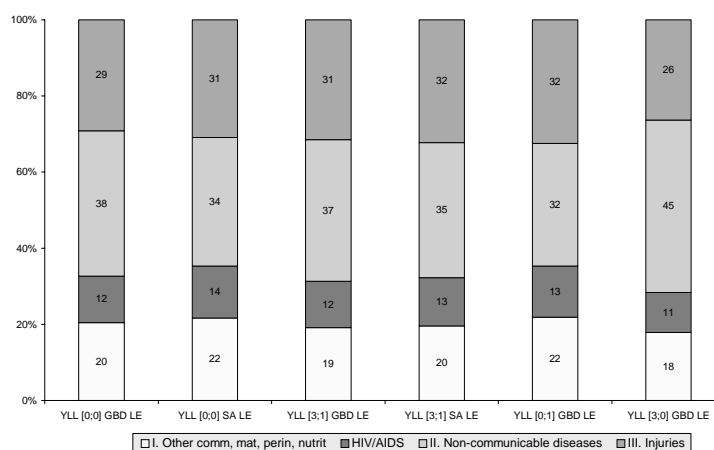
Age	Total Population: Cape Town 2001											
	South Pen	Athlone	Central	M Plain	Nyanga	Blaauwberg	Tyg East	Tyg West	Khayelitsha	Oostenberg	Heiderberg	Cape Town
0	7004	4397	5347	5551	8131	3191	4612	5780	9688	5460	2733	61893
1-4	28140	17070	20537	21745	27481	12964	18377	23529	32659	21420	10872	234794
5-9	36876	21745	25380	27841	28351	17124	23734	31251	33544	27337	14025	287208
10-14	36835	22203	23703	28109	22376	16914	23177	31588	26295	26711	13593	271503
15-19	38769	23195	26938	29213	30134	17967	24944	32867	35648	28631	14719	303025
20-24	35530	20460	27244	25643	35904	16604	23431	29271	42718	26642	13964	297412
25-29	37471	20780	29967	26086	40231	17766	25092	30635	47962	28176	15035	319203
30-34	35974	19144	27729	24275	32465	17250	23919	29750	38661	26433	14329	289929
35-39	33523	18014	24508	22745	25153	16002	21926	28072	29847	24163	13071	257024
40-44	29306	15012	21053	18739	17599	14161	19074	24674	20790	20434	11369	212211
45-49	24238	11791	17645	14444	13045	11810	15759	20281	15412	16416	9416	170258
50-54	20021	9153	14837	11125	9658	9908	13094	16725	11427	13278	7851	137076
55-59	15418	6441	11566	7859	6435	7764	10146	12832	7603	9991	6113	102167
60-64	12517	5166	9393	6360	5128	6337	8271	10454	6054	8128	4989	82797
65-69	9221	3955	6657	4822	3185	4600	5988	7734	3732	5931	3598	59423
70-74	7668	4038	6808	1874	2550	2113	3404	6442	1505	2493	2971	41866
75-79	5186	2462	5634	957	1456	1292	2220	3931	681	1468	2481	27770
80-84	3073	1232	3763	458	743	868	1412	2204	442	711	1648	16555
85+	2137	777	2965	280	342	445	871	1348	127	541	1180	11014
Total	418909	227034	311673	278127	310368	195078	269451	349370	364793	294367	163958	3183127

## Appendix 4: Sensitivity analysis for YLL calculation

This analysis explores the sensitivity of YLLs to various combinations of age weighting, discounting and life expectancies. The effects of changing the discount rate ( $r$ ), age-weighting modulation factor ( $K$ ) and life expectancy ( $LE$ ) on the total number of YLLs and composition of YLLs are demonstrated in Figures 1 and 2 below.



**Figure 4.1: Comparison of the effects of changing the discount rate ( $r$ ), age-weighting ( $K$ ), and life expectancy ( $LE$ ) on the composition of total YLLs [ $r;K$ ], Cape Town 2001**



**Figure 4.2: Comparison of the effects of changing the discount rate ( $r$ ), age-weighting ( $K$ ), and life expectancy ( $LE$ ) on the composition of total YLLs [ $r;K$ ], Cape Town, 2001**

## Appendix 5: Completeness of Cape Town mortality data

Table 5.1: Comparison of the number of deaths in Cape Metropole from different sources

12 month period	Estimated deaths (ASSA)	Registered by Home affairs	Processed by MLCs	% of Home Affairs
1997/98	23 245	23 203	17 218	74.2
1998/99	24 730	21 445 *	17 534	81.7
2001	27 013	26 092	23 185	88.9

\* 17 871 for 10/12

Table 5.2: Comparison between number of deaths recorded by Cape Town and ASSA estimates for Cape Town for 2001

	Cape Town 2001	ASSA 2001/02	Difference	CT/ASSA
Total	23185	27013	3828	85.8%
AIDS	1706	3489	1783	48.9%
Non AIDS	21479	23524	2045	91.3%
Male	13171	14635	1464	90.0%
AIDS	770	1574	803	48.9%
Non AIDS	12401	13061	660	94.9%
Female	10014	12378	2364	80.9%
AIDS	936	1915	979	48.9%
Non AIDS	9078	10463	1385	86.8%
< 14	1845	2186	341	84.4%
AIDS	364	776	412	46.9%
Non AIDS	1481	1410	-71	105.1%
15-49	8345	9912	1567	84.2%
AIDS	1203	2595	1392	46.4%
Non AIDS	7142	7317	174	97.6%
50+	12994	14915	1920	87.1%
AIDS	139	117	-22	118.7%
Non AIDS	12855	14798	1942	86.9%

**Table 5.3: Number of injury deaths by specific cause from Cape Town, 2001 compared with NIMMS 2001**

Manner of death	Cape Town	Cape Town excl. Helderberg		Tygerberg & Salt River mortuaries		% of NIMMS
	N	N	%	N	%	%
Motor vehicle accidents involving pedestrians	454	433	10.2	608	13.0	71
Motor vehicle accidents other	350	330	7.8	340	7.3	97
Railway	109	108	2.6	147	3.2	73
Other transport	4	3	0.1	37	0.8	8
Accidental drowning	74	67	1.6	82	1.8	82
Exposure to smoke, fire or flames or explosion	231	208	4.9	239	5.1	87
Iatrogenic/misadventures during surgical and medical care	52	50	1.2	23	0.5	217
Other external causes	323	316	7.5	198	4.2	160
Injury unspecified means, undetermined cause	248	227	5.4	260	5.6	87
Suicide/intentional self-harm	258	234	5.5	309	6.6	76
Assault by firearm	1167	1153	27.3	1112	23.9	104
Assault by sharp object	935	886	21.0	931	20.0	95
Assault by other/unspecified	227	214	5.1	375	8.0	57
<b>Total</b>	<b>4432</b>	<b>4229</b>	<b>100.0</b>	<b>4661</b>	<b>100.0</b>	<b>90</b>

**Appendix 6: Number of deaths by age, cause and sex, Cape Town 2001**

Cause of death	Male		Male		Male		Male		Male		Male		Male		Female		Female		Female		Female		Female		Female		Total		Total			
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total		
Tuberculosis	11	4	37	168	223	214	135	55	27	875	12	5	63	141	124	63	51	24	14	496	1,371											
HIV/AIDS	182	17	21	197	221	105	23	4	-	770	158	7	120	341	183	95	29	3	-	936	1,706											
HIV/AIDS + TB	18	3	10	88	100	41	9	-	-	269	14	1	57	156	70	38	13	1	-	349	619											
HIV/AIDS excl TB	164	14	11	109	121	64	14	4	-	501	144	6	63	185	114	57	16	2	-	587	1,088											
Diarrhoeal Diseases	80	-	4	3	5	7	3	4	4	111	74	1	2	11	10	4	3	7	12	125	236											
Bacterial Meningitis and meningococcaemia	17	5	2	15	14	3	3	1	-	60	13	-	6	12	10	3	5	1	-	51	111											
Malaria	-	-	1	-	-	-	-	1	-	2	-	-	-	-	1	-	-	-	-	1	3											
Schistosomiasis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
Septicaemia	28	-	2	7	18	24	25	24	33	161	20	2	2	13	14	13	15	33	72	185	345											
Other Infectious and parasitic diseases	1	2	-	-	6	-	2	4	1	17	1	-	2	1	1	1	2	-	1	10	27											
Lower Respiratory infections	60	3	14	30	44	56	52	71	107	437	76	5	13	34	37	36	24	62	182	468	904											
Maternal Conditions	-	-	-	-	-	-	-	-	-	-	-	3	5	-	-	-	-	-	-	-	9											
Low birth weight and RDS	146	-	-	-	-	-	-	-	-	146	153	1	-	-	-	-	-	-	-	154	300											
Neonatal infections	5	-	-	-	-	-	-	-	-	5	3	-	-	-	-	-	-	-	-	3	8											
Other perinatal	77	-	-	1	-	-	-	-	-	79	47	-	-	-	-	-	-	1	1	49	128											
Protein-energy malnutrition	9	1	-	1	2	1	2	1	1	19	3	-	-	-	-	1	-	2	2	8	27											
Oesophagus cancer	-	-	-	1	8	41	38	36	20	145	-	-	-	-	3	21	28	18	20	91	236											
Stomach cancer	-	-	-	-	7	22	36	30	20	115	-	-	1	2	3	12	9	22	26	76	190											
Colo-rectal cancer	-	-	-	1	13	17	29	56	42	158	-	-	4	9	19	20	31	58	142	300												
Liver cancer	-	-	-	4	6	15	19	14	12	70	-	-	1	-	3	4	7	13	9	38	108											
Pancreas cancer	-	-	-	-	5	10	15	17	10	57	-	-	-	-	3	6	12	18	27	66	123											
Trachea/bronchi/lung cancer	-	-	-	6	39	131	168	141	84	568	-	1	-	4	12	38	76	81	52	265	833											
Melanoma	-	-	-	1	1	2	1	1	5	5	-	-	-	-	-	-	1	-	-	1	7											
Breast cancer	-	-	-	-	1	-	-	2	2	5	-	-	-	6	50	63	59	68	74	320	325											
Cervix and uterus cancer	-	-	-	-	-	-	-	-	-	-	-	-	3	26	28	31	27	23	138	138												
Ovary cancer	-	-	-	-	-	-	-	-	-	-	-	1	1	5	9	15	15	15	9	55	55											
Prostate cancer	-	-	-	1	-	2	23	60	78	164	-	-	-	-	-	-	-	-	-	164												
Bladder cancer	-	-	-	-	-	2	4	17	16	40	-	-	1	1	1	1	3	7	8	22	62											
Kidney cancer	-	-	1	1	2	5	11	4	4	25	-	-	-	1	1	6	3	-	4	15	41											
Brain, meninges and CNS cancer	-	2	2	1	5	16	6	7	11	51	1	-	1	1	3	4	10	6	6	34	84											
Leukaemia	3	5	5	3	7	1	4	5	12	45	-	-	-	2	3	2	1	6	11	26	71											
Other cancers of lymphatic and haematopoietic system	-	1	4	4	9	17	18	18	21	94	-	-	-	3	9	8	11	12	21	63	156											
Other malignant neoplasms	2	3	3	11	32	85	88	75	61	361	1	4	1	3	19	48	61	55	73	266	627											
Benign neoplasms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
Diabetes Mellitus*	1	-	5	9	26	55	120	153	125	492	1	1	3	7	18	71	160	231	238	729	1,223											
Diabetes Mellitus	1	-	3	3	8	24	36	43	36	154	-	1	3	4	11	31	53	57	70	230	385											
DM + Hypertension	-	-	1	6	18	31	84	110	88	339	1	-	-	3	7	40	107	174	167	498	838											



Cause of death	Male		Male		Male		Male		Male		Male		Male		Female		Female		Female		Female		Persons	
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	Female	Male	Total	
Anaemias and other diseases of blood and blood forming organs	3	-	-	1	2	3	3	3	10	26	1	-	-	2	5	2	2	5	22	41	66			
Remainder of endocrine, nutritional and metabolic disorders	4	-	2	3	1	3	4	9	5	32	4	1	-	2	2	5	2	4	11	32	65			
Substance abuse (alcohol and drugs)	-	-	-	-	3	7	6	2	-	19	-	-	1	-	-	3	1	2	-	8	27			
Remainder of mental and behavioural disorders	-	-	-	-	2	2	1	-	1	7	-	1	-	-	-	3	1	-	2	8	15			
Alzheimer's disease	-	-	-	-	-	-	-	-	27	39	-	-	-	-	-	1	3	20	57	82	121			
Parkinsons disease	-	-	-	-	-	-	-	4	18	23	-	-	-	-	-	-	-	1	12	13	36			
Epilepsy	8	3	5	17	23	26	24	13	9	127	1	4	6	5	15	4	2	7	7	53	180			
Remainder of diseases of nervous system	5	4	6	7	8	9	12	15	18	84	11	3	3	4	3	5	6	12	61	110	194			
Diseases of the eye and adnexa	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	2	2			
Diseases of the ear and mastoid process	-	-	-	-	-	-	-	1	-	1	-	-	-	1	-	-	-	-	-	1	2			
Rheumatic heart disease	-	2	-	-	3	1	-	5	4	15	-	-	-	-	-	1	1	1	4	8	23			
Ischaemic heart disease	-	-	4	19	62	125	216	288	309	1,023	-	-	1	7	14	54	115	196	469	856	1,880			
Stroke	5	-	6	7	32	58	103	127	150	489	4	2	1	16	30	60	79	108	309	610	1,096			
Hypertensive disease #	1	-	3	7	31	77	150	175	156	599	-	1	3	14	39	68	142	209	403	878	1,477			
Hypertensive disease	1	-	-	5	21	31	87	82	80	307	-	1	1	10	29	34	75	109	233	493	800			
Hypertension and CVA	-	-	3	1	10	46	63	93	76	292	-	1	4	10	34	66	100	100	171	386	677			
Pulmonary heart and circulatory disease	5	2	4	7	21	15	31	25	41	151	6	-	6	9	10	32	23	38	67	191	342			
Remainder of diseases of circulatory system	9	1	-	4	11	19	28	28	51	152	7	-	2	4	4	13	13	43	99	185	337			
Other cardiovascular	7	2	4	3	12	23	17	23	29	120	10	2	5	10	10	12	17	17	42	125	245			
COPD	-	-	-	3	30	64	131	169	137	535	-	1	-	-	8	16	53	86	104	268	803			
Asthma	10	4	10	8	19	26	53	29	8	167	4	2	4	17	16	31	19	33	24	150	317			
Other respiratory	15	1	3	22	42	42	33	38	29	224	25	3	9	14	20	13	15	33	58	190	414			
Peptic ulcer	-	-	1	1	2	2	6	6	9	31	-	-	1	1	1	2	1	1	7	17	30	61		
Cirrhosis of liver	-	-	1	7	10	20	36	21	5	101	-	-	1	1	3	14	9	4	2	35	136			
Diseases of the pancreas	-	-	-	2	6	5	4	2	1	20	-	-	-	-	2	3	2	-	1	9	29			
Remainder of diseases of digestive system	12	1	2	13	11	32	38	19	27	156	8	-	4	14	18	19	17	18	53	150	306			
Renal failure	3	2	3	13	36	35	56	40	57	246	5	1	2	15	25	31	40	37	69	226	472			
Other genito-urinary	3	-	-	1	1	2	4	4	13	29	-	-	1	2	1	1	-	5	17	27	56			
Skin disease	-	-	-	1	1	1	-	-	2	4	-	-	-	-	1	-	2	2	6	11	15			
Musculo-skeletal	4	-	-	3	-	5	3	1	5	22	1	-	2	2	2	-	6	1	12	25	47			
Congenital abnormalities	26	1	1	4	5	1	1	1	1	41	23	3	1	-	-	3	-	1	-	31	72			
Road traffic accidents	17	45	105	166	153	89	42	16	6	638	20	16	38	34	51	30	18	9	3	219	857			
Other transport accidents	4	3	20	31	21	4	8	1	-	93	-	1	7	10	5	2	1	-	-	27	120			
Drowning	18	6	14	17	7	4	1	3	-	71	-	3	-	1	1	-	3	-	2	10	81			
Fires	12	13	19	47	39	17	5	3	-	155	15	6	15	17	21	11	4	4	2	93	248			

Cause of death	Male				Female				Male				Female				Persons Total				
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54		55-64	65-74	75+	Total
Surgical / medical misadventure	2	1	1	2	2	6	6	7	4	32	2	-	-	4	2	5	3	6	3	26	58
Other unintentional injuries specified	22	6	31	48	49	29	20	16	14	235	18	7	16	18	19	6	15	8	7	115	350
Suicide and self-inflicted	-	3	37	82	35	39	20	5	5	227	-	2	17	8	7	3	7	1	-	46	272
Homicide	16	27	764	771	393	135	41	8	11	2,164	9	12	66	81	60	29	9	5	10	282	2,446
Homicide and violence with firearm	5	16	437	378	184	57	17	2	3	1,099	2	5	38	39	28	8	-	1	-	122	1,221
Homicide and violence without firearm	11	10	327	393	209	78	24	5	8	1,065	7	6	29	42	32	20	9	4	10	160	1,225
<b>Total</b>	<b>831</b>	<b>172</b>	<b>1,148</b>	<b>1,785</b>	<b>1,768</b>	<b>1,763</b>	<b>1,934</b>	<b>1,920</b>	<b>1,851</b>	<b>13,172</b>	<b>741</b>	<b>100</b>	<b>432</b>	<b>911</b>	<b>950</b>	<b>1,041</b>	<b>1,269</b>	<b>1,671</b>	<b>2,898</b>	<b>10,013</b>	<b>23,185</b>

\* Includes Diabetes Mellitus (code 1301) and Diabetes mellitus and hypertension (code 1302)

# Includes Hypertensive disease (code 1810) and Hypertension and CVA (code 1811)

## Appendix 7: Age specific and age standardised death rates per 100 000, Cape Town 2001

Table 7.1: Age specific death rates per 100 000 by cause and sex, Cape Town 2001

Cause of death	Male										Female										Persons	
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	Total	
<b>Group I</b>	<b>411.0</b>	<b>11.7</b>	<b>27.6</b>	<b>138.9</b>	<b>232.4</b>	<b>274.3</b>	<b>273.5</b>	<b>366.0</b>	<b>864.5</b>	<b>171.0</b>	<b>382.3</b>	<b>7.7</b>	<b>69.8</b>	<b>182.3</b>	<b>158.5</b>	<b>137.8</b>	<b>136.0</b>	<b>237.7</b>	<b>804.9</b>	<b>154.4</b>	<b>162.6</b>	
Tuberculosis	7.6	1.5	12.3	55.3	97.4	143.2	150.6	121.2	134.1	55.8	8.4	1.7	20.8	46.2	51.6	39.8	53.9	41.8	40.4	30.7	43.1	
TB + code 1020 (HIV + TB)	19.6	2.6	15.7	84.4	141.0	170.6	160.2	121.2	134.1	73.0	17.9	2.1	39.5	97.2	80.6	64.0	67.4	43.7	40.4	52.4	62.5	
HIV/AIDS	121.1	6.1	7.2	64.9	96.4	70.1	25.3	9.5	0.0	49.1	107.7	2.7	39.5	111.5	76.5	60.3	30.3	5.7	0.0	58.0	53.6	
Diarrhoeal Diseases	53.3	0.0	1.5	1.1	2.0	4.6	3.6	9.5	21.5	7.1	50.6	0.4	0.7	3.5	4.1	2.8	3.4	13.3	33.9	7.7	7.4	
Bacterial Meningitis and meningococcaemia	11.3	1.9	0.7	4.8	6.0	2.3	3.6	2.4	0.0	3.9	9.0	0.0	2.1	3.8	4.1	2.1	5.6	1.9	0.0	3.2	3.5	
Malaria	0.0	0.0	0.4	0.0	0.0	0.0	0.0	2.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
Schistosomiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Septicaemia	18.5	0.0	0.7	2.2	8.0	16.0	27.7	52.2	166.7	10.3	13.7	0.8	0.7	4.2	6.0	8.3	15.7	58.9	203.3	11.4	10.9	
Other Infectious and parasitic diseases	0.8	0.8	0.0	0.0	2.5	0.0	2.4	9.5	5.3	1.1	0.9	0.0	0.7	0.3	0.5	0.7	2.2	0.0	3.2	0.6	0.8	
Lower Respiratory infections	40.0	1.1	4.7	10.0	19.1	37.4	57.9	157.0	531.4	27.8	51.9	1.7	4.2	11.1	15.2	23.1	24.8	110.3	514.6	290	28.4	
Maternal Conditions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.7	0.0	0.0	0.0	0.0	0.0	0.5	0.3	
Low birth weight and RDS	97.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	104.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	9.4	
Neonatal infections	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	
Other perinatal	51.6	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	5.0	31.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.2	3.0	4.0	
Protein-energy malnutrition	5.8	0.4	0.0	0.4	1.0	0.8	2.4	2.4	5.4	1.2	1.9	0.0	0.0	0.0	0.0	0.7	0.0	3.8	6.2	0.5	0.8	
<b>Group II</b>	<b>82.9</b>	<b>12.4</b>	<b>24.9</b>	<b>65.6</b>	<b>233.6</b>	<b>688.1</b>	<b>1719.8</b>	<b>3756.0</b>	<b>8166.7</b>	<b>438.5</b>	<b>79.4</b>	<b>11.6</b>	<b>20.1</b>	<b>59.2</b>	<b>167.9</b>	<b>467.3</b>	<b>1136.1</b>	<b>2678.7</b>	<b>7332.1</b>	<b>4150</b>	<b>426.5</b>	
Oesophagus cancer	0.0	0.0	0.0	0.4	3.5	27.3	42.1	80.7	101.9	9.2	0.0	0.0	0.0	0.0	1.4	13.4	29.6	32.7	56.1	5.6	7.4	
Stomach cancer	0.0	0.0	0.0	0.0	3.0	14.4	39.7	66.4	101.8	7.3	0.0	0.0	0.4	0.7	1.4	7.8	9.1	38.5	75.1	4.7	6.0	
Colo-rectal cancer	0.0	0.0	0.0	0.4	5.5	11.4	32.5	123.4	209.0	10.1	0.0	0.0	0.0	1.4	3.7	12.0	21.5	55.6	165.7	8.8	9.4	
Liver cancer	0.0	0.0	0.0	1.5	2.5	9.9	21.6	30.8	59.2	4.5	0.0	0.0	0.4	0.0	1.4	2.8	7.9	22.8	25.0	2.4	3.4	
Pancreas cancer	0.0	0.0	0.0	0.0	2.0	6.8	16.8	38.0	48.3	3.6	0.0	0.0	0.0	0.0	1.4	3.5	12.4	32.4	77.7	4.1	3.9	
Trachea/bronchi/lung cancer	0.0	0.0	0.0	1.8	17.0	87.6	186.8	311.4	419.1	36.2	0.0	0.5	0.0	1.4	5.1	23.9	80.1	144.9	147.6	16.4	26.2	
Melanoma	0.0	0.0	0.0	0.4	0.0	0.8	2.4	2.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.1	0.2	
Breast cancer	0.0	0.0	0.0	0.0	0.5	0.0	0.0	4.7	10.8	0.3	0.0	0.0	0.0	2.1	20.7	39.8	61.8	121.5	210.4	19.8	10.2	
Cervix and uterus cancer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.6	17.6	32.8	48.0	65.6	8.5	4.3	
Ovary cancer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	2.3	5.6	15.7	26.6	24.9	3.4	1.7	
Prostate cancer	0.0	0.0	0.0	0.4	0.0	1.5	25.6	132.3	387.7	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	
Bladder cancer	0.0	0.0	0.0	0.0	0.0	1.5	4.8	38.0	80.8	2.5	0.0	0.0	0.0	0.3	0.5	0.7	3.4	13.3	21.8	1.3	1.9	
Kidney cancer	0.0	0.0	0.4	0.4	1.0	3.0	12.0	9.5	5.3	1.6	0.0	0.0	0.0	0.3	3.5	3.4	0.0	0.0	12.3	0.9	1.3	
Brain, meninges and CNS cancer	0.0	0.8	0.8	0.4	2.0	10.7	7.2	16.6	53.6	3.2	0.8	0.0	0.4	0.3	1.4	2.8	10.1	11.4	18.2	2.1	2.6	
Leukaemia	1.7	1.9	1.6	1.1	3.0	0.8	4.8	11.8	59.1	2.9	0.0	0.0	0.0	0.7	1.4	1.4	1.1	11.4	30.8	1.6	2.2	

Cause of death	Male		Male		Male		Male		Male		Male		Female		Female		Female		Female		Persons	
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	Total	
Other cancers of lymphatic and haematopoietic system	0.0	0.4	1.2	1.5	4.0	11.4	20.4	40.3	107.2	6.0	0.0	0.0	0.0	1.0	3.7	4.9	11.2	20.9	59.0	3.9	4.9	
Other malignant neoplasms	1.6	1.1	1.2	3.7	14.0	57.0	97.5	166.1	304.8	23.0	0.8	1.3	0.4	1.1	7.9	30.5	64.0	98.4	207.9	16.5	19.7	
Benign neoplasms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Diabetes Mellitus all *	0.9	0.0	1.5	3.0	11.6	36.7	133.2	339.3	621.5	31.5	0.9	0.4	1.1	2.4	7.3	44.8	168.8	410.9	673.1	45.2	38.4	
DM + Hypert (I302)	0.0	0.0	0.4	1.9	8.1	20.7	93.5	244.4	439.4	21.6	0.9	0.0	0.0	1.0	2.8	25.2	112.6	310.3	474.2	30.9	26.3	
Anaemias and other diseases of blood and blood forming organs	1.7	0.0	0.0	0.4	1.0	2.3	3.6	7.1	48.4	1.6	0.9	0.0	0.0	0.7	2.3	1.4	2.2	9.5	62.5	2.5	2.1	
Remainder of endocrine, nutritional and metabolic disorders	2.6	0.0	0.7	1.1	0.5	2.3	4.8	19.0	27.0	2.1	2.7	0.5	0.0	0.7	0.9	3.4	2.2	7.6	31.3	2.0	2.0	
Substance abuse (alcohol and drugs)	0.0	0.0	0.0	0.0	1.5	4.6	7.2	4.7	0.0	1.2	0.0	0.0	0.4	0.0	0.0	2.1	1.1	3.8	0.0	0.5	0.8	
Remainder of mental and behavioural disorders	0.0	0.0	0.0	0.0	1.0	1.5	1.2	0.0	5.4	0.4	0.0	0.5	0.0	0.0	0.0	2.1	1.1	0.0	6.1	0.5	0.5	
Alzheimer's disease	0.0	0.0	0.0	0.0	0.0	0.0	2.4	21.4	135.2	2.5	0.0	0.0	0.0	0.0	0.0	0.7	3.4	36.1	161.7	5.1	3.8	
Parkinson's disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	91.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	34.3	0.8	1.1	
Epilepsy	5.0	1.2	1.5	5.5	10.0	17.5	26.5	28.5	42.9	8.1	0.8	1.5	2.1	1.7	6.5	2.8	2.2	13.3	18.9	3.3	5.7	
Remainder of diseases of nervous system	3.3	1.5	1.9	2.2	3.5	6.1	13.2	33.2	92.1	5.4	7.8	1.2	1.1	1.4	1.4	3.5	6.7	20.9	172.7	6.8	6.1	
Diseases of the eye and adnexa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
Diseases of the ear and mastoid process	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
Rheumatic heart disease	0.0	0.6	0.0	0.0	1.2	0.8	0.0	10.7	21.1	0.9	0.0	0.0	0.0	0.0	0.0	0.8	1.3	2.2	11.7	0.5	0.7	
Ischaemic heart disease	0.0	0.0	1.3	6.3	27.2	83.9	240.2	638.4	1539.7	65.3	0.0	0.0	0.5	2.4	6.0	34.2	121.0	348.1	1328.2	53.0	59.1	
Stroke	3.4	0.0	1.9	2.2	14.0	38.7	114.3	282.4	746.8	31.1	2.7	0.7	0.4	5.2	12.4	38.3	83.1	191.6	874.6	37.7	34.4	
Hypertensive disease #	0.8	0.0	0.9	2.2	13.4	51.8	166.8	386.9	776.5	38.2	0.0	0.5	0.8	4.5	16.2	43.3	148.9	371.4	1143.2	54.4	46.4	
Hypertension and CVA	-	-	0.9	0.4	4.2	31.0	70.2	205.1	378.3	18.6	-	-	0.4	1.2	4.2	21.6	69.7	177.8	483.3	23.9	21.3	
Pulmonary heart and circulatory disease	3.1	0.6	1.3	2.4	9.0	10.3	34.5	56.0	206.0	9.6	4.0	0.0	2.1	2.8	4.2	20.2	24.7	68.2	188.9	11.8	10.7	
Remainder of diseases of circulatory system	6.1	0.4	0.0	1.5	5.0	12.9	31.3	61.7	253.7	9.7	4.7	0.0	0.7	1.4	1.8	8.4	13.5	76.0	279.3	11.5	10.6	
Other cardiovascular	4.7	0.7	1.3	0.9	5.4	15.5	19.3	50.4	144.1	7.7	6.7	0.7	1.5	3.2	4.2	7.4	18.3	30.9	118.4	7.7	7.7	
COPD	0.0	0.0	0.0	1.0	13.1	43.0	146.2	375.1	682.8	34.1	0.0	0.5	0.0	0.0	3.3	10.2	55.9	153.6	293.7	16.6	25.2	
Asthma	6.6	1.5	3.4	2.6	8.1	17.5	58.8	64.0	41.7	10.6	2.8	0.8	1.2	5.4	6.7	19.5	19.9	59.3	69.1	9.3	10.0	
Other respiratory	10.0	0.4	0.9	7.1	18.4	27.8	37.1	83.8	142.3	14.3	17.3	1.1	3.0	4.6	8.3	8.0	15.3	58.7	164.6	11.8	13.0	
Peptic ulcer	0.0	0.0	0.4	0.4	1.0	3.9	6.2	12.3	44.7	2.0	0.0	0.0	0.4	0.4	1.0	0.8	1.3	12.7	48.8	1.9	1.9	
Cirrhosis of liver	0.0	0.0	0.4	2.2	4.5	13.7	39.7	47.5	26.7	6.4	0.0	0.0	0.4	0.3	1.4	9.1	9.0	7.6	6.2	2.2	4.3	
Diseases of the pancreas	0.0	0.0	0.0	0.7	2.5	3.0	4.8	4.8	5.4	1.3	0.0	0.0	0.0	0.0	0.9	2.1	2.2	0.0	3.0	0.5	0.9	
Remainder of diseases	7.7	0.4	0.7	4.4	5.0	21.3	42.1	42.7	134.7	9.9	5.4	0.0	1.4	4.5	7.4	11.9	18.0	32.4	149.6	9.3	9.6	

Cause of death	Male		Male		Male		Male		Male		Male		Female		Female		Female		Female		Persons	
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total	Total	
of digestive system																						
Renal failure	1.8	0.8	1.2	4.4	15.5	23.6	62.5	87.8	285.7	15.7	3.6	0.5	0.7	4.9	10.6	19.6	41.6	66.5	196.9	14.0	14.8	
Other genito-urinary	1.8	0.0	0.0	0.4	0.5	1.5	4.8	9.5	64.7	1.8	0.0	0.0	0.4	0.7	0.5	0.7	0.0	9.5	46.9	1.7	1.8	
Skin disease	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.0	10.8	0.3	0.0	0.0	0.0	0.0	0.5	0.0	2.2	3.8	15.6	0.7	0.5	
Musculo-skeletal	2.7	0.0	0.0	1.1	0.0	3.0	3.6	2.4	26.9	1.4	0.9	0.0	0.7	0.7	0.9	0.0	6.7	1.9	34.4	1.6	1.5	
Congenital abnormalities	17.6	0.4	0.4	1.5	2.0	0.8	1.2	2.4	0.0	2.6	15.5	0.9	0.4	0.0	0.0	2.1	0.0	1.9	0.0	1.9	2.2	
<b>Group III: Injuries</b>	<b>60.0</b>	<b>36.8</b>	<b>332.9</b>	<b>383.4</b>	<b>304.8</b>	<b>216.8</b>	<b>158.0</b>	<b>133.0</b>	<b>199.5</b>	<b>230.5</b>	<b>43.7</b>	<b>17.0</b>	<b>52.9</b>	<b>56.6</b>	<b>69.6</b>	<b>54.5</b>	<b>63.1</b>	<b>58.7</b>	<b>76.5</b>	<b>50.6</b>	<b>139.2</b>	
Road traffic accidents	11.1	15.9	35.1	54.6	66.7	59.6	46.3	36.3	28.0	40.7	13.7	5.6	12.4	11.2	21.3	18.8	18.5	16.7	9.5	13.5	26.9	
Other transport accidents	2.4	1.2	6.9	10.3	9.1	2.8	8.8	2.4	0.0	5.9	0.0	0.4	2.5	3.3	2.2	1.3	1.2	0.0	0.0	1.7	3.8	
Drowning	11.9	2.0	4.8	5.5	3.2	2.8	1.3	7.3	0.0	4.5	0.0	1.1	0.0	0.4	0.4	0.0	3.3	0.0	4.5	0.6	2.5	
Fires	8.0	4.5	6.5	15.6	16.9	11.3	5.0	7.3	0.0	9.9	9.9	2.2	4.9	5.4	8.7	6.7	4.4	6.4	4.5	5.8	7.8	
Surgical / medical misadventure	1.6	0.4	0.3	0.7	0.9	4.3	6.3	14.5	22.2	2.0	1.7	0.0	0.0	1.5	0.9	3.4	3.6	10.4	7.6	1.6	1.8	
Other unintentional injuries specified	14.5	2.0	10.3	16.0	21.5	19.1	22.6	36.3	69.9	15.0	12.1	2.6	5.4	5.8	7.8	4.0	15.6	14.6	20.6	7.1	11.0	
Suicide and self-inflicted	0.0	1.2	12.4	27.0	15.1	26.2	22.6	12.1	24.9	14.5	0.0	0.8	5.7	2.5	3.1	2.0	7.0	2.2	0.0	2.8	8.6	
Homicide	10.5	9.4	256.5	253.8	171.3	90.5	45.1	16.9	54.4	138.0	6.3	4.3	22.0	26.5	25.2	18.2	9.5	8.5	29.7	17.5	76.8	
Homicide and violence with firearm	3.3	5.7	146.6	124.6	80.1	38.2	18.8	4.8	16.4	70.1	1.5	1.9	12.4	12.8	11.7	5.4	0.0	2.2	0.0	7.5	38.4	
Homicide and violence without firearm	7.2	3.7	109.9	129.3	91.2	52.4	26.3	12.0	38.0	67.9	4.8	2.3	9.6	13.8	13.5	12.8	9.5	6.4	29.7	9.9	38.5	
<b>Total</b>	<b>553.9</b>	<b>60.9</b>	<b>385.4</b>	<b>587.9</b>	<b>770.8</b>	<b>1179.1</b>	<b>2151.3</b>	<b>4255.1</b>	<b>9230.7</b>	<b>840.0</b>	<b>505.4</b>	<b>36.2</b>	<b>142.8</b>	<b>298.1</b>	<b>395.9</b>	<b>659.5</b>	<b>1335.2</b>	<b>2975.1</b>	<b>8213.5</b>	<b>620.0</b>	<b>728.4</b>	

\* Includes Diabetes Mellitus (code 1301) and Diabetes mellitus and hypertension (code 1302)

# Includes Hypertensive disease (code 1810) and Hypertension and CVA (code 1811)

**Table 7.2: Age standardised death rates per 100 000 for persons by cause and sub-district, Cape Town 2001**

Cause of death	CAPE TOWN SUB-DISTRICTS										Cape Town	
	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East		Tygerberg West
<b>Group I</b>	<b>114.3</b>	<b>85.6</b>	<b>175.1</b>	<b>163.4</b>	<b>363.0</b>	<b>107.7</b>	<b>366.4</b>	<b>179.3</b>	<b>94.1</b>	<b>123.6</b>	<b>141.6</b>	<b>176.8</b>
Tuberculosis	42.2	14.0	35.1	46.7	140.9	29.0	117.4	37.1	15.2	24.9	39.9	46.7
TB + code 1020	49.2	31.3	55.9	57.9	186.5	37.4	167.0	54.9	19.5	34.9	42.6	64.8
HIV/AIDS	22.2	29.8	61.9	38.3	101.6	22.5	145.8	59.8	10.7	31.8	10.8	50.5
Diarrhoeal Diseases	3.3	0.9	5.1	15.4	21.5	3.4	28.5	6.4	2.2	0.5	0.8	7.8
Bacterial Meningitis and meningococcaemia	0.8	0.9	1.1	1.3	8.8	1.5	7.0	3.5	2.6	4.4	2.6	3.4
Malaria	0.0	0.5	0.0	0.6	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Schistosomiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Septicaemia	13.8	6.5	14.5	10.6	12.2	11.5	13.7	17.0	14.6	13.0	23.4	14.8
Other Infectious and parasitic diseases	0.4	0.6	0.5	0.6	0.9	1.2	0.9	1.8	1.6	1.5	0.4	1.0
Lower Respiratory infections	22.0	21.5	42.0	43.1	59.9	22.3	39.1	38.4	33.5	30.5	46.2	38.3
Maternal Conditions	0.4	0.0	0.3	0.0	0.4	0.6	0.3	0.0	0.3	0.0	0.0	0.2
Low birth weight and RDS	7.7	6.4	12.1	7.7	8.1	8.1	6.8	12.1	8.9	10.8	11.3	8.9
Neonatal infections	0.0	0.9	0.4	0.0	0.0	0.4	0.6	0.0	0.4	0.0	0.0	0.2
Other perinatal	1.6	3.5	1.3	5.5	5.1	3.1	4.9	2.2	3.0	5.1	5.9	3.8
Protein-energy malnutrition	0.0	0.0	0.8	0.7	3.7	0.6	1.3	1.0	0.9	1.0	0.5	1.0
<b>Group II</b>	<b>843.1</b>	<b>341.4</b>	<b>636.5</b>	<b>476.0</b>	<b>513.6</b>	<b>832.2</b>	<b>718.7</b>	<b>546.0</b>	<b>594.1</b>	<b>581.2</b>	<b>735.6</b>	<b>626.9</b>
Oesophagus cancer	5.8	5.5	13.3	7.3	33.1	9.0	34.5	4.8	4.3	7.5	9.8	10.6
Stomach cancer	13.7	8.3	4.3	9.4	9.4	8.8	1.2	9.5	10.9	8.7	11.1	8.8
Colo-rectal cancer	18.9	8.7	18.4	8.0	1.5	13.4	5.4	11.6	18.5	18.4	14.2	14.2
Liver cancer	5.0	1.3	7.2	0.6	2.2	6.8	9.5	5.3	4.0	4.1	7.1	4.8
Pancreas cancer	8.8	3.5	5.3	6.4	1.8	9.0	8.2	0.5	6.3	8.0	5.6	5.8
Trachea/bronchi/lung cancer	60.6	15.2	36.9	26.3	25.1	47.9	23.6	36.1	38.2	35.1	56.3	37.8
Melanoma	0.8	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Breast cancer	21.9	10.6	17.2	6.9	5.5	17.1	11.1	9.5	15.8	9.3	19.4	14.4
Cervix and uterus cancer	10.6	4.2	5.5	3.5	5.8	13.0	7.9	3.9	5.2	4.4	4.4	5.9
Ovary cancer	2.0	2.5	4.7	3.6	1.5	2.5	0.0	1.8	3.2	1.2	1.5	2.5
Prostate cancer	7.9	3.1	9.9	10.8	8.1	7.9	10.4	9.7	8.2	9.8	7.9	8.4
Bladder cancer	4.9	0.9	4.1	0.8	0.0	2.2	0.0	2.7	3.7	4.1	4.4	3.1
Kidney cancer	3.0	0.9	3.8	2.0	0.0	0.5	2.3	2.3	0.9	0.7	1.7	1.7
Brain, meninges and CNS cancer	5.2	2.9	5.6	1.9	4.1	1.7	2.4	2.0	4.5	2.7	4.2	3.6
Leukaemia	3.5	1.7	4.6	1.8	0.5	3.0	2.4	3.9	4.2	1.2	2.7	3.0
Other cancers of lymphatic and haematopoietic system	8.1	1.6	6.4	2.1	3.5	7.1	6.3	6.2	16.3	7.7	1.9	6.9
Other malignant neoplasms	45.7	14.5	36.3	20.3	11.6	41.2	27.4	18.5	23.1	16.1	40.4	27.9
Benign neoplasms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diabetes Mellitus*	106.4	24.9	39.8	33.7	38.0	105.9	85.2	54.4	54.9	58.7	76.0	58.6
DM + hypertension (I302)	74.1	18.1	25.8	29.4	15.2	72.0	57.0	33.1	42.4	45.6	50.8	40.7
Anaemias and other diseases of blood and blood forming organs	3.1	0.9	4.0	1.8	1.6	5.3	3.2	0.5	4.8	0.0	3.6	3.0
Remainder of endocrine, nutritional and metabolic disorders	4.7	2.6	7.1	0.0	3.1	4.3	7.8	1.3	1.0	0.0	0.8	2.7

Cause of death	CAPE TOWN SUB-DISTRICTS										Cape Town	
	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East		Tygerberg West
Substance abuse (alcohol and drugs)	1.5	1.7	1.6	0.0	0.0	3.0	2.9	0.4	1.5	0.0	0.0	1.1
Remainder of mental and behavioural disorders	0.7	0.0	2.9	0.0	0.0	0.0	0.5	0.0	0.6	0.7	0.0	0.6
Alzheimer's disease	4.9	9.7	7.2	11.2	0.0	6.5	1.0	1.4	9.0	6.2	5.0	6.4
Parkinson's disease	2.1	2.3	2.9	1.3	0.0	0.0	1.3	0.0	1.6	3.4	2.2	1.9
Epilepsy	9.9	3.1	4.8	4.1	5.0	5.1	16.3	5.9	5.2	5.2	10.5	6.7
Remainder of diseases of nervous system	14.7	1.1	20.7	3.1	4.2	14.8	14.1	1.2	2.3	3.0	2.6	8.6
Diseases of the eye and adnexa	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Diseases of the ear and mastoid process	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Rheumatic heart disease	0.0	0.0	0.4	0.0	0.0	2.4	0.4	0.5	3.7	0.5	1.1	1.0
Ischaemic heart disease	90.2	82.3	80.1	121.9	20.3	69.3	23.3	101.6	102.8	97.6	124.1	91.6
Stroke	68.9	30.5	58.8	37.7	45.7	79.8	75.1	42.3	41.5	29.3	72.2	52.4
Hypertensive heart disease	110.5	21.4	54.3	48.3	81.3	141.1	121.4	71.6	62.2	82.2	66.0	71.3
Pulmonary heart and circulatory disease	6.3	14.5	8.4	19.8	19.9	7.7	14.4	6.7	16.7	27.1	29.7	15.3
Remainder of diseases of circulatory system	33.4	2.5	33.5	4.0	2.5	40.5	20.3	5.3	9.4	1.8	7.3	16.0
Other cardiovascular	11.2	7.9	9.8	8.8	15.9	5.5	18.5	7.5	13.4	10.7	9.2	10.6
COPD	52.1	15.8	28.5	33.8	13.1	47.6	31.7	36.8	41.6	47.4	55.6	38.6
Asthma	16.8	4.5	6.6	4.0	38.9	13.9	25.1	9.1	11.2	14.1	14.5	12.9
Other respiratory	22.8	3.0	26.6	10.9	35.9	23.7	37.0	12.5	4.9	3.1	9.3	16.9
Peptic ulcer	1.4	1.1	1.1	1.5	8.6	0.0	1.3	2.6	2.1	3.4	3.3	2.9
Cirrhosis of liver	3.2	0.6	4.5	1.5	1.7	3.4	7.2	2.6	9.2	8.4	11.4	5.7
Diseases of the pancreas	0.9	0.6	1.3	0.0	0.0	1.8	0.6	0.8	0.2	2.5	2.2	1.1
Remainder of diseases of digestive system	14.2	4.3	16.4	5.5	23.2	16.9	21.5	9.0	6.0	19.8	11.6	12.9
Renal failure	23.5	6.5	17.5	9.5	35.0	31.1	24.6	31.9	17.5	12.7	21.6	20.6
Other genito-urinary	5.3	0.5	5.3	0.6	4.2	2.6	4.6	2.5	1.3	1.2	0.4	2.7
Skin disease	0.7	0.9	1.2	0.0	0.5	0.0	2.8	0.6	0.7	0.0	0.0	0.7
Musculo-skeletal	4.3	2.6	4.4	0.0	0.9	6.6	1.6	0.0	0.9	0.0	0.4	2.0
Congenital abnormalities	3.1	0.0	1.3	1.3	0.3	2.3	2.2	8.6	0.7	3.3	2.0	2.2
<b>Group III</b>	<b>107.9</b>	<b>68.5</b>	<b>89.9</b>	<b>120.3</b>	<b>212.4</b>	<b>121.5</b>	<b>217.4</b>	<b>136.5</b>	<b>76.8</b>	<b>128.2</b>	<b>137.6</b>	<b>133.5</b>
Road traffic accidents	26.6	13.4	20.0	28.2	38.3	25.9	42.5	33.1	6.1	32.7	32.0	26.9
Other transport accidents	0.8	0.0	2.7	1.1	7.3	3.5	1.1	8.8	2.3	2.0	4.3	3.6
Drowning	1.6	2.4	2.0	4.7	1.7	2.0	1.7	1.7	5.2	2.6	2.0	2.5
Fires	3.0	3.9	2.9	15.2	18.4	2.3	10.9	7.6	4.8	6.8	6.0	7.6
Surgical / medical misadventure	1.1	0.0	2.9	1.3	2.3	0.4	1.2	3.1	1.6	2.9	3.7	2.4
Other unintentional injuries specified	11.2	10.3	11.3	5.2	16.3	11.0	12.8	4.0	15.9	12.1	11.7	11.9
Suicide and self-inflicted	4.9	5.7	5.5	16.1	8.3	2.8	6.1	12.0	6.1	13.3	12.5	8.6
Homicide	58.9	32.8	42.6	48.4	119.8	73.5	133.3	72.7	35.0	56.4	65.3	70.1
Homicide and violence with firearm	38.9	17.7	19.8	8.4	53.3	47.7	75.4	18.4	17.5	25.7	34.2	34.5
Homicide and violence without firearm	20.1	15.1	22.8	40.1	66.5	25.8	57.9	54.3	17.5	30.6	31.2	35.7
<b>Total</b>	1065.4	495.6	901.5	759.7	1088.9	1061.5	1302.4	861.8	765.0	832.6	1014.8	937.1

**Table 7.3: Age standardised death rates per 100 000 for males by cause and sub-district, Cape Town 2001**

Cause of death	CAPE TOWN SUB-DISTRICTS										Cape Town	
	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East		Tygerberg West
<b>Group I</b>	<b>136.3</b>	<b>95.5</b>	<b>188.5</b>	<b>193.9</b>	<b>352.1</b>	<b>155.2</b>	<b>384.0</b>	<b>203.7</b>	<b>107.7</b>	<b>123.9</b>	<b>186.0</b>	<b>195.3</b>
Tuberculosis	66.3	20.0	48.2	64.4	163.2	47.5	146.5	51.2	23.6	30.3	66.2	64.2
TB + code 1020	73.6	38.0	68.0	75.7	199.8	57.2	182.8	70.6	28.5	42.0	66.8	80.4
HIV/AIDS	22.1	34.1	66.7	38.9	78.0	23.6	125.3	57.8	11.5	28.7	10.9	46.9
Diarrhoeal Diseases	3.2	0.0	3.0	17.5	12.6	4.3	23.2	7.9	3.1	1.0	1.9	7.4
Bacterial Meningitis and meningococcaemia	1.7	0.0	0.7	0.0	9.0	2.3	9.7	2.2	3.4	3.0	3.3	3.7
Malaria	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.2
Schistosomiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Septicaemia	9.0	3.9	13.4	12.3	10.1	21.9	13.6	24.8	16.8	9.9	26.2	15.0
Other Infectious and parasitic diseases	0.0	0.0	0.7	0.0	1.7	2.9	1.7	2.7	2.3	1.5	0.9	1.4
Lower Respiratory Infections	29.6	30.7	36.9	51.4	59.6	36.0	49.2	43.7	34.8	27.2	56.0	41.9
Maternal Conditions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Low birth weight and RDS	4.5	1.7	15.7	1.4	7.8	10.2	5.9	9.0	5.7	15.2	13.2	8.6
Neonatal infections	0.0	1.7	0.8	0.0	0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.3
Other perinatal	0.0	3.4	1.6	6.8	6.2	4.2	5.9	2.5	4.3	6.4	7.4	4.6
Protein-energy malnutrition	0.0	0.0	0.7	0.0	4.0	1.4	2.3	2.0	1.4	0.8	0.0	1.3
<b>Group II</b>	<b>994.8</b>	<b>409.8</b>	<b>660.8</b>	<b>574.4</b>	<b>457.0</b>	<b>1032.6</b>	<b>679.6</b>	<b>717.5</b>	<b>747.8</b>	<b>682.0</b>	<b>929.6</b>	<b>717.5</b>
Oesophagus cancer	12.4	5.7	14.8	14.6	23.9	17.2	27.9	9.9	7.4	12.6	17.0	14.4
Stomach cancer	17.0	12.4	7.1	12.9	7.5	16.4	0.0	13.1	17.3	8.1	18.8	11.9
Colo-rectal cancer	25.0	14.1	20.4	7.8	1.1	22.4	4.4	22.7	27.0	20.4	18.4	17.5
Liver cancer	4.7	3.8	11.9	1.6	1.1	10.9	8.2	8.3	6.4	6.1	10.7	6.9
Pancreas cancer	7.3	2.2	6.9	6.7	1.9	9.0	6.5	1.1	7.1	4.9	6.0	5.9
Trachea/bronchi/lung cancer	104.3	18.3	47.1	45.3	38.7	83.0	34.4	51.0	56.4	50.0	96.0	56.9
Melanoma	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Breast cancer	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	1.4	0.0	2.0	0.6
Cervix and uterus cancer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ovary cancer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prostate cancer	20.2	8.2	22.8	27.3	15.2	22.0	19.0	27.6	21.2	25.0	20.6	20.9
Bladder cancer	12.1	0.0	6.7	0.0	0.0	3.3	0.0	1.5	4.7	8.6	7.9	5.0
Kidney cancer	3.4	2.0	6.4	2.9	0.0	1.0	3.2	2.1	1.5	0.0	1.6	2.3
Brain, meninges and CNS cancer	8.1	6.1	7.4	2.9	3.2	2.0	4.5	3.3	5.0	2.9	4.7	4.9
Leukaemia	7.0	1.1	5.3	5.1	0.9	1.4	2.3	6.9	5.0	2.5	2.8	4.2
Other cancers of lymphatic and haematopoietic system	11.8	2.2	8.8	3.0	2.6	8.3	11.3	7.2	20.9	8.7	3.6	9.4
Other malignant neoplasms	66.2	12.4	43.5	22.2	8.6	74.6	33.9	17.1	32.5	25.8	50.6	35.4
Benign neoplasms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diabetes Mellitus*	77.5	34.2	37.0	41.4	28.7	90.7	59.9	50.9	62.5	51.7	77.9	53.9
DM + Hypertension (I302)	46.2	25.8	24.3	36.7	14.1	67.6	37.4	30.4	47.0	44.6	55.1	37.5
Anaemias and other diseases of blood and blood forming organs	5.1	0.0	1.5	3.5	0.0	7.5	2.9	1.1	6.2	0.0	2.0	2.7
Remainder of endocrine, nutritional and metabolic disorders	7.6	0.0	7.7	0.0	0.0	5.8	5.2	0.0	2.4	0.0	1.0	3.0
Substance abuse (alcohol and drugs)	3.4	3.6	2.4	0.0	0.0	2.4	3.5	0.9	2.1	0.0	0.0	1.6



Cause of death	CAPE TOWN SUB-DISTRICTS										Cape Town	
	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East		Tygerberg West
Remainder of mental and behavioural disorders	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.6
Alzheimer's disease	1.7	21.7	2.9	8.4	0.0	2.0	0.0	0.0	9.6	8.5	3.6	5.4
Parkinsons disease	4.0	0.0	4.4	1.7	0.0	0.0	2.4	0.0	4.3	1.4	6.2	3.2
Epilepsy	13.3	4.8	5.9	6.1	7.1	11.8	21.2	11.8	10.8	8.5	14.9	10.1
Remainder of diseases of nervous system	13.8	1.1	14.8	3.4	5.7	28.7	9.6	1.5	3.8	5.3	2.3	8.0
Diseases of the eye and adnexa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diseases of the ear and mastoid process	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.1
Rheumatic heart disease	0.0	0.0	0.7	0.0	0.0	0.0	0.8	0.0	6.4	1.1	1.6	1.6
Ischaemic heart disease	131.6	132.9	90.9	137.9	31.6	78.1	14.9	137.4	136.0	127.8	164.0	113.8
Stroke	74.6	15.4	54.1	41.9	39.0	107.9	74.1	57.6	46.5	31.3	73.8	53.9
Hypertensive disease*	102.1	23.1	49.5	53.0	65.8	137.5	95.9	78.1	61.0	71.8	57.0	65.6
Pulmonary heart and circulatory disease	9.2	9.0	4.7	24.0	21.7	13.2	21.8	2.2	15.5	23.1	35.3	15.3
Remainder of diseases of circulatory system	23.8	3.8	29.0	6.8	1.7	48.1	24.1	14.8	11.1	2.7	11.5	16.4
Other cardiovascular	13.9	7.6	11.5	3.8	6.7	4.7	17.3	16.3	16.7	16.7	9.7	11.9
COPD	97.2	20.6	33.4	46.3	11.0	77.8	42.0	72.9	69.9	72.0	98.6	59.0
Asthma	15.4	4.8	7.0	4.5	27.6	16.4	25.0	5.6	12.6	22.0	18.7	14.4
Other respiratory	32.1	3.4	26.9	15.2	33.1	38.8	31.5	14.0	6.1	5.4	16.4	19.6
Peptic ulcer	1.7	14.4	1.4	0.0	9.9	0.0	0.0	3.2	2.0	5.2	3.9	3.2
Cirrhosis of liver	4.5	1.3	7.9	3.1	2.2	8.1	9.1	4.5	15.3	10.4	21.4	9.1
Diseases of the pancreas	1.8	1.3	1.5	0.0	0.0	3.1	1.2	1.1	0.5	2.3	4.0	1.6
Remainder of diseases of digestive system	17.6	3.4	17.2	6.8	23.3	28.8	20.6	10.2	6.8	18.3	15.3	14.4
Renal failure	27.7	9.7	20.4	10.0	34.7	31.1	26.6	46.0	22.0	17.2	26.4	24.3
Other genito-urinary	10.3	0.0	6.5	1.7	0.9	5.9	5.3	2.1	0.6	1.0	0.9	3.3
Skin disease	0.0	0.0	0.7	0.0	1.0	0.0	2.2	0.0	0.0	0.0	0.0	0.5
Musculo-skeletal	2.2	5.1	4.2	0.0	0.0	10.0	2.3	0.0	1.5	0.0	0.8	2.0
Congenital abnormalities	3.0	0.0	0.8	2.6	0.6	2.5	2.4	13.7	0.4	2.7	0.8	2.5
<b>Group III</b>	<b>189.7</b>	<b>116.4</b>	<b>138.0</b>	<b>200.1</b>	<b>333.8</b>	<b>204.2</b>	<b>357.4</b>	<b>214.5</b>	<b>129.1</b>	<b>201.8</b>	<b>234.1</b>	<b>219.5</b>
Road traffic accidents	41.3	25.1	26.0	44.9	52.4	40.6	58.0	50.4	9.6	53.3	49.9	40.6
Other transport accidents	1.6	0.0	3.7	2.3	10.0	4.6	14.6	3.3	2.7	2.1	9.1	5.6
Drowning	3.2	2.2	3.8	7.3	3.3	3.8	2.6	3.4	8.1	4.3	4.2	4.3
Fires	3.3	6.5	4.2	18.3	22.9	5.1	13.5	7.1	4.8	8.0	7.2	9.4
Surgical / medical misadventure	0.8	0.0	2.7	2.9	2.5	0.0	1.9	4.8	3.1	3.6	4.2	2.9
Other unintentional injuries specified	14.9	19.4	14.3	7.7	21.8	17.7	15.2	3.6	27.7	13.2	18.0	16.8
Suicide and self-inflicted	9.6	11.9	10.6	25.3	14.6	4.3	10.9	20.2	9.5	20.8	21.9	14.8
Homicide	114.9	51.3	72.7	91.4	206.3	128.2	240.7	121.7	63.6	96.6	119.7	124.9
Homicide and violence with firearm	76.9	31.9	34.3	17.6	95.3	83.1	138.7	31.6	31.7	43.1	63.8	62.8
Homicide and violence without firearm	37.9	19.3	38.5	73.8	111.1	45.1	102.0	90.1	31.9	53.5	55.8	62.2
<b>Total</b>	<b>1320.8</b>	<b>621.8</b>	<b>987.3</b>	<b>968.4</b>	<b>1142.9</b>	<b>1392.1</b>	<b>1421.0</b>	<b>1135.7</b>	<b>984.6</b>	<b>1007.7</b>	<b>1349.7</b>	<b>1132.3</b>

\* Includes Diabetes Mellitus (code 1301) and Diabetes mellitus and hypertension (code 1302); # Includes Hypertensive disease (code 1810) and Hypertension and CVA (code 1811)

**Table 7.4: Age standardised death rates per 100 000 for females by cause and sub-district , Cape Town 2001**

Cause of death	CAPE TOWN SUB-DISTRICTS										Cape Town	
	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East		Tygerberg West
<b>Group I</b>	<b>96.0</b>	<b>79.4</b>	<b>158.7</b>	<b>134.8</b>	<b>372.6</b>	<b>77.9</b>	<b>343.4</b>	<b>162.9</b>	<b>83.2</b>	<b>121.2</b>	<b>106.8</b>	<b>160.3</b>
Tuberculosis	22.4	8.9	21.7	30.4	112.6	14.5	83.1	27.0	7.8	20.2	19.0	31.2
TB code 1020	29.1	25.5	43.6	41.6	168.4	22.0	146.2	43.5	11.6	28.4	23.6	51.1
HIV/AIDS	22.1	25.6	56.9	38.0	128.0	22.0	166.8	62.0	10.2	34.8	10.8	54.1
Diarrhoeal Diseases	3.0	1.9	6.8	13.0	31.7	2.7	34.7	4.8	1.7	0.0	0.0	8.0
Bacterial Meningitis and meningococcaemia	0.0	1.9	1.5	2.5	9.0	0.7	3.9	4.9	1.8	5.5	2.0	3.1
Malaria	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Schistosomiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Septicaemia	16.3	8.4	15.3	8.1	14.4	5.9	14.2	13.1	12.6	15.2	21.4	14.4
Other Infectious and parasitic diseases	0.8	1.2	0.4	1.2	0.0	0.0	0.0	1.0	1.0	1.7	0.0	0.7
Lower Respiratory infections	16.5	15.9	45.4	36.4	60.2	16.0	27.9	32.8	32.5	32.6	39.3	35.3
Maternal Conditions	0.8	0.0	0.6	0.0	0.8	1.2	0.5	0.0	0.6	0.0	0.0	0.4
Low birth weight and RDS	11.0	11.2	8.2	0.0	8.4	12.9	7.7	15.3	12.2	6.3	9.3	9.2
Neonatal infections	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.8	0.0	0.0	0.2
Other perinatal	3.1	3.4	0.9	3.9	3.9	2.0	3.8	1.9	1.5	3.8	4.3	3.0
Protein-energy malnutrition	0.0	0.0	0.9	1.5	3.7	0.0	0.0	0.0	0.5	1.0	0.7	0.6
<b>Group II</b>	<b>724.5</b>	<b>294.1</b>	<b>604.3</b>	<b>395.1</b>	<b>586.9</b>	<b>698.3</b>	<b>766.4</b>	<b>437.6</b>	<b>481.7</b>	<b>503.3</b>	<b>596.8</b>	<b>551.5</b>
Oesophagus cancer	1.1	5.1	12.4	1.3	43.4	3.8	42.8	1.5	2.2	3.6	4.5	7.6
Stomach cancer	11.4	4.8	1.6	5.6	12.8	3.7	2.7	7.0	6.1	9.0	5.8	6.3
Colo-rectal cancer	14.5	5.9	16.6	7.0	2.0	8.5	6.7	5.8	12.4	16.5	11.8	11.7
Liver cancer	5.1	0.0	2.4	0.0	3.6	4.0	10.9	3.7	2.2	2.5	4.6	3.2
Pancreas cancer	10.0	4.3	3.7	5.7	1.6	7.7	10.4	0.0	5.7	10.1	5.3	5.6
Trachea/bronchi/lung cancer	28.9	12.9	28.3	11.0	8.2	22.5	10.3	26.7	24.7	23.6	27.9	22.3
Melanoma	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Breast cancer	37.7	18.1	31.9	12.7	12.4	29.1	21.7	17.9	26.7	16.3	32.4	25.5
Cervix and uterus cancer	17.8	7.0	10.7	6.4	13.7	21.7	17.2	7.3	9.4	7.7	7.7	10.8
Ovary cancer	3.6	4.6	9.2	6.5	3.6	4.6	0.0	3.4	5.4	2.1	2.6	4.5
Prostate cancer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bladder cancer	0.0	1.5	2.5	1.5	0.0	1.3	0.0	3.2	3.1	1.1	2.5	1.8
Kidney cancer	2.9	0.0	1.2	1.0	0.0	0.0	1.3	2.5	0.5	1.1	1.8	1.2
Brain, meninges and CNS cancer	2.7	1.2	4.4	1.3	5.0	1.4	0.0	1.0	4.3	2.9	3.3	2.7
Leukaemia	0.9	1.7	4.3	0.0	0.0	3.6	2.8	1.8	3.6	0.0	2.5	2.1
Other cancers of lymphatic and haematopoietic system	5.3	1.1	4.9	1.3	5.1	5.9	0.4	5.3	12.9	7.0	0.7	5.0
Other malignant neoplasms	32.4	16.7	28.9	18.7	15.1	21.5	20.0	17.9	15.4	8.6	33.7	21.8
Benign neoplasms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diabetes Mellitus*	124.3	18.6	41.8	29.2	49.0	114.3	116.4	58.4	49.3	65.3	73.9	62.4
DM + Hypertension (I302)	92.0	14.0	26.5	25.4	17.0	76.1	81.7	35.7	38.5	47.2	46.2	43.2
Anaemias and other diseases of blood and blood forming organs	1.8	1.9	5.7	1.0	3.6	4.2	3.5	0.0	3.6	0.0	4.6	3.2
Remainder of endocrine, nutritional and metabolic disorders	2.9	4.4	6.4	0.0	6.5	3.2	10.9	1.8	0.0	0.0	0.6	2.5
Substance abuse (alcohol and drugs)	0.0	0.0	0.7	0.0	0.0	3.3	2.4	0.0	1.0	0.0	0.0	0.6

Cause of death	CAPE TOWN SUB-DISTRICTS										Cape Town	
	Athlone	Blaauwberg	Central	Helderberg	Khayelitsha	Mitchells Plain	Nyanga	Oostenberg	South Peninsula	Tygerberg East		Tygerberg West
Remainder of mental and behavioural disorders	1.1	0.0	3.1	0.0	0.0	0.0	1.1	0.0	0.0	1.1	0.0	0.6
Alzheimer's disease	6.4	3.5	10.1	13.5	0.0	8.3	2.2	2.0	8.9	4.5	6.0	7.1
Parkinsons disease	1.1	3.5	2.0	1.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	1.1
Epilepsy	6.8	1.9	3.3	2.4	2.4	0.9	10.9	2.0	0.5	2.2	7.4	3.6
Remainder of diseases of nervous system	14.3	1.1	24.3	2.9	2.1	7.8	19.4	0.9	1.0	1.1	2.7	8.7
Diseases of the eye and adnexa	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Diseases of the ear and mastoid process	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1
Rheumatic heart disease	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.9	2.0	0.0	0.8	0.7
Ischaemic heart disease	60.6	48.2	67.1	106.0	7.9	56.8	32.6	76.2	79.1	74.1	97.3	73.2
Stroke	63.0	38.6	61.2	34.4	54.5	63.8	76.1	33.4	38.0	26.7	68.9	50.4
Hypertensive disease*	112.9	19.2	57.8	44.9	103.0	142.6	152.4	60.6	62.2	88.7	68.8	74.1
Pulmonary heart and circulatory disease	4.7	17.7	11.3	16.2	18.1	4.4	5.7	8.7	17.1	30.2	26.6	15.3
Remainder of diseases of circulatory system	38.7	1.7	36.9	2.4	3.7	35.8	15.6	0.9	7.4	0.9	4.6	15.4
Other cardiovascular	8.7	8.2	8.6	12.3	27.2	6.1	19.7	3.2	10.7	7.0	9.3	9.6
COPD	20.6	14.1	23.9	23.9	15.3	27.0	19.2	18.0	22.6	29.5	26.2	23.1
Asthma	17.9	3.5	6.0	3.1	51.7	11.8	25.0	12.5	9.5	8.3	10.6	11.4
Other respiratory	15.1	2.0	25.6	6.5	37.5	15.2	43.8	10.2	3.7	1.4	3.6	14.3
Peptic ulcer	1.1	8.7	1.0	2.5	7.5	0.0	2.8	2.0	1.9	2.0	2.7	2.5
Cirrhosis of liver	2.2	0.0	1.4	0.0	1.1	0.9	4.8	0.9	4.4	6.6	3.9	2.7
Diseases of the pancreas	0.0	0.0	1.2	0.0	0.0	0.9	0.0	0.6	0.0	2.8	0.6	0.6
Remainder of diseases of digestive system	11.6	4.6	14.8	4.2	23.9	8.4	22.9	7.4	5.1	20.4	8.7	11.4
Renal failure	20.9	4.3	15.1	8.8	35.0	31.1	22.2	25.2	14.9	8.8	17.7	17.8
Other genito-urinary	2.2	1.0	4.4	0.0	7.7	1.3	3.6	2.2	1.5	1.1	0.0	2.2
Skin disease	1.1	1.5	1.7	0.0	0.0	0.0	3.5	1.0	1.0	0.0	0.0	0.9
Musculo-skeletal	5.4	0.0	4.1	0.0	2.1	5.4	0.7	0.0	0.5	0.0	0.0	2.0
Congenital abnormalities	3.2	0.0	1.9	0.0	0.0	2.0	1.9	3.6	1.0	4.0	3.2	1.9
<b>Group III</b>	<b>34.4</b>	<b>25.1</b>	<b>39.6</b>	<b>44.8</b>	<b>86.4</b>	<b>41.7</b>	<b>77.8</b>	<b>60.8</b>	<b>29.0</b>	<b>59.2</b>	<b>50.8</b>	<b>50.8</b>
Road traffic accidents	13.8	4.2	13.6	12.4	23.8	11.9	26.7	17.0	3.0	13.6	15.7	13.8
Other transport accidents	0.0	0.0	1.7	0.0	4.3	2.6	2.7	1.4	1.4	0.7	0.0	1.5
Drowning	0.0	2.5	0.0	2.2	0.0	0.0	0.9	0.0	2.7	0.9	0.0	0.7
Fires	2.6	1.4	1.5	12.0	13.8	0.0	8.3	8.0	4.6	5.8	4.8	5.7
Surgical / medical misadventure	1.0	0.0	3.5	0.0	2.4	0.8	0.5	1.6	0.7	2.5	3.5	1.9
Other unintentional injuries specified	8.4	2.6	8.3	2.7	10.1	5.8	10.5	3.1	6.2	10.9	7.5	7.5
Suicide and self-inflicted	0.8	0.0	0.6	7.5	1.6	1.3	1.1	4.1	2.9	6.3	4.8	2.8
Homicide	7.8	14.5	10.4	8.0	30.4	19.2	27.1	25.6	7.5	18.6	14.5	16.7
Homicide and violence with firearm	3.9	4.2	4.5	0.0	9.7	12.3	13.1	5.7	3.9	8.9	6.2	6.9
Homicide and violence without firearm	3.9	10.3	5.9	8.0	20.8	6.9	14.1	19.8	3.6	9.8	8.3	9.9
<b>Total</b>	<b>854.9</b>	<b>398.7</b>	<b>802.6</b>	<b>574.8</b>	<b>1045.9</b>	<b>818.0</b>	<b>1187.6</b>	<b>661.4</b>	<b>594.0</b>	<b>682.9</b>	<b>754.4</b>	<b>762.6</b>

\* Includes Diabetes Mellitus (code 1301) and Diabetes mellitus and hypertension (code 1302); # Includes Hypertensive disease (code 1810) and Hypertension and CVA (code 1811)