Cause of death and premature mortality in Cape Town,

...ocking... ...from the ...on of a report to ...y of Cape Town ...ith committee yester-...y.

Entitled *Cause of Death and Premature Mortality in Cape Town (2001)*, the report depicts the devasta-tion ... wrought on ...

And the specialists say the pattern is not confined to Cape Town.

"We live in an extremely violent country. About 30 000 people are murdered in South Africa each year, more than half of them killed by firearms," said Dr Sebastian van As, head of the Red Cross Children's Hospital trauma unit and ...gun lobbyist.

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Nyanga's burden of death Page 5

Medical Research Council's Burden of Disease Research Unit, said researchers had found Aids to be the leading cause of death in the city in children younger than five.

Road accidents, homicides and fires were also

Key findings

...here had ...800% increase in the past 10 years in the number of children treated for gunshot wounds at Red Cross Hospital alone.

The report is a joint initiative between the City of Cape Town, the Medical Research Council, the public health units of UWC and UCT and the Metropolitan Health Information Group.

Bradshaw said premature deaths were calculated by subtracting the age at which death occurred from average life expectancy, for a figure reflecting "years of life lost".

"These early deaths are the ones we really need to try to prevent," she said.

MRC SOUTH AFRICA

CITY OF CAPE TOWN
ISIXELO SASEKAPA
STAD KAAPSTAD

The study is a collaborative effort by the MRC Burden of Disease Research Unit, the Metro Information Group, UCT's Department of Public Health and the Equity Gauge Project of UWC's School of Public Health. The City of Cape Town routinely collects the detail of all deaths to identify the major health problems of the population. The Metro Information Group invited the researchers to evaluate the system that has been in place for many years to identify ways in which it could to be improved.

Cause of death information is essential for planning health services and identifying major health problems. Cape Town has an ongoing system of collecting such statistics. The quality of the cause of death coding was reviewed in 2000. This resulted in the development of a shortlist that would meet the public health needs and improve the standardisation of coding between the municipalities. The key findings from the analysis of the cause of death statistics for 2001 are presented in this report. Copies of the full report can be downloaded from www.mrc.ac.za/bod.bod.htm

The 2001 data have been analysed using the burden of disease classification. This classification has three main groups: Group I, (pre-transitional causes) include communicable diseases, maternal causes, perinatal conditions, and nutritional deficiencies; Group II, (non-communicable causes) and Group III (injuries). Premature mortality (years of life lost) for Cape Town and eleven health sub-districts are compared as well as age standardised death rates.

The findings show that the majority of deaths (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%. This arises when a doctor does not have access to the full medical record of the deceased or scope to conduct an autopsy. Ideally this proportion should be less than 5%.

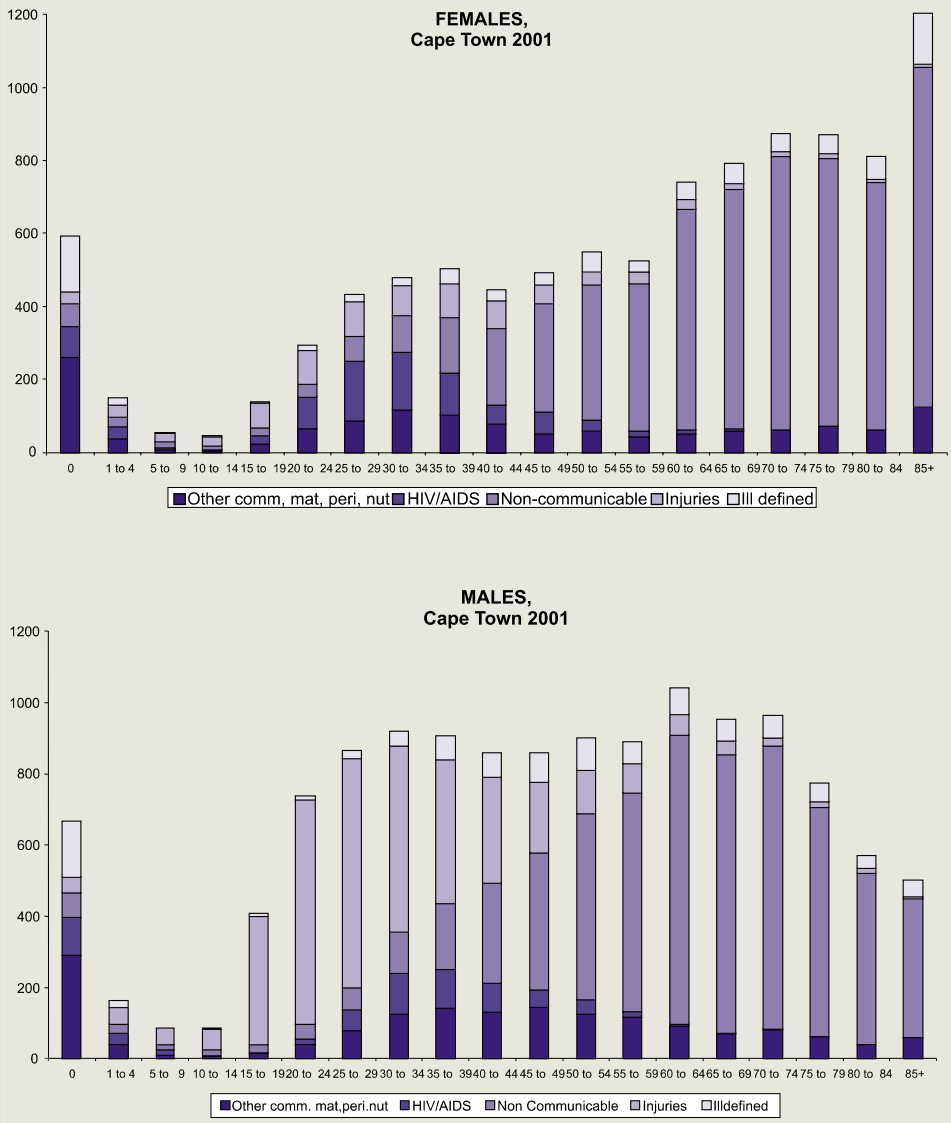
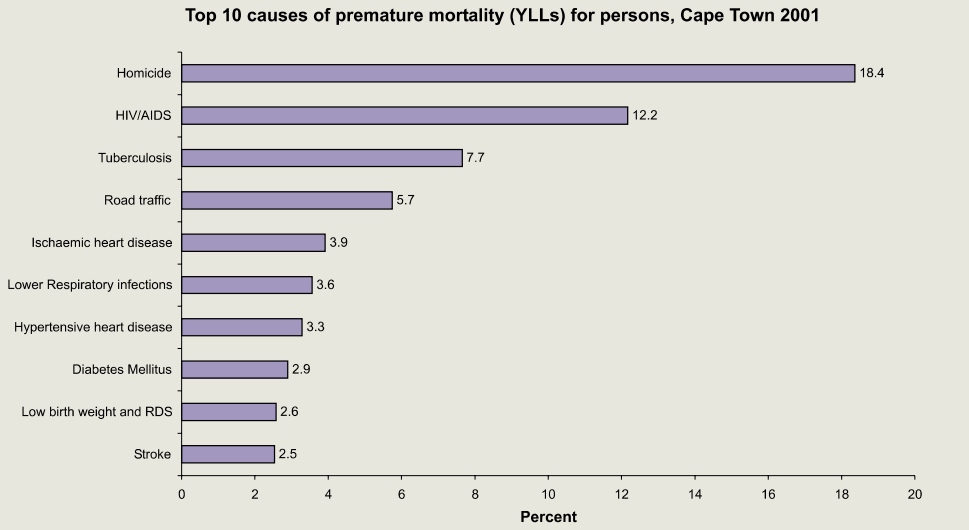
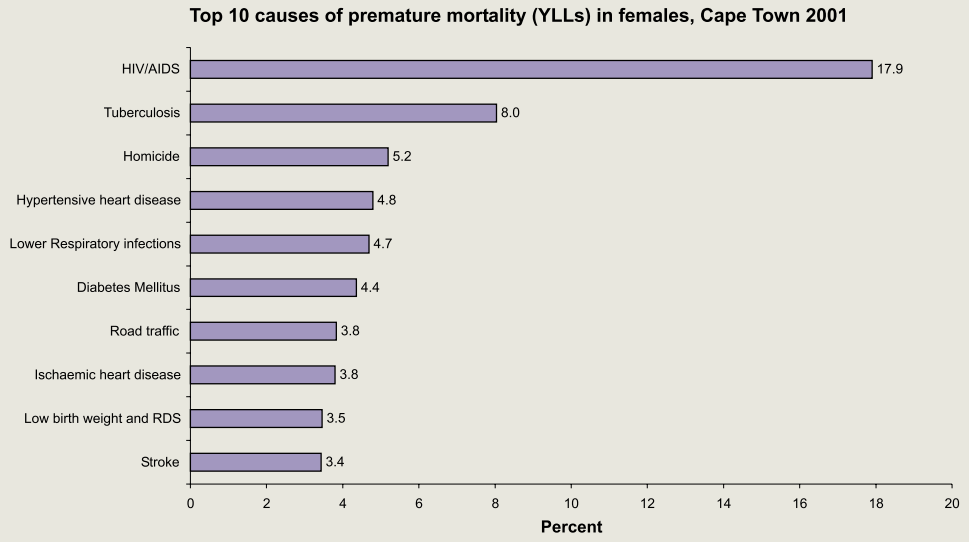


Figure 1:
Age distribution of deaths by cause group and gender, Cape Town 2001

The age pattern of the deaths is shown in Figure 1. 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. The older age deaths are mostly due to non-communicable causes.

Causes of premature mortality in Cape Town





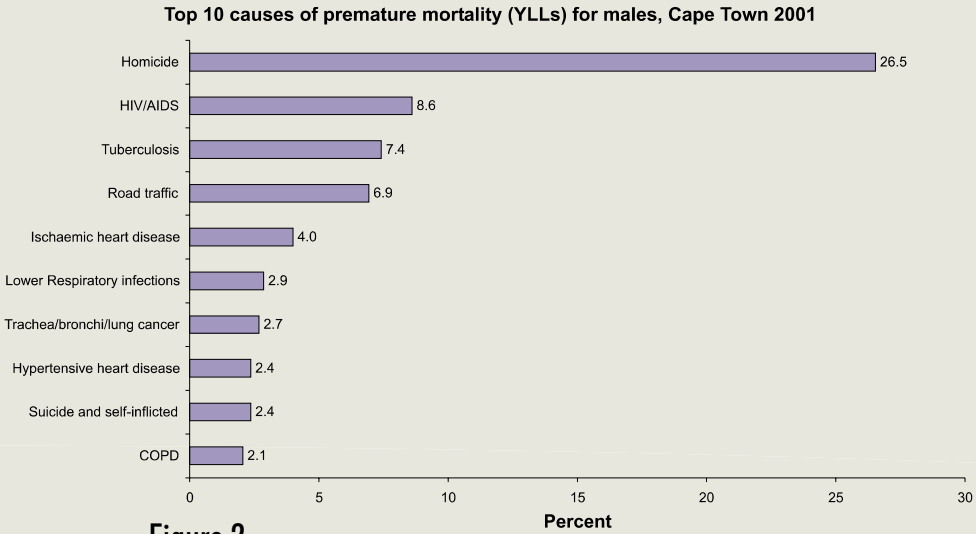


Figure 2:
Top causes of premature mortality (YLLs), Cape Town 2001

Figure 2 shows the top causes of premature mortality based on the number of years of life lost.
The top cause of premature mortality in Cape Town is homicide followed by HIV/AIDS, tuberculosis, road traffic accidents and ischaemic heart disease. Males and females have very different cause of death profiles. Homicide and other injuries are dominant causes of premature mortality among men. HIV/AIDS is the most common cause of premature mortality among women.

RDS — respiratory distress syndrome

COPD — chronic obstructive pulmonary disease

Differences across the city

There are striking differences in the cause of death profile among 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 af uent sub-districts. A comparison of the age standardised premature mortality rates by cause reveals huge disparities between districts (see Figure 3). It can be seen that the premature mortality is much higher in the sub-districts of Nyanga and Khayelitsha and this results from particularly high rates of infectious diseases, HIV/AIDS and injuries. The top causes of premature mortality for each sub-district are shown in Table 1.

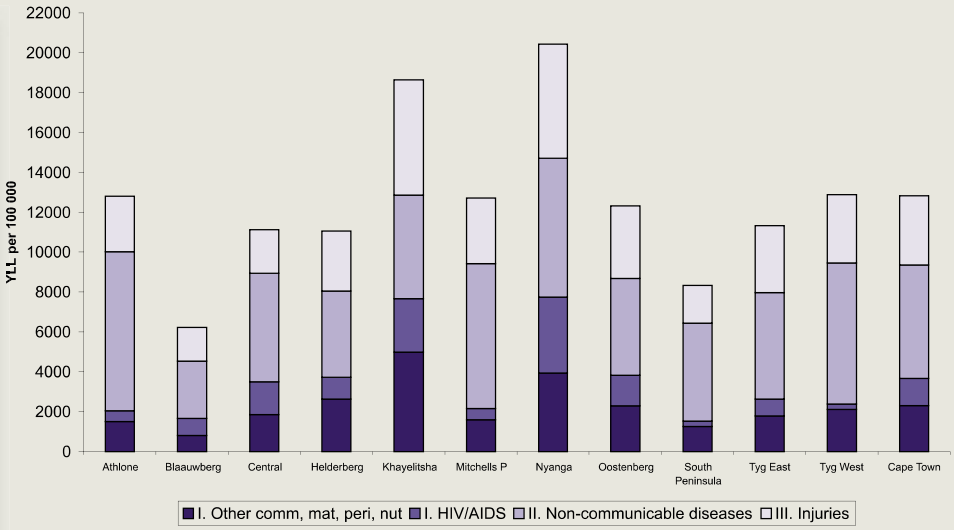


Figure 3:
YLLs per 100 000 by cause group and HIV/AIDS for the Cape Town and sub-districts, 2001

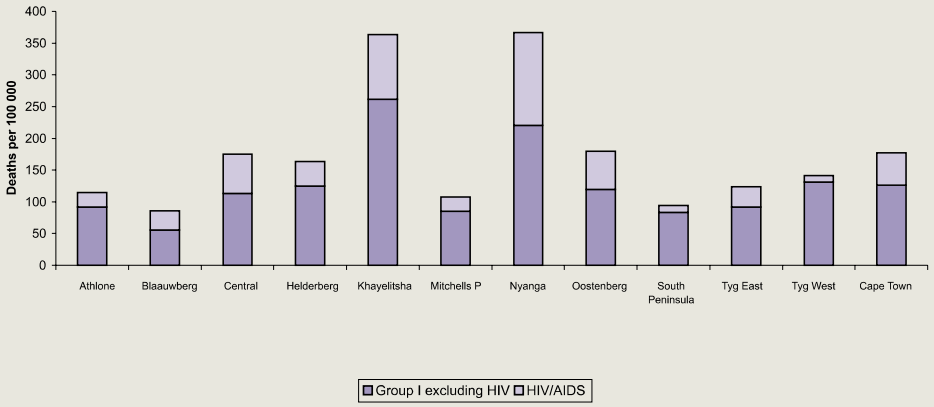


Figure 4:
Age standardised death rates (per 100 000) persons due to pre-transitional causes (including HIV) in the sub-districts of Cape Town, 2001

Table 1: Top 10 causes of premature mortality (YLLs) for Cape Town and sub-districts for persons, 2001

Rank	Athlone	Blaawberg	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 (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/bronchi/lung cancer (4%)	Ischaemic heart disease (4.9%)	Diabetes Mellitus (4.6%)	Ischaemic heart disease (3.9%)
6	Hypertensive heart disease (5.4%)	Low birth weight (3.4%)	Stroke (3.9%)	Road traffic (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/bronchi/lung cancer (4.2%)	Lower Respiratory infections (3.6%)
7	HIV/AIDS (5.1%)	Stroke (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 (4.1%)	Hypertensive heart disease (3.3%)
8	Stroke (4%)	Suicide (2.7%)	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/bronchi/ lung cancer (3.9%)	Pulmonary heart and circulatory disease (2.6%)	Hypertensive heart disease (3.4%)	Hypertensive heart disease (3.4%)	Low birth weight (1.9%)	Trachea/bronchi/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%)	Diabetes mellitus (2.6%)	Trachea/bronchi/ 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%)

A recurrent geographical pattern of inequity emerged, particularly for the pre-transitional (group 1) causes of death, which are largely preventable (see Figure 4). The same pattern of inequity is seen in the provision of basic services, housing, educational levels, employment and health expenditure. The death rates are particularly high in the sub-districts of Khayelitsha and Nyanga, where they are about double the average for the Unicity. The deaths rates due to HIV/AIDS and TB are particularly high in these two districts (Figure 5). It should be noted that there is under-reporting of HIV that may vary by area.

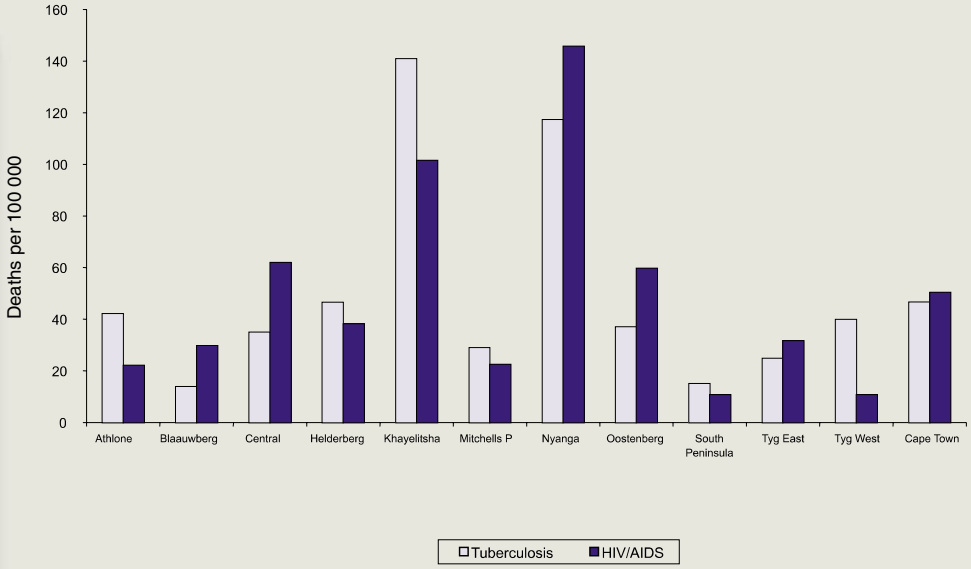


Figure 5:
Age standardised death rates (per 100 000) persons due to TB and HIV/AIDS in the sub-districts of Cape Town, 2001

The geographical distribution of non-communicable diseases follows a different pattern to what is seen in the other equity comparisons. The highest burden of disease, as shown by age standardised mortality rates per 100 000, is borne by Athlone (843), Mitchells Plain (832), Tygerberg West (735) and Nyanga (719). The lowest burden is in Blaauwberg (341) while the Cape Town rate is 627. The highest causes of mortality are cardiovascular and neoplasms.

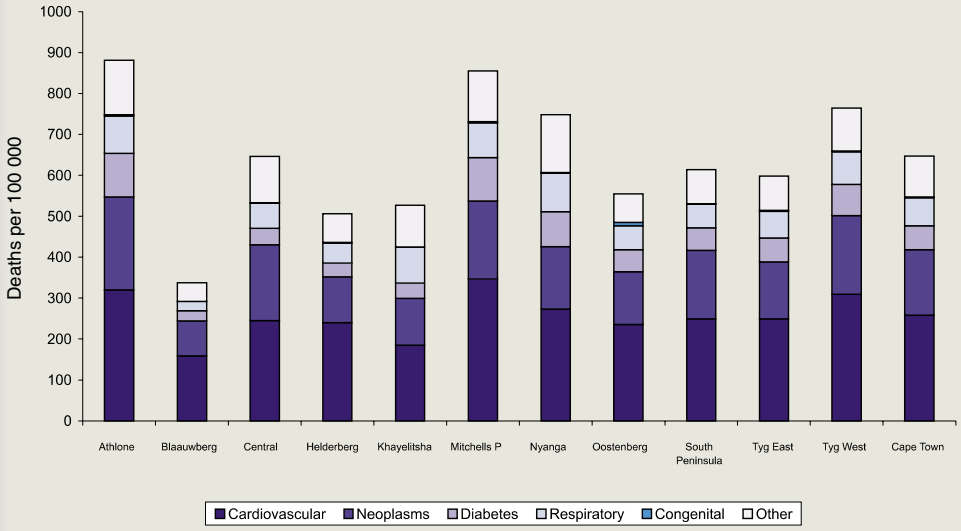


Figure 6:
Age standardised death rates due to non-communicable diseases (per 100 000) persons in the sub-districts of Cape Town, 2001

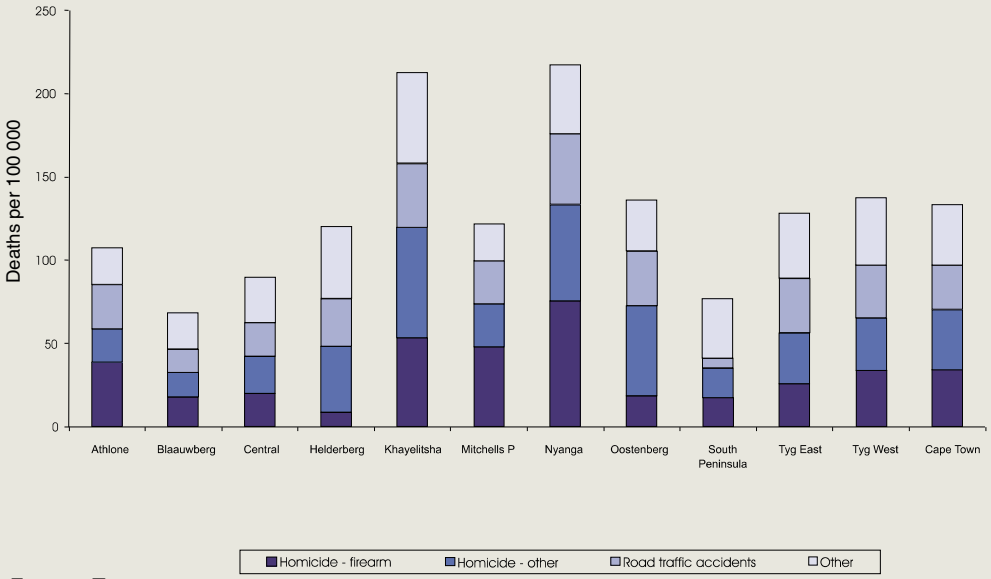


Figure 7:
Age standardised death rates due to injuries (per 100 000) persons in the sub-districts of Cape Town, 2001

Once again the pattern of inequity emerges - Khayelitsha and Nyanga have very high rates of homicide as well as road traffic accidents (Figure 7). Homicide affects men more than women. Men aged 15-34 years are particularly affected experiencing rates of 250 per 100000 population (see Figure 8). About half of the homicides involve firearms.

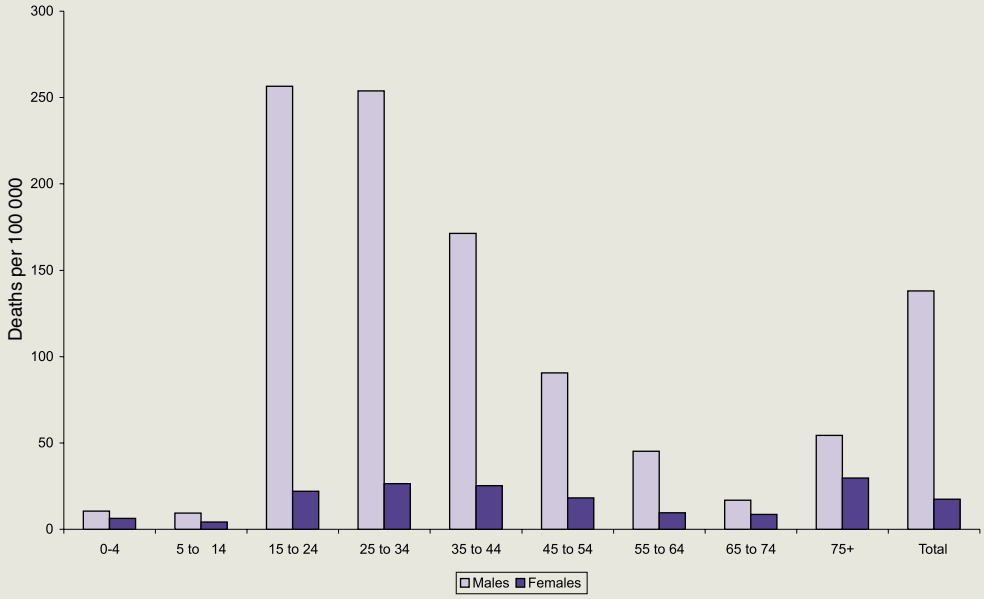


Figure 8:
Age specific death rates due to homicide for males and females in the sub-districts of Cape Town, 2001

Conclusion and recommendations

Cape Town is experiencing a quadruple burden of disease with substantial variation between areas. Homicide rates are exceedingly high and it can be expected that the burden due to HIV/AIDS and TB has increased since 2001. The long term social and economic consequence of the loss of young lives is great. A review of the top 10 causes of mortality shows that much of the mortality is preventable through a comprehensive primary care approach which emphasises promotive and preventative strategies, uses intersectoral collaboration effectively and seeks to promote equity.

- 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. As the leading cause of death in Cape Town, the high rate of homicide deaths requires special investigation and should be prioritised, as a health need. The pattern of the distribution of homicides should inform the allocation of resources to crime prevention programmes. The underlying socio-economic instability of the high incidence areas can only be addressed by a committed intersectoral approach. The problem of homicide highlights the need for a range of provincial and local authority departments including Safety and Security, Sports and Recreation and Housing to work together in committed partnerships.

- Additional interventions, including the provision of antiretrovirals to HIV positive patients, are required to strengthen the HIV/AIDS programme. Tuberculosis control must be improved. From the Unicity side, Public Housing must be an active partner in the fight against TB, and the Department of Economic Development and Tourism also has an important part to play.

- Primary care to manage non-communicable diseases should be strengthened and healthy lifestyles must be promoted in order to reduce the burden of non-communicable diseases.

- Equity must be prioritised in resource allocation between the sub-districts. The distribution of homicide, HIV and TB must inform the programme spending per sub-district. Once resource allocation is equitable between sub-districts, sub-district intervention strategies must be drawn up appropriately to each individual sub-district, as the health priorities are very different in the different sub-districts.

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