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Statistical release

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Preface

This statistical release presents information on mortality and causes of death in South Africa for deaths that occurred in 2011 as well as information on death occurrences from 1997 to 2010 to show trends in mortality and causes of death. It is based on deaths collected through the South African civil registration system maintained by the Department of Home Affairs.



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1. Introduction

1.1 Background

Statistics on mortality and causes of death provide information on the number of deaths as well as the number of deaths due to immediate, contributing and underlying causes of deaths. These data assist in the formulation of evidence-based health policies and decision-making as well as implementation of cost-effective health interventions for all. Causes of death statistics may also be used to determine preventive and curative measures or investments in research aimed at increasing the life expectancy of the population.

In South Africa, statistics from civil registrations are the only national source of information on causes of death. Civil registration in South Africa is a mandate of the Department of Home Affairs (DHA). The Births and Deaths registration Act 1992 (Act No. 51 of 1992), as amended, governs the registration of births and deaths in the country. The Act states that *'After a death occurs due to natural causes any person who was present at the time of death, or who became aware thereof, or who has charge of the burial concerned, shall give, as soon as practicable, notice of death'*. The Act further states that, if there is any doubt whether the death was not due to natural causes, such a death must be reported to a police officer. After an investigation as to the circumstances of a death due to other than natural causes, the medical practitioner concerned shall, as soon as he/she is satisfied that the corpse concerned is no longer required for the purposes of an examination, issue a prescribed certificate to that effect. After death registration is completed, a death certificate is issued to the informant. All death notification forms are then collected by Statistics South Africa (Stats SA) regularly for data processing, analysis and publication of statistical releases and data sets on mortality and causes of death.

The continued collaboration between Statistics South Africa, Department of Home Affairs and Department of Health has ensured continuous data from the civil registration system as well as improvement in the quality of mortality and causes of death data. This has resulted in the estimation of indicators used in the monitoring of the Millennium Development Goals such as the under-five mortality rate, infant mortality rate and maternal mortality ratio.

1.2 Objectives of this statistical release

The statistical release forms part of a regular series of publications on mortality and causes of death by Stats SA. The aims of this publication are as follows:

- To outline emerging trends spanning a 15-year period (1997–2011) and differentials in mortality by selected socio-demographic characteristics for deaths that occurred in 2011; and
- To present statistics on the causes of death for deaths that occurred in 2011, focusing on the underlying causes of death.

1.3 Scope of this statistical release

This release is based on information on mortality and causes of death from the South African civil registration system. All death notification forms from DHA for deaths that occurred in 2011 or earlier that reached Stats SA during the 2013 processing phase are covered. The main focus is on deaths that occurred in 2011. Deaths that occurred during the period 1997 to 2010 are also provided to show trends in mortality and causes of death. The number of deaths discussed in this release excludes stillbirths, which are also collected through the civil registration system using the same death notification form. The definitions of technical terms used in this release are provided in Appendix A.

1.4 Organisation and presentation of this statistical release

This release is organised into five sections. Section one provides the background and purpose of the release. Section two describes the data and methods applied in the release. Additionally, data quality assessment methods used in the evaluation of the mortality and causes of death data are discussed. The third section on registered deaths provides levels, trends and differentials in mortality with a particular focus on sex, age, marital status, population group, institution of death occurrence, smoking status and spatial analysis of death occurrence. Section four is devoted to the analysis of causes of death with emphasis on the underlying causes of death. Section five presents a summary of the findings and concluding remarks.

2. Data and methods

This section provides information on data sources, methodology used in processing data and data analysis methods applied. It also presents results of the assessments undertaken on the mortality and causes of death data.

2.1 Data source

Administrative records on mortality and causes of death from the Department of Home Affairs (DHA) are the exclusive data source for this release. The release primarily covers deaths that occurred in 2011 and were registered at the DHA. Deaths that occurred before 2011 are also included for trend analysis.

There are two forms currently used by the DHA in registering a death: Form BI-1663 which was introduced in 1998 and form DHA-1663 which was introduced in 2009 (see appendix B and B1). Form BI-1663 is being replaced by Form DHA-1663 but continues to be used in areas where it is still in stock. The data elements in these two forms were largely comparable which allowed for merging of data from these two forms into one dataset. The main difference with the two forms is the registration of perinatal deaths (stillbirths and deaths occurring within seven days of birth). DHA-1663 has a separate section on recording causes of death for perinatal deaths whereas BI-1663 collected causes of death for all deaths and stillbirths in one section. In 2011, 45,4% and 54,6% of deaths were from the BI-1663 and DHA-1663 forms respectively.

The Birth and Deaths Registration Act, 1992 (Act No. 51 of 1992), requires that all deaths be certified by a medical practitioner using a prescribed form. In instances where a person dies in remote areas where there are no medical practitioners within a reasonable distance to certify the death, a chief or a tribal leader completes a DHA-1680 form, which is then sent to the nearest DHA offices. The official at the DHA offices checks the form and once satisfied that there was no medical practitioner who could certify the death and that the death was a natural cause, then the official fills in the BI-1663 or DHA-1663 form.

For cases where the birth of the deceased was registered on the National Population Register (NPR) maintained by the DHA, the death gets registered on the NPR. The NPR only includes South African citizens and permanent residents whose birth records exist on the NPR. Death notification forms which Stats SA collects from DHA include forms for deaths captured on the NPR and also those which were not eligible for inclusion on the NPR (deaths for non-South African citizens and South African citizens whose births were not registered on the NPR). This is the reason why the number of deaths processed and published by Stats SA will always be higher than those included on the NPR.

During the 2013 data processing phase, Statistics South Africa (Stats SA) processed a total of 505 803 deaths that occurred in 2011. This figure is 3,7% higher than the number of deaths registered on the NPR (487 046) for deaths that occurred during the same period. Similar trends have been observed over the previous years where Stats SA reported higher number of deaths than the deaths on the NPR (refer to Figure 3.1).

2.2 Data processing

Stats SA collects completed death notification forms from the DHA head office for data processing, analysis, report writing and dissemination.

Processing of the death notification forms takes place at Stats SA Data Processing Centre. There are different stages involved in processing death notification forms from the time they are received from the DHA. Stages of data processing involve sorting forms by year of death, pasting labels of unique identifiers on each form, coding socio-demographic variables and the causes of death and data capturing.

Classification of the causes of death

Causes of death statistics in this release are compiled in accordance with the World Health Organization (WHO) regulations that require that member nations classify and code causes of death using the tenth revision of the International Classification of Diseases (ICD-10) (WHO, 2009). The International Classification of Diseases is the most widely used statistical classification system of diseases in the world. All member states of the United Nations, including South Africa, agreed to use ICD standard classification system. The National Health Information System of South Africa has also adopted it as a standard. The ICD-10 is published by the WHO and is revised from time to time. Currently, the tenth revision is under review.

The ICD-10 provides for the coding and classification of diseases and injuries and a wide variety of signs, symptoms and other abnormal findings. It also provides a framework for certifying the cause of death and the collection of internationally standardised mortality statistics. The ICD-10 contains approximately 8 000 categories of causes of death. It is organised into chapters covering communicable diseases, other diseases that may affect the whole body, localised diseases by site, developmental diseases, injuries and external causes. The quality of the causes of death data depends heavily on the completeness and quality in which the notification form was completed and on the accuracy of coding. There are well-established rules for assigning the causes of death and for coding.

ICD-10 coders at Stats SA follow a 'what you see is what you code' principle when coding information on causes of death. For diseases that are not coded in the ICD-10 manuals, Stats SA has outlined specific guidelines. In terms of the Stats SA coding procedures and guidelines, *immunosuppression* is coded as *immunodeficiency*, not as *human immunodeficiency virus (HIV) disease*. Certifying officials sometimes report the cause of death as *acquired immune suppression*. In terms of the Stats SA coding procedures, this term was interpreted as HIV disease and given an HIV code (B20-B24). If HIV was written on the form, this was also coded in the HIV group, as required by the ICD-10. Codes U51 and U52 were assigned to *multidrug-resistant tuberculosis* (MDR-TB) and *extensively drug-resistant tuberculosis* (XDR-TB) respectively, and included in the *tuberculosis* (A15-A19) broad group of causes of death. The processing of the 2011 data on causes of death used 4-character coding where sufficient details were provided to code up to these levels. However, this statistical release is based on three-character categories.

Generation of the underlying causes of death

The ICD-10 defines underlying cause of death as "(a) the disease or injury that initiated the sequence of events leading directly to death or (b) the circumstances of the accident or violence that produced the fatal injury" (WHO, 2009: 1195). Under international rules for selecting the underlying cause from the reported conditions, every death is attributed to one (and only one) underlying cause based on information reported on the death certificate.

Stats SA uses a computerised coding system to derive the underlying causes of death using a software program called Automated Classification of Medical Entities (ACME, 2011) developed by the United States National Center for Health Statistics (NCHS). This program applies the WHO rules on the selection of the underlying cause of death. An additional software program called IRIS, which also derives the underlying cause of death, was used during 2011 data processing for comparison of results with the anticipation that IRIS will be used in future processing of causes of death data. About 95,2% of underlying causes derived by ACME and IRIS for 2011 data were the same.

The ACME program automatically derived the underlying cause of death for 93,9% of the individual death records processed in 2013. In instances where ACME did not derive the underlying cause, results from IRIS were used. In instances where both ACME and IRIS did not derive the underlying cause of death, experienced coders within Stats SA derived the underlying cause manually.

2.3 Data analysis

Descriptive analyses were used to produce this statistical release. Frequency tables, cross-tabulations and median ages at death were calculated. The median age at death by year of death provides a basic measure which facilitates the comparison of mortality experiences in a population over time. The median age at death is used to assess how early or late death occurs in a population. Lower median ages at death are an indication that mortality occurs mostly at earlier ages of life whereas higher median ages at death are an indication that mortality occurs mostly at later stages of life in a particular population.

Selected demographic indicators are also derived and included in this release. These include sex ratio at death (which shows the number of male deaths per 100 female deaths), crude death rate (number of deaths per 1 000 population) as well as age specific death rates (number of deaths in specified ages per 1 000 population in those ages).

Determining and monitoring the leading causes of death is considered a primary and important indicator of health status or quality of life. The best approach to determining the leading causes of death is to group deaths into standard categories based on the underlying cause of death code assigned to each death and then rank the underlying causes of death by cause of death categories. The ranking simply denotes the frequency of causes of death among those causes eligible to be ranked. For this release, the numbers of deaths in each broad group category were ranked from highest to lowest and results presented for the ten leading causes. The ranking excluded all deaths due to *symptoms and signs not elsewhere classified* as these are not useful for public health planning.

The categories were ranked from top to bottom with the top ranked cause as the leading cause of death. In instances where two causes had the exact number of deaths, they both received one rank and the next rank was skipped. For example, if two causes had the same frequency received then rank two was skipped and the following cause received rank three. Due to the high rate of violence in South Africa, natural and non-natural causes of deaths were ranked separately.

This release also presents tables on mortality and causes of death for district municipalities in the country, shown in the appendices. Information on local municipalities is also available on request. The demarcation used for boundaries are the 2011 municipal boundaries.

2.4 Quality of data

Quality of data on mortality and causes of death can suffer from a range of issues. These include incomplete registration of deaths, late registrations, partially completed forms, ill-defined cause of death and underreporting of causes especially in the case of HIV/AIDS. There is a body of literature on different frameworks used for the assessment of the quality of death registration data. For the purpose of this release, the framework proposed by Mahapatra et al. (2007) is used to assess the quality of the 2011 deaths and cause of death statistics from the civil registration system. The Analysing mortality level and cause-of-death data (ANACoD) by WHO (2013) was also used to assess the quality of causes of death.

2.4.1 Completeness of death registration

A number of methods have been developed for the evaluation of completeness of death registration. The main distinctions amongst the various methods are in input data requirement, underlying assumptions and limitations of each method. The implication of these differences is lack of consistency in resulting estimates. A combination of the General Growth Balance method (Hill, 1987) and the Synthetic Extinct Generations method (Bennett and Hourichi, 1981 and 1984) has been suggested for use in South Africa. Consequently, these methods have been used in the assessment of completeness of death registration in South Africa (Bah, 2005, Dorrington and Bradshaw, 2011).

The availability of the 2011 population census results has allowed the use of methods that employ intercensal growth rates to estimate the completeness of death reporting. Most critically, it allows the estimation of completeness to be provided for three 'intercensal' periods: 1996–2001, 2001–2007 and 2007–2011. Two methods were utilised to estimate the level of completeness of the deaths reported in this statistical release. The first method used was the Generalised Growth Balance (GGB) as proposed by Hill (1987), and thereafter the Synthetic Extinct Generation method (SEG) as illustrated by Bennett and Horiuchi (1981, 1984). These methods have previously been applied to estimate the completeness of death registration in South Africa in the intercensal periods 1996–2001 and 2001–2007 (Dorrington and Bradshaw, 2011). Although the main strength of the two methods is no assumption of stability, their sensitivity to age misreporting and change in census coverage is among known limitations (Hill, 2009). Given the well-documented age and sex structure deficiency of the 1996 and 2001 censuses, the assumptions of consistency in age reporting is unlikely to be met (Udjo, 2003; Moultrie and Dorrington, 2004). Equally, the assumption that recording of deaths does not vary with age, does not hold in the case of death recording in South Africa, particularly at younger ages.

The populations from the censuses undertaken in South Africa in Census 1996, 2001, 2011 and the 2007 Community Survey were moved to their respective mid-year points in preparation for the estimation. No migration was assumed for this exercise. The output from GGB is used as an initial input in the estimation process in the SEG (as recommended by Bennett and Horiuchi, 1981) to obtain consistent estimates by age.

Overall completeness for adult (15 years and older) death registration for the intercensal period 1996–2001 was estimated at 89%, while for the period 2001–2007 the level of completeness was 93% and for the 2007–2011 period it was estimated at 94%. This indicates that there has been an increase, though modest, in the registration of adult deaths. Estimation of the completeness of child deaths is an exercise that requires more time and could not be included in this release. The estimates will be provided in due course.

2.4.2 Late registrations

Late registrations in this release refer to deaths that occurred from the year 1997 to 2010 but were only processed in the 2013 processing phase. Information on the number of deaths published in April 2013 for the years 1997–2010 is provided in Table 2.1, additional forms received during the 2013 processing phase; and the overall number of deaths for each year as of September 2013.

Overall there were 4 560 additional forms received in the 2013 processing phase for deaths which occurred from 1997 to 2010. The majority of these late registrations (84,8%) were for deaths that occurred in 2010. However, this is a notable decrease in the number of late registrations compared to the previous years. For example, there were 8 786 late death registrations in 2010 and 5 044 in 2009. This could be attributed to improved registrations, decline in the number of deaths or the shorter period taken to process the 2011 deaths. There were fewer late registrations for the other years, representing less than 6% of the late registrations each year. The distribution of deaths from 1997 to 2011 by age and sex is provided in Appendices C (1997–1999), C.1 (2000–2002), C.2 (2003–2005), C.3 (2006–2008) and C.4 (2009–2011).

Table 2.1: Number of deaths published in April 2013 and late registrations processed in 2013 by year of death, 1997–2010

| Year of death | Number of deaths published in April 2013 | Additional forms received in the 2013 processing phase | Total number of deaths (by September 2013) |
|---------------|--|--|--|
| 1997 | 317 170 | 25 | 317 195 |
| 1998 | 365 884 | 25 | 365 909 |
| 1999 | 381 858 | 24 | 381 882 |
| 2000 | 416 420 | 22 | 416 442 |
| 2001 | 455 126 | 62 | 455 188 |
| 2002 | 502 337 | 33 | 502 370 |
| 2003 | 556 998 | 36 | 557 034 |
| 2004 | 577 042 | 42 | 577 084 |
| 2005 | 598 321 | 33 | 598 354 |
| 2006 | 613 108 | 20 | 613 128 |
| 2007 | 604 360 | 46 | 604 406 |
| 2008 | 595 624 | 57 | 595 681 |
| 2009 | 579 711 | 267 | 579 978 |
| 2010 | 543 856 | 3 868 | 547 724 |
| Total | 7 107 815 | 4 560 | 7 112 375 |

2.4.3 Timeliness of death registration

Timeliness of death registration refers to the number of days it took to register a death from the date on which the death occurred to the date the death was registered at DHA. The Births and Deaths Registration Act, 1992 (Act No. 51 of 1992) recommends that notice of death should be given as soon as practicable. Table 2.2 shows the number of days it took for deaths which occurred in 2011 to be registered at the DHA.

In 2011, 13,0% of deaths were registered at the DHA within the day of death. By the first day after death, there were 40,3% of deaths that were registered and more than half (59,1%) of deaths were registered by the second day of death occurrence. A vast majority of deaths (90,1%) were registered within the first week in which they occurred and by the end of the first month of death occurrence, 97,7% deaths were registered. The timeliness of reporting deaths has improved slightly from the observation made for 2010 deaths. In 2010, 11,3% within the first day of death occurrence and 88,2% within the first week of death occurrence.

Table 2.2: Distribution of deaths by the number of days it took to register the death, 2011

| Number of days | Number of deaths | Percentage | Cumulative percentage |
|-----------------------|------------------|--------------|-----------------------|
| Within a day of death | 65 751 | 13,0 | 13,0 |
| 1 day | 138 054 | 27,3 | 40,3 |
| 2 days | 95 372 | 18,7 | 59,1 |
| 3 days | 68 908 | 13,6 | 72,8 |
| 4 days | 44 192 | 8,7 | 81,5 |
| 5 days | 27 241 | 5,4 | 86,9 |
| 6 days | 16 016 | 3,1 | 90,1 |
| 7–13 days | 29 776 | 5,9 | 95,9 |
| 14–20 days | 5 386 | 1,1 | 97,1 |
| 21–30 days | 3 260 | 0,6 | 97,7 |
| 31–364 days | 11 260 | 2,2 | 99,9 |
| 1 year+ | 587 | 0,1 | 100,0 |
| Total | 505 803 | 100,0 | |

2.4.4 Completeness of information for selected variables

This section gives an indication of the completeness of information for selected variables. For this release, completeness of information in any variable refers to the number of variables with values stated as unknown or unspecified, taking into consideration the applicable subset of the population. The unknown cases refer to cases where more than one option was selected on the form or where the information could not be classified according to specified categories. The unspecified cases refer to missing data for that variable.

Table 2.3 shows that less than 1% of deaths had unknown or unspecified information for age of deceased (0,5%), sex of the deceased (0,4%) and province death occurrence (0,5%). About 4,9% and 16,0% of forms had missing information on province of usual residence and province of birth respectively. On the one hand, there was a slight increase in missing information on sex and age compared to 2010 (0,2% for both age and sex). On the other hand, missing information on province of death, birth and usual residence of the deceased has decreased. This is more evident in the province of usual residence for the deceased, which decreased from 8,0 % in 2010 to 4,9% in 2011. A notable increase in missing information is observed for institution of death occurrence which increased from 16,2% in 2010 to 22,9% in 2011.

Incomplete information for population group of the deceased and the method used to ascertain the cause of death were 17,9% and 24,6% respectively. The decrease in the proportion of deaths with missing information on population group is a notable improvement in particular, considering that over the period 1997–2010 missing information on this variable was constant at around 25%.

About 44,7% of deaths had unknown or unspecified information on smoking status of the deceased (aged 16 and older). Although there has been an improvement in missing information for level of education, pregnancy status, occupation and the type of industry where the deceased worked, these variables remain poorly reported. In this release, no analyses were undertaken for all variables where more than half of the deaths had unknown or unspecified information. However, a dataset containing unit records of data on recorded deaths for 2011 is available on request from Stats SA, which allows for further analysis of these variables.

Table 2.3: Percentage of deaths classified as unknown/unspecified for selected variables, 2011

| Variables | Applicable group | Percentage unknown or unspecified |
|--|---|-----------------------------------|
| Sex | All | 0,4 |
| Age | All | 0,5 |
| Province of death occurrence | All | 0,5 |
| Province of usual residence of deceased | All | 4,9 |
| Province of birth | All | 16,0 |
| Population group | All | 17,9 |
| Place or institution of death occurrence | All | 22,9 |
| Method used to ascertain cause of death | All | 24,6 |
| Smoking status | Aged 16 and older | 44,7 |
| Education | Aged 6 and older | 50,7 |
| Occupation | Aged 15 and older | 54,8 |
| Industry | Aged 15 and older (economically active) | 59,6 |
| Pregnancy status | Females aged 10–55 | 75,3 |

2.4.5 Quality of causes of death information

It is vital to evaluate the quality of causes-of-death data from the data processing to data analysis phases, in order to enhance its value in informing health policies and programmes. Data quality assessment in all stages ensures that errors in the mortality data are identified and corrected in all stages, where possible.

In processing the 2011 causes of death data, quality checks were put in place during different stages. After the data processing phase, data editing was carried out to check for consistencies in the data, more especially for age, sex, rare causes and unlikely causes for specific ages and sex. In instances where inconsistencies were identified, the record was returned to the data processing team to verify the information on the death notification form.

Once data editing was completed, the electronic tool, ANACoD version 1.1 was used to further analyse mortality levels and causes of death data. ANACoD provides relatively simple ways of analysing the internal validity and coherence of mortality data and shows how comparisons with other external sources of mortality data can be used to assess data consistency and plausibility.

ANACoD is also useful in calculating mortality rates such as crude death rates and age-specific mortality rates (including infant and under-5 mortality rates). The rates may be used to assess the completeness of death reporting, to examine the plausibility of the age and sex patterns of mortality and to compare the results of registered deaths with other sources.

ANACoD also calculates the distribution of ill-defined causes in the causes of death data by sex and age-group. Ill-defined causes of death are of no public health value and may make the cause of death information unreliable. Consequently, these need to be monitored continuously to check for areas of improvement in the quality of data. The ill-defined causes of death include deaths classified as *symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified (R00-R99)*; *events of undetermined intent (Y10-Y34)* and other causes such as *malignant neoplasms of other and ill-defined sites*; *acute, chronic and unspecified renal failure*; *cardiac arrest*; and *heart failure* (see Appendix D for a complete list). However, these causes (with the exception of *symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified*) still help to describe the overall mortality due to broad diseases. For 2011 causes of death, a total of 24,4% of causes were attributed to ill-defined underlying cause of death. Males had 23,1% of deaths classified as ill-defined causes whilst females had 25,8%.

These percentages increased slightly compared to those reported in 2010. As such there has not been any improvement on the reporting of causes-of-death data.

The number and percentage of ill-defined causes of death by main groups of cause and sex as summarised by the ANACoD tool is shown in Table 2.4. Overall 55,5% of all ill-defined causes of death were *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* for both sexes. Ill-defined causes of deaths assigned to *diseases of the circulatory system* were 19,1% for males and 24,3% for females. The *ill-defined causes due to external causes of morbidity and mortality* was high amongst males at 8,1% compared to 2,1% amongst females. There are no notable differences in the proportions for males and females in 2011 as compared to 2010.

Table 2.4: Number of ill-defined causes of death by main groups of causes, 2011*

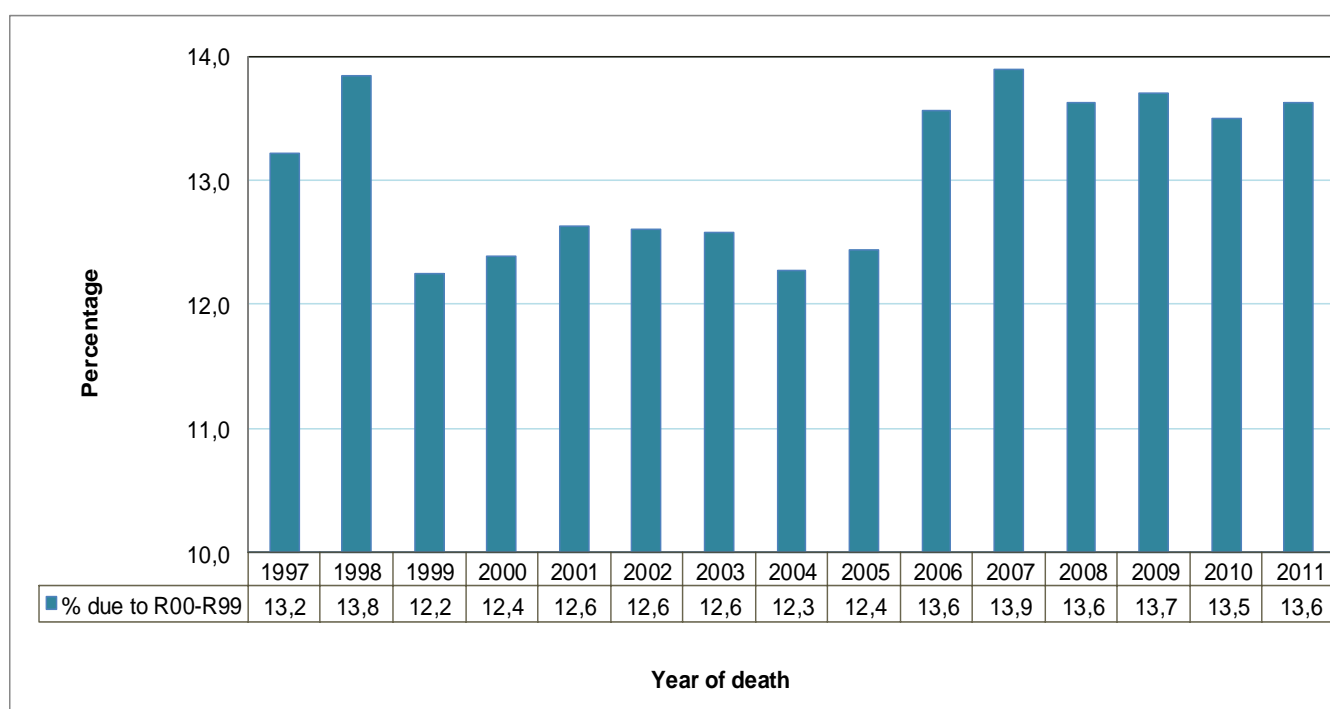
| Causes of deaths (based on ICD-10) | Number | | | Percentage | | |
|---|---------------|---------------|----------------|--------------|--------------|--------------|
| | Male | Female | Both sexes | Male | Female | Both sexes |
| Certain infectious and parasitic diseases (A00-B99) | 2 589 | 3 066 | 5 655 | 4,3 | 4,9 | 4,6 |
| Neoplasms (C00-D48) | 1 789 | 1 865 | 3 654 | 3,0 | 3,0 | 3,0 |
| Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50-D89) | 54 | 81 | 135 | 0,1 | 0,1 | 0,1 |
| Endocrine, nutritional and metabolic diseases (E00-D90) | 889 | 881 | 1 770 | 1,5 | 1,3 | 1,4 |
| Diseases of the circulatory system (I00-I99) | 11 435 | 15 223 | 26 658 | 19,1 | 24,3 | 21,8 |
| Diseases of the respiratory system (J00-J99) | 1 082 | 1 038 | 2 120 | 1,8 | 1,7 | 1,7 |
| Diseases of the digestive system (K00-K93) | 867 | 693 | 1 560 | 1,4 | 1,1 | 1,3 |
| Diseases of the genitourinary system (N00-N99) | 3 554 | 3 360 | 6 914 | 5,9 | 5,4 | 5,6 |
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) | 32 902 | 35 188 | 68 090 | 54,8 | 56,1 | 55,5 |
| External causes of morbidity and mortality (V01-Y98) | 4 832 | 1 326 | 6 158 | 8,1 | 2,1 | 5,0 |
| Total of ill-defined | 59 993 | 62 721 | 122 714 | 100,0 | 100,0 | 100,0 |

*Excluding 1 997 deaths with unspecified sex.

Due to the high number of ill-defined causes of death attributed to *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* (55,5%), it therefore becomes important to further analyse this group to identify specific causes affected and to monitor trends over time. This may possibly involve interventions to improve certification practices, or coding practices, or both.

Figure 2.1 shows the percentage distribution of deaths classified under *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* and year of death for the period 1997 to 2011. From 1997 up to 2011, there has been no clear indication of improvements in classification of causes of death in this category. The only notable improvement was observed between 1998 and 1999, where the proportion of deaths due to *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* was reduced from 13,8% in 1998 to 12,2% in 1999. In the years 1999 to 2005, deaths due to *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* hovered around 12,2% and 12,6%. The highest proportion of deaths due to *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* was highest in 2007 (13,9%). For 2011, the number of deaths due to *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* was 13,6%.

Figure 2.1: Percentage distribution of deaths classified by symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified and year of death, 1997–2011*



* Data for 1997–2010 have been updated to include late registrations processed in 2013.

Table 2.5 shows the number of deaths due to *symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified* by main groups of causes for 2011. About 94,9% of these deaths were due to the broad group *ill-defined and unknown cause of mortality (R95-R99)* and 4,6 % of these deaths were due to *general symptoms and signs (R50-R69)*, which is a group inclusive of causes such as *fever, headache, pain, fatigue and senility*.

Table 2.5: Number of causes of death due to symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified by main groups of causes, 2011

| Underlying cause of death (based on ICD-10) | Frequency | Percentage |
|--|---------------|--------------|
| Symptoms and signs involving the circulatory and respiratory systems (R00-R09) | 129 | 0,2 |
| Symptoms and signs involving the digestive system and abdomen (R10-R19) | 58 | 0,1 |
| Symptoms and signs involving the skin and subcutaneous tissue (R20-R23) | 2 | 0,0 |
| Symptoms and signs involving the nervous and musculoskeletal systems (R25-R29) | 5 | 0,0 |
| Symptoms and signs involving the urinary system (R30-R39) | 13 | 0,0 |
| Symptoms and signs involving cognition, perception, emotional state and behaviour (R40-R46) | 7 | 0,0 |
| Symptoms and signs involving speech and voice (R47-R49) | 4 | 0,0 |
| General symptoms and signs (R50-R69) | 3 171 | 4,6 |
| Abnormal findings on examination of blood, without diagnosis (R70-R79) | 38 | 0,1 |
| Abnormal findings on examination of other body fluids, substances and tissues, without diagnosis (R83-R89) | 24 | 0,0 |
| Abnormal findings on diagnostic imaging and in function studies, without diagnosis (R90-R94) | 11 | 0,0 |
| Ill-defined and unknown causes of mortality (R95-R99) | 64 912 | 94,9 |
| Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) | 68 374 | 100,0 |

2.4.6 Assessment framework for death registration data

The measure of how useful vital statistics will be depends on its quality measurement and its fitness for use. Quality assessment frameworks thus become a useful tool to measure the quality of data from civil registration systems. The assessment framework proposed by Mahapatra et al. (2007) is one amongst other methods which can be used to assess the quality of death registration data received from civil registration systems. This release adopts this framework to assess the quality of the 2011 death and cause of death. Both categories measure the level of accuracy, relevance and comparability. Additional measures include timeliness and accessibility.

Table 2.6 shows the results of the assessment of the 2011 South African death statistics from the civil registration system using the framework proposed by Mahapatra et al. (2007). In terms of completeness of death registration, about 94% of adult deaths which occurred during the 2007–2011 intercensal period were registered on the civil registration system. Both age and sex were generally well-reported with 0,5% missing age and 0,4% missing sex. The variables on population group and province of birth were not well reported with 17,9% of information missing for population group and 16,0% of information missing for birth province of the deceased. Relevance and comparability were regarded as complete. The tools used in coding causes of death for 2011 were similar to those used in previous years and the variables included in causes of death data for 2011 have been consistent over the years, thus ensuring that data are comparable over time.

Statistics on cause of death gives an indication that 46,3% of deaths in 2011 occurred within a health care facility. About 13,6% of deaths were assigned to ill-defined causes. The information on causes of death is highly relevant over time, based on provision of data for specified ages and sex.

Based on routine tabulations by sex and 5-year age groups as well as the fact that tabulation of cause-of-death information is provided for the nine provinces and 52 district municipalities in the country cause-of-death statistics is regarded as completely relevant. There was consistency in cause-specific mortality proportions over consecutive years and ICD-10 coding was used. As such cause-of-death statistics were also regarded as comparable.

Processing 2011 data on causes of death took nine months and the mean time from end of reference period to publication was 26 months. The data published on this release are available in a wide range of formats and can be accessed through Stats SA website and also by making use of Stats SA User Information Services.

Table 2.6: Assessment of the 2011 South African death statistics from the civil registration system*

| General vital statistics | | Cause-of-death statistics | |
|---|--|--|---|
| Criteria and indicators | Measure | Criteria and indicators | Measure |
| Accuracy (%) Completeness of death registration for adults (2007–2011) Missing data Sex Age Province of residence Province of birth Population group | 94% 0,4% 0,5% 4,9% 16,0% 17,9% | Accuracy Proportion of deaths that occurred in healthcare facilities Proportion of deaths assigned to symptoms and signs of disease not elsewhere classified (R00-R99) | 46,3% 13,6% |
| Relevance Routine tabulations by sex and 5-year age groups Deaths in children under five years tabulated by 0 and 1–4-year age group | 100% 100% | Relevance Routine tabulation by sex and 5-year age groups Number of cause-of-death tabulation areas | 100% 9 provinces and 52 district/metropolitan municipalities |
| Comparability Stability of key definitions over time Uniformity of definitions across areas | 100% 100% | Comparability Consistency of cause-specific mortality proportions over consecutive years ICD coding for certification and coding of causes of deaths, revision used and code level to which tabulations are published | 100% No coding for certification; coding causes of death using the tenth revision at 4/5-digit level |
| Timeliness Processing time Mean time from end of reference period to publication | 9 months 26 months | | |
| Accessibility Media – number of formats in which data are released Metadata Availability of user service | Two: website and compact discs Published with compact disc and available on request Email: info@statssa.gov.za / Tel: 012 310 8600 / Fax 012 310 8500 and 012 310 8495 | | |

*Based on the framework proposed by Mahapatra et al. (2007).

3. Registered deaths

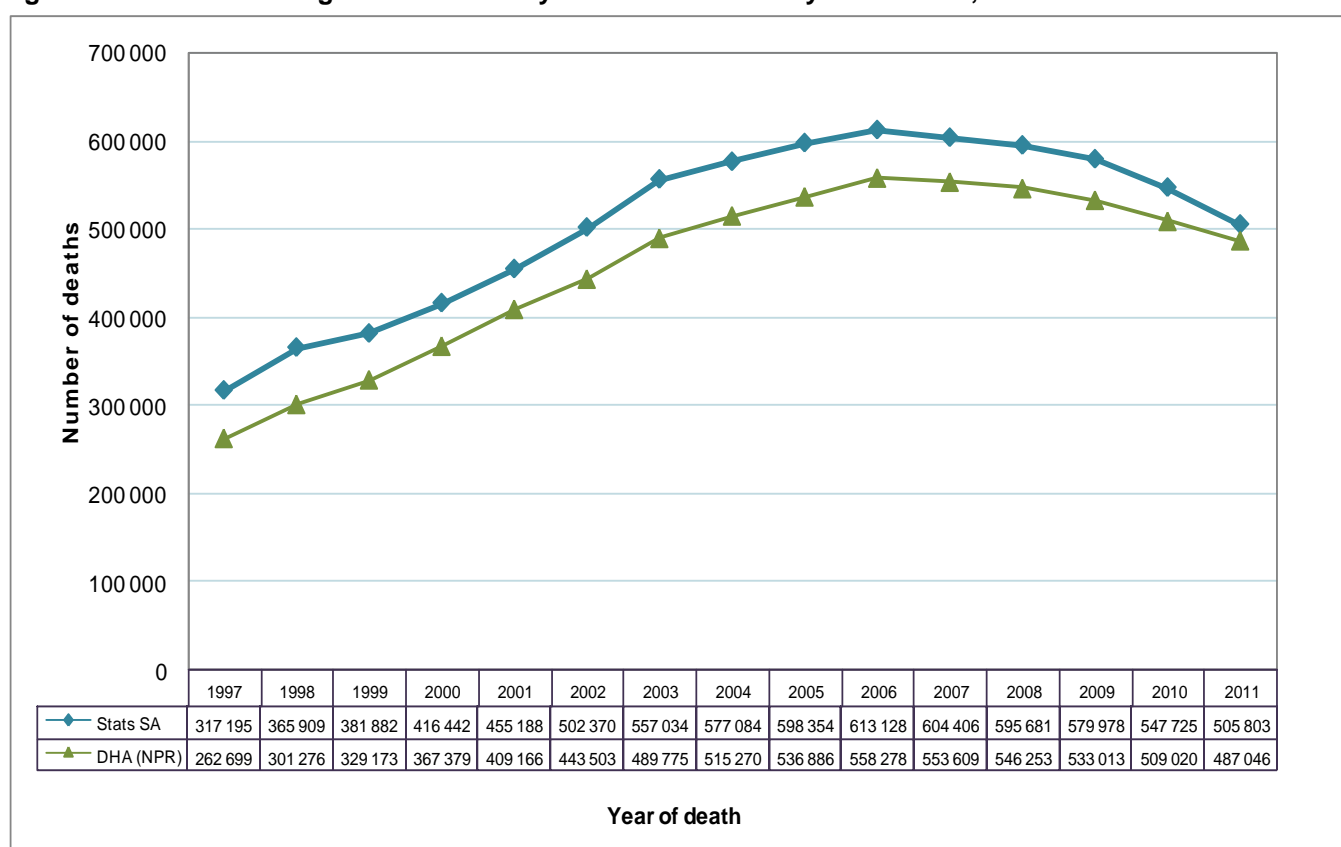
This section provides information on the distribution of deaths in 2011 by selected socio-demographic and geographic factors. These include age, sex, population group, place/institution where death occurred and geographic information (province and district/metropolitan municipalities). Distribution of deaths by smoking status of the deceased is also included. The section also shows levels and trends of registered deaths from 1997 to 2011.

3.1 Levels and trends of registered deaths

Figure 3.1 shows the number of deaths registered from 1997–2011 from two different sources, namely the National Population Register (NPR) maintained by the Department of Home Affairs (DHA) and deaths processed by Statistics South Africa (Stats SA) using death notification forms received from the DHA. Trends in the number of deaths included in the NPR and those processed by Stats SA follow a similar pattern over time, although the number of deaths processed by Stats SA is more than that on the NPR. As explained in Section 2 of this statistical release, only the deaths of South African citizens and permanent residents whose particulars were already on the NPR appear on the NPR while Stats SA reports on all deaths registered at the DHA. Consequently, Stats SA deaths are always expected to be higher than those on the NPR. For example, the number of deaths processed by Stats SA for 2011 was 505 803 compared to 487 046 recorded on the NPR for the same year, which is 3,9% more deaths processed by Stats SA in 2011.

According to Figure 3.1, the number of deaths increased from 1997 to 2006 and decreased from 2007 to 2011. It is further observed that the gap between the number of deaths on the NPR and those processed and published by Stats SA appears to have narrowed down in the recent years. This may result from an increase in the number of South African citizens being included on the NPR.

Figure 3.1: Number of registered deaths by source of data and year of death, 1997–2011*



*Data for 1997–2010 have been updated to include late registrations processed in 2013.

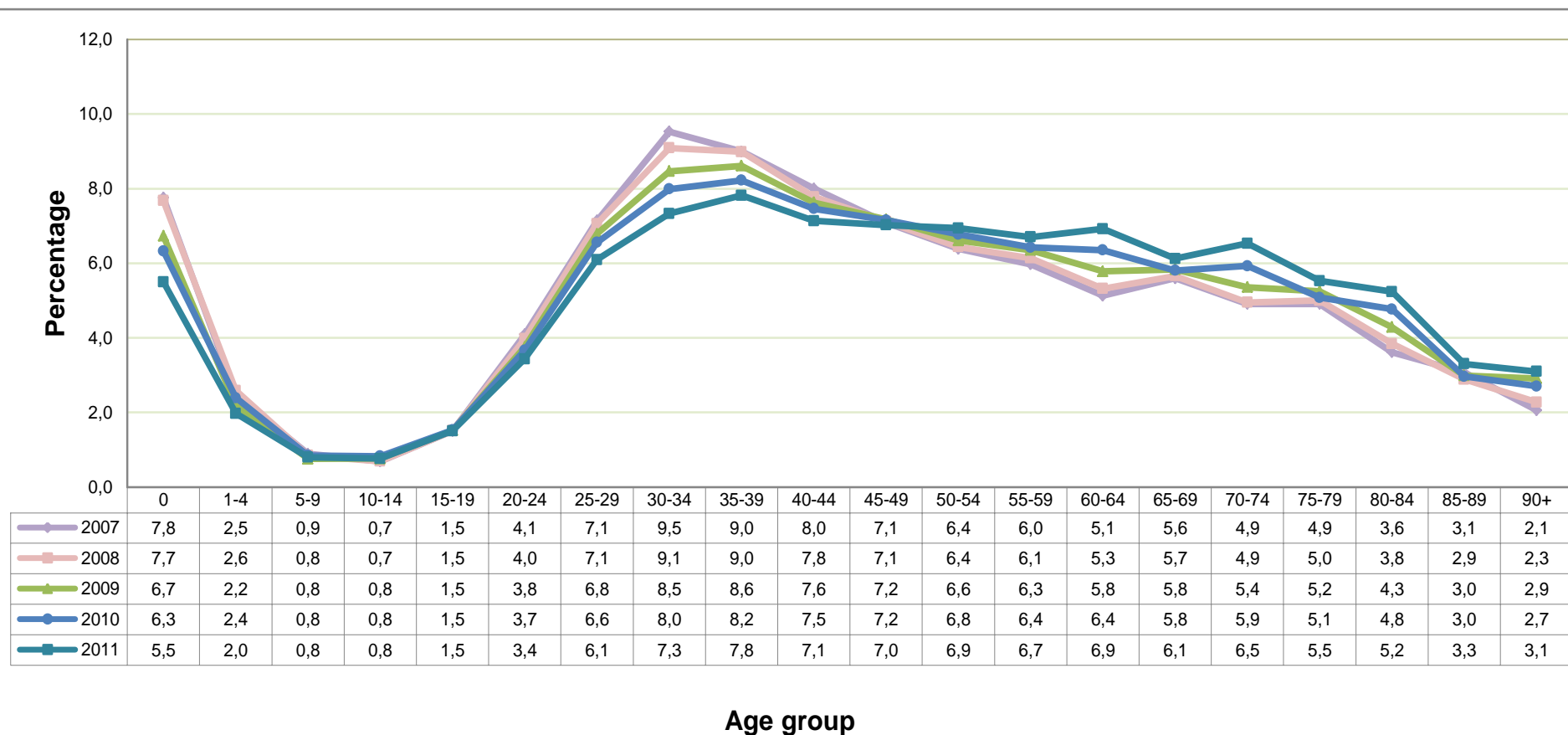
3.2 Age differentials

The distribution of deaths by age for 2011 is presented in Table 3.1. The highest percentage of deaths in 2011 occurred amongst age group 35–39 years (7,8%) followed by age group 30–34 years (7,3%). This shows a similar trend to that observed in 2010 whereby the number of deaths was highest amongst these two age groups (8,2% and 8,0% respectively). About 5,5% of deaths occurred before the first birthday. The lowest proportion of deaths were observed in age groups 5–9 years and 10–14 years, each representing 0,8% of all deaths in 2011.

Table 3.1: Number and percentage distribution of deaths by age, 2011

| Age group | Number | Percentage |
|--------------|----------------|--------------|
| 0 | 27 981 | 5,5 |
| 1–4 | 9 927 | 2,0 |
| 5–9 | 4 290 | 0,8 |
| 10–14 | 3 847 | 0,8 |
| 15–19 | 7 577 | 1,5 |
| 20–24 | 17 283 | 3,4 |
| 25–29 | 30 679 | 6,1 |
| 30–34 | 36 895 | 7,3 |
| 35–39 | 39 355 | 7,8 |
| 40–44 | 35 913 | 7,1 |
| 45–49 | 35 356 | 7,0 |
| 50–54 | 34 949 | 6,9 |
| 55–59 | 34 119 | 6,7 |
| 60–64 | 34 849 | 6,9 |
| 65–69 | 30 815 | 6,1 |
| 70–74 | 32 870 | 6,5 |
| 75–79 | 27 817 | 5,5 |
| 80–84 | 26 361 | 5,2 |
| 85–89 | 16 928 | 3,3 |
| 90+ | 15 591 | 3,1 |
| Unspecified | 2 401 | 0,5 |
| Total | 505 803 | 100,0 |

Figure 3.2 shows the distribution of deaths by age and year of death from 2007 to 2011. The figure shows that the percentage of deaths for children aged 0 was 7,8% in 2007 and has since decreased to 5,5 % in 2011. There was also a notable decrease in the percentage of deaths for age group 30–34 from 9,5% deaths in 2007 to 7,3% in 2011. The age pattern of mortality from 2007 to 2011 was generally the same, although there were notable increases in the proportion of deaths at older age groups and decreases at younger ages. Generally in all the years, the lowest percentage of deaths occurred in age groups 5–9 and 10–14 with each age group at less than 1% of deaths each year. The highest percentage of deaths observed in 2007 and 2008 were for age group 30–34 and in 2009–2011, the highest proportions were in age group 35–39.

Figure 3.2: Percentage distribution of deaths by age and year of death, 2007–2011*

* (1) Excluding deaths with unspecified age (1 244 deaths in 2007; 1 056 in 2008; 1 487 in 2009; 1 307 in 2010, and 2 401 deaths in 2011).

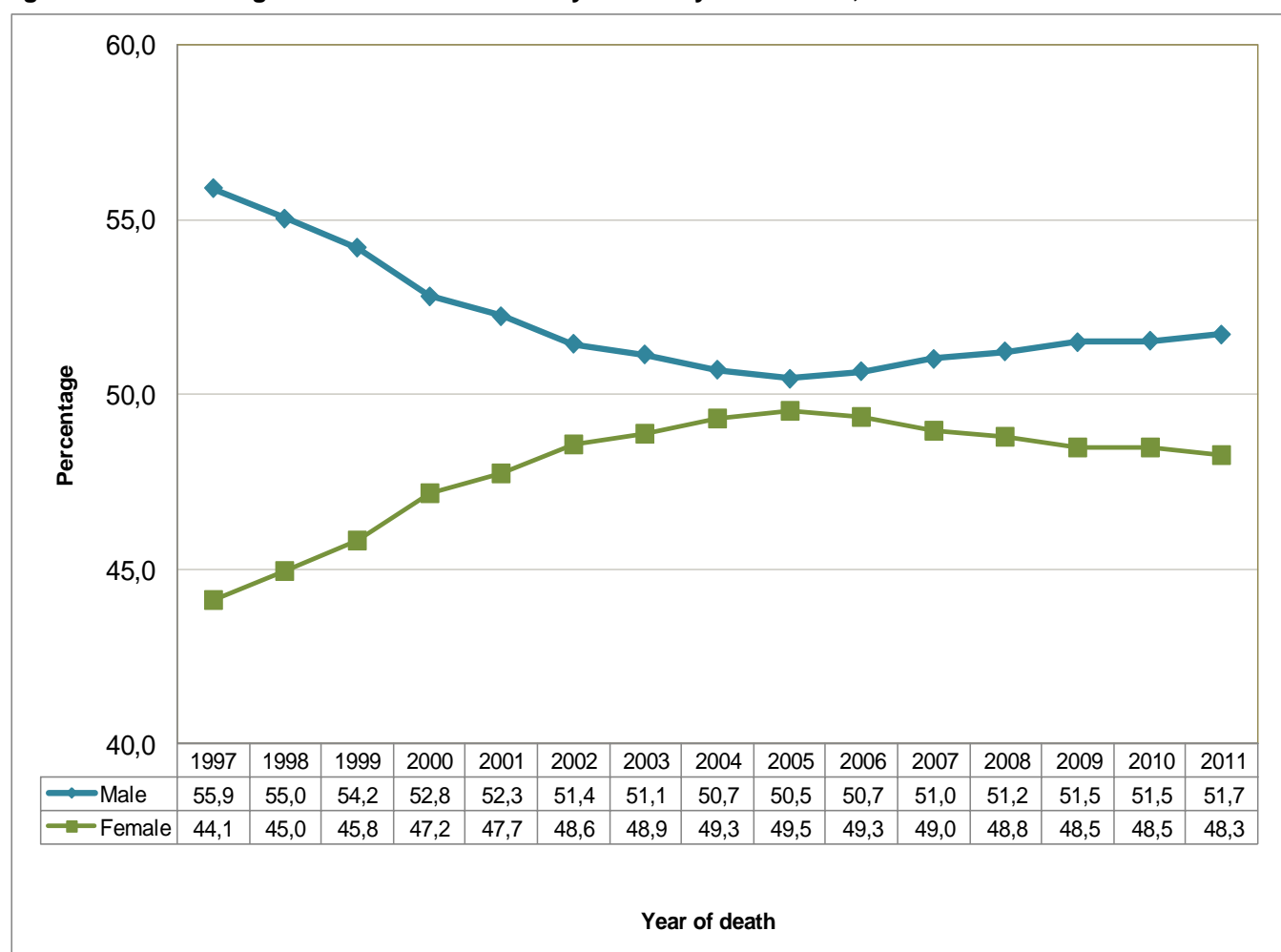
(2) Data for 2007–2010 have been updated to include late registrations processed in 2013.

3.3 Sex differentials

Figure 3.3 shows the percentage distribution of deaths by sex and year of death from 1997 to 2011. Throughout these years, the proportions of male deaths were always higher than those of female deaths. There was a huge gap in the proportion of male and female deaths in 1997, but this narrowed yearly until 2005, and broadened again thereafter. The gap was much wider between 1997 and 2001 when the difference between males and females was in the range of 4,6 percentage points (2001) to 11,8 percentage points (1997). For 2011, males constituted 51,7% and females constituted 48,7% of the deaths. The proportion of female deaths increased gradually over the years from 44,1% in 1997 to 49,5% in 2005. From 2006 to 2011, the proportion of female deaths declined slightly from 49,3% in 2006 to 48,3% in 2011. Conversely, the proportion of male deaths decreased from 55,9% in 1997 to 50,5% in 2005 and thereafter increased steadily from 50,7% in 2006 to 51,7% in 2011.

The annual percentage changes in the number of deaths and year of death are shown in Appendix E. Female deaths increased much more than male deaths between 1997 and 1998 and during 2004–2005. Over the period 2005–2006, male deaths increased at a higher rate than female deaths but since 2006–2007, female deaths decreased at a much higher pace than male deaths.

Figure 3.3: Percentage distribution of deaths by sex and year of death, 1997–2011*



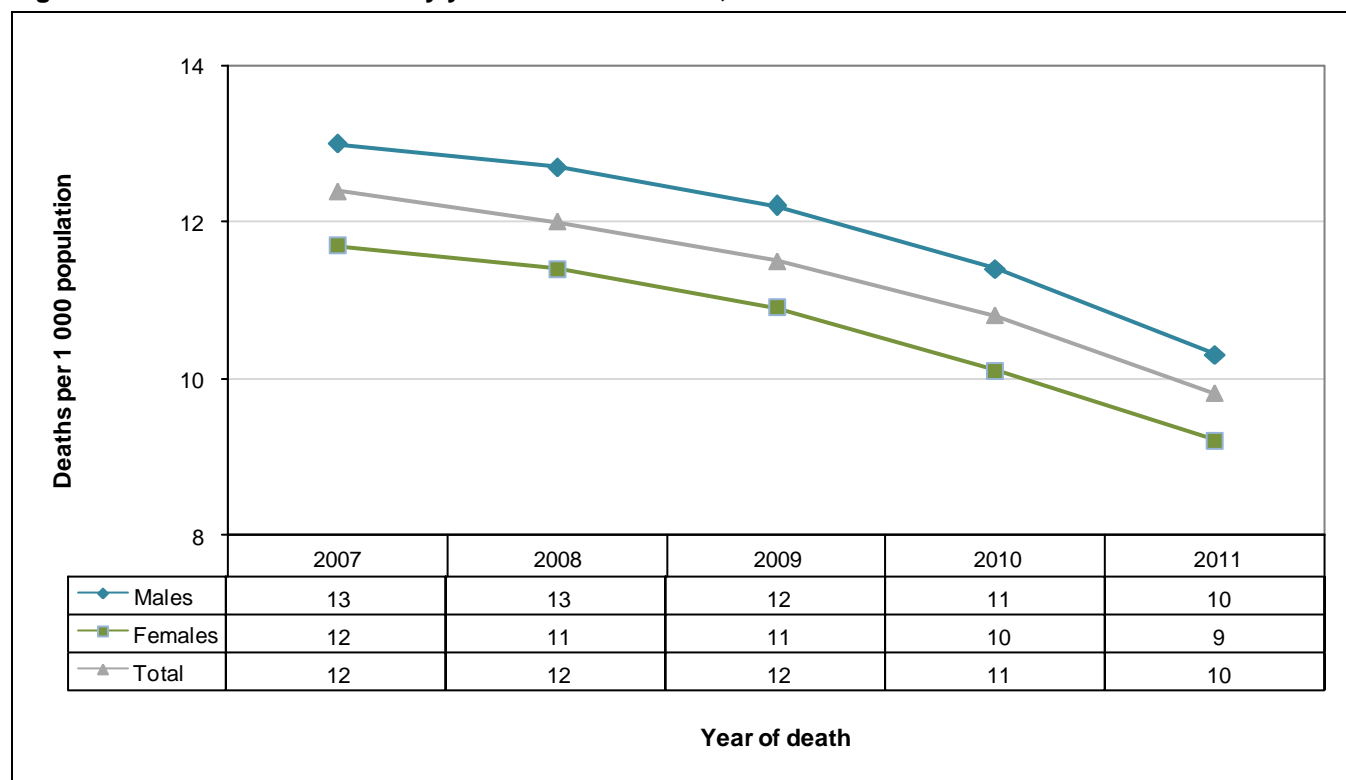
* (1) Excluding deaths with unspecified sex (1 031 in 1997; 1 931 in 1998; 2 079 in 1999; 1 727 in 2000; 1 650 in 2001; 1 947 in 2002; 1 977 in 2003; 1 621 in 2004; 1 721 in 2005; 1 743 in 2006; 998 in 2007; 841 in 2008; 1 147 in 2009; 1 166 in 2010; and 1 997 deaths in 2011).

(2) Data for 1997–2010 have been updated to include late registrations processed in 2013.

Figure 3.4 gives the Crude Death Rates (CDR) by year of death and sex based on observed number of deaths. The CDR gives an indication of the number of deaths during a particular year per 1 000 population. The CDR shows that there was a constant decline in death rates for both males and females in the 5-year period (2007–2011). The CDR for males decreased from 13 deaths per 1 000 population in 2007 to 10 deaths per 1 000

population in 2011 and the CDR for females decreased from 12 deaths per 1 000 population in 2007 to 9 deaths per 1 000 population in 2011.

Figure 3.4: Crude Death Rates by year of death and sex, 2007–2011*



*Data for 2007–2010 have been updated to include late registrations processed in 2013.

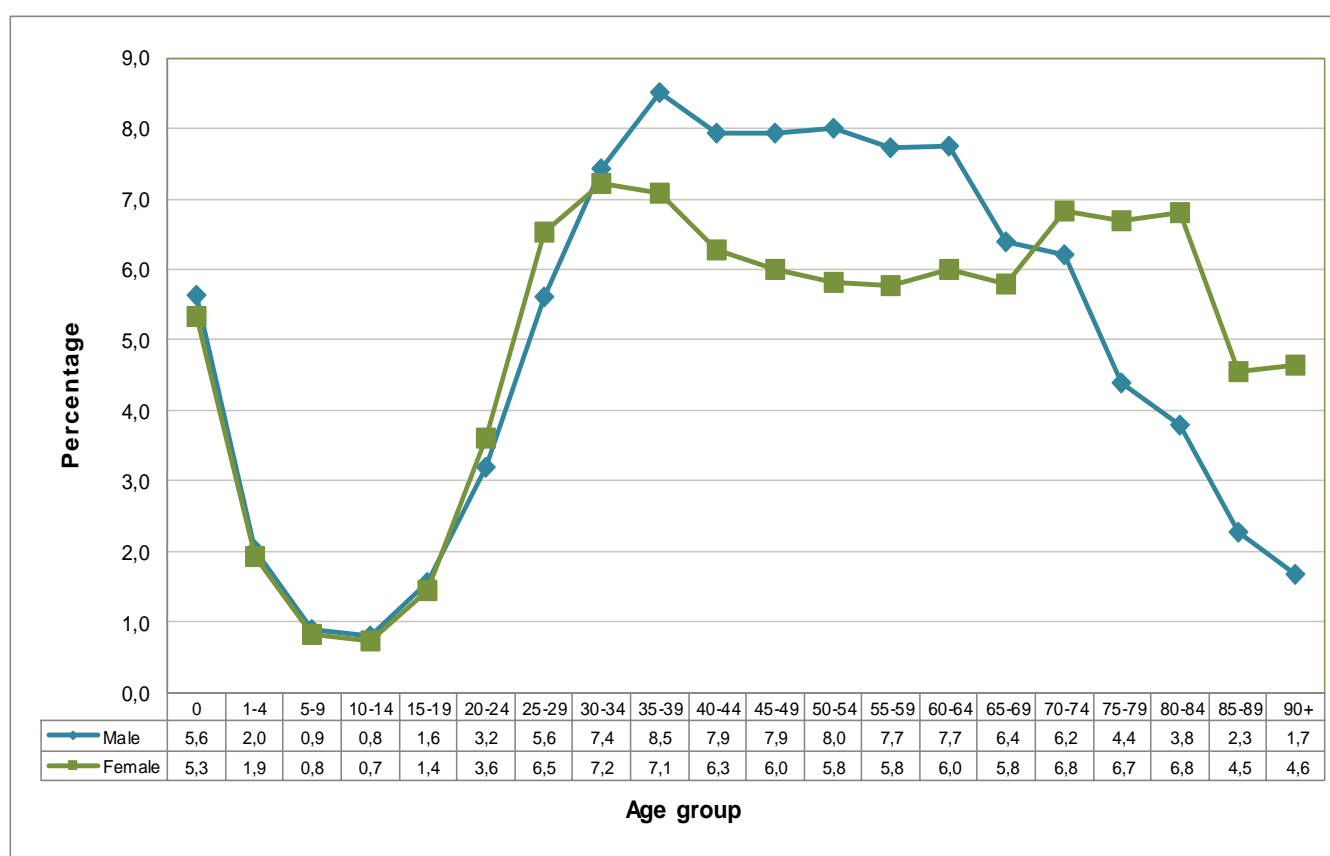
In order to provide an indication of the age pattern of mortality over the five-year period taking into consideration the population size at each age, Age-Specific Death Rates (ASDRs) for the total population for the period 2007–2011 are presented in Appendix F. The graph in this appendix shows that following relatively high rates of death in infancy, death rates decline sharply through childhood. In 2011, children aged 5–9 years and 10–14 years had the lowest age-specific death rates. The ASDR increased gradually from around age group 25–29 until around age 60–64 years, where they began to increase more rapidly throughout the older age groups. Over the 5-year period, death rates generally declined annually with a higher proportion of the decreases occurring in the younger age groups, particularly among infants.

3.4 Age and sex differentials

Percentage distribution

The age and sex percentage distribution of deaths that occurred in 2011 is shown in Figure 3.5 (absolute numbers are provided in Appendix C.4). For both sexes, the proportion of deaths is lowest at age groups 5–9 and 10–14. While the age distribution for males and females appears largely similar, there are some distinct differences by age. At ages younger than 20 years the proportion of deaths was slightly higher for males as compared to females, but the proportions for women were higher at ages 20–24, 25–29 and then at much older ages (from age group 70–74). Male deaths also exceeded female deaths at ages 30–34 to 65–69.

On the one hand, the proportion of male deaths peaked at age group 35–39 (8,5% of all male deaths) and remained relatively high at age groups 40–44 and 50–54 (around 8,0% per age group). On the other hand, female deaths peaked at age groups 30–34 and 35–39 (7,2% and 7,1% respectively). The gap in the proportion for male and female deaths was highest between age groups 35–39 and 60–64 (proportion of males higher) and at much older ages (proportion of females higher). The differences between males and females were minimal at younger ages (from age 0 to age group 20–24).

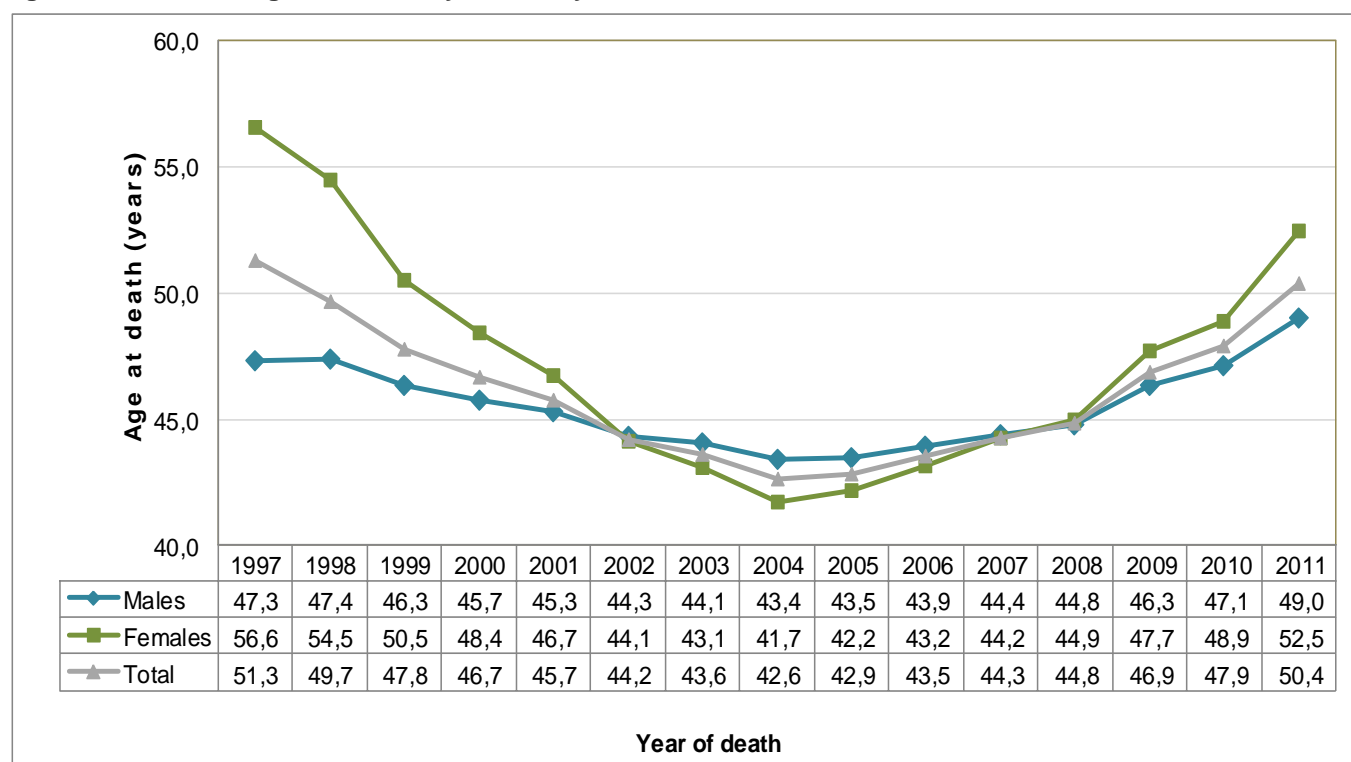
Figure 3.5: Percentage distribution of deaths by age and sex, 2011*

*Excluding 1 997 deaths with unspecified age and unspecified sex.

Median ages at death by sex

The median age at death shows how early or late mortality occurs in a population and specifies the age at which half of the reported deaths occur. The median age at death in 2011 was 49,0 years for males and 52,5 years for females. This gives an indication that on average males died at earlier ages than females (refer to figure 3.6). The median age at death for females was generally higher than that of males from 1997 to 2001, narrowing annually during this period. However, the gap increased again in 2003 but with the median age at death for males being higher than that of females. This means that from the years 2003 to 2006, mortality was occurring earlier among females as compared to males.

In 2007, the median age at death for males and females converged, with both sexes having a median age at death of about 44 years. After 2007, the median age at death for females was higher than that of males. Most notably, the median age at death for females decreased sharply from 56,6 years in 1997 to 41,7 years in 2004. This was the lowest median age for both males and females for the period 1997 to 2011. Since 2005, the median age at death for both males and females has increased, showing an improvement during this period.

Figure 3.6: Median ages at death by sex and year of death, 1997–2011*

* Data for 1997–2010 have been updated to include late registrations processed in 2013.

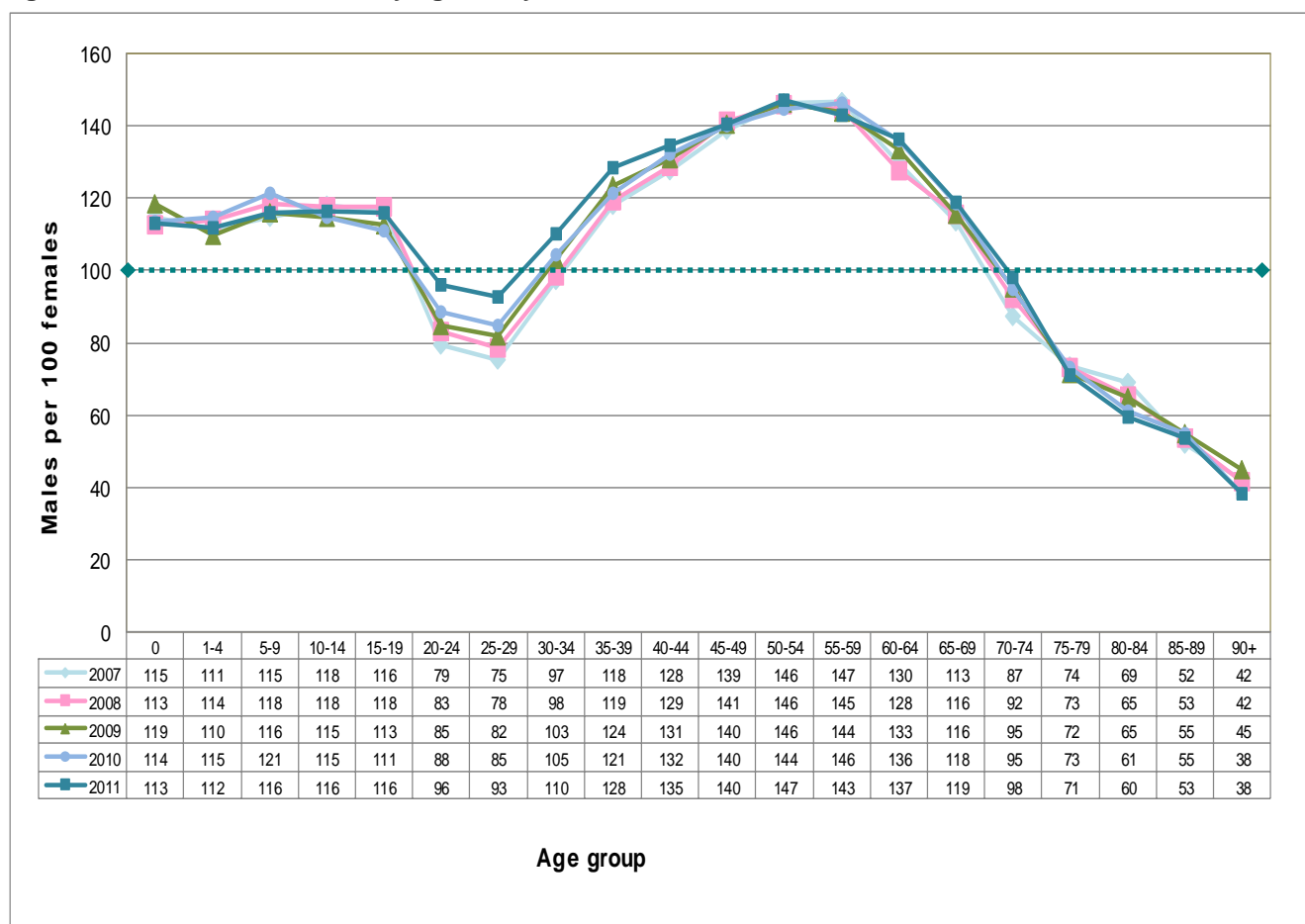
Sex ratios by age

The sex ratio at death measures the ratio of male deaths to female deaths. When there are equal number of deaths among males and females the ratio is equal to 100, if there are more female deaths than males the ratio is less than 100.

In 2011, the overall sex ratio at death was 107 male deaths per 100 female deaths, indicating slightly more male deaths than female deaths (refer to Appendix G). Over the years, the sex ratios at death decreased notably from 127 male deaths per 100 female deaths in 1997 to 107 male deaths per 100 female deaths in 2011. Over the 15-year period (1997–2011), sex ratios declined from 1997 to 2005 and increased thereafter.

For the period 2007 to 2011, Figure 3.7 shows that there were more male deaths than female deaths from age groups 0–4 up to 15–19, after which there were more female deaths from age group 20–24 to age group 25–29. Male deaths exceeded female deaths again from age group 35–39 up to age group 65–69, after which there were more female deaths from age group 70–74 up to 90 years and older.

Sex ratios at death particularly increased at ages 20–24 and 25–29 between 2007 and 2011. For example, the sex ratio at death for those who died at ages 20–24 in 2007 was 79 male deaths per 100 female deaths. It increased to 96 male deaths per 100 female deaths in 2011. This is an indication that there was an improvement in female mortality in these ages over time.

Figure 3.7: Sex ratio at death by age and year of death, 2007–2011*

* (1) Excluding deaths with unspecified sex: (998 in 2007; 841 in 2008; 1 147 in 2009; 1 166 in 2010; and 1 997 deaths in 2011).

(2) Data for 2007–2010 have been updated to include late registrations processed in 2013.

3.5 Population group differences in mortality

Table 3.2 shows the absolute number and percentage distribution of deaths by population group for 2011. The highest proportion of deaths was for black Africans (67,4%) and the lowest was for Indian/Asian (1,6%). About 7,7% of the deaths were from the coloured population group and 5,3% from the white population group. The reporting of population group was not good as 17,9% of the information on population group was unspecified or unknown on the death notification forms. As such, caution should be exercised when interpreting the results.

Table 3.2: Number and percentage distribution of deaths by population group, 2011

| Population group | Number | Percentage |
|------------------------|----------------|--------------|
| Black African | 340 728 | 67,4 |
| Coloured | 39 037 | 7,7 |
| Indian/Asian | 7 924 | 1,6 |
| White | 26 724 | 5,3 |
| Other | 891 | 0,2 |
| Unknown or unspecified | 90 499 | 17,9 |
| Total | 505 803 | 100,0 |

3.6 Marital status differences in mortality

Table 3.3 shows the distribution of deaths by marital status in 2011. Almost half of the registered deaths in 2011 occurred among people who were never married (49,2%), followed by people who were married (23,2%). Deaths among the widowed persons were at 9,4% and the lowest percentage was among those who were divorced 1,8%. The marital status of the deceased at the time of death was unknown or unspecified in 16,4% of the deaths.

Table 3.3: Number and percentage distribution of deaths by marital status, 2011

| Marital status | Number | Percentage |
|------------------------|----------------|--------------|
| Never married | 248 901 | 49,2 |
| Married | 117 413 | 23,2 |
| Widowed | 47 398 | 9,4 |
| Divorced | 8 902 | 1,8 |
| Unknown or unspecified | 83 189 | 16,4 |
| Total | 505 803 | 100,0 |

3.7 Differences in mortality by smoking status

The distribution of deaths by smoking status in 2011 is presented in Table 3.4. The results show that 15,4% of the deceased were smoking and 34,8% deaths occurred amongst people who were non-smokers. This also shows poor reporting of this information on the death notification forms. The proportion of deaths with unknown/unspecified smoking status was 44,7%. This declined notably in comparison to 2010 where the proportion was 53,6%.

Table 3.4: Number and percentage distribution of deaths by smoking status among those aged 16 years and older, 2011

| Smoking status | Frequency | Percentage |
|------------------------|----------------|--------------|
| Yes | 70 572 | 15,4 |
| No | 159 117 | 34,8 |
| Do not know | 23 165 | 5,1 |
| Unknown or unspecified | 204 550 | 44,7 |
| Total | 457 404 | 100,0 |

3.8 Differences in mortality by place or institution of death occurrence

The distribution of deaths by place or institution of death occurrence for 2011 is shown in Table 3.5. The highest proportion of deaths (46,3%) occurred within a health care facility. This includes hospitals (42,6%); ER or outpatient (1,5%) and nursing homes (2,2%). This was followed by 26,0% of deaths that occurred at home and 1,9% of deaths that occurred upon arrival at a hospital. About 22,8% of the deaths had an unknown or unspecified institution of death.

Table 3.5: Number and percentage distribution of deaths by place or institution of death occurrence, 2011

| Place of death | Number | Percentage |
|------------------------|----------------|--------------|
| Hospital | 215 324 | 42,6 |
| Home | 131 332 | 26,0 |
| Nursing home | 11 274 | 2,2 |
| Dead on arrival | 9 761 | 1,9 |
| ER or outpatient | 7 785 | 1,5 |
| Other | 14 899 | 2,9 |
| Unknown or unspecified | 115 428 | 22,8 |
| Total | 505 803 | 100,0 |

3.9 Geographic variations in mortality

This section provides information on the distribution of deaths by provinces and districts where the death occurred as well as the deceased's usual place of residence. The information on district and province was derived based on the 2011 municipal boundaries. The number and the percentage distribution of deaths by province of death occurrence and province of usual residence of the deceased are provided in Appendix H and H1 respectively. Appendix I and I1 present the number and percentage distribution of deaths at provincial and district municipality levels by age, while the sex distribution is provided in Appendix J.

3.9.1 Differences by province, age and sex

Table 3.6 shows the distribution of deaths by province of death occurrence and province of usual residence of the deceased in 2011. With regard to province of death occurrence, KwaZulu-Natal had the highest proportion of deaths (20,7%), followed by Gauteng at 19,9% and then Eastern Cape at 14,4%. The lowest proportion of deaths were in Northern Cape (2,9%). There were 806 (0,2%) people whose deaths occurred outside South Africa. Similar patterns were observed for the deaths by province of usual residence of the deceased with KwaZulu-Natal having the highest proportion (19,9%) of people who died in the province of their usual residence, followed by Gauteng at 18,9% and Eastern Cape at 13,1%.

A cross tabulation of province of death occurrence and province of usual residence of the deceased (refer to Appendix H and H1) show that the majority of deaths occurred in the province of usual residence. For all the provinces, over 80% of deaths occurred within the province of usual residence, with Free State having the highest percentage (93,2%), followed by KwaZulu-Natal (92,0%). The highest proportion of people who died outside South Africa (28,9%) were residing mostly in Gauteng.

Subsequent analysis on geography focuses only on place of death occurrence, not on place of residence or place of birth of the deceased. The information on place of residence of the deceased, as well as their place of birth is available on request from Stats SA.

Table 3.6: Distribution of deaths by province of death occurrence and province of usual residence of the deceased, 2011

| Province | Province of death occurrence | | Province of usual residence of deceased | |
|---------------|------------------------------|--------------|---|--------------|
| | Number | Percentage | Number | Percentage |
| Western Cape | 45 743 | 9,0 | 43 317 | 8,6 |
| Eastern Cape | 73 035 | 14,4 | 66 447 | 13,1 |
| Northern Cape | 14 718 | 2,9 | 14 432 | 2,9 |
| Free State | 40 635 | 8,0 | 39 758 | 7,9 |
| KwaZulu-Natal | 104 652 | 20,7 | 100 879 | 19,9 |
| North West | 37 555 | 7,4 | 35 549 | 7,0 |
| Gauteng | 100 751 | 19,9 | 95 645 | 18,9 |
| Mpumalanga | 38 037 | 7,5 | 38 332 | 7,6 |
| Limpopo | 47 347 | 9,4 | 45 446 | 9,0 |
| Foreign | 806 | 0,2 | 1 193 | 0,2 |
| Unspecified | 2 524 | 0,5 | 24 805 | 4,9 |
| Total | 505 803 | 100,0 | 505 803 | 100,0 |

Appendix I and I1 present the number and percentages of deaths by age, province and district municipality of death occurrence for 2011. North West had the highest proportion (7,8%) of deaths for children aged 0, whilst Limpopo had the highest percentage of deaths among children aged 1–4 (3,1%). KwaZulu-Natal had the highest proportion of deaths in ages 5–14. For the age group 15–49, Mpumalanga had the highest proportion of deaths (45,4%) and Western Cape had the highest proportion of deaths for age groups 50–54 and 65 years and older (23,5% and 38,4% respectively).

With regard to sex ratios, all provinces except for Limpopo had sex ratios that exceeded 100. Western Cape had the highest sex ratio with 118 male deaths per 100 female deaths, followed by North West at 115 male deaths per 100 female deaths (refer to Appendix J). This means that more males were dying in these provinces compared to females. Limpopo had a sex ratio of 99 male deaths per 100 female deaths, thus indicating that there were slightly more female deaths compared to male deaths.

3.9.2 Differences by district municipality, age and sex

According to Appendix I, five metros had the highest number of deaths in the following order: City of Johannesburg (29 469), eThekweni (27 536), Ekurhuleni (26 724), City of Cape Town (26 466) and City of Tshwane (19 574). Three of these metros were in Gauteng, one in KwaZulu-Natal and one in the Western Cape. Of these five metros, Appendix I1 illustrates that more than 35% of deaths occurred in the 15–49 year age group except in Cape Town, where these deaths were amongst age group 65 years and older. Districts with the lowest number of deaths were found in Central Karoo and Namakwa, 871 and 1 078 respectively. In these two districts, children less than 15 years contributed to the low number of deaths comprising 6,2% of deaths in Central Karoo and 5,8% of deaths in Namakwa.

Percentage distributions by district show that Dr Ruth Segomotsi Mompati had the highest proportion of deaths (8,9%) for children aged 0. Among children aged 1–4, Vhembe district had the highest proportion of deaths (3,5%), whilst in ages 5–14 these were highest in Zululand (3,6%). Ehlanzeni district had the highest proportion of deaths in age group 15–49 (46,8%) and West Coast had the highest proportion of deaths for age group 50–54 (26,3%). In the oldest age group (65 years and older), the largest proportion of deaths were observed in Namakwa district (43,8%).

Further comparison of district information by sex shows that out of the 52 districts: ten districts had a sex ratio at death less than 100; one district had a sex ratio of 100 and 41 districts had a sex ratio exceeding 100. The districts

where female deaths were more than male deaths (sex ratio of less than 100) ranged from a sex ratio of 94 male deaths per 100 female deaths (Greater Sekhukhune) to 98 male deaths per 100 female deaths (Thabo Mofutsanyane). Of the 41 districts with a sex ratio of more than 100, these ranged from 101 male deaths per 100 female deaths (Chris Hani and Ehlanzeni district municipalities) to 130 male deaths per 100 female deaths (Overberg district municipality). It is also worth noting that for deaths which occurred outside South Africa, the sex ratio was 191 male deaths per 100 female deaths, showing that male deaths were almost twice the number of female deaths.

4. Causes of death

4.1 Introduction

This section presents information on causes of death for deaths that occurred in 2011 and were registered at the Department of Home Affairs (DHA). The information on causes of death provided is as recorded on death notification forms completed by medical practitioners and other certifying officials. Causes of death data in this publication are classified using the 10th revision of the International Classification of Diseases (ICD-10). The ICD, which is recommended by the World Health Organization (WHO), is mainly intended for the classification of diseases and injuries with a formal diagnosis. This allows for the systematic recording, analysis, interpretation and comparison of mortality and morbidity data collected in different countries at different times.

The information on causes of death is based mainly on the underlying causes of death. It is provided according to the 19 main groups (chapters) of the classification of death and broad age groups. Due to concerns over South Africa's levels of violence and deaths due to accidents, underlying causes of death are further divided into two groups: natural and non-natural causes of death. Non-natural causes of death cover all deaths that were not attributable, or may not have been attributable to natural causes. In terms of the Inquest Act, 1959 (Act No. 58 of 1959), these deaths are subjected to medico-legal investigation. An autopsy must be performed to establish the cause of death, and an inquest is compulsory. The results of the inquest are then sent to the Department of Home Affairs (DHA), which issues the final death certificate.

Analyses carried out in this section include describing causes of death by age, sex and province of occurrence. The causes of death are classified by main groups; natural and non-natural causes; and broad groups. Trend analysis for the period 1997–2011 was also done to establish patterns between the natural and non-natural causes of death. The last subsection provides a comparison of underlying, immediate and contributing causes of death. This analysis gives an overview of the recorded instances of multiple causes of death.

4.2 Reported causes of death

Information on diseases, injuries or complications that caused death is provided on the death notification form when a death is registered at the DHA. Forms BI-1663 and DHA-1663 were used to compile this statistical release. In both the forms, provision is made for a certifying official to record one or more causes on the death notification form.

Table 4.1 shows the number of causes of death reported on death notification forms for deaths that occurred in 2011. A total of 3 107 (0,6%) forms had no information provided for the cause of death. These were cases where causes of death were not specified on the form, where the deaths was still under investigation; where a doctor indicated that they were not in a position to certify; where a traditional leader completed a death report form; or where pages with causes of death information were missing.

ICD-10 codes R99 (*other ill-defined and unspecified causes of mortality*) and P96 (*other conditions originating in the perinatal period*) were used to code these deaths depending on the age of the deceased. Almost 58,7% of the death notification forms had one cause of death recorded on the death notification form and 25,7% had two causes of death recorded. About 10,9% of the forms had three causes and a total of 4,0% had four or more causes.

Table 4.1: Distribution of death notification forms by the number of causes entered on the form, 2011

| Number of reported causes of death | Number of death notification forms | Percentage |
|------------------------------------|------------------------------------|--------------|
| No cause | 3 107 | 0,6 |
| One cause | 296 963 | 58,7 |
| Two causes | 130 019 | 25,7 |
| Three causes | 55 253 | 10,9 |
| Four causes | 16 298 | 3,2 |
| Five causes | 4 099 | 0,8 |
| Six causes | 64 | 0,0 |
| Total | 505 803 | 100,0 |

4.3 Method of ascertaining the cause of death

The Births and Deaths Registration Act, 1992 (Act No. 51 of 1992) requires that all deaths be certified by a medical practitioner who must issue a prescribed certificate stating the cause of death. The DHA uses a death notification form which makes provision for a certifying official to indicate the method that was used to ascertain the cause of death. The BI-1663 form has five options to choose from for method used to ascertain cause of death with the sixth option being other. When the form was revised in 2009 as DHA-1663, one more option was added on the DHA-1663 form, which is 'post mortem examination'. In the case of perinatal deaths, there are three options in the DHA-1663 form for method used to ascertain death (refer to Appendix B1 section G.2). The resulting categories after combining comparable information in form BI-1663 and DHA-1663 are provided in Table 4.2.

Causes of death ascertained by trained medical personnel accounted for a total of 42,2% (25,9% by opinion of the attending medical practitioner; 8,2% by opinion of attending medical practitioner on duty; and 8,1% by opinion of registered professional nurse) followed by post mortem examination (15,7%). Nearly 10% of causes of death were ascertained by autopsy (8,6%). There were 7,5% causes of death which were ascertained by conducting an interview with a family member of the deceased to establish the cause of death.

A cross tabulation for the method used to ascertain cause of death and type of underlying cause (whether it was a natural or non-natural cause) showed that 71,7% of the non-natural causes of death had their causes ascertained through autopsy compared to the 2,2% for natural deaths (results not included in the release). As for type of causes indicated as a natural cause, the highest method for ascertaining a cause of death was opinion of attending medical practitioner (25,9%).

Table 4.2: Number and percentage distribution of deaths by method used to ascertain the cause of death, 2011

| Method of ascertaining the cause of death | Frequency | Percentage |
|---|----------------|--------------|
| Autopsy | 43 276 | 8,6 |
| Post mortem examination | 79 293 | 15,7 |
| Opinion of attending medical practitioner | 130 914 | 25,9 |
| Opinion of attending medical practitioner on duty | 41 474 | 8,2 |
| Opinion of registered professional nurse | 41 027 | 8,1 |
| Interview of family member | 38 160 | 7,5 |
| Other | 7 158 | 1,4 |
| Autopsy results may be available later* | 43 | 0,0 |
| Autopsy not performed* | 865 | 0,2 |
| Unknown | 3 913 | 0,8 |
| Unspecified | 119 680 | 23,7 |
| Total | 505 803 | 100,0 |

* For perinatal deaths only.

4.4 Main groups of the underlying causes of death

The ICD-10 classifies diseases and related health problems into 22 chapters, 19 of which are used in the reporting of information on underlying causes of death (see Table 4.3). The following chapters are thus excluded in this report:

1. Chapter 19: Injury, poisoning and certain other consequences of external causes (S00-T98). These codes are used to classify causes of death in other causes but not in the underlying causes.
2. Chapter 21: Factors influencing health status and contact with health services (Z00-Z99). These are only used in morbidity coding.
3. Chapter 22: Codes for special purposes. These codes are used by WHO for the provisional assignment of new diseases of uncertain aetiology. U51 and U52 were used for coding *multidrug-resistant tuberculosis (MDR-TB)* and *extensively drug-resistant tuberculosis (XDR-TB)* in this release for individual causes of death but were both recoded to the broad group of *tuberculosis (A15-A19)* in the analyses.

Table 4.3 shows the percentage distribution of deaths by the 19 main groups (chapters) of the classification of causes of death. In 2011, *certain infections and parasitic diseases* were the most common main group of causes of death constituting 23,1% of all deaths. This group also includes 752 deaths due to *MDR-TB* and 164 deaths due to *XDR-TB*. These numbers have slightly declined in 2010 and 2011 with *MDR-TB* decreasing from 856 deaths in 2010 to 752 deaths in 2011 and deaths attributable to *XDR-TB* reduced from 171 in 2010 to 164 in 2011.

The second highest main group was *diseases of the circulatory system* (16,2%) and the third most frequent main group was *symptoms and signs not elsewhere classified* (13,6%), followed by *diseases of the respiratory system* (11,9%). The main group *external causes of morbidity and mortality* was at 9,1% and the rest of the other main groups made less than 10% contribution each to the main groups of underlying causes of death. The least common main groups were *diseases of the eye and adnexa* and *diseases of the ear and mastoid process* which were both less than 0,1%. The main group of *perinatal conditions* was 2,0% of all deaths and *pregnancy, childbirth and puerperium* was 0,2%.

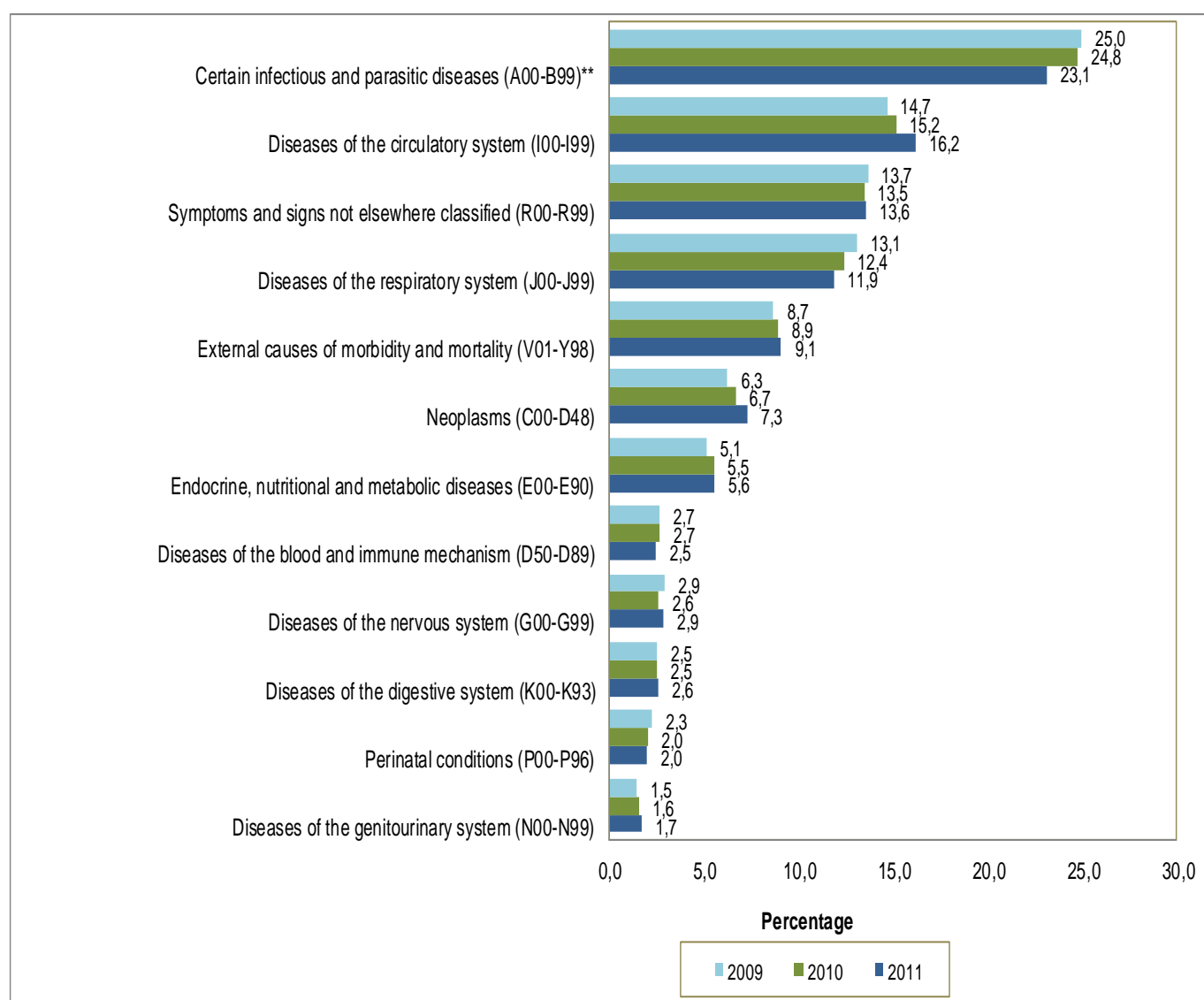
Table 4.3: Distribution of deaths by main groups of causes of death, 2011

| No. | Main groups of underlying causes of death (based on ICD-10) | Frequency | Percentage |
|--------------|---|----------------|--------------|
| 1. | Certain infectious and parasitic diseases (A00-B99)* | 117 071 | 23,1 |
| 2. | Neoplasms (C00-D48) | 36 877 | 7,3 |
| 3. | Diseases of the blood and immune mechanism (D50-D89) | 14 499 | 2,9 |
| 4. | Endocrine, nutritional and metabolic diseases (E00-E90) | 28 141 | 5,6 |
| 5. | Mental and behavioural disorders (F00-F99) | 1 731 | 0,3 |
| 6. | Diseases of the nervous system (G00-G99) | 12 499 | 2,5 |
| 7. | Diseases of the eye and adnexa (H00-H59) | 31 | 0,0 |
| 8. | Diseases of the ear and mastoid process (H60-H95) | 62 | 0,0 |
| 9. | Diseases of the circulatory system (I00-I99) | 82 058 | 16,2 |
| 10. | Diseases of the respiratory system (J00-J99) | 60 235 | 11,9 |
| 11. | Diseases of the digestive system (K00-K93) | 13 146 | 2,6 |
| 12. | Diseases of the skin and subcutaneous tissue (L00-L99) | 891 | 0,2 |
| 13. | Diseases of the musculoskeletal system etc. (M00-M99) | 1 790 | 0,4 |
| 14. | Diseases of the genitourinary system (N00-N99) | 8 715 | 1,7 |
| 15. | Pregnancy, childbirth and puerperium (O00-O99) | 1 250 | 0,2 |
| 16. | Perinatal conditions (P00-P96) | 10 149 | 2,0 |
| 17. | Congenital malformations (Q00-Q99) | 1 878 | 0,4 |
| 18. | Symptoms and signs not elsewhere classified (R00-R99) | 68 790 | 13,6 |
| 19. | External causes of morbidity and mortality (V01-Y98) | 45 990 | 9,1 |
| Total | | 505 803 | 100,0 |

*Including deaths due to MDR-TB and XDR-TB.

Trend analysis of deaths by main groups of causes of death is useful to measure the influence of the various main groups on deaths over time and provides a tool to measure public health interventions on some of the diseases.

Figure 4.1 shows the percentage distribution of deaths by selected main groups of causes of death and year of death occurrence from 2009 to 2011. *Certain infectious and parasitical diseases* main group was the most common group of causes of death at roughly 25% each year. However, there was a gradual decline in the proportion of deaths due to this main group over the three-year period from 25,0% in 2009 to 23,1% in 2011. *Diseases of the circulatory system* (the second most common main group) were on the increase from 14,7% in 2009 to 16,2% in 2011. *Diseases of the respiratory system* (the third most common group) decreased from 13,1% in 2009 to 11,9% in 2011. The ranking in the order of the most common to the least common main groups of cause of death has been almost the same for the three years, except for 2011 where *diseases of the digestive system* ranked higher than the *diseases of the nervous system*. Deaths due to *perinatal conditions* remained constant at around 2% during the three-year period.

Figure 4.1: Percentage distribution of deaths by main groups of causes of death, 2009–2011*

*Data for 2009 and 2010 have been updated to include late registrations processed in 2013.

**Including deaths due to MDR-TB and XDR-TB.

4.5 Natural and non-natural causes of death

Due to the high levels of violence and deaths attributed to accidents, natural and non-natural underlying causes of death are treated as separate groups. Non-natural causes of death comprise all deaths that were not attributable, or may not have been attributable to natural causes. All causes of death from chapter 1 to 18 of ICD-10 are classified as natural causes and chapter 19 as non-natural causes.

Table 4.4 shows the actual number of natural and non-natural deaths by year of death from 1997 to 2011. Throughout all the years, the numbers of deaths due to natural causes were higher than the number of deaths due to non-natural causes. Between 1997 and 2006, there was a consistent increase in the number of natural deaths, after which there was a decline. Further, one can see from the table that there has been an inconsistent pattern in the number of deaths due to non-natural causes up to 2007, but a steady decline since 2007.

Table 4.4: Number of natural and non-natural deaths by year of death, 1997–2011*

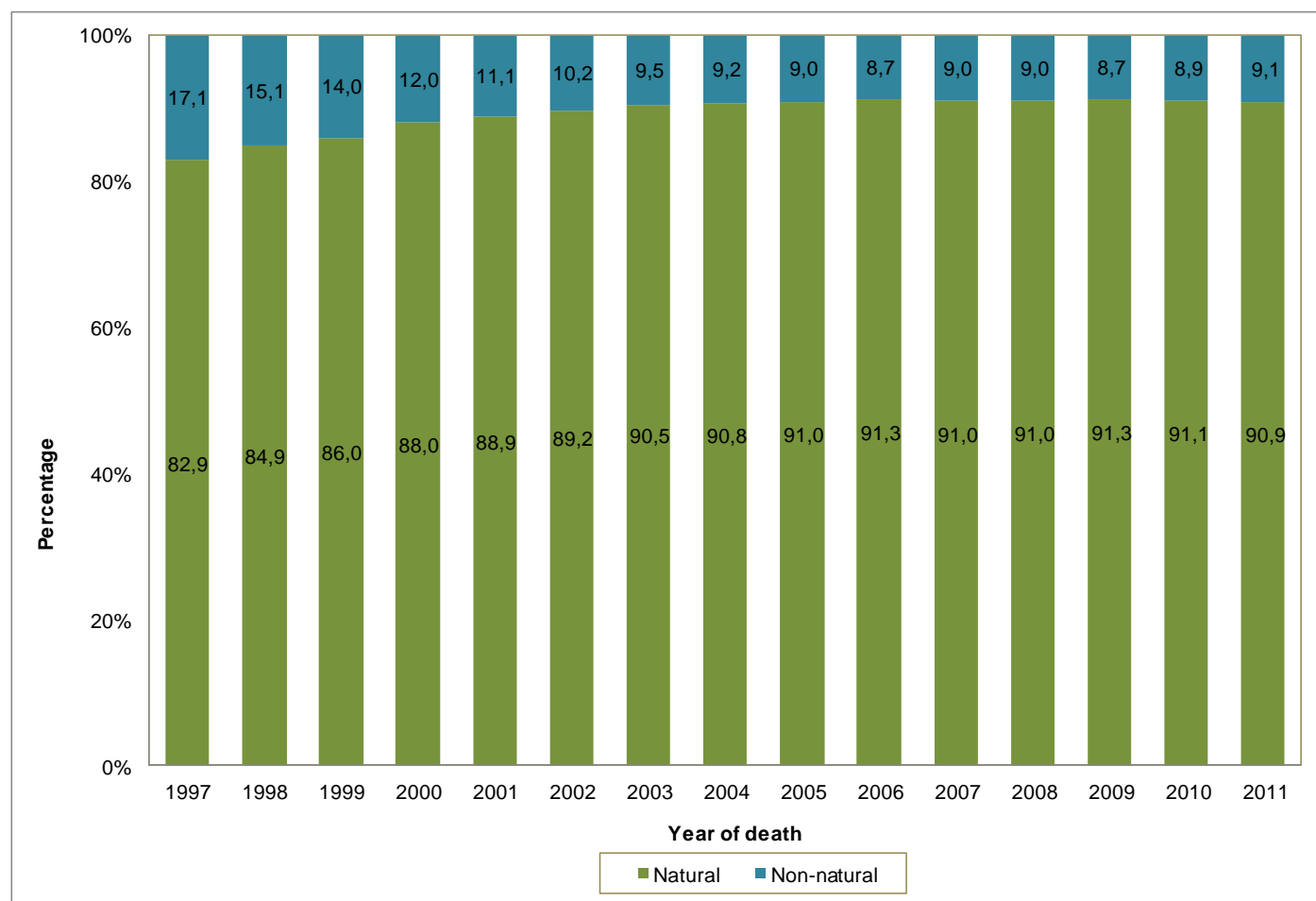
| Year of death | Number of natural deaths | Number of non-natural deaths | Total |
|---------------|--------------------------|------------------------------|---------|
| 1997 | 263 097 | 54 098 | 317 195 |
| 1998 | 310 799 | 55 110 | 365 909 |
| 1999 | 328 545 | 53 337 | 381 882 |
| 2000 | 366 653 | 49 789 | 416 442 |
| 2001 | 404 834 | 50 354 | 455 188 |
| 2002 | 450 884 | 51 486 | 502 370 |
| 2003 | 504 181 | 52 853 | 557 034 |
| 2004 | 523 716 | 53 368 | 577 084 |
| 2005 | 544 376 | 53 978 | 598 354 |
| 2006 | 559 892 | 53 236 | 613 128 |
| 2007 | 549 908 | 54 498 | 604 406 |
| 2008 | 542 325 | 53 356 | 595 681 |
| 2009 | 529 649 | 50 329 | 579 978 |
| 2010 | 498 886 | 48 838 | 547 724 |
| 2011 | 459 813 | 45 990 | 505 803 |

*Data for 1997–2010 have been updated to include late registrations processed in 2013.

Figure 4.2 shows the percentage distribution of natural and non-natural causes of death by year of death for the period 1997 to 2011. The percentage of deaths due to natural causes was consistently above 80% each year. The percentage of deaths due to natural causes increased from 82,9% in 1997 to 91,3% in 2006 and then remained generally stable around 91,0% between 2007 and 2008. In 2009, the percentage of deaths due to natural causes increased to 91,3%. Since then, the proportion of deaths due to natural causes has decreased slightly. In 2011, 90,9% of deaths were due to natural causes.

Conversely, during 1997–2011, the percentage of deaths due to non-natural causes decreased from 17,1% in 1997 to 9,1% in 2011. The lowest percentage of deaths due to non-natural causes was recorded in 2006 and in 2009 with deaths due to non-natural causes at 8,7% each year.

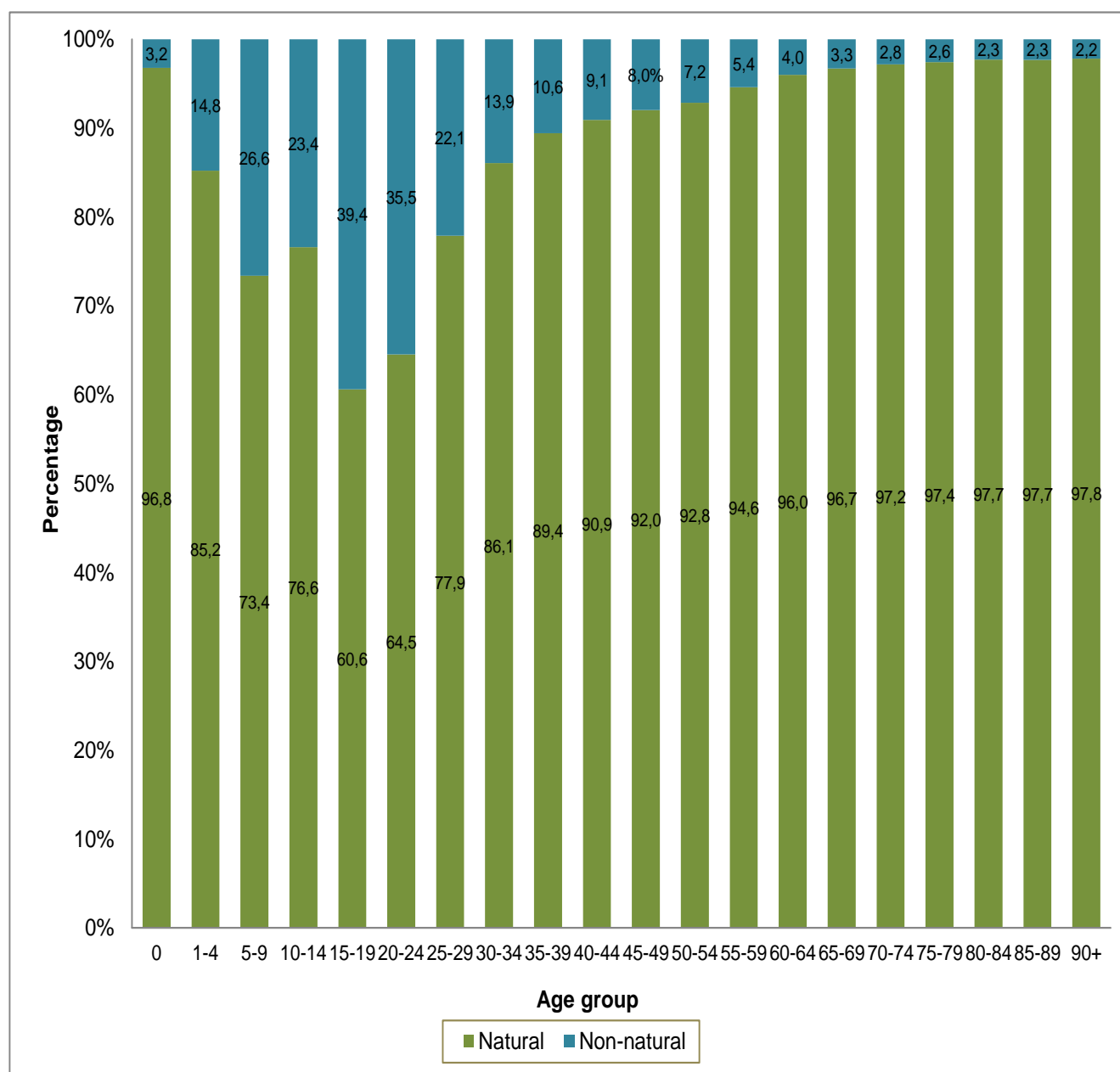
Figure 4.2: Percentage distribution of natural and non-natural causes of death by year of death, 1997–2011*



*Data for 1997–2010 have been updated to include late registrations processed in 2013.

Natural and non-natural causes of death by age

Figure 4.3 shows the percentage distribution of deaths due to natural and non-natural causes of death classified by age group for deaths that occurred in 2011. The pattern observed for both the natural and non-natural causes of death is that from age 0 to age group 5–9, the percentage of deaths attributed to natural causes decreased whilst the percentage of deaths due to non-natural causes increased with age for the same ages. From age group 15–19 years, the percentage of deaths due to non-natural causes decreased with age and the opposite was true for natural causes. The highest percentage of deaths due to natural causes was among those aged 0 (97,3%) and the highest percentage of deaths due to non-natural causes was for those in age group 15–19 (44,4%).

Figure 4.3: Percentage distribution of natural and non-natural causes of death by age, 2011*

* Excluding 2 401 deaths with unspecified age.

4.6 Underlying natural causes of death

This subsection presents information on the leading underlying natural causes of death. The ten leading causes are identified by ranking the causes of death by frequency among those eligible for ranking as described in Section 2. The ranking of the leading causes of death in this release excludes *symptoms, signs and abnormal findings, not elsewhere classified* as well as all non-natural deaths (*external causes of morbidity and mortality*). Non-natural causes will be discussed in the next subsection. The top-ranking causes determine the leading underlying natural causes of death.

Overall pattern of the leading underlying natural causes of death

Table 4.5 shows the ten leading underlying natural causes of death in South Africa for the years 2009–2011. Information for 2009 and 2010 were added in the analysis to show changes in the ten leading causes of death as well as the relative contribution of these causes to the total number of deaths. The table provides changes in the ten leading underlying causes of death by percentages and absolute numbers over the three-year period.

The distribution of deaths by all broad groups of causes of death ranked by frequency (including non-natural causes and *symptoms and signs not elsewhere classified*) for 2011 is shown in Appendix K while the breakdown of individual causes for the broad groups that were among the ten leading causes in 2011 is provided in Appendix L.

According to Table 4.5, *tuberculosis* was the leading cause of death in 2011 accounting for 10,7% of all deaths and was the leading cause of death over the 3-year period. *Influenza and pneumonia* also maintained its position as the second highest throughout the three-year period and accounted for 6,6% of all deaths in 2011. However, the actual number and proportion of deaths due to *tuberculosis* and *influenza and pneumonia* showed a decline over time. The percentage of deaths attributed to *tuberculosis* decreased from 12,0% in 2009 to 11,6% in 2010 and further to 10,7% in 2011. The percentage of deaths due to *influenza and pneumonia* decreased from 7,5% in 2009, then declined to 7,2% in 2010 and further to 6,6% in 2011.

Intestinal infectious diseases, which were ranked third in both 2009 (5,4%) and 2010 (5,0%), were overtaken by *cerebrovascular diseases* in 2011 (5,1%) to be the third leading causes of death. *Cerebrovascular diseases* moved from fifth place in 2009 (4,3%) and 2010 (4,5%) to third place in 2011. *Intestinal infectious diseases* were ranked sixth in 2011, accounting for 3,8% of all deaths. *Human immunodeficiency virus [HIV] disease* maintained the seventh position in the three-year period as well as *hypertensive diseases* which remained in the eighth position in the three-year period. Nine of the ten leading natural underlying causes of death were the same for the three years. The only exception was *certain disorders involving the immune mechanism* which moved out of the ten leading underlying causes of death and was replaced by *other viral diseases* in both 2010 and 2011, occupying the tenth and ninth ranking in 2010 and 2011, respectively.

Between 2010 and 2011, *intestinal infectious diseases* showed the greatest decline in the number of deaths (from 27 548 deaths in 2010 to 19 376 deaths in 2011), followed by declines observed for *influenza and pneumonia* (14,9%) and *tuberculosis* (14,5%). Among the ten leading causes the number of deaths increased only for *other viral diseases* (16,9%), *hypertensive diseases* (3,8%) and *cerebrovascular diseases* (3,7%).

Table 4.5: The ten leading underlying natural causes of death, 2009–2011*

| Causes of death (based on ICD-10) | 2009 | | | 2010 | | | 2011 | | |
|--|------|----------------|------------|------|----------------|------------|------|----------------|------------|
| | Rank | Number | % | Rank | Number | % | Rank | Number | % |
| Tuberculosis (A15-A19)** | 1 | 69 816 | 12,0 | 1 | 63 281 | 11,6 | 1 | 54 112 | 10,7 |
| Influenza and pneumonia (J09-J18) | 2 | 43 468 | 7,5 | 2 | 39 236 | 7,2 | 2 | 33 381 | 6,6 |
| Cerebrovascular diseases (I60-I69) | 5 | 25 065 | 4,3 | 5 | 24 816 | 4,5 | 3 | 25 732 | 5,1 |
| Other forms of heart disease (I30-I52) | 4 | 26 750 | 4,6 | 4 | 25 976 | 4,7 | 4 | 23 564 | 4,7 |
| Diabetes mellitus (E10-E14) | 6 | 20 687 | 3,6 | 6 | 21 612 | 3,9 | 5 | 20 171 | 4,0 |
| Intestinal infectious diseases (A00-A09) | 3 | 31 084 | 5,4 | 3 | 27 548 | 5 | 6 | 19 376 | 3,8 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 7 | 17 787 | 3,1 | 7 | 18 465 | 3,4 | 7 | 17 012 | 3,4 |
| Hypertensive diseases (I10-I15) | 8 | 15 489 | 2,7 | 8 | 14 961 | 2,7 | 8 | 15 529 | 3,1 |
| Other viral diseases (B25-B34) | ... | ... | ... | 10 | 12 453 | 2,3 | 9 | 14 557 | 2,9 |
| Chronic lower respiratory diseases (J40-J47) | 9 | 14 343 | 2,5 | 9 | 13 176 | 2,4 | 10 | 13 084 | 2,6 |
| Certain disorders involving the immune mechanism (D80-D89) | 10 | 13 259 | 2,3 | ... | ... | ... | ... | ... | ... |
| Other natural causes | | 251 901 | 43,4 | | 237 362 | 43,3 | | 223 295 | 44,1 |
| Non-natural causes | | 50 329 | 8,7 | | 48 838 | 8,9 | | 45 990 | 9,1 |
| All causes | | 579 978 | 100 | | 547 724 | 100 | | 505 803 | 100 |

*Data for 2009–2010 have been updated to include late registrations processed in 2013.

** Including deaths due to MDR-TB and XDR-TB.

.... Category not in top ten.

Leading underlying natural causes of death by sex

Table 4.6 presents the ten leading underlying causes of death by sex in 2011. The first two leading causes of death for both sexes were *tuberculosis* and *influenza and pneumonia*. *Tuberculosis* accounted for 11,8% of all male deaths and 9,5% of female deaths. *Influenza and pneumonia* accounted for 6,7% of deaths amongst female deaths and 6,5% of deaths amongst male deaths. *Other forms of heart disease* (4,1%) were the third leading cause of death for males, while the third leading cause of death for females was *cerebrovascular diseases* (6,2%). *HIV disease* was ranked sixth amongst males (3,2%) and eighth amongst females (3,6%).

Eight of the ten leading underlying causes of deaths were common amongst the two sexes. On the one hand, *chronic lower respiratory diseases* (3,0%) and *ischaemic heart diseases* (2,6%) were among the ten leading underlying causes of death for males, but not for females. On the other hand, *hypertensive diseases* (4,0%) and *certain disorders involving the immune mechanism* (2,4%) were among the top ten underlying causes of death for females but not for males. The ten leading causes of death contributed 44,3% of the total deaths amongst males and 50,1% among females.

Table 4.6: The ten leading underlying natural causes of death for males and females, 2011*

| Causes of death (based on ICD-10) | Male | | | Female | | |
|--|------|----------------|------------|--------|----------------|------------|
| | Rank | Number | % | Rank | Number | % |
| Tuberculosis (A15-A19)** | 1 | 30 807 | 11,8 | 1 | 23 112 | 9,5 |
| Influenza and pneumonia (J09-J18) | 2 | 16 955 | 6,5 | 2 | 16 300 | 6,7 |
| Other forms of heart disease (I30-I52) | 3 | 10 796 | 4,1 | 4 | 12 731 | 5,2 |
| Cerebrovascular diseases (I60-I69) | 4 | 10 715 | 4,1 | 3 | 14 983 | 6,2 |
| Intestinal infectious diseases (A00-A09) | 5 | 9 147 | 3,5 | 6 | 10 132 | 4,2 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 6 | 8 255 | 3,2 | 8 | 8 702 | 3,6 |
| Diabetes mellitus (E10-E14) | 7 | 8 014 | 3,1 | 5 | 12 139 | 5 |
| Chronic lower respiratory diseases (J40-J47) | 8 | 7 812 | 3 | ... | ... | ... |
| Ischaemic heart diseases (I20-I25) | 9 | 6 891 | 2,6 | ... | ... | ... |
| Other viral diseases (B25-B34) | 10 | 6 590 | 2,5 | 9 | 7 914 | 3,3 |
| Hypertensive diseases (I10-I15) | ... | ... | ... | 7 | 9 634 | 4 |
| Certain disorders involving the immune mechanism (D80-D89) | ... | ... | ... | 10 | 5 728 | 2,4 |
| Other natural causes | | 110 014 | 42,2 | | 110 808 | 45,6 |
| Non-natural causes | | 34 573 | 13,3 | | 11 054 | 4,5 |
| All causes | | 260 569 | 100 | | 243 237 | 100 |

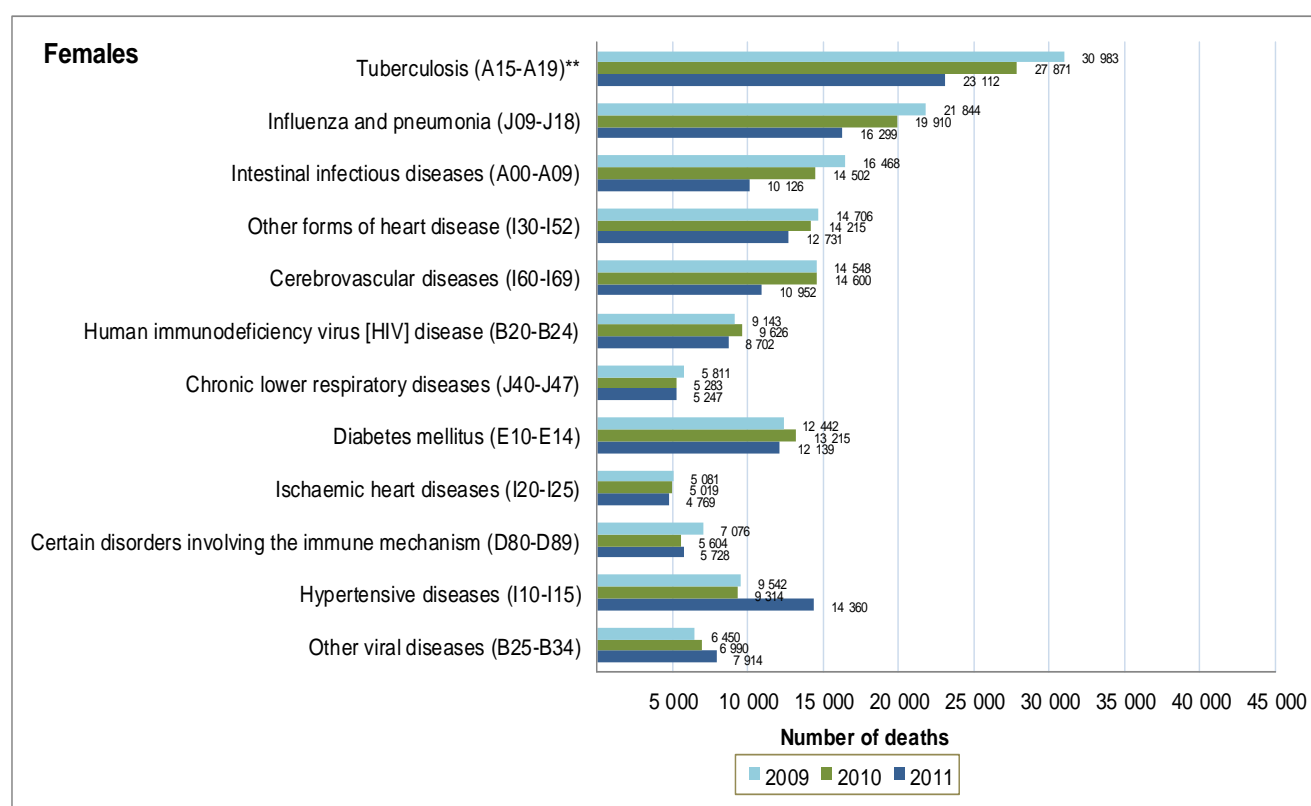
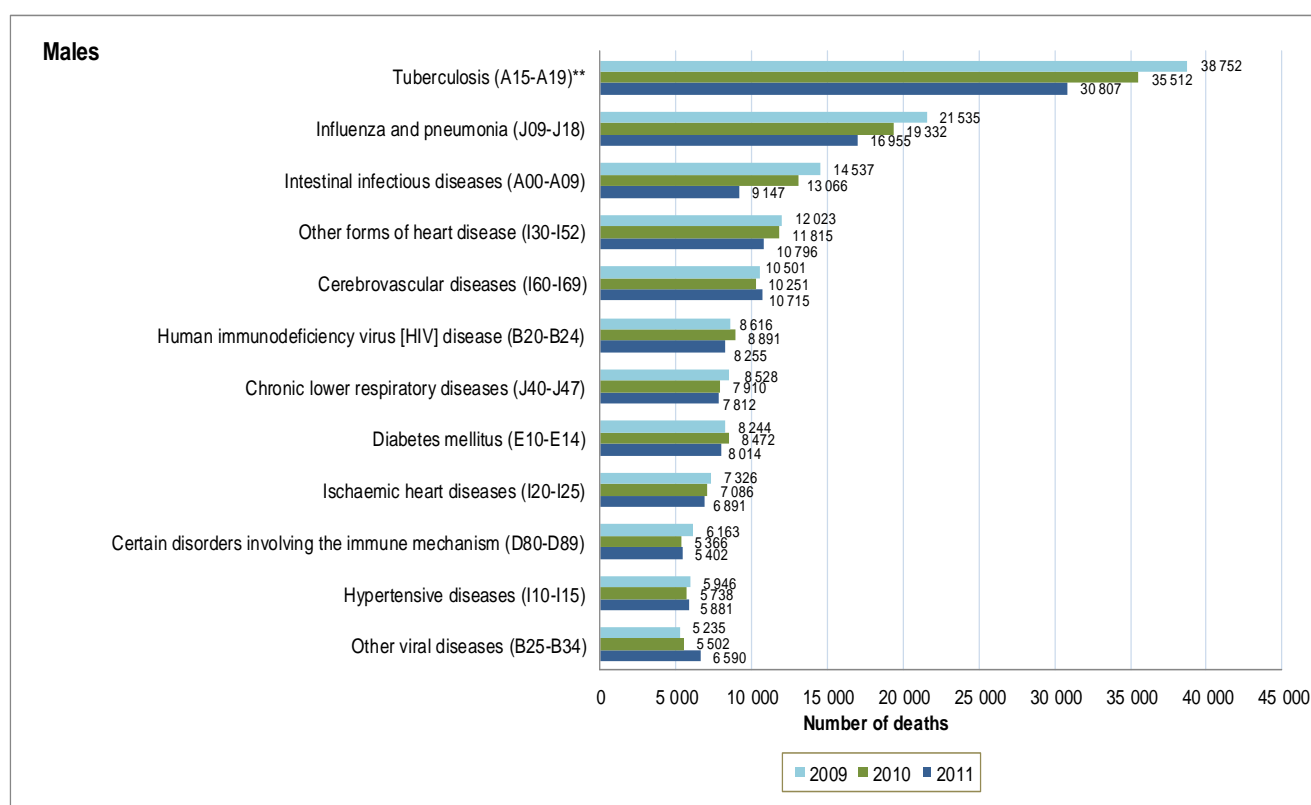
*Excluding 1 997 cases with unspecified sex.

**Including deaths due to *MDR-TB* and *XDR-TB*.

...Category not in top ten.

Figure 4.4 shows the ten leading causes of death classified by sex for a three-year period (2009–2011). Over this period, *tuberculosis* remained the leading cause of death for both males and females. However, the number of male deaths attributed to *tuberculosis* always out-number female deaths due to this cause. *Influenza and pneumonia* was the second leading underlying cause of death for both males and females with roughly the same number of deaths due to the diseases for both sexes each year. *Intestinal infectious diseases* were the third leading cause of death for males in 2010 and moved to fifth place in 2011, and it was in the fourth position for females in 2010 and moved to sixth in 2011. It can also be seen from Figure 4.4 that deaths due to *other viral diseases* were on the increase for both males and females. Deaths due to this underlying cause were 5 235 in 2009, increasing to 5 502 deaths in 2010 and 6 590 deaths in 2011.

Further examination of the trends in the three-year period shows that there was a drop in the number of deaths due to *tuberculosis*, *influenza and pneumonia*, *intestinal infectious disease* and *other forms of heart disease* for males and females. However, there was a noticeable increase in the number of deaths due to *other viral diseases*.

Figure 4.4: Distribution of deaths for the leading causes of death by year of death and sex, 2009–2011*

*Data for 2009–2010 have been updated to include late registrations processed in 2013.

** Including deaths due to MDR-TB and XDR-TB.

Leading underlying natural causes of death by age

Table 4.7 shows the ten leading underlying natural causes of death for broad age groups (0–14, 15–49, 50–64, and 65 years and older) for 2011. For each of these age groups, *intestinal infectious diseases*, *influenza and pneumonia* and *tuberculosis* were among the ten leading causes of death. However, the ranking of these causes varied greatly by age. For example, deaths due to *intestinal infectious diseases* were the first leading cause of death for age group 0–14 (13,6%) , sixth for age group 15–49 (3,6%) and tenth leading cause of death for both age groups 50–64 (2,5%) and 65 years and older (2,1%).

For age group 0–14, *influenza and pneumonia* was the second leading underlying cause of death responsible for 10,4% of deaths. *Respiratory and cardiovascular disorders specific to the perinatal period*, *other disorders originating in the perinatal period*, *malnutrition*, *disorders related to length of gestation and fetal growth* and *infections specific to the perinatal period* were on the ten leading underlying causes of death only for age group 0–14 and were ranked third, fourth, fifth, seventh and eighth respectively. *Other acute lower respiratory infections*, *other disorders originating in the perinatal period*, *malnutrition*, *other viral diseases* and *disorders related to length of gestation and fetal growth* were each responsible for less than 5% of deaths in the age group 0–14.

Tuberculosis was the first leading underlying cause of death for age group 15–49 (18,1%) followed by *influenza and pneumonia* (7,3%). The leading underlying cause of death for age group 50–64 was *tuberculosis* responsible for 10,6% of deaths in this age group. *Human immunodeficiency virus [HIV] disease* was the third leading underlying cause of death for this age group responsible for 6,6% of deaths. This was the only age group where this disease was among the ten leading underlying causes of death. Other underlying causes of death which affected this group only were *certain disorders involving the immune mechanism* (4,2%), ranked fifth and *inflammatory diseases of the central nervous system* (2,0%) ranked eighth.

The second leading underlying cause of death in this age group was *diabetes mellitus* (6,4%) followed by *cerebrovascular diseases* (6,2%). For the age group 65 years and older, the first leading underlying cause of death was *cerebrovascular diseases* (10,6%), followed by *other forms of heart disease* (8,4%). *Tuberculosis* was ranked eighth (3,2%).

For age groups 50–64 and 65 years and older, the ten leading underlying causes of death were the same with the difference only in the rankings. The only underlying cause of death which had the same ranking amongst the two groups was *intestinal infectious diseases* which were ranked tenth in both groups. *Cerebrovascular diseases*, *diabetes mellitus*, *hypertensive diseases*, *chronic lower respiratory diseases*, *ischaemic heart diseases* and *malignant neoplasm of digestive organs* were amongst the ten leading underlying causes of death for only age groups 60–64 and 65 years and older. This gives an indication that these diseases were dominant amongst the elderly.

Other acute lower respiratory infections, *other disorders originating in the perinatal period*, *malnutrition*, *other viral diseases* and *disorders related to length of gestation and fetal growth* were each responsible for less than 5% of deaths in the age group 0–14.

Table 4.7: The ten leading underlying natural causes of death for broad age groups, 2011

| Causes of death (based on ICD-10) | 0-14 | | | 15-49 | | | 50-64 | | | 65+ | | |
|---|------|---------------|--------------|-------|----------------|--------------|-------|----------------|--------------|------|----------------|--------------|
| | Rank | Number | % | Rank | Number | % | Rank | Number | % | Rank | Number | % |
| Intestinal infectious diseases (A00-A09) | 1 | 6 250 | 13,6 | 6 | 7 248 | 3,6 | 10 | 2 638 | 2,5 | 10 | 3 186 | 2,1 |
| Influenza and pneumonia (J09-J18) | 2 | 4 771 | 10,4 | 2 | 14 759 | 7,3 | 4 | 5 919 | 5,7 | 5 | 7 822 | 5,2 |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 3 | 4 072 | 8,8 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other disorders originating in the perinatal period (P90-P96) | 4 | 1 562 | 3,4 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Malnutrition (E40-E46) | 5 | 1 503 | 3,3 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tuberculosis (A15-A19)* | 6 | 1 426 | 3,1 | 1 | 36 728 | 18,1 | 1 | 10 983 | 10,6 | 8 | 4 771 | 3,2 |
| Disorders related to length of gestation and fetal growth (P05-P08) | 7 | 1340 | 2,9 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Infections specific to the perinatal period (P35-P39) | 8 | 1090 | 2,4 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other viral diseases (B25-B34) | 9 | 830 | 1,8 | 4 | 11226 | 5,5 | ... | ... | ... | ... | ... | ... |
| Other acute lower respiratory infections (J20-J22) | 10 | 800 | 1,7 | 10 | 3053 | 1,5 | ... | ... | ... | ... | ... | ... |
| Human immunodeficiency virus [HIV] disease (B20-B24) | ... | ... | ... | 3 | 13431 | 6,6 | ... | ... | ... | ... | ... | ... |
| Certain disorders involving the immune mechanism (D80-D89) | ... | ... | ... | 5 | 8473 | 4,2 | ... | ... | ... | ... | ... | ... |
| Other forms of heart disease (I30-I52) | ... | ... | ... | 7 | 4 838 | 2,4 | 5 | 5 534 | 5,3 | 2 | 12 632 | 8,4 |
| Inflammatory diseases of the central nervous system (G00-G09) | ... | ... | ... | 8 | 4133 | 2,0 | ... | ... | ... | ... | ... | ... |
| Cerebrovascular diseases (I60-I69) | ... | ... | ... | 9 | 3 295 | 1,6 | 3 | 6 429 | 6,2 | 1 | 15 867 | 10,6 |
| Diabetes mellitus (E10-E14) | ... | ... | ... | ... | ... | ... | 2 | 6 648 | 6,4 | 3 | 11 026 | 7,3 |
| Hypertensive diseases (I10-I15) | ... | ... | ... | ... | ... | ... | 7 | 3 947 | 3,8 | 4 | 9 931 | 6,6 |
| Chronic lower respiratory diseases (J40-J47) | ... | ... | ... | ... | ... | ... | 6 | 4 104 | 3,9 | 7 | 6 801 | 4,5 |
| Ischaemic heart diseases (I20-I25) | ... | ... | ... | ... | ... | ... | 8 | 3 326 | 3,2 | 6 | 7 035 | 4,7 |
| Malignant neoplasm of digestive organs (C15-C26) | ... | ... | ... | ... | ... | ... | 9 | 3 293 | 3,2 | 9 | 4 627 | 3,1 |
| Other natural causes | | 17 989 | 39,1 | | 64 597 | 31,8 | | 45 357 | 43,6 | | 62 673 | 41,7 |
| Non-natural causes | | 4 412 | 9,6 | | 31 277 | 15,4 | | 5 739 | 5,5 | | 4 011 | 2,7 |
| All causes | | 46 045 | 100,0 | | 203 058 | 100,0 | | 103 917 | 100,0 | | 150 382 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

... Category not in top ten.

Leading underlying natural causes of death for infants and children

The ten leading causes of death for neonatal deaths (less than 29 days), post-neonatal deaths (29 days to 11 months), all infant deaths (aged less than one year), and deaths among those aged 1–4 years are shown in Table 4.8. Infant deaths are composed of both neonatal and post-neonatal deaths.

There was a total of 11 002 neonatal deaths in 2011. Deaths due to *respiratory and cardiovascular disorders specific to the perinatal period* maintained their position as the first leading underlying cause of death amongst neonates, accounting for 36,8% of all deaths in 2011. *Other disorders originating in the perinatal period* ranked second contributing 14,1% of deaths among neonates. Neonatal deaths mainly resulted from the main groups of *conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities*. The ten leading underlying causes of death during the neonatal period constituted 90,3% of deaths in this age.

The leading underlying cause of death for those who died during the post-neonatal period was *intestinal infectious diseases* which accounted for 21,7% of deaths, followed by *influenza and pneumonia* which was responsible for 17,8% of deaths. The third leading underlying cause of death was *malnutrition* (4,7%) followed by *other acute lower respiratory infections* (3,1%). *Tuberculosis* was ranked eighth accounting for 1,9% of deaths and *HIV disease* (1,4%) occupied the tenth position.

Among infants the first leading underlying cause of deaths was *respiratory and cardiovascular disorders specific to the perinatal period* (14,6%). *Intestinal infectious diseases* (14,1%) were ranked second. These two underlying causes of death also occupied the first two ranks in the top ten leading underlying causes of death in 2010, but with a difference in the ranking.

For the age group 1–4 years, the leading underlying cause of death was *intestinal infectious diseases* (17,6%). *Influenza and pneumonia* was ranked second, accounting for 11,5% of deaths. The third leading underlying cause of death was *malnutrition* (6,7%), followed by *tuberculosis* (4,5%). *HIV disease* was ranked tenth (1,4%).

Table 4.8: The ten leading underlying natural causes of death for infants and children, 2011

| Causes of death (based on ICD-10) | Neonatal (0-28 days) | | | Post-neonatal (29 days to 11 months) | | | Infants (Less than 1 year) | | | 1-4 years | | |
|---|-------------------------|---------------|--------------|---|---------------|--------------|-------------------------------|---------------|--------------|-----------|--------------|--------------|
| | Rank | Number | % | Rank | Number | % | Rank | Number | % | Rank | Number | % |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1 | 4 049 | 36,8 | ... | ... | ... | 1 | 4 072 | 14,6 | ... | ... | ... |
| Other disorders originating in the perinatal period (P90-P96) | 2 | 1 555 | 14,1 | ... | ... | ... | 4 | 1 562 | 5,6 | ... | ... | ... |
| Disorders related to length of gestation and fetal growth (P05-P08) | 3 | 1 210 | 11,0 | ... | ... | ... | 5 | 1 337 | 4,8 | ... | ... | ... |
| Infections specific to the perinatal period (P35-P39) | 4 | 1 060 | 9,6 | ... | ... | ... | 6 | 1 090 | 3,9 | ... | ... | ... |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 5 | 733 | 6,7 | ... | ... | ... | 8 | 736 | 2,6 | ... | ... | ... |
| Haemorrhagic and haematological disorders of fetus and newborn (P50-P61) | 6 | 410 | 3,7 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Intestinal infectious diseases (A00-A09) | 7 | 268 | 2,4 | 1 | 3 686 | 21,7 | 2 | 3 954 | 14,1 | 1 | 1 748 | 17,6 |
| Other congenital malformations (Q80-Q89) | 8 | 244 | 2,2 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Digestive system disorders of fetus and newborn (P75-P78) | 9 | 236 | 2,1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Congenital malformations of the circulatory system (Q20-Q28) | 10 | 162 | 1,5 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Influenza and pneumonia (J09-J18) | ... | ... | ... | 2 | 3 024 | 17,8 | 3 | 3 025 | 10,8 | 2 | 1 141 | 11,5 |
| Malnutrition (E40-E46) | ... | ... | ... | 3 | 799 | 4,7 | 7 | 802 | 2,9 | 3 | 666 | 6,7 |
| Other acute lower respiratory infections (J20-J22) | ... | ... | ... | 4 | 530 | 3,1 | 9 | 553 | 2,0 | 6 | 169 | 1,7 |
| Other bacterial diseases (A30-A49) | ... | ... | ... | 5 | 475 | 2,8 | 10 | 478 | 1,7 | 9 | 147 | 1,5 |
| Other diseases of the respiratory system (J95-J99) | ... | ... | ... | 6 | 353 | 2,1 | ... | ... | ... | ... | ... | ... |
| Other viral diseases (B25-B34) | ... | ... | ... | 7 | 345 | 2,0 | ... | ... | ... | 5 | 222 | 2,2 |
| Tuberculosis (A15-A19)* | ... | ... | ... | 8 | 316 | 1,9 | ... | ... | ... | 4 | 450 | 4,5 |
| Metabolic disorders (E70-E90) | ... | ... | ... | 9 | 257 | 1,5 | ... | ... | ... | ... | ... | ... |
| Human immunodeficiency virus [HIV] disease (B20-B24) | ... | ... | ... | 10 | 244 | 1,4 | ... | ... | ... | 10 | 137 | 1,4 |
| Other forms of heart disease (I30-I52) | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7 | 166 | 1,7 |
| Inflammatory diseases of the central nervous system (G00-G09) | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | 148 | 1,5 |
| Other natural causes | | 917 | 8,3 | | 6 208 | 36,6 | | 9 472 | 33,9 | | 3 463 | 34,9 |
| Non-natural causes | | 158 | 1,4 | | 742 | 4,4 | | 900 | 3,2 | | 1 470 | 14,8 |
| All causes | | 11 002 | 100,0 | | 16 979 | 100,0 | | 27 981 | 100,0 | | 9 927 | 100,0 |

*Including deaths due to MDR-TB and XDR-TB. ... Category not in top ten.

Leading underlying natural causes of death for the population aged 15–24

The analysis on the causes of death among the population aged 15–24 years is recommended by the World Health Organization (WHO, 2009). Table 4.9 shows that the ten leading causes of death among population aged 15–24 in 2011. In the top three, *tuberculosis* was ranked as the first underlying cause of death accounting for 12,6% of deaths. In second place was *influenza and pneumonia* responsible for 5,1% of deaths and *HIV disease* was ranked third accounting for 4,3% of deaths.

Table 4.9: The ten leading underlying natural causes of death for the population aged 15–24 years, 2011

| Causes of death (based on ICD-10) | 15-24 | | |
|---|-------|---------------|--------------|
| | Rank | Number | Percentage |
| Tuberculosis (A15-A19)* | 1 | 3 120 | 12,6 |
| Influenza and pneumonia (J09-J18) | 2 | 1 277 | 5,1 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 3 | 1 065 | 4,3 |
| Other viral diseases (B25-B34) | 4 | 911 | 3,7 |
| Intestinal infectious diseases (A00-A09) | 5 | 703 | 2,8 |
| Certain disorders involving the immune mechanism (D80-D89) | 6 | 587 | 2,4 |
| Inflammatory diseases of the central nervous system (G00-G09) | 7 | 550 | 2,2 |
| Other forms of heart disease (I30-I52) | 8 | 449 | 1,8 |
| Episodic and paroxysmal disorders (G40-G47) | 9 | 320 | 1,3 |
| Other acute lower respiratory infections (J20-J22) | 10 | 252 | 1,0 |
| Other natural causes | | 6 512 | 26,2 |
| Non-natural causes | | 9 114 | 36,7 |
| All causes | | 24 860 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Leading underlying natural causes of death by province of death occurrence

Information on the ten leading underlying natural causes of death in each province of death occurrence for 2011 is shown in Table 4.10. For complete information on the distribution of the ten leading underlying causes of death by province and sex, refer to Appendices M to M9.

The leading underlying cause of death was *tuberculosis* in all provinces with the exception of Free State and Limpopo, where it was the second leading underlying cause of death in both provinces. In Free State and Limpopo, the leading cause of death was *influenza and pneumonia*, accounting for 10,8% and 11,4% of deaths in Free State and Limpopo respectively. The highest number and proportion of deaths due to *tuberculosis* occurred in KwaZulu-Natal (15 034) accounting for 14,4% of all deaths in the province. The second province with the highest proportion of deaths due to *tuberculosis* was Mpumalanga responsible for 13,4% of all deaths in the province. Western Cape had the least proportion of deaths due to *tuberculosis* (7,1%).

Tuberculosis, diabetes mellitus, hypertensive diseases, cerebrovascular diseases and other forms of heart disease were common in all the nine provinces, but the rank of these causes varied greatly among provinces. Table 4.10 further shows that with the exception of Western and Eastern Cape, the other seven provinces can be categorised into three groups with commonalities in the top three leading underlying causes of death with varying ranks. The first group includes Free State, North West and Gauteng, which had *tuberculosis, influenza and pneumonia* and *other forms of heart disease* as their top three leading underlying causes. The second group comprises Northern Cape and KwaZulu-Natal with *tuberculosis, influenza and pneumonia* and *cerebrovascular diseases*. Lastly, Mpumalanga and Limpopo provinces had *tuberculosis, influenza and pneumonia* and *intestinal infectious diseases* as the three most common causes of death. Western and Eastern Cape provinces had two top causes in common: *tuberculosis* and *cerebrovascular diseases*.

HIV disease featured in seven of the nine provinces. However, the rank of this disease varied widely between the seven provinces. The two provinces where *HIV disease* did not appear in the ten leading underlying causes of death were North West and Limpopo. The highest ranking for *HIV disease* was Northern Cape, where it was the fourth leading cause of death. It was ranked fifth in KwaZulu-Natal and Western Cape, eighth in Mpumalanga and Eastern Cape, ninth in Gauteng and tenth in Free State. However, the highest proportion of deaths due to *HIV disease* was observed in Western Cape (5,7%), followed by KwaZulu-Natal (4,7%) and Northern Cape (4,5%).

Table 4.10: The ten leading underlying natural causes of death in each province of death occurrence, 2011

| Causes of death (based on ICD-10) | Western Cape | | | Eastern Cape | | | Northern Cape | | | Free State | | | KwaZulu-Natal | | | North West | | | Gauteng | | | Mpumalanga | | | Limpopo | | |
|---|--------------|---------------|--------------|--------------|---------------|--------------|---------------|---------------|--------------|------------|---------------|--------------|---------------|----------------|--------------|------------|---------------|--------------|---------|----------------|--------------|------------|---------------|--------------|---------|---------------|--------------|
| | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % |
| Tuberculosis (A15-A19)* | 1 | 3 225 | 7,1 | 1 | 8 315 | 11,4 | 1 | 1 246 | 8,5 | 2 | 3 903 | 9,6 | 1 | 15 034 | 14,4 | 1 | 4 235 | 11,3 | 1 | 8 438 | 8,4 | 1 | 5 103 | 13,4 | 2 | 4 311 | 9,1 |
| Diabetes mellitus (E10-E14) | 2 | 2 897 | 6,3 | 7 | 2 527 | 3,5 | 10 | 381 | 2,6 | 8 | 1 169 | 2,9 | 6 | 4 925 | 4,7 | 9 | 1 168 | 3,1 | 5 | 3 603 | 3,6 | 6 | 1 513 | 4,0 | 5 | 1 879 | 4,0 |
| Cerebrovascular diseases (I60-I69) | 3 | 2 832 | 6,2 | 2 | 3 378 | 4,6 | 3 | 689 | 4,7 | 5 | 1 973 | 4,9 | 2 | 5 753 | 5,5 | 4 | 1 740 | 4,6 | 4 | 4 678 | 4,6 | 4 | 2 161 | 5,7 | 4 | 2 384 | 5,0 |
| Ischaemic heart diseases (I20-I25) | 4 | 2 766 | 6,0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 10 | 2 471 | 2,4 | ... | ... | ... | 6 | 2 863 | 2,8 | ... | ... | ... | ... | ... | ... |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 5 | 2 590 | 5,7 | 8 | 2 264 | 3,1 | 4 | 660 | 4,5 | 10 | 850 | 2,1 | 5 | 4 956 | 4,7 | ... | ... | ... | 9 | 2 667 | 2,6 | 8 | 1 308 | 3,4 | ... | ... | ... |
| Chronic lower respiratory diseases (J40-J47) | 6 | 2 058 | 4,5 | 5 | 2 754 | 3,8 | 5 | 550 | 3,7 | 9 | 865 | 2,1 | ... | ... | ... | 10 | 981 | 2,6 | 10 | 2343 | 2,3 | ... | ... | ... | 10 | 792 | 1,7 |
| Malignant neoplasm of digestive organs (C15-C26) | 7 | 1 950 | 4,3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 8 | 1 833 | 4,0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Hypertensive diseases (I10-I15) | 9 | 1 603 | 3,5 | 9 | 2 081 | 2,8 | 8 | 432 | 2,9 | 7 | 1 187 | 2,9 | 9 | 2 867 | 2,7 | 5 | 1 706 | 4,5 | 8 | 2 748 | 2,7 | 7 | 1 437 | 3,8 | 8 | 1 371 | 2,9 |
| Other forms of heart disease (I30-I52) | 10 | 1 364 | 3,0 | 3 | 3 242 | 4,4 | 6 | 535 | 3,6 | 3 | 2 240 | 5,5 | 4 | 5 227 | 5,0 | 3 | 2 196 | 5,8 | 3 | 5 340 | 5,3 | 5 | 1 564 | 4,1 | 6 | 1 692 | 3,6 |
| Influenza and pneumonia (J09-J18) | ... | ... | ... | 4 | 2 903 | 4,0 | 2 | 761 | 5,2 | 1 | 4 376 | 10,8 | 3 | 5 280 | 5,0 | 2 | 3 149 | 8,4 | 2 | 7 159 | 7,1 | 2 | 3 083 | 8,1 | 1 | 5 376 | 11,4 |
| Intestinal infectious diseases (A00-A09) | ... | ... | ... | 10 | 1 903 | 2,6 | 7 | 448 | 3,0 | 4 | 2 089 | 5,1 | 7 | 4 389 | 4,2 | 6 | 1 549 | 4,1 | 7 | 2 810 | 2,8 | 3 | 2 213 | 5,8 | 3 | 3 369 | 7,1 |
| Other viral diseases (B25-B34) | ... | ... | ... | 6 | 2 569 | 3,5 | ... | ... | ... | ... | ... | ... | 8 | 4 164 | 4,0 | 7 | 1 360 | 3,6 | ... | ... | ... | 10 | 1 194 | 3,1 | 7 | 1 636 | 3,5 |
| Certain disorders involving the immune mechanism (D80-D89) | ... | ... | ... | ... | ... | ... | 9 | 395 | 2,7 | 6 | 1 425 | 3,5 | ... | ... | ... | 8 | 1 264 | 3,4 | ... | ... | ... | 9 | 1 219 | 3,2 | 9 | 937 | 2,0 |
| Other natural causes | | 17 311 | 37,8 | | 34 130 | 46,7 | | 7 386 | 50,2 | | 17 430 | 42,9 | | 40 309 | 38,5 | | 15 445 | 41,1 | | 48 362 | 48,0 | | 13 877 | 36,5 | | 19 812 | 41,8 |
| Non-natural causes | | 5 314 | 11,6 | | 6 969 | 9,5 | | 1 235 | 8,4 | | 3 128 | 7,7 | | 9 277 | 8,9 | | 2 762 | 7,4 | | 9 740 | 9,7 | | 3 365 | 8,8 | | 3 788 | 8,0 |
| All causes | | 45 743 | 100,0 | | 73 035 | 100,0 | | 14 718 | 100,0 | | 40 635 | 100,0 | | 104 652 | 100,0 | | 37 555 | 100,0 | | 100 751 | 100,0 | | 38 037 | 100,0 | | 47 347 | 100,0 |

*Including deaths due to MDR-TB and XDR-TB. ... Category not in top ten.

Underlying causes of death by district municipality of death occurrence

Main group

The number and percentage distribution of deaths by main groups of underlying causes of death by district municipalities for 2011 are provided in Appendices N to N2 and Appendices O to O2 respectively. The main groups have been re-grouped into 11 groups to facilitate analysis at this level of geography. Similar information is available at local municipality level and may be requested from Statistics South Africa.

Deaths due to *certain infectious and parasitic diseases* were highest in KwaZulu-Natal (29,6%) and Mpumalanga (28,7%) and lowest in Western Cape (17,1%). About 70% of the districts had *certain infectious and parasitic diseases* as the leading main group of underlying causes of death. These include all districts in KwaZulu-Natal, North West and Mpumalanga and five of the districts in Eastern Cape (excluding Joe Gqabi, Alfred Nzo and OR Tambo). Other districts with *certain infectious and parasitic diseases* as the most common main group were Cape Winelands in Western Cape, Ekurhuleni and West Rand in Gauteng, and Capricorn, Greater Sekhukhune and Mopani in Limpopo.

Diseases of the circulatory system appeared as the second most common underlying main group of causes for all provinces with the exception of Western Cape where these were the leading main group, accounting for 20,2% of deaths. *Diseases of the circulatory system* were the most common underlying cause of death for all districts of Western Cape except Cape Winelands, where *certain infectious and parasitic diseases* were the most common underlying cause of death. Additionally, City of Tshwane and Sedibeng were part of this main group of diseases. Limpopo had *diseases of the respiratory system* as the second leading main groups of diseases.

Broad groups

Appendices P to P8 present information on the ten leading natural causes of death by district municipality. The leading cause in most (75%) of the districts was *tuberculosis*. It was the leading cause of death for all districts in Eastern Cape, North West and Mpumalanga. Four of the district municipalities (excluding Sedibeng) in Gauteng had *tuberculosis* as the leading cause of death. In Western Cape, *tuberculosis* was the leading cause of death in Central Karoo and West Coast, while in Northern Cape it was highest in Frances Baard, Pixley and Siyanda. In Free State, *tuberculosis* was the most common leading cause of death in Mangaung and Xhariep, while in Limpopo it was the leading cause for Mopani, Vhembe and Waterberg districts.

The second most prevalent leading cause of death was *influenza and pneumonia*, appearing in eight districts. These include John Taolo Gaetsewe (Northern Cape), Fezile Dabi, Lejweleputswa, Thabo Mofutsanyane (all three in Free State), Sedibeng (Gauteng), Capricorn and Greater Sekhukhune (both in Limpopo).

HIV disease, ischaemic heart diseases, cerebrovascular diseases, chronic lower respiratory diseases and diabetes mellitus were the leading causes of death in some districts. *HIV disease* was the leading cause of death in only two district municipalities, Cape Winelands in Western Cape (7,4%) and uMkhanyakude in KwaZulu-Natal (16,2%) *Chronic lower respiratory diseases* were the leading underlying cause of death for Namakwa district (4,1%) in Northern Cape. *Cerebrovascular diseases* was only in Eden district in Western Cape, and was responsible for 8,4% of the deaths. *Diabetes mellitus* was the number one leading cause of death in City of Cape Town (6,7%) whereas *ischaemic heart diseases* was the leading cause of death in Overberg (7,5%).

Underlying natural causes of death by population group

As in the case of previous releases, given the large proportion of unknown or unspecified cases, the ten leading underlying natural causes of death by population group are not discussed in this section. However, Appendices Q and Q.1 provide a discussion on the distribution of underlying causes of death by population group.

4.7 Non-natural causes of death

Information on non-natural causes of death is important in South Africa, considering the high levels of violence experienced in the country. This section discusses non-natural causes of death based on *all external causes of morbidity and mortality (V01-Y98)* derived from the causes of death specified on the death notification forms.

The distributions of non-natural causes of death by broad groups in 2011 are shown in Table 4.11. There were 61,0% of non-natural causes of deaths from *other external causes of accidental injury*, which constituted 5,5% of the total causes of death. The second most common cause of non-natural deaths was *event of undetermined intent* (13,6%), followed by *transport accidents* (11,1%). *Complications of medical and surgical care*, *intentional self-harm* and *sequelae of external causes of morbidity and mortality* accounted for less than 1% each.

Table 4.11: Distribution of non-natural causes of death by broad groups, 2011

| Causes of death (based on ICD-10, 1992) | Number | Percentage of non-natural causes | Percentage of all causes (N = 505 803) |
|--|---------------|---|---|
| Other external causes of accidental injury (W00-X59) | 28 044 | 61,0 | 5,5 |
| Event of undetermined intent (Y10-Y34) | 6 275 | 13,6 | 1,2 |
| Transport accidents (V01-V99) | 5 088 | 11,1 | 1,0 |
| Assault (X85-Y09) | 4 888 | 10,6 | 1,0 |
| Complications of medical and surgical care (Y40-Y84) | 1 285 | 2,8 | 0,3 |
| Intentional self-harm (X60-X84) | 359 | 0,8 | 0,1 |
| Sequelae of external causes of morbidity and mortality (Y85-Y89) | 51 | 0,1 | 0,0 |
| Total | 45 990 | 100,0 | |

Since the broad group *other external causes of accidental injury* contained almost 61,0% of all non-natural deaths, it was considered necessary to further break down deaths due to this broad group. The breakdown of these deaths is presented in Table 4.12. It is observed that over half of the deaths (51,8%) were due to *accidental exposure to other and unspecified factors*. This includes accidents not elsewhere classified and exposure not elsewhere classified. *Other accidental threats to breathing* were the second most common cause of death, accounting for 15,0% of deaths in this group. Deaths due to *exposure to inanimate mechanical forces* came third, comprising 13,3% of deaths with a majority (97,8% results not shown) of these deaths *due to discharge from other and unspecified firearms*. The fourth highest proportion was *exposure to smoke, fire and flames* (8,0%).

Table 4.12: Distribution of deaths due to other external causes of accidental injury, 2011

| Cause of death (based on ICD-10) | Number | Percentage |
|--|---------------|--------------|
| Accidental exposure to other and unspecified factors (X58-X59) | 14 522 | 51,8 |
| Other accidental threats to breathing (W75-W84) | 4 217 | 15,0 |
| Exposure to inanimate mechanical forces (W20-W49) | 3 726 | 13,3 |
| Exposure to smoke, fire and flames (X00-X09) | 2 243 | 8,0 |
| Accidental drowning and submersion (W65-W74) | 1 583 | 5,6 |
| Accidental poisoning by and exposure to noxious substances (X40-X49) | 874 | 3,1 |
| Exposure to forces of nature (X30-X39) | 346 | 1,2 |
| Exposure to electric current, radiation and extreme ambient air temperature and pressure (W85-W99) | 279 | 1,0 |
| Falls (W00-W19) | 152 | 0,5 |
| Contact with venomous animals and plants (X20-X29) | 47 | 0,2 |
| Exposure to animate mechanical forces (W50-W64) | 37 | 0,1 |
| Contact with heat and hot substances (X10-X19) | 9 | 0,0 |
| Overexertion, travel and privation (X50-X57) | 9 | 0,0 |
| Total | 28 044 | 100,0 |

Non-natural causes of death by age and sex

The number and percentage distribution of underlying non-natural causes of death by age group and sex for 2011 are shown in Table 4.13. It can be seen from the table that for both sexes, the age group mostly affected by non-natural causes of death was the age group 15–49 where 15,4% of all deaths were due to non-natural causes. Most of these deaths in this age group were from the broad group *other external causes of death* which accounted for the highest proportion of deaths (58,2%). The age group least affected by non-natural causes was among those aged 65 years and older, with less than 3% of deaths occurring in this age group.

When comparing the two sexes, males were found to have a higher proportion of deaths due to non-natural causes as compared to females (13,2% for males and 4,5 % for females). The proportion of deaths due to non-natural causes were higher among males at all ages, with the difference particularly wide at age groups 15–49. About 23,1% of deaths among males 15–49 were due to non-natural causes compared to 6,2% of female deaths in the same age group. The most notable difference in non-natural causes of male and female deaths was concentrated on age group 15–49. For example, there were four times more male deaths than there were female deaths due to *other external causes of accidental injury* (14 715 vs. 3 398). Similarly, with deaths due to *assault*, there were seven times more male deaths than female deaths due to *assault* (3 816 vs. 484).

The most common non-natural cause of death for both males and females was *other external causes of accidental injury*. However, slightly more females (63,2%) died of *other external causes of accidental injury* compared to 60,2% of males. For almost all the female age groups (excluding 65 years and above), *transport accidents* were the second most common non-natural cause of death whereas for male age groups, the second most common cause was *event of undetermined intent* (except for age group 0–14). In terms of percentages, deaths due to *transport accidents* were higher amongst females (12,7%) than amongst males (10,6%).

There was a positive correlation of deaths due to *complications of medical and surgical care* and age. As age increases, deaths due to *complications of medical and surgical care* also increases. Deaths due to non-natural

causes followed the same trend for all age groups wherein there were more male deaths than female deaths. The exceptions were deaths due to *sequelae of external causes of morbidity and mortality* where the number of male deaths due to *sequelae of external causes of morbidity and mortality* were almost the same as female deaths.

Table 4.13: Underlying non-natural causes of death by age group and sex, 2011

| Causes of death (based on the 10 th Revision, International Classification of Disease, 1992) | Number | | | | | Percentage | | | | |
|---|---------------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------|--------------|
| | 0-14 | 15-49 | 50-64 | 65+ | Total | 0-14 | 15-49 | 50-64 | 65+ | Total |
| Both sexes* | | | | | | | | | | |
| Transport accidents (V01-V99) | 542 | 3 506 | 716 | 271 | 5 035 | 12,3 | 11,2 | 12,5 | 6,8 | 11,1 |
| Other external causes of accidental injury (W00-X59) | 3 264 | 18 189 | 3 517 | 2 717 | 27 687 | 74,0 | 58,2 | 61,3 | 67,7 | 60,9 |
| Intentional self-harm (X60-X84) | 5 | 290 | 44 | 19 | 358 | 0,1 | 0,9 | 0,8 | 0,5 | 0,8 |
| Assault (X85-Y09) | 75 | 4 324 | 321 | 128 | 4 848 | 1,7 | 13,8 | 5,6 | 3,2 | 10,7 |
| Event of undetermined intent (Y10-Y34) | 450 | 4 583 | 784 | 365 | 6 182 | 10,2 | 14,7 | 13,7 | 9,1 | 13,6 |
| Complications of medical and surgical care (Y40-Y84) | 76 | 362 | 345 | 496 | 1 279 | 1,7 | 1,2 | 6,0 | 12,4 | 2,8 |
| Sequelae of external causes of morbidity and mortality (Y85-Y89) | 0 | 23 | 12 | 15 | 50 | 0,0 | 0,1 | 0,2 | 0,4 | 0,1 |
| Sub-total | 4 412 | 31 277 | 5 739 | 4 011 | 45 439 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |
| Non-natural causes | 4 412 | 31 277 | 5 739 | 4 011 | 45 439 | 9,6 | 15,4 | 5,5 | 2,7 | 9,0 |
| Natural causes | 41 633 | 171 781 | 98 178 | 146 371 | 457 963 | 90,4 | 84,6 | 94,5 | 97,3 | 91,0 |
| All causes | 46 045 | 203 058 | 103 917 | 150 382 | 503 402 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |
| Males** | | | | | | | | | | |
| Transport accidents (V01-V99) | 289 | 2 664 | 512 | 152 | 3 617 | 10,9 | 10,5 | 12,3 | 7,4 | 10,6 |
| Other external causes of accidental injury (W00-X59) | 2 010 | 14 715 | 2 577 | 1 324 | 20 626 | 75,7 | 58,0 | 61,7 | 64,7 | 60,2 |
| Intentional self-harm (X60-X84) | 2 | 234 | 34 | 13 | 283 | 0,1 | 0,9 | 0,8 | 0,6 | 0,8 |
| Assault (X85-Y09) | 49 | 3 816 | 257 | 71 | 4 193 | 1,8 | 15,0 | 6,2 | 3,5 | 12,2 |
| Event of undetermined intent (Y10-Y34) | 265 | 3 747 | 596 | 224 | 4 832 | 10,0 | 14,8 | 14,3 | 10,9 | 14,1 |
| Complications of medical and surgical care (Y40-Y84) | 41 | 187 | 191 | 254 | 673 | 1,5 | 0,7 | 4,6 | 12,4 | 2,0 |
| Sequelae of external causes of morbidity and mortality (Y85-Y89) | 0 | 20 | 9 | 9 | 38 | 0,0 | 0,1 | 0,2 | 0,4 | 0,1 |
| Sub-total | 2 656 | 25 383 | 4 176 | 2 047 | 34 262 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |
| Non-natural causes | 2 656 | 25 383 | 4 176 | 2 047 | 34 262 | 11,0 | 23,1 | 6,9 | 3,2 | 13,2 |
| Natural causes | 21 509 | 84 295 | 56 711 | 62 539 | 225 054 | 89,0 | 76,9 | 93,1 | 96,8 | 86,8 |
| All causes | 24 165 | 109 678 | 60 887 | 64 586 | 259 316 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |
| Females*** | | | | | | | | | | |
| Transport accidents (V01-V99) | 250 | 828 | 203 | 119 | 1 400 | 14,5 | 14,4 | 13,1 | 6,1 | 12,7 |
| Other external causes of accidental injury (W00-X59) | 1 232 | 3 398 | 933 | 1 389 | 6 952 | 71,3 | 59,0 | 60,3 | 70,9 | 63,2 |
| Intentional self-harm (X60-X84) | 3 | 56 | 10 | 6 | 75 | 0,2 | 1,0 | 0,6 | 0,3 | 0,7 |
| Assault (X85-Y09) | 26 | 484 | 61 | 57 | 628 | 1,5 | 8,4 | 3,9 | 2,9 | 5,7 |
| Event of undetermined intent (Y10-Y34) | 183 | 817 | 185 | 141 | 1 326 | 10,6 | 14,2 | 12,0 | 7,2 | 12,1 |
| Complications of medical and surgical care (Y40-Y84) | 35 | 174 | 153 | 240 | 602 | 2,0 | 3,0 | 9,9 | 12,3 | 5,5 |
| Sequelae of external causes of morbidity and mortality (Y85-Y89) | 0 | 3 | 3 | 6 | 12 | 0,0 | 0,1 | 0,2 | 0,3 | 0,1 |
| Sub-total | 1 729 | 5 760 | 1 548 | 1 958 | 10 995 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |
| Non-natural causes | 1 729 | 5 760 | 1 548 | 1 958 | 10 995 | 8,1 | 6,2 | 3,6 | 2,3 | 4,5 |
| Natural causes | 19 609 | 86 979 | 41 311 | 83 741 | 231 640 | 91,9 | 93,8 | 96,4 | 97,7 | 95,5 |
| All causes | 21 338 | 92 739 | 42 859 | 85 699 | 242 635 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |

* Excluding 2 401 cases with unspecified age, ** Excluding 1 253 cases with unspecified age; *** Excluding 602 cases with unspecified age.

Non-natural causes of death by province of death occurrence

Table 4.14 shows the distribution of the underlying non-natural causes of death by province for 2011. The highest proportion of deaths due to non-natural causes was observed in Western Cape (11,6%). Gauteng had the second highest proportion of deaths due to non-natural causes (9,7%), whilst Eastern Cape came third with 9,5% of deaths due to non-natural causes. The provinces with the lowest proportion of deaths due to non-natural causes were North West and Free State (7,4% and 7,7% respectively).

For all the provinces, with the exception of Limpopo, deaths due to *other external causes of accidental injury* accounted for more than 50% of non-natural deaths. In Limpopo, deaths due to *other external causes of accidental injury* were 48,4%. The highest proportion of deaths due to this cause were in Mpumalanga (77,1%), followed by Northern Cape (72,6%).

Three provinces (Western Cape, Eastern Cape and Northern Cape) had *assault* as the second most common underlying cause of non-natural death. KwaZulu-Natal, North West and Gauteng had *event of undetermined intent* as the second most common underlying cause of death, whilst Mpumalanga, Free State and Limpopo had *transport accidents* as the second most common underlying non-natural cause of death.

Deaths due to *transport accidents* were highest in Limpopo (31,8%) followed by Free State (16,3%) and Mpumalanga (12,1%). Amongst non-natural deaths due to *assault*, Western Cape (19,1%) had the highest proportion of deaths followed by Eastern Cape (16,0%), Free State (14,7%) and Northern Cape (14,6%). The lowest proportion of deaths due to *assault* were in Mpumalanga (3,5%) and Limpopo (4,3%). Deaths due to *intentional self-harm* were highest in Northern Cape (2,5%) and death due to *complications of medical and surgical care* were highest in Gauteng (3,9%).

Non-natural causes of death by district municipalities

Appendices O to O2 present the percentage distribution of deaths due to non-natural causes for each of the district municipalities. Non-natural causes of death are on the last column labelled *external causes of morbidity and mortality (V01-Y98)*.

Of the 52 district municipalities, Central Karoo in Western Cape had the highest proportion of deaths due to *external causes of morbidity and mortality* responsible for 16,4% of deaths. Dr Ruth Segomotsi Mompati in North West had the lowest proportion (5,4%) of deaths due to *external causes of morbidity and mortality*.

When using the national average of 9,1% as a benchmark, there were approximately 40% of districts (21) above the national average. The districts that had a proportion of 10% or more deaths due to *external causes of morbidity and mortality* were all districts in Western Cape (except Central Karoo), Buffalo City in Eastern Cape, West Rand in Gauteng, Waterberg in Limpopo and eThekweni in KwaZulu-Natal.

Table 4.14: Underlying non-natural causes of death by province, 2011

| Causes of death (based on ICD-10) | Western Cape | | Eastern Cape | | Northern Cape | | Free State | | KwaZulu-Natal | | North West | | Gauteng | | Mpumalanga | | Limpopo | |
|--|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|---------------|--------------|----------------|--------------|---------------|--------------|---------------|--------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Transport accidents (V01-V99) | 480 | 9,0 | 835 | 12,0 | 63 | 5,1 | 510 | 16,3 | 935 | 10,1 | 314 | 11,4 | 287 | 2,9 | 408 | 12,1 | 1 205 | 31,8 |
| Other external causes of accidental injury (W00-X59) | 2 845 | 53,5 | 3 923 | 56,3 | 896 | 72,6 | 1 751 | 56,0 | 5 741 | 61,9 | 1 564 | 56,6 | 6 625 | 68,0 | 2 596 | 77,1 | 1 835 | 48,4 |
| Intentional self-harm (X60-X84) | 87 | 1,6 | 30 | 0,4 | 31 | 2,5 | 19 | 0,6 | 122 | 1,3 | 12 | 0,4 | 12 | 0,1 | 13 | 0,4 | 30 | 0,8 |
| Assault (X85-Y09) | 1 016 | 19,1 | 1 112 | 16,0 | 180 | 14,6 | 461 | 14,7 | 898 | 9,7 | 304 | 11,0 | 612 | 6,3 | 117 | 3,5 | 161 | 4,3 |
| Event of undetermined intent (Y10-Y34) | 687 | 12,9 | 912 | 13,1 | 37 | 3,0 | 278 | 8,9 | 1 323 | 14,3 | 491 | 17,8 | 1 805 | 18,5 | 173 | 5,1 | 508 | 13,4 |
| Complications of medical and surgical care (Y40-Y84) | 190 | 3,6 | 152 | 2,2 | 26 | 2,1 | 104 | 3,3 | 247 | 2,7 | 75 | 2,7 | 384 | 3,9 | 57 | 1,7 | 48 | 1,3 |
| Sequelae of external causes of morbidity and mortality (Y85-Y89) | 9 | 0,2 | 5 | 0,1 | 2 | 0,2 | 5 | 0,2 | 11 | 0,1 | 2 | 0,1 | 15 | 0,2 | 1 | 0,0 | 1 | 0,0 |
| Sub-total | 5 314 | 100,0 | 6 969 | 100,0 | 1 235 | 100,0 | 3 128 | 100,0 | 9 277 | 100,0 | 2 762 | 100,0 | 9 740 | 100,0 | 3 365 | 100,0 | 3 788 | 100,0 |
| Non-natural causes | 5 314 | 11,6 | 6 969 | 9,5 | 1 235 | 8,4 | 3 128 | 7,7 | 9 277 | 8,9 | 2 762 | 7,4 | 9 740 | 9,7 | 3 365 | 8,8 | 3 788 | 8,0 |
| Natural causes | 40 429 | 88,4 | 66 066 | 90,5 | 13 483 | 91,6 | 37 507 | 92,3 | 95 375 | 91,1 | 34 793 | 92,6 | 91 011 | 90,3 | 34 672 | 91,2 | 43 559 | 92,0 |
| All causes | 45 743 | 100,0 | 73 035 | 100,0 | 14 718 | 100,0 | 40 635 | 100,0 | 104 652 | 100,0 | 37 555 | 100,0 | 100 751 | 100,0 | 38 037 | 100,0 | 47 347 | 100,0 |

4.8 Comparison between immediate, contributing and underlying causes of death

Section G of both the old death notification form (BI-1663) and the new death notification form (DHA-1663) makes provision for the person determining the cause of death to enter the disease, injuries or complications that caused the death. The causes may be entered in Part 1 as immediate cause (final disease resulting in death), contributing causes (any causes leading to immediate cause) and underlying cause (conditions that initiated events leading to death). Part 2 is for other significant conditions which contributed to death, but not resulting in underlying cause. The maximum number of causes recorded on the death notification forms in 2011 was six. For deaths in 2011, there were 58,7% of forms which had only one cause entered on the death notification form.

Table 4.15 shows the 20 most commonly reported causes of death in 2011 as either immediate, contributing or underlying. The information considers the number of causes of death reported in each form irrespective of whether the cause was listed as underlying, immediate or contributing, and groups the causes according to broad groups of causes of death. The list includes natural and non-natural causes, as well as *deaths due to symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified*.

In 2011, the most frequently reported cause of death was *tuberculosis* and was entered in 69 510 death notification forms received. In terms of percentage distribution, about 11,6% of all death notification forms had *tuberculosis* recorded as either immediate, contributing or underlying cause of death. The second most commonly reported cause was *ill-defined and unknown causes of mortality* representing 62 574 (10,4%) of deaths. *Influenza and pneumonia* was the third most reported cause of death (9,7%), mentioned on 58 037 forms. *Other forms of heart disease* and *hypertensive diseases* were fourth and fifth respectively, with *other forms of heart disease* reported on 54 348 (9,0%) death notification forms and *hypertensive diseases* reported on 39 769 (6,6%) forms.

Other external causes of accidental injury was the only non-natural cause appearing among the twenty most commonly reported causes of death. It was ranked seventh and was reported on 28 816 (4,8%) death notification forms. *HIV disease* was ranked eighteenth and was reported on 17 588 (2,9%) forms. *Other viral diseases* were the ninth most commonly mentioned cause of death (4,5%), *diabetes mellitus* was the tenth (4,0%) and *other diseases of the respiratory system* was in seventeenth place (3,0%). *Chronic lower respiratory disease*, which was ranked tenth in the ten leading causes of death, was mentioned on 18 284 death notification forms. *Hypertensive diseases* which were ranked fifth were mentioned in 39 769 death notification forms.

Table 4.15: Distribution of the 20 most commonly reported causes of death, 2011

| Rank | Causes of death (based on ICD-10) | Number of deaths in which the causes was reported | Percentage of all deaths |
|------|--|---|--------------------------|
| 1 | Tuberculosis (A15-A19)* | 69 510 | 11,6 |
| 2 | Ill-defined and unknown causes of mortality (R95-R99) | 62 574 | 10,4 |
| 3 | Influenza and pneumonia (J09-J18) | 58 037 | 9,7 |
| 4 | Other forms of heart disease (I30-I52) | 54 348 | 9,0 |
| 5 | Hypertensive diseases (I10-I15) | 39 769 | 6,6 |
| 6 | Cerebrovascular diseases (I60-I69) | 34 201 | 5,7 |
| 7 | Other external causes of accidental injury (W00-X59) | 28 816 | 4,8 |
| 8 | Intestinal infectious diseases (A00-A09) | 25 545 | 4,3 |
| 9 | Other viral diseases (B25-B34) | 24 965 | 4,2 |
| 10 | Diabetes mellitus (E10-E14) | 23 868 | 4,0 |
| 11 | Other bacterial diseases (A30-A49) | 21 712 | 3,6 |
| 12 | Renal failure (N17-N19) | 21 595 | 3,6 |
| 13 | Certain disorders involving the immune mechanism (D80-D89) | 20 919 | 3,5 |
| 14 | Chronic lower respiratory diseases (J40-J47) | 18 284 | 3,0 |
| 15 | Ischaemic heart diseases (I20-I25) | 18 225 | 3,0 |
| 16 | Metabolic disorders (E70-E90) | 18 017 | 3,0 |
| 17 | Other diseases of the respiratory system (J95-J99) | 17 984 | 3,0 |
| 18 | Human immunodeficiency virus [HIV] disease (B20-B24) | 17 588 | 2,9 |
| 19 | Other acute lower respiratory infections (J20-J22) | 13 430 | 2,2 |
| 20 | Malignant neoplasm of ill-defined, secondary and unspecified sites (C76-C80) | 11 234 | 1,9 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Table 4.16 provides the breakdown of the number of deaths by whether the death was selected as the underlying cause or whether it was reported as the immediate or contributing cause. The main group *symptoms and signs not elsewhere classified (R00-R99)* which is for non-natural deaths was excluded in the table as the focus was on specified causes of death. It can be observed from the table that all the natural underlying causes of death that appeared among the ten leading causes of death in Table 4.5, also appeared among the 20 most commonly mentioned causes. Within each category, the counts of underlying causes and immediate or contributing causes are not duplicated, so that they can be summed up to equal the total number of times a specific cause of death was recorded on a death notification form.

Table 4.16 shows that where *tuberculosis* (77,8%); *cerebrovascular diseases* (75,2%), *diabetes mellitus* (84,5%); *intestinal infectious diseases* (75,9%); *HIV disease* (96,7%) and *chronic lower respiratory diseases* (71,6%) were mentioned, these were mostly selected as the underlying causes. The causes of death which when mentioned were least selected as the underlying causes were *other forms of heart diseases* (43,4%) and *hypertensive diseases* (39,0%).

Table 4.16: Number and percentage of deaths selected as underlying or reported as immediate or contributing causes of death, 2011

| Causes of death (ICD-10) | Underlying rank | Number of deaths | | | Percentage of any mention | | |
|--|-----------------|------------------|---------------------------|----------------|---------------------------|---------------------------|----------------|
| | | Underlying | Immediate or contributing | Total recorded | Underlying | Immediate or contributing | Total recorded |
| Tuberculosis (A15-A19)* | 1 | 54 112 | 15 398 | 69 510 | 77,8 | 22,2 | 100,0 |
| Influenza and pneumonia (J09-J18) | 2 | 33 381 | 24 656 | 58 037 | 57,5 | 42,5 | 100,0 |
| Cerebrovascular diseases (I60-I69) | 3 | 25 732 | 8 469 | 34 201 | 75,2 | 24,8 | 100,0 |
| Other forms of heart disease (I30-I52) | 4 | 23 564 | 30 784 | 54 348 | 43,4 | 56,6 | 100,0 |
| Diabetes mellitus (E10-E14) | 5 | 20 171 | 3 697 | 23 868 | 84,5 | 15,5 | 100,0 |
| Intestinal infectious diseases (A00-A09) | 6 | 19 376 | 6 169 | 25 545 | 75,9 | 24,1 | 100,0 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 7 | 17 012 | 576 | 17 588 | 96,7 | 3,3 | 100,0 |
| Hypertensive diseases (I10-I15) | 8 | 15 529 | 24 240 | 39 769 | 39,0 | 61 | 100,0 |
| Other viral diseases (B25-B34) | 9 | 14 557 | 10 408 | 24 965 | 58,3 | 41,7 | 100,0 |
| Chronic lower respiratory diseases (J40-J47) | 10 | 13 084 | 5 200 | 18 284 | 71,6 | 28,4 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

5. Summary and concluding remarks

Information on mortality and causes of death published in this release is based on data collected through the civil registration system in South Africa by the Department of Home Affairs. Statistics South Africa collects all the death notification forms from DHA for data processing, analysis and dissemination of statistics on mortality and causes of death

A total 505 803 deaths occurred in 2011, which was a decrease of 7,7% from 547 724 deaths that occurred in 2010. The findings indicate that the number of deaths in South Africa continues to decrease. This observation is supported by the Crude Death Rates (CDR) for the period 2007 to 2011 where CDR decreased over the five years. This decline in mortality is further supported by the increasing median ages at death which showed that mortality occurs later in life. In 2007, the median age was 44,3 years and rose to 50,4 years in 2011.

Mortality differentials by sex show that generally male deaths tend to occur earlier in life compared to female deaths as shown by the median ages. Similarly, the CDR remained higher for males compared to females throughout 2007–2011. The median age at death in 2011 was 49,0 years for males and 52,5 years for females. Age and sex differentials show that male deaths peaked at age group 35–39 and female deaths peaked at age groups 30–34 and 35–39.

Other differentials such as population group showed that about two-thirds of deaths which occurred in 2011 were for black Africans and almost half of the registered deaths in 2011 occurred among people who had never married. The results also indicate that less than half of the deaths occurred within a medical care facility. The highest proportion of deaths happened in KwaZulu-Natal (20,7%), followed by Gauteng (19,9%), then Eastern Cape (14,4%). In terms of population size, these provinces also have the largest population in the country. Less than 1% of deaths occurred outside South Africa. The majority of those who died in 2011 died in the provinces in which they usually lived.

The first three leading causes of natural deaths in 2011 were *tuberculosis, influenza and pneumonia* and *cerebrovascular diseases*. *Tuberculosis* maintained its rank as the number one leading cause of death in South Africa with 10,7% deaths, although deaths due to *tuberculosis* decreased annually in the recent years.

The second leading cause of death in 2011 was *influenza and pneumonia* (6,6%). The third leading cause of death for 2009 and 2010 was the same (*intestinal infectious diseases*). However, in 2011 this disease was ranked sixth, responsible for 3,8% of natural deaths. *Cerebrovascular diseases* (5,1%) was ranked third in 2011. Amongst the ten leading causes of death, *HIV disease* moved from seventh position in both 2009 and 2010 to eighth position in 2011, responsible for 3,4% of natural deaths in 2011.

Among the then leading causes of death, *intestinal infectious diseases* had the largest decrease of 29,7% deaths between 2010 and 2011. Deaths due to *tuberculosis* and *influenza and pneumonia* decreased by 14,5% and 14,9% respectively between 2010 and 2011. Increases in the number of deaths between 2010 and 2011 were noted among deaths due to *cerebrovascular diseases* (3,7%), *hypertensive diseases* (3,8%) and *other viral diseases* (16,9%).

With regards to sex differentials, *tuberculosis* and *influenza and pneumonia* were both ranked first and second respectively amongst the ten leading causes of death for both males and females. The third leading underlying cause of death for females was *cerebrovascular diseases* (6,2%), while for males, *other forms of heart disease* (4,1%) was ranked third. Age differentials show that *intestinal infectious diseases* was ranked as the first leading cause of death amongst those aged 0–14 years, responsible for 13,6% of deaths in this age group. *Tuberculosis* was ranked the first leading cause of death for adults (15–64 years) whilst for those aged 65 years and older *cerebrovascular diseases* were the leading cause of death.

At provincial level, the leading underlying cause of death was *tuberculosis* and in all provinces with the exception of Free State and Limpopo, where it ranked second in both provinces. In both Free State and Limpopo, the leading cause of death was *influenza and pneumonia* with 10,8% and 11,4% deaths attributed to *influenza and pneumonia* in these provinces respectively. For all districts in the provinces of Eastern Cape, North West and Mpumalanga *tuberculosis* was the most common underlying cause of death. KwaZulu-Natal and Gauteng had all but one district

each where *tuberculosis* was not the leading cause of death, whilst Northern Cape had two districts where *tuberculosis* was not the leading cause of death. Western Cape and Free State provinces had more than two-thirds of districts where *tuberculosis* was not ranked at the number one leading cause of death.

Deaths due to non-natural causes were mainly dominated by *other external causes of accidental injury* (61,0%) followed by *event of undetermined intent* (13,6%). *Transport accidents* and *assault* were responsible for 11,1% and 10,6% of all non-natural deaths in 2011, respectively. The ages that were mostly affected by non-natural causes were between 5–29 years, with males being more affected than females. Female deaths were mostly linked to *transport accidents*, while male deaths were mostly linked to *assaults*. Western Cape had the highest percentage of deaths associated with non-natural causes, with higher proportions due to assault compared to other provinces. Limpopo had the highest percentage of deaths due to *transport accidents* and remains the province with the highest number of *transport accidents* in the country.

Data on mortality and causes of death relies heavily on the quality of the input data, thus efforts in improving the quality of completing the death notification form cannot be emphasized enough. The release also addressed quality issues of data on mortality and causes of death from the South African civil registration system. Timely reporting of deaths was noted, with an indication that nearly 90% of deaths that are registered do get registered within a week of occurrence. About 94,0% of adult deaths were registered during 2007–2011. However, this release is published two years and four months from the end of 2011 which, although by international standards is adequate, can be improved. During the processing of 2011 data, the coding of information on causes of death was revised to go up to 4th-character and the data capturing systems were improved.

The number of deaths that were registered late decreased, with a total of 4 560 deaths that occurred between 1997 and 2010 but were registered in 2011. While the reporting of age, sex and province of death occurrence was very good, the analysis was compromised by the high proportion of missing information for other variables such as population group, province of residence of the deceased, education, smoking status, pregnancy status, occupation and industry. That said however, the reporting of population group improved in 2011.

The quality of information on causes of death remains a concern as the proportion of deaths assigned to ill-defined causes as there were no improvements in 2011. Additionally, as observed in other years less than 50% of deaths occurred in a medical care facility thus further compromising data quality issues. Statistics South Africa will continue its efforts to improve on the data quality and it is anticipated that the training of medical practitioners in completing death notification forms that was initiated by Stats SA in collaboration with the DHA and the Department of Health (DoH) during 2012–2013 will bear fruit in the near future.

Notwithstanding data quality issues highlighted above, the data on mortality and causes of death has proved to be a valuable source of data that can be used to assess the well-being and health status of the South Africa population with the aim of preventing and reducing premature mortality and improving the quality of life. Concerted efforts between the public, the DHA, the DoH, Stats SA and other key stakeholders are required for timely, accurate and relevant information on mortality and causes of death in the country.

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Appendices

Appendix A: Definitions

Causes of death are all those diseases, morbid conditions, or injuries that either resulted in or contributed to death, and the circumstances of the accident or violence which produced any such injuries.

Contributing causes of death are morbid conditions, if any, giving rise to the immediate cause of death.

Death is a permanent disappearance of all evidence of life at any time after a *live birth* has taken place.

Human immunodeficiency virus (HIV) is the pathogenic organism responsible for the acquired immunodeficiency syndrome (AIDS), also known as the lymphadenopathy virus (LAV).

Immediate cause of death is the disease or condition directly leading to death.

Leading underlying causes of death are the most frequent underlying causes of death in any given population. In this release, the underlying causes of death are ranked according to frequency.

Live birth is the complete expulsion or extraction from its mother's womb of a product of conception, irrespective of the duration of the pregnancy, which after such separation, breathes or shows any other evidence of life.

Multiple causes of death are all morbid conditions, diseases and injuries entered on the death certificate. These include those involved in the morbid train of events leading to the death which were classified as either the underlying cause, the intermediate cause, or any intervening cause and those conditions which contributed to death but were not related to the disease or condition causing death.

Neonatal death is the death of a live-born child during the first 28 completed days of life.


Post-neonatal death is a live-born infant dying after 28 completed days of birth but before the first year of life is completed.

Population group: According to the Population Registration Act Repeal Act (No. 114 of 1991), the South African Population Register no longer stores information regarding the population group of individuals whose details are on the register. This Repeal Act is still in place; therefore, the population group used in this report refers to the population group as identified by the certifying physician/professional nurse on the death notification form and is only used for statistical purposes.

Stillbirth is the intra-uterine death of a foetus of at least 26 weeks of gestation that showed no sign of life after complete birth.

Underlying cause of death (previously known as primary cause) is the disease or injury that initiated the sequence of events leading directly to death; or the circumstances of the accident or violence which produced the fatal injury.

Appendix B: Death notification form (BI-1663)

|  REPUBLIC OF SOUTH AFRICA DEPARTMENT OF HOME AFFAIRS NOTIFICATION / REGISTER OF DEATH / STILL BIRTH | | BI - 1663 Space for Bar Code |
|---|--|---|
| <p>in terms of the Births and Deaths Registration Act, 1992 (Act No. 51 of 1992)</p> <p>* Must be completed in black ink (please tick <input checked="" type="checkbox"/> where applicable) SERIAL No: A0 1857265</p> <p>* Please refer to instructions FILE No: DATE: A0 1857265</p> | | |
| A PARTICULARS OF DECEASED INDIVIDUAL <input type="checkbox"/> / STILLBORN CHILD <input type="checkbox"/> | | Date of birth Y Y Y Y M M D D Age at last birthday years Sex If death occurred within 24 hours after birth No. of hours alive |
| Identity number of deceased Surname Maiden Name (If female) Forenames | | Left thumb print of deceased |
| MARITAL STATUS OF DECEASED Single <input type="checkbox"/> Civil Marriage <input type="checkbox"/> Living as married <input type="checkbox"/> Widowed <input type="checkbox"/> Religious Law Marriage <input type="checkbox"/> Divorced <input type="checkbox"/> Customary Marriage <input type="checkbox"/> | | |
| PLACE OF BIRTH (municipal district or country if abroad) PLACE OF DEATH (City / Town / Village) PLACE OF REGISTRATION OF DEATH CITIZENSHIP OF DECEASED | | |
| B PARTICULARS OF INFORMANT Identity number Initials and Surname Relationship to deceased Parent <input type="checkbox"/> Spouse <input type="checkbox"/> Child <input type="checkbox"/> Other (specify) Postal address Postal Code Dialling Code Was the next of kin of the deceased a smoker* during the past five years? Yes <input type="checkbox"/> No <input type="checkbox"/> Refuse to answer <input type="checkbox"/> Telephone No. Date Signature | | |
| C PARTICULARS OF FUNERAL UNDERTAKER Initials and Surname Designation No. Date Signature Place of burial / cremation | | Office Stamp of Funeral Undertaker |
| D CERTIFICATE BY ATTENDING MEDICAL PRACTITIONER / PROFESSIONAL NURSE I, the undersigned, hereby certify that the deceased named in Section A, to the best of my knowledge and belief, died solely and exclusively due to NATURAL CAUSES specified in Section G <input type="checkbox"/> I, the undersigned, am not in the position to certify that the deceased died exclusively due to natural causes <input type="checkbox"/> INITIALS AND SURNAME SIGNATURE CERTIFICATE BY DISTRICT SURGEON / FORENSIC PATHOLOGIST I, the undersigned, hereby certify that a medicolegal post-mortem examination has been conducted on the body of the person whose particulars are given in Section A and that the body is no longer required for the purpose of the Inquest Act, 1959 (Act No. 58 of 1959) and that the cause of death is: Unnatural <input type="checkbox"/> Under investigation <input type="checkbox"/> Natural (Cause of Death as indicated in Section G) <input type="checkbox"/> Initials and Surname Place of post-mortem Date Signature Date signed Postal Address Postal Code SAMDC / SANC Reg. No. Date signed Postal Address Postal Code Mortuary Reference SAMDC Reg. No. | | |
| E FOR OFFICIAL USE ONLY Registration of death approved and burial order issued Address Date Signature Initials and Surname of Registrar Force No. / Designation No. Persal No. | | |
| Office Stamp | | |

* Someone who smokes tobacco on most days


PARAGON 225639 0/0

Appendix B: Reverse side of the BI-1663 death notification form

| NOTIFICATION / REGISTER OF DEATH / STILL BIRTH | | BI - 1663 Page 2 | | | | | | | | | | | | | | | |
|--|-------|--|------|-----|-----|-----|-----|---------------|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------|------|
| INFORMATION FOR MEDICAL AND HEALTH USE ONLY (After completion <i>seal</i> to ensure confidentiality) | | | | | | | | | | | | | | | | | |
| SERIAL No: A 01857265 | | <i>Space for Bar Code</i> | | | | | | | | | | | | | | | |
| FILE No: | DATE: | | | | | | | | | | | | | | | | |
| F DEMOGRAPHIC DETAILS | | | | | | | | | | | | | | | | | |
| Initials and Surname of deceased <input type="text"/> | | | | | | | | | | | | | | | | | |
| Identity Number <input type="text"/> | | | | | | | | | | | | | | | | | |
| Place of death 1. Hospital: (Inpatient <input type="checkbox"/> ER/ Outpatient <input type="checkbox"/> DOA <input type="checkbox"/>) 2. Nursing Home <input type="checkbox"/> 3. Home <input type="checkbox"/> 4. Other (Specify) <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| FACILITY NAME (If not institution, give street and number) <input type="text"/> | | | | | | | | | | | | | | | | | |
| Usual residential address of deceased # <input type="text"/> Suburb <input type="text"/> | | | | | | | | | | | | | | | | | |
| Town / Village <input type="text"/> | | | | | | | | | | | | | | | | | |
| Name of Plot, Farm, etc. <input type="text"/> Census Enumerator Area <input type="text"/> | | | | | | | | | | | | | | | | | |
| Street name and number <input type="text"/> | | | | | | | | | | | | | | | | | |
| Deceased's Education (Specify <input checked="" type="checkbox"/> only highest class completed/achieved) | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>None</td><td>Gr1</td><td>Gr2</td><td>Gr3</td><td>Gr4</td><td>Gr5</td><td>Gr6</td><td>Gr7</td><td>Gr8 Form 1</td><td>Gr9 Form 2</td><td>Gr10 Form 3 NTC1</td><td>Gr11 Form 4 NTC2</td><td>Gr12 Form 5 NTC3</td><td>Univ Tech</td><td>CODE</td> </tr> </table> | | | None | Gr1 | Gr2 | Gr3 | Gr4 | Gr5 | Gr6 | Gr7 | Gr8 Form 1 | Gr9 Form 2 | Gr10 Form 3 NTC1 | Gr11 Form 4 NTC2 | Gr12 Form 5 NTC3 | Univ Tech | CODE |
| None | Gr1 | Gr2 | Gr3 | Gr4 | Gr5 | Gr6 | Gr7 | Gr8 Form 1 | Gr9 Form 2 | Gr10 Form 3 NTC1 | Gr11 Form 4 NTC2 | Gr12 Form 5 NTC3 | Univ Tech | CODE | | | |
| Magist. Dist. <input type="text"/> | | | | | | | | | | | | | | | | | |
| Postal Code <input type="text"/> | | | | | | | | | | | | | | | | | |
| Province <input type="text"/> | | | | | | | | | | | | | | | | | |
| Country <input type="text"/> | | | | | | | | | | | | | | | | | |
| USUAL OCCUPATION OF DECEASED (give type of work done during most of working life. Do not use retired) | | TYPE OF BUSINESS / INDUSTRY (e.g. Mining, Farming) refer to instructions | | | | | | | | | | | | | | | |
| Was the deceased a smoker* five years ago? (<input checked="" type="checkbox"/>) : Yes <input type="checkbox"/> Do not know <input type="checkbox"/> Not applicable (minor) <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| G MEDICAL CERTIFICATE OF CAUSE OF DEATH | | | | | | | | | | | | | | | | | |
| PART 1. Enter the disease, injuries or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line. | | | | | | | | | | | | | | | | | |
| IMMEDIATE CAUSE (Final disease or condition resulting in death) a. <input type="text"/> Due to (or as a consequence of) <input type="text"/> | | | | | | | | | | | | | | | | | |
| Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE last (Disease or injury that initiated events resulting in death) b. <input type="text"/> Due to (or as a consequence of) <input type="text"/> | | | | | | | | | | | | | | | | | |
| c. <input type="text"/> Due to (or as a consequence of) <input type="text"/> | | | | | | | | | | | | | | | | | |
| d. <input type="text"/> Due to (or as a consequence of) <input type="text"/> | | | | | | | | | | | | | | | | | |
| PART 2. Other significant conditions contributing to death but not resulting in the underlying cause given in Part 1. <input type="text"/> | | | | | | | | | | | | | | | | | |
| If a female, was she pregnant 42 days prior to death? (<input checked="" type="checkbox"/>) : Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| If stillborn, please write mass in grams <input type="text"/> | | | | | | | | | | | | | | | | | |
| Do you consider the deceased to be: African <input type="checkbox"/> White <input type="checkbox"/> Indian <input type="checkbox"/> Coloured <input type="checkbox"/> Other <input type="checkbox"/> (Specify) <input type="text"/> | | | | | | | | | | | | | | | | | |
| Method of ascertainment of cause of death: | | | | | | | | | | | | | | | | | |
| 1. Autopsy <input type="checkbox"/> 2. Opinion of attending medical practitioner <input type="checkbox"/> 3. Opinion of attending medical practitioner on duty <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| 4. Opinion of registered professional nurse <input type="checkbox"/> 5. Interview of family member <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| 6. Other <input type="checkbox"/> (Specify) <input type="text"/> | | | | | | | | | | | | | | | | | |
| # Where someone lived on most days * Someone who smokes tobacco on most days | | | | | | | | | | | | | | | | | |

Appendix B1: Death notification form (DHA-1663A)- page 2 of 3

G.P.-S. 0909



REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF HOME AFFAIRS

NOTICE OF DEATH / STILL BIRTH
[Births and Deaths Registration Act 51 of 1992]
[Regulations 11 and 14]

DHA-1663 A
Page 2 of 3

BARCODE

Serial number

To be completed in full and submitted at the Department of Home Affairs' office by the informant or authorised funeral undertaker. The form to be completed in black ink with BLOCK LETTERS. Please mark with ☒ the CORRECT box, where required. All fields are COMPULSORY. Incomplete applications and applications that are not legible may be considered invalid. (Note: The fingerprints of the deceased, the informant and the undertaker must be taken by the undertaker)

B. CERTIFICATE BY ATTENDING MEDICAL PRACTITIONER / PROFESSIONAL NURSE
Instructions: Section B to be filled out by the same Medical Practitioner / Professional Nurse who completed Section A.

☐ 22.1 I, the undersigned, hereby certify that the deceased named in Section A, to the best of my knowledge and belief, died solely and exclusively due to Natural Causes

☐ 22.2 I, the undersigned, am not in a position to certify that the deceased died exclusively due to Natural Causes

Particulars of the Medical Practitioner / Professional Nurse who filled out the form: 23. HPCSA Registration No.

24. Surname

25. Forenames

26. Name of Health Facility / Practice 27. Facility / Practice No.

28. Business Address: Street

Town Province

Telephone No. (Office) Postal Code

I, the undersigned, hereby certify that I examined the body of the deceased named in section A and declare that the deceased, to the best of my knowledge and belief, died solely and exclusively due to natural or unnatural causes as indicated on paragraph 22 and in case this is not true, I shall be guilty of an offence and on conviction liable to a fine or to imprisonment for a period not exceeding five years or to both such fine and such imprisonment (Section 31(1)(b) of the Act 51 of 1992.)

Place signed

Date signed Signature

Office stamp of health facility or practice

C. CERTIFICATE BY MEDICAL PRACTITIONER/ FORENSIC PATHOLOGIST
Instructions: Section C to be filled out by Medical Practitioner or Forensic Pathologist, who is conducting medico-legal investigation of death.

29. I, the undersigned, hereby certify that a medico-legal investigation of death has been conducted on the body of the person whose particulars are given in Section A and that the body is no longer required for the purpose of the Inquest Act, 1959 (Act No. 58 of 1959) and the cause of death is:

☐ 30.1 Natural ☐ 30.2 Unnatural ☐ 30.3 Under investigation

31. Date of Post-mortem

32. Name of Medico-legal Mortuary / Mortuary

33. Mortuary No.

34. Mortuary Reference Number of Deceased

35. SAPS Case No.

36. Name of Police Station

Particulars of the Medical Practitioner / Forensic Pathologist who filled out the form: HPCSA Registration No.

37. Surname

38. Forenames

39. Business Address: Street

Town Province Postal Code

Telephone No. (Office)

I, the undersigned, hereby certify that I examined the body of the deceased named in section A and the deceased, to the best of my knowledge and belief, died solely and exclusively due to natural or unnatural causes as indicated on paragraph 29 and in case this is not true, I shall be guilty of an offence and on conviction liable to a fine or to imprisonment for a period not exceeding five years or to both such fine and such imprisonment (Section 31(1)(b) of the Act 51 of 1992.)

Place signed

Date signed Signature

Office stamp of mortuary

D. PARTICULARS OF INFORMANT
Instructions: Section D to be completed by informant. Informant is responsible for certifying the identity of the deceased.

40. Identity No. (Passport No. if foreigner)

41. Date of Birth

42. Citizenship

43. Surname

44. Forenames

45. Residential Address: Street

Town Province Postal Code

Telephone No. (Home) Cellphone No.

46. The Deceased is my: ☐ 46.1 Parent ☐ 46.2 Spouse ☐ 46.3 Child ☐ 46.4 Other, Specify

I, the undersigned, hereby certify that the identity of the deceased mentioned in section A is to the best of my knowledge and belief true and correct in case it is not true, I shall be guilty of an offence and on conviction liable to a fine or to imprisonment for a period not exceeding five years or to both such fine and such imprisonment (Section 31(1)(b) of the Act 51 of 1992.)

Signature Date signed Place signed

Left thumb print of informant

Appendix B1: Death notification form (DHA-1663A)- page 3 of 3

G.P.-S. 09/09



REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF HOME AFFAIRS

DHA-1663 A
Page 3 of 3

NOTICE OF DEATH / STILL BIRTH

[Births and Deaths Registration Act 51 of 1992]

[Regulations 11 and 14]

BARCODE

To be completed in full and submitted at the Department of Home Affairs' office by the informant or authorised funeral undertaker. The form to be completed in black ink with BLOCK LETTERS. Please mark with ☐ the CORRECT box, where required. All fields are COMPULSORY. Incomplete applications and applications that are not legible may be considered invalid. (Note: The fingerprints of the deceased, the informant and the undertaker must be taken by the undertaker)

Serial number

E. PARTICULARS OF FUNERAL UNDERTAKER

Instructions: Section E to be completed by Funeral Undertaker. The undertaker must take his or her finger print, the finger print of the deceased and the informant. **Authorised Funeral Undertaker or Informant** may submit the completed form to the nearest Home Affairs office.

47. Name of Funeral Parlour

48. DHA Designation No.

49. Company Reg. No.

50. SARS Reg. No. (Income tax reference no.)

Details of Funeral Undertaker or Authorised Representative

51. Identity No. (Passport No. if foreigner)

52. Surname

53. Forenames

54. Business Address

Street

Town

Province

Postal Code

Telephone No. (Office)

Cellphone No.

55. Date of collection of corpse

Y Y Y Y M M D D

56. Date of Cremation (if applicable)

Y Y Y Y M M D D

57. Place of Burial (City / Town / Village)

Province

58. Date of Burial

Y Y Y Y M M D D

59. Grave No. (if available)

Name of person who collected the deceased:

60. Identity No. (Passport No. if foreigner)

61. Surname

62. Forenames

Place signed

Date signed

Y Y Y Y M M D D

Signature

F. FOR OFFICIAL USE ONLY

Registration of death approved, DHA-1663 received by (particulars of DHA official):

63. Identity No.

64. Surname

65. Forenames

66. Persal No.

Documents included with this notice:

☐ Copy of the deceased's ID☐ Copy of ID document of the informant☐ DHA - 6 (if applicable)☐ DHA - 1680 (if applicable)

DHA-1663 was submitted by:

☐ Informant☐ Funeral Undertaker

Left thumbprint of funeral undertaker

Office stamp of funeral undertaker

Office stamp of DHA

Appendix B1: Death notification form (DHA-1663B)-page 1 of 1

NOTICE OF DEATH / STILL BIRTH

Confirmation for Medical and Health use Only
(After completion seal to ensure confidentiality)

DHA-1663 B
Page 1 of 1

To be completed in full and submitted at the Department of Home Affairs' office by the informant or authorised party. The form to be completed in black ink with BLOCK LETTERS. Please mark with ☒ the CORRECT box, where required.

All fields are COMPULSORY. Incomplete applications and applications that are not legible may be considered invalid.

File no _____ Date _____

G. MEDICAL CERTIFICATE OF CAUSE OF DEATH

Instructions: Section G is to be filled out by Medical Practitioner / Professional Nurse / Forensic Pathologist, who has determined the cause of death

PARTICULARS OF DECEASED

| | | | | | | | | | | | | |
|--|--|---|--|--|---|---|--|--|--|--|--|--|
| 67. Identity No. (Passport No. if foreigner) | <input type="text"/> | | | | | | | | | | | |
| 68. Gender | <input type="checkbox"/> 68.1 Male | <input type="checkbox"/> 68.2 Female | <input type="checkbox"/> 68.3 Indeterminable | | | | | | | | | |
| 69. Surname | <input type="text"/> | | | | | | | | | | | |
| 70. Forenames | <input type="text"/> | | | | | | | | | | | |
| 71. Population Group | <input type="checkbox"/> 71.1 African | <input type="checkbox"/> 71.2 White | <input type="checkbox"/> 71.3 Indian/Asian | <input type="checkbox"/> 71.4 Coloured | <input type="checkbox"/> 71.5 Other (specify) _____ | | | | | | | |
| 72. Place of Death | <input type="checkbox"/> 72.1 Hospital/Inpatient | <input type="checkbox"/> 72.2 ER/Outpatient | <input type="checkbox"/> 72.3 DOA | <input type="checkbox"/> 72.4 Nursing Home | <input type="checkbox"/> 72.5 At Home | <input type="checkbox"/> 72.6 Other (specify) _____ | | | | | | |
| 73. Name of Health Facility/Practice | <input type="text"/> | | | | | | | | | | | |
| 74. Facility Contact Telephone No. incl. Area Code | <input type="text"/> | | | | | | | | | | | |
| 75. Patient File No. | <input type="text"/> | | | | | | | | | | | |
| 76. Contact Person at Facility: | | | | | | | | | | | | |
| Surname | <input type="text"/> | | | | | | | | | | | |
| Forenames | <input type="text"/> | | | | | | | | | | | |
| Role/Rank | <input type="text"/> | | | | | | | | | | | |

G.1 FOR DEATHS OCCURRING AFTER ONE WEEK OF BIRTH

Instructions: Section G.1 is to be completed for all deaths that occurred after one week of birth

77. CAUSES OF DEATH

| | | | |
|---|---|---|---|
| Part 1 | Enter the disease, injuries or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock or heart failure. List only one cause on each line | Approximate interval between onset and death (Days / Months / Years) | For office use only ICD-10 |
| | IMMEDIATE CAUSE (final disease or condition resulting in death) | a) _____ Due to (or as a consequence of) _____ | <input type="text"/> |
| | Sequentially list conditions, if any, leading to immediate cause. | b) _____ Due to (or as a consequence of) _____ | <input type="text"/> |
| | Enter UNDERLYING CAUSE last (Disease or injury that initiated events resulting in death) | c) _____ Due to (or as a consequence of) _____ | <input type="text"/> |
| | | d) _____ | <input type="text"/> |
| Part 2 | Other significant conditions contributing to death but not resulting in underlying cause given in Part 1 _____ | | |
| 78. If a female, was she pregnant at the time of death or up to 42 days prior to death? (<input checked="" type="checkbox"/>) | <input type="checkbox"/> 82.1 Yes | <input type="checkbox"/> 82.2 No | |
| 79. Method used to ascertain the cause of death (tick all that apply): | | | |
| <input type="checkbox"/> 79.1 Autopsy | <input type="checkbox"/> 79.2 Post mortem examination | <input type="checkbox"/> 79.3 Opinion of attending medical practitioner | <input type="checkbox"/> 79.4 Opinion of attending medical practitioner on duty |
| <input type="checkbox"/> 79.5 Opinion of registered professional nurse | <input type="checkbox"/> 79.6 Interview of family member | <input type="checkbox"/> 79.7 Other (specify) _____ | |

G.2 FOR STILL BIRTHS AND DEATHS OCCURRING WITHIN ONE WEEK OF BIRTH (PERINATAL DEATHS)

Instructions: Section G.2 is to be completed for all still births and deaths that occurred within one week of birth (perinatal deaths)

| Mother | Child |
|--|---|
| 80. Identity Number <input type="text"/> | 89. Type of death: <input type="checkbox"/> 89.1 Still birth <input type="checkbox"/> 89.2 Live birth |
| 81. Date Of Birth <input type="text"/> | 90. Birth weight (in grams) <input type="text"/> |
| 82. Age of last birthday/ DoB unknown <input type="text"/> | 91. This birth was: <input type="checkbox"/> 91.1 Single birth <input type="checkbox"/> 91.2 First twin |
| 83. Number of previous pregnancies resulting in: | <input type="checkbox"/> 91.3 Second twin <input type="checkbox"/> 91.4 Other multiple |
| <input type="checkbox"/> 83.1 Live births <input type="checkbox"/> 83.2 Still births <input type="checkbox"/> 83.3 Abortions | 92. If still born, heartbeat ceased: |
| 84. Outcome of last previous pregnancy (tick one): | <input type="checkbox"/> 92.1 Before labour |
| <input type="checkbox"/> 84.1 Live birth <input type="checkbox"/> 84.2 Still birth <input type="checkbox"/> 84.3 Abortion | <input type="checkbox"/> 92.2 During labour but before delivery |
| 85. Date of last previous delivery <input type="text"/> | <input type="checkbox"/> 92.3 Before delivery but not known whether before or during labour |
| 86. First day of last menstrual period <input type="text"/> | 93. If death occurred within 24 hours after birth, number of hours alive <input type="text"/> |
| Or, if unknown, estimated duration of pregnancy (in completed weeks) <input type="text"/> | 94. Attendant at birth: |
| 87. Method of delivery: | <input type="checkbox"/> 94.1 Physician |
| <input type="checkbox"/> 87.1 Spontaneous <input type="checkbox"/> 87.4 Vacuum extractor | <input type="checkbox"/> 94.2 Trained midwife |
| <input type="checkbox"/> 87.2 Forceps delivery <input type="checkbox"/> 87.5 Caesarean section | <input type="checkbox"/> 94.3 Other trained person (specify) _____ |
| <input type="checkbox"/> 87.3 Forceps and rotation <input type="checkbox"/> 87.6 Other (specify) _____ | <input type="checkbox"/> 94.4 Other (specify) _____ |
| 88. Antenatal care two or more visits: | |
| <input type="checkbox"/> 88.1 Yes <input type="checkbox"/> 88.2 No <input type="checkbox"/> 88.3 Unknown | |

95. CAUSES OF DEATH

| | |
|---|--|
| a. Main disease or conditions in foetus or infant | _____ |
| b. Other diseases or conditions in foetus or infant | _____ |
| c. Main maternal disease or condition affecting foetus or infant | _____ |
| d. Other maternal diseases or conditions affecting foetus or infant | _____ |
| e. Other relevant circumstances | _____ |
| 96. Autopsy information (<input checked="" type="checkbox"/>) | |
| <input type="checkbox"/> 96.1 Certified causes of death has been confirmed by autopsy | <input type="checkbox"/> 96.2 Autopsy information may be available later |
| | <input type="checkbox"/> 96.3 Autopsy not performed |

Appendix C: Number of deaths by age, sex and year of death, 1997–1999*

| Age group | 1997 | | | | 1998 | | | | 1999 | | | |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|
| | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total |
| 0 | 12 986 | 11 546 | 203 | 24 735 | 14 927 | 13 254 | 314 | 28 495 | 14 731 | 13 455 | 438 | 28 624 |
| 1-4 | 4 049 | 3 650 | 52 | 7 751 | 4 860 | 4 485 | 96 | 9 441 | 5 068 | 4 636 | 98 | 9 802 |
| 5-9 | 1 706 | 1 253 | 17 | 2 976 | 1 779 | 1 435 | 36 | 3 250 | 1 894 | 1 505 | 34 | 3 433 |
| 10-14 | 1 546 | 1 189 | 20 | 2 755 | 1 693 | 1 288 | 23 | 3 004 | 1 649 | 1 305 | 23 | 2 977 |
| 15-19 | 3 777 | 2 475 | 23 | 6 275 | 4 105 | 2 904 | 62 | 7 071 | 4 353 | 3 326 | 89 | 7 768 |
| 20-24 | 8 176 | 5 449 | 50 | 13 675 | 8 790 | 6 905 | 109 | 15 804 | 8 638 | 8 291 | 105 | 17 034 |
| 25-29 | 10 923 | 7 432 | 43 | 18 398 | 13 076 | 9 855 | 110 | 23 041 | 13 885 | 12 610 | 141 | 26 636 |
| 30-34 | 11 831 | 7 186 | 49 | 19 066 | 14 364 | 9 705 | 127 | 24 196 | 16 290 | 12 257 | 119 | 28 666 |
| 35-39 | 11 968 | 6 857 | 51 | 18 876 | 14 604 | 8 924 | 97 | 23 625 | 16 446 | 10 805 | 111 | 27 362 |
| 40-44 | 11 778 | 6 400 | 36 | 18 214 | 13 921 | 7 921 | 94 | 21 936 | 15 203 | 8 908 | 90 | 24 201 |
| 45-49 | 12 220 | 6 362 | 50 | 18 632 | 14 184 | 7 671 | 88 | 21 943 | 14 970 | 8 512 | 99 | 23 581 |
| 50-54 | 11 292 | 6 238 | 29 | 17 559 | 12 996 | 7 205 | 79 | 20 280 | 13 864 | 7 751 | 79 | 21 694 |
| 55-59 | 12 643 | 7 925 | 45 | 20 613 | 13 920 | 8 873 | 107 | 22 900 | 14 059 | 8 673 | 84 | 22 816 |
| 60-64 | 11 184 | 9 287 | 50 | 20 521 | 12 419 | 9 995 | 60 | 22 474 | 12 677 | 10 036 | 82 | 22 795 |
| 65-69 | 12 462 | 11 038 | 45 | 23 545 | 13 237 | 12 454 | 83 | 25 774 | 12 822 | 12 312 | 91 | 25 225 |
| 70-74 | 11 285 | 10 059 | 48 | 21 392 | 12 733 | 11 790 | 53 | 24 576 | 12 852 | 12 247 | 70 | 25 169 |
| 75-79 | 11 186 | 12 333 | 44 | 23 563 | 11 413 | 12 479 | 87 | 23 979 | 10 693 | 11 583 | 63 | 22 339 |
| 80-84 | 6 599 | 8 777 | 32 | 15 408 | 7 875 | 11 042 | 48 | 18 965 | 7 600 | 11 316 | 73 | 18 989 |
| 85-89 | 3 950 | 6 917 | 25 | 10 892 | 4 257 | 7 804 | 34 | 12 095 | 4 450 | 7 942 | 51 | 12 443 |
| 90+ | 2 028 | 4 730 | 13 | 6 771 | 2 363 | 5 560 | 29 | 7 952 | 2 210 | 5 380 | 30 | 7 620 |
| Unspecified | 3 110 | 2 362 | 106 | 5 578 | 2 821 | 2 092 | 195 | 5 108 | 1 491 | 1 108 | 109 | 2 708 |
| Total | 176 699 | 139 465 | 1 031 | 317 195 | 200 337 | 163 641 | 1 931 | 365 909 | 205 845 | 173 958 | 2 079 | 381 882 |

*Data for 1997–1999 have been updated with late registrations processed in 2013.

Appendix C1: Number of deaths by age, sex and year of death, 2000–2002*

| Age group | 2000 | | | | 2001 | | | | 2002 | | | |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|
| | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total |
| 0 | 15 001 | 13 523 | 351 | 28 875 | 15 466 | 14 070 | 307 | 29 843 | 17 869 | 16 190 | 338 | 34 397 |
| 1-4 | 5 380 | 4 918 | 86 | 10 384 | 5 877 | 5 301 | 78 | 11 256 | 6 319 | 5 678 | 87 | 12 084 |
| 5-9 | 1 998 | 1 595 | 29 | 3 622 | 2 122 | 1 706 | 28 | 3 856 | 2 400 | 1 962 | 17 | 4 379 |
| 10-14 | 1 722 | 1 337 | 36 | 3 095 | 1 748 | 1 467 | 22 | 3 237 | 1 867 | 1 485 | 24 | 3 376 |
| 15-19 | 4 319 | 3 484 | 72 | 7 875 | 4 476 | 3 911 | 62 | 8 449 | 4 735 | 4 287 | 58 | 9 080 |
| 20-24 | 8 877 | 9 873 | 84 | 18 834 | 8 939 | 10 925 | 85 | 19 949 | 9 571 | 12 482 | 109 | 22 162 |
| 25-29 | 15 076 | 15 720 | 105 | 30 901 | 16 844 | 19 280 | 108 | 36 232 | 18 636 | 23 308 | 133 | 42 077 |
| 30-34 | 18 483 | 15 802 | 108 | 34 393 | 20 912 | 18 726 | 109 | 39 747 | 23 894 | 23 523 | 145 | 47 562 |
| 35-39 | 18 548 | 13 599 | 95 | 32 242 | 21 087 | 15 862 | 101 | 37 050 | 24 079 | 19 441 | 124 | 43 644 |
| 40-44 | 17 124 | 11 010 | 77 | 28 211 | 19 338 | 12 852 | 94 | 32 284 | 21 588 | 15 494 | 113 | 37 195 |
| 45-49 | 16 121 | 9 562 | 78 | 25 761 | 17 899 | 10 941 | 62 | 28 902 | 19 294 | 12 652 | 111 | 32 057 |
| 50-54 | 15 287 | 9 096 | 64 | 24 447 | 16 893 | 10 142 | 74 | 27 109 | 18 608 | 11 250 | 102 | 29 960 |
| 55-59 | 13 932 | 8 873 | 74 | 22 879 | 14 560 | 9 127 | 65 | 23 752 | 15 403 | 10 009 | 71 | 25 483 |
| 60-64 | 14 235 | 11 256 | 67 | 25 558 | 15 109 | 12 069 | 66 | 27 244 | 16 169 | 12 703 | 81 | 28 953 |
| 65-69 | 12 588 | 12 066 | 52 | 24 706 | 13 017 | 12 799 | 64 | 25 880 | 13 744 | 13 282 | 63 | 27 089 |
| 70-74 | 13 117 | 14 139 | 67 | 27 323 | 14 042 | 15 123 | 60 | 29 225 | 13 790 | 15 471 | 62 | 29 323 |
| 75-79 | 10 351 | 11 536 | 48 | 21 935 | 10 849 | 12 037 | 61 | 22 947 | 11 096 | 12 835 | 70 | 24 001 |
| 80-84 | 8 484 | 12 639 | 32 | 21 155 | 9 163 | 13 910 | 47 | 23 120 | 9 540 | 14 194 | 60 | 23 794 |
| 85-89 | 4 681 | 8 228 | 27 | 12 936 | 4 580 | 8 360 | 31 | 12 971 | 4 374 | 8 317 | 34 | 12 725 |
| 90+ | 2 530 | 6 526 | 31 | 9 087 | 3 023 | 7 158 | 28 | 10 209 | 3 294 | 7 665 | 33 | 10 992 |
| Unspecified | 1 187 | 892 | 144 | 2 223 | 1 046 | 782 | 98 | 1 926 | 1 137 | 788 | 112 | 2 037 |
| Total | 219 041 | 195 674 | 1 727 | 416 442 | 219 041 | 195 674 | 1 727 | 455 188 | 257 407 | 243 016 | 1 947 | 502 370 |

*Data for 2000–2002 have been updated with late registrations processed in 2013.

Appendix C2: Number of deaths by age, sex and year of death, 2003–2005*

| Age group | 2003 | | | | 2004 | | | | 2005 | | | |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|
| | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total |
| 0 | 19 948 | 18 033 | 434 | 38 415 | 21 736 | 19 168 | 530 | 41 434 | 24 043 | 21 922 | 474 | 46 439 |
| 1-4 | 7 129 | 6 278 | 78 | 13 485 | 8 253 | 7 625 | 71 | 15 949 | 8 210 | 7 310 | 80 | 15 600 |
| 5-9 | 2 777 | 2 197 | 28 | 5 002 | 3 185 | 2 799 | 13 | 5 997 | 3 358 | 2 800 | 21 | 6 179 |
| 10-14 | 2 001 | 1 641 | 25 | 3 667 | 2 139 | 1 774 | 12 | 3 925 | 2 145 | 1 856 | 17 | 4 018 |
| 15-19 | 4 837 | 4 553 | 70 | 9 460 | 4 681 | 4 612 | 41 | 9 334 | 4 770 | 4 540 | 52 | 9 362 |
| 20-24 | 10 330 | 14 171 | 104 | 24 605 | 10 362 | 15 052 | 76 | 25 490 | 10 488 | 14 854 | 89 | 25 431 |
| 25-29 | 20 009 | 26 203 | 147 | 46 359 | 19 801 | 27 534 | 111 | 47 446 | 19 311 | 27 239 | 105 | 46 655 |
| 30-34 | 27 478 | 28 108 | 141 | 55 727 | 28 430 | 30 621 | 79 | 59 130 | 28 787 | 31 236 | 105 | 60 128 |
| 35-39 | 26 420 | 22 629 | 112 | 49 161 | 28 212 | 25 134 | 87 | 53 433 | 29 399 | 26 227 | 100 | 55 726 |
| 40-44 | 24 717 | 18 413 | 117 | 43 247 | 26 456 | 20 541 | 67 | 47 064 | 27 455 | 21 467 | 83 | 49 005 |
| 45-49 | 22 022 | 14 469 | 85 | 36 576 | 23 075 | 16 235 | 64 | 39 374 | 24 423 | 17 361 | 77 | 41 861 |
| 50-54 | 20 565 | 12 875 | 67 | 33 507 | 21 096 | 14 088 | 46 | 35 230 | 21 501 | 14 947 | 57 | 36 505 |
| 55-59 | 17 186 | 10 976 | 49 | 28 211 | 18 053 | 12 014 | 32 | 30 099 | 19 692 | 13 304 | 47 | 33 043 |
| 60-64 | 17 371 | 13 290 | 56 | 30 717 | 16 959 | 13 388 | 28 | 30 375 | 16 834 | 13 242 | 34 | 30 110 |
| 65-69 | 14 654 | 13 884 | 53 | 28 591 | 15 203 | 13 794 | 26 | 29 023 | 16 362 | 15 173 | 36 | 31 571 |
| 70-74 | 14 462 | 16 369 | 55 | 30 886 | 13 434 | 15 421 | 25 | 28 880 | 12 906 | 15 078 | 33 | 28 017 |
| 75-79 | 12 060 | 14 109 | 56 | 26 225 | 11 800 | 14 072 | 15 | 25 887 | 12 211 | 15 910 | 35 | 28 156 |
| 80-84 | 9 443 | 13 696 | 39 | 23 178 | 8 640 | 11 952 | 21 | 20 613 | 8 433 | 11 833 | 21 | 20 287 |
| 85-89 | 5 435 | 10 193 | 36 | 15 664 | 5 036 | 9 473 | 19 | 14 528 | 5 446 | 10 336 | 17 | 15 799 |
| 90+ | 3 380 | 8 147 | 18 | 11 545 | 3 287 | 7 478 | 14 | 10 779 | 3 287 | 7 883 | 15 | 11 185 |
| Unspecified | 1 658 | 941 | 207 | 2 806 | 1 922 | 928 | 244 | 3 094 | 1 975 | 1 079 | 223 | 3 277 |
| Total | 283 882 | 271 175 | 1 977 | 557 034 | 291 760 | 283 703 | 1 621 | 577 084 | 301 036 | 295 597 | 1 721 | 598 354 |

*Data for 2003–2005 have been updated with late registrations processed in 2013.

Appendix C3: Number of deaths by age, sex and year of death, 2006–2008*

| Age group | 2006 | | | | 2007 | | | | 2008 | | | |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|------------|----------------|----------------|----------------|------------|----------------|
| | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total |
| 0 | 25 484 | 22 080 | 725 | 48 289 | 24 817 | 21 654 | 414 | 46 885 | 24 071 | 21 365 | 296 | 45 732 |
| 1-4 | 8 385 | 7 566 | 117 | 16 068 | 7 810 | 7 016 | 47 | 14 873 | 8 192 | 7 186 | 31 | 15 409 |
| 5-9 | 3 024 | 2 548 | 17 | 5 589 | 2 866 | 2 499 | 4 | 5 369 | 2 723 | 2 299 | 6 | 5 028 |
| 10-14 | 2 386 | 1 914 | 14 | 4 314 | 2 245 | 1 901 | 2 | 4 148 | 2 226 | 1 889 | 2 | 4 117 |
| 15-19 | 4 846 | 4 596 | 38 | 9 480 | 4 883 | 4 200 | 15 | 9 098 | 4 850 | 4 126 | 26 | 9 002 |
| 20-24 | 10 865 | 14 805 | 97 | 25 767 | 10 922 | 13 743 | 50 | 24 715 | 10 718 | 12 902 | 41 | 23 661 |
| 25-29 | 19 008 | 26 148 | 82 | 45 238 | 18 509 | 24 589 | 67 | 43 165 | 18 461 | 23 542 | 43 | 42 046 |
| 30-34 | 28 882 | 31 018 | 93 | 59 993 | 28 392 | 29 127 | 67 | 57 586 | 26 817 | 27 262 | 55 | 54 134 |
| 35-39 | 29 490 | 26 097 | 78 | 55 665 | 29 426 | 24 889 | 48 | 54 363 | 29 104 | 24 371 | 47 | 53 522 |
| 40-44 | 28 114 | 21 856 | 73 | 50 043 | 27 114 | 21 214 | 47 | 48 375 | 26 089 | 20 227 | 28 | 46 344 |
| 45-49 | 25 149 | 17 958 | 45 | 43 152 | 24 884 | 17 900 | 43 | 42 827 | 24 808 | 17 552 | 31 | 42 391 |
| 50-54 | 22 798 | 15 614 | 40 | 38 452 | 22 912 | 15 658 | 17 | 38 587 | 22 754 | 15 573 | 21 | 38 348 |
| 55-59 | 20 649 | 14 188 | 41 | 34 878 | 21 442 | 14 623 | 23 | 36 088 | 21 602 | 14 949 | 19 | 36 570 |
| 60-64 | 17 068 | 13 348 | 25 | 30 441 | 17 501 | 13 485 | 10 | 30 996 | 17 757 | 13 920 | 16 | 31 693 |
| 65-69 | 17 757 | 15 816 | 24 | 33 597 | 17 957 | 15 846 | 9 | 33 812 | 18 068 | 15 620 | 10 | 33 698 |
| 70-74 | 13 594 | 15 610 | 26 | 29 230 | 13 832 | 15 839 | 8 | 29 679 | 14 163 | 15 319 | 2 | 29 484 |
| 75-79 | 12 727 | 17 022 | 24 | 29 773 | 12 596 | 17 086 | 4 | 29 686 | 12 582 | 17 211 | 4 | 29 797 |
| 80-84 | 8 951 | 12 346 | 20 | 21 317 | 8 912 | 12 930 | 3 | 21 845 | 9 034 | 13 865 | 1 | 22 900 |
| 85-89 | 6 147 | 12 031 | 11 | 18 189 | 6 362 | 12 213 | 2 | 18 577 | 5 987 | 11 204 | 1 | 17 192 |
| 90+ | 3 565 | 8 715 | 9 | 12 289 | 3 684 | 8 792 | 12 | 12 488 | 3 976 | 9 554 | 27 | 13 557 |
| Unspecified | 864 | 356 | 144 | 1 364 | 803 | 335 | 106 | 1 244 | 674 | 248 | 134 | 1 056 |
| Total | 309 753 | 301 632 | 1 743 | 613 128 | 307 869 | 295 539 | 998 | 604 406 | 304 656 | 290 184 | 841 | 595 681 |

*Data for 2006–2008 have been updated with late registrations processed in 2013.

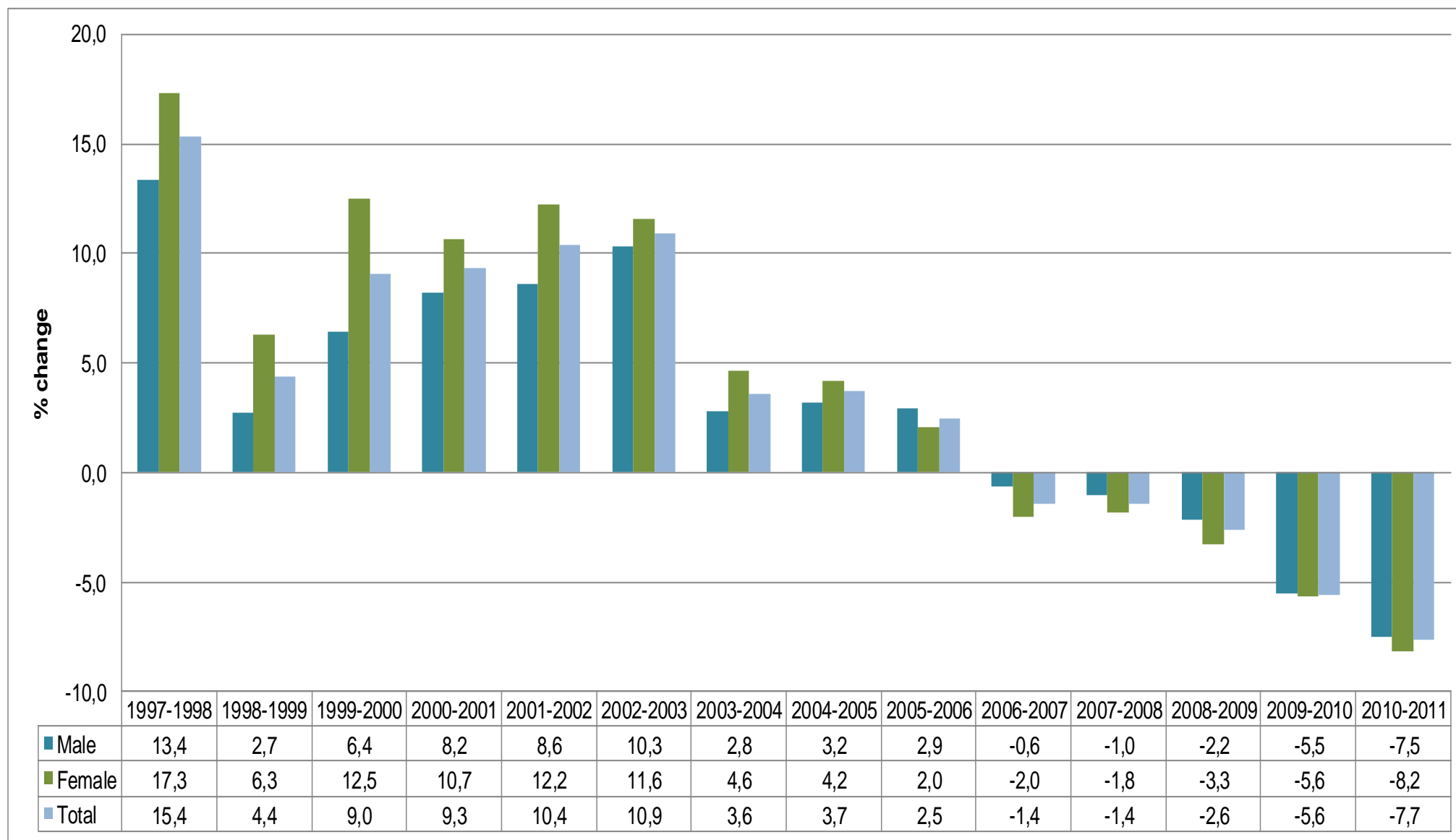
Appendix C4: Number of deaths by age, sex and year of death, 2009–2011*

| Age group | 2009 | | | | 2010 | | | | 2011 | | | |
|--------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|--------------|----------------|
| | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total | Male | Female | Unsp. | Total |
| 0 | 20 934 | 17 644 | 455 | 39 033 | 18 235 | 16 045 | 376 | 34 656 | 14 583 | 12 914 | 484 | 27 981 |
| 1-4 | 6 616 | 6 039 | 31 | 12 686 | 6 978 | 6 070 | 43 | 13 091 | 5 218 | 4 663 | 46 | 9 927 |
| 5-9 | 2 346 | 2 023 | 6 | 4 375 | 2 538 | 2 089 | 5 | 4 632 | 2 299 | 1 984 | 7 | 4 290 |
| 10-14 | 2 371 | 2 064 | 4 | 4 439 | 2 420 | 2 112 | 3 | 4 535 | 2 065 | 1 777 | 5 | 3 847 |
| 15-19 | 4 658 | 4 130 | 24 | 8 812 | 4 397 | 3 955 | 18 | 8 370 | 4 055 | 3 497 | 25 | 7 577 |
| 20-24 | 9 953 | 11 763 | 51 | 21 767 | 9 400 | 10 640 | 33 | 20 073 | 8 434 | 8 769 | 80 | 17 283 |
| 25-29 | 17 673 | 21 615 | 67 | 39 355 | 16 440 | 19 397 | 61 | 35 898 | 14 686 | 15 851 | 142 | 30 679 |
| 30-34 | 24 892 | 24 128 | 75 | 49 095 | 22 321 | 21 352 | 67 | 43 740 | 19 259 | 17 502 | 134 | 36 895 |
| 35-39 | 27 570 | 22 311 | 53 | 49 934 | 24 680 | 20 314 | 46 | 45 040 | 22 069 | 17 182 | 104 | 39 355 |
| 40-44 | 25 072 | 19 124 | 52 | 44 248 | 23 246 | 17 573 | 44 | 40 863 | 20 566 | 15 251 | 96 | 35 913 |
| 45-49 | 24 273 | 17 288 | 43 | 41 604 | 22 836 | 16 305 | 56 | 39 197 | 20 609 | 14 687 | 60 | 35 356 |
| 50-54 | 22 758 | 15 540 | 38 | 38 336 | 21 910 | 15 164 | 30 | 37 104 | 20 762 | 14 120 | 67 | 34 949 |
| 55-59 | 21 701 | 15 095 | 28 | 36 824 | 20 874 | 14 274 | 33 | 35 181 | 20 043 | 14 029 | 47 | 34 119 |
| 60-64 | 19 152 | 14 357 | 20 | 33 529 | 20 017 | 14 744 | 26 | 34 787 | 20 082 | 14 710 | 57 | 34 849 |
| 65-69 | 18 149 | 15 686 | 14 | 33 849 | 17 224 | 14 560 | 21 | 31 805 | 16 727 | 14 064 | 24 | 30 815 |
| 70-74 | 15 140 | 15 915 | 16 | 31 071 | 15 802 | 16 644 | 13 | 32 459 | 16 263 | 16 586 | 21 | 32 870 |
| 75-79 | 12 692 | 17 743 | 8 | 30 443 | 11 741 | 16 083 | 8 | 27 832 | 11 542 | 16 257 | 18 | 27 817 |
| 80-84 | 9 767 | 15 081 | 9 | 24 857 | 9 909 | 16 187 | 11 | 26 107 | 9 834 | 16 513 | 14 | 26 361 |
| 85-89 | 6 132 | 11 204 | 2 | 17 338 | 5 758 | 10 485 | 5 | 16 248 | 5 895 | 11 020 | 13 | 16 928 |
| 90+ | 5 245 | 11 650 | 1 | 16 896 | 4 078 | 10 713 | 8 | 14 799 | 4 325 | 11 259 | 7 | 15 591 |
| Unspecified | 1 008 | 329 | 150 | 1 487 | 818 | 230 | 259 | 1 307 | 1 253 | 602 | 546 | 2 401 |
| Total | 298 102 | 280 729 | 1 147 | 579 978 | 281 622 | 264 936 | 1 166 | 547 724 | 260 569 | 243 237 | 1 997 | 505 803 |

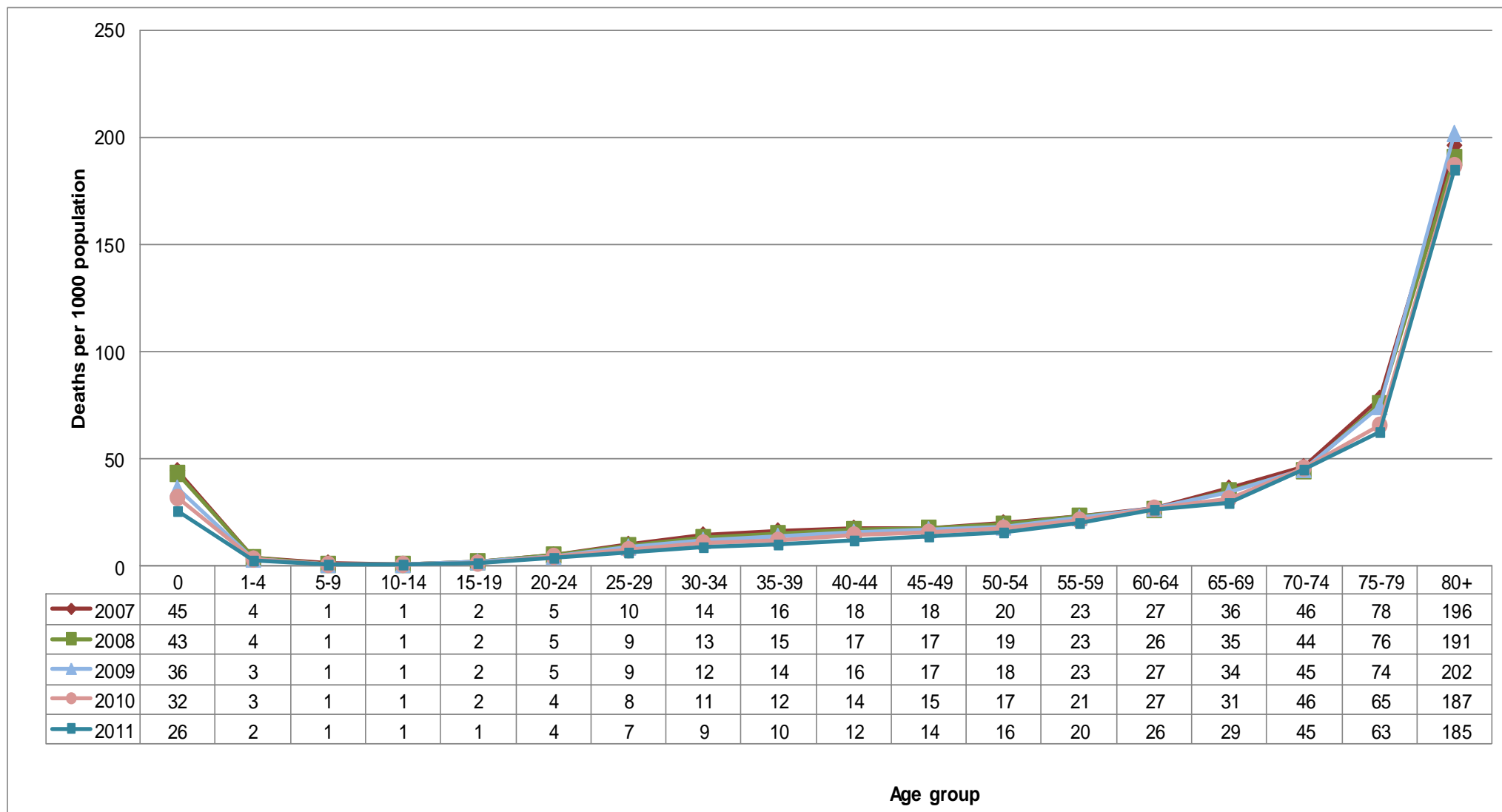
*Data for 2009–2010 have been updated with late registrations processed in 2013.

Appendix D: List of ill-defined causes

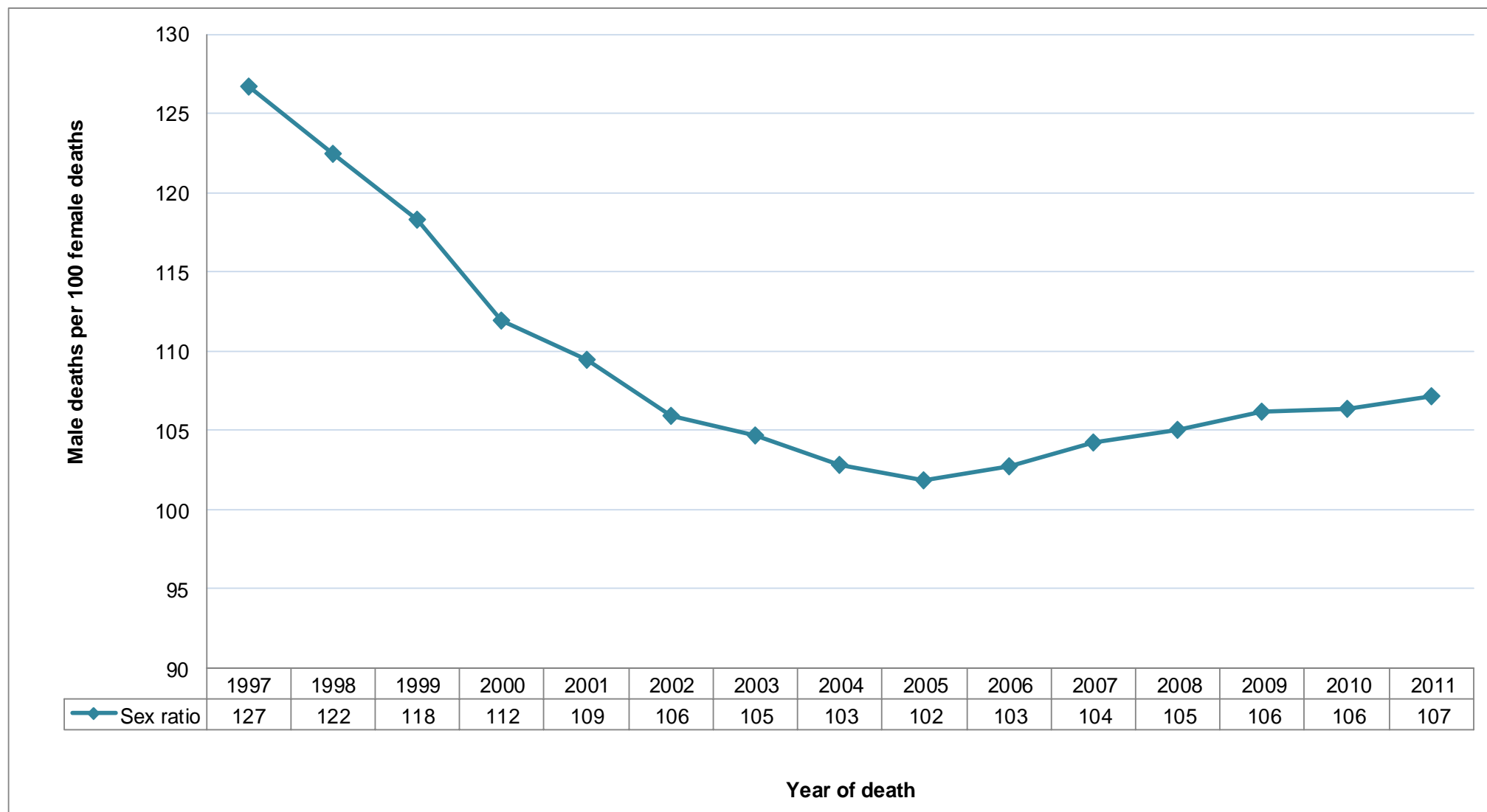
| No. | 3-character codes ill-defined causes of death (based on ICD-10) |
|-----|---|
| 1 | Streptococcal septicaemia (A40) |
| 2 | Other septicaemia (A41) |
| 3 | Malignant neoplasm of other and ill-defined sites (C76) |
| 4 | Malignant neoplasm without specification of site (C80) |
| 5 | Malignant neoplasm of independent (primary) multiple sites (C97) |
| 6 | Disseminated intravascular coagulation [defibrination syndrome] (D65) |
| 7 | Volume depletion (E86) |
| 8 | Essential (primary) hypertension (I10) |
| 9 | Cardiac arrest (I46) |
| 10 | Heart failure (I50) |
| 11 | Complications and ill-defined descriptions of heart disease (I51) |
| 12 | Other and unspecified disorders of circulatory system (I99) |
| 13 | Pulmonary oedema (J81) |
| 14 | Respiratory failure, not elsewhere classified (J96) |
| 15 | Hepatic failure, not elsewhere classified (K72) |
| 16 | Acute renal failure (N17) |
| 17 | Chronic renal failure (N18) |
| 18 | Unspecified renal failure (N19) |
| 19 | Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) |
| 20 | Event of undetermined intent (Y10-Y34) |

Appendix E: Year-to-year annual percentage changes in number of deaths by sex, 1997–2011*

*Data for 1997–2010 have been updated to include late registrations processed in 2013.

Appendix F: Age specific death rates (ASDR) by year of death, 2007–2011*

*Data for 1997–2010 have been updated to include late registrations processed in 2013.

Appendix G: Sex ratios at death by year of death, 1997–2011*

*Data for 1997–2010 have been updated to include late registrations processed in 2013.

Appendix H: Number of deaths by province of death occurrence and province of usual residence of the deceased, 2011

| Province of death occurrence | Province of usual residence of deceased | | | | | | | | | | | |
|------------------------------|---|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|--------------|---------------|----------------|
| | Western Cape | Eastern Cape | Northern Cape | Free State | KwaZulu-Natal | North West | Gauteng | Mpu-malanga | Limpopo | Foreign | Unspecified | Total |
| Western Cape | 41 921 | 471 | 136 | 71 | 762 | 99 | 298 | 100 | 170 | 46 | 1 669 | 45 743 |
| Eastern Cape | 345 | 62 755 | 101 | 147 | 1 670 | 100 | 813 | 266 | 131 | 76 | 6 631 | 73 035 |
| Northern Cape | 127 | 113 | 13 387 | 151 | 55 | 275 | 94 | 44 | 59 | 023 | 390 | 14 718 |
| Free State | 75 | 270 | 247 | 37 854 | 133 | 383 | 660 | 99 | 95 | 182 | 637 | 40 635 |
| KwaZulu-Natal | 299 | 1 760 | 33 | 140 | 96 325 | 87 | 626 | 461 | 105 | 068 | 4 748 | 104 652 |
| North West | 46 | 113 | 259 | 287 | 59 | 31 852 | 1 386 | 89 | 281 | 75 | 3 108 | 37 555 |
| Gauteng | 256 | 518 | 110 | 732 | 756 | 2 143 | 89 950 | 1 589 | 1 382 | 246 | 3 069 | 100 751 |
| Mpumalanga | 47 | 154 | 26 | 113 | 406 | 70 | 707 | 34 526 | 736 | 129 | 1 123 | 38 037 |
| Limpopo | 48 | 115 | 76 | 76 | 225 | 314 | 520 | 854 | 42 167 | 197 | 2 755 | 47 347 |
| Foreign | 34 | 15 | 8 | 92 | 48 | 24 | 233 | 33 | 13 | 133 | 173 | 806 |
| Unspecified | 119 | 163 | 49 | 95 | 440 | 202 | 358 | 271 | 307 | 18 | 502 | 2 524 |
| Total | 43 317 | 66 447 | 14 432 | 39 758 | 100 879 | 35 549 | 95 645 | 38 332 | 45 446 | 1 193 | 24 805 | 505 803 |

Appendix H1: Percentage distribution of deaths by province of death occurrence and province of usual residence of the deceased, 2011

| Province of death occurrence | Province of usual residence of deceased | | | | | | | | | | | |
|------------------------------|---|--------------|---------------|------------|---------------|------------|---------|-------------|---------|---------|-------------|--------------|
| | Western Cape | Eastern Cape | Northern Cape | Free State | KwaZulu-Natal | North West | Gauteng | Mpu-malanga | Limpopo | Foreign | Unspecified | Total |
| Western Cape | 91,6 | 1,0 | 0,3 | 0,2 | 1,7 | 0,2 | 0,7 | 0,2 | 0,4 | 0,1 | 3,6 | 100,0 |
| Eastern Cape | 0,5 | 85,9 | 0,1 | 0,2 | 2,3 | 0,1 | 1,1 | 0,4 | 0,2 | 0,1 | 9,1 | 100,0 |
| Northern Cape | 0,9 | 0,8 | 91,0 | 1,0 | 0,4 | 1,9 | 0,6 | 0,3 | 0,4 | 0,2 | 2,6 | 100,0 |
| Free State | 0,2 | 0,7 | 0,6 | 93,2 | 0,3 | 0,9 | 1,6 | 0,2 | 0,2 | 0,4 | 1,6 | 100,0 |
| KwaZulu-Natal | 0,3 | 1,7 | 0,0 | 0,1 | 92,0 | 0,1 | 0,6 | 0,4 | 0,1 | 0,1 | 4,5 | 100,0 |
| North West | 0,1 | 0,3 | 0,7 | 0,8 | 0,2 | 84,8 | 3,7 | 0,2 | 0,7 | 0,2 | 8,3 | 100,0 |
| Gauteng | 0,3 | 0,5 | 0,1 | 0,7 | 0,8 | 2,1 | 89,3 | 1,6 | 1,4 | 0,2 | 3,0 | 100,0 |
| Mpumalanga | 0,1 | 0,4 | 0,1 | 0,3 | 1,1 | 0,2 | 1,9 | 90,8 | 1,9 | 0,3 | 3,0 | 100,0 |
| Limpopo | 0,1 | 0,2 | 0,2 | 0,2 | 0,5 | 0,7 | 1,1 | 1,8 | 89,1 | 0,4 | 5,8 | 100,0 |
| Foreign | 4,2 | 1,9 | 1,0 | 11,4 | 6,0 | 3,0 | 28,9 | 4,1 | 1,6 | 16,5 | 21,5 | 100,0 |
| Unspecified | 4,7 | 6,5 | 1,9 | 3,8 | 17,4 | 8,0 | 14,2 | 10,7 | 12,2 | 0,7 | 19,9 | 100,0 |

Appendix I: Number of deaths by age, province and district municipality of death occurrence, 2011*

| Province of death occurrence | District municipality of death occurrence | Age | | | | | | | |
|------------------------------|---|--------------|--------------|--------------|---------------|---------------|---------------|------------|----------------|
| | | 0 | 1-4 | 5-14 | 15-49 | 50-64 | 65+ | Unsp. | Total |
| Western Cape | Cape Winelands | 274 | 72 | 41 | 2 011 | 1 657 | 2 568 | 26 | 6 649 |
| | Central Karoo | 38 | 7 | 9 | 304 | 210 | 301 | 2 | 871 |
| | City of Cape Town | 1 198 | 316 | 203 | 8 649 | 5 974 | 9 998 | 128 | 26 466 |
| | Eden | 185 | 39 | 38 | 1 410 | 1 279 | 2 086 | 14 | 5 051 |
| | Overberg | 84 | 22 | 21 | 672 | 479 | 932 | 3 | 2 213 |
| | West Coast | 128 | 34 | 21 | 995 | 867 | 1 250 | 5 | 3 300 |
| | Unspecified | 51 | 14 | 7 | 385 | 300 | 424 | 12 | 1 193 |
| | Total | 1 958 | 504 | 340 | 14 426 | 10 766 | 17 559 | 190 | 45 743 |
| Eastern Cape | Joe Gqabi | 209 | 71 | 71 | 1 706 | 962 | 1 452 | 15 | 4 486 |
| | Alfred Nzo | 249 | 125 | 144 | 2 671 | 1 142 | 1 928 | 15 | 6 274 |
| | Amatole | 403 | 228 | 250 | 5 436 | 2 876 | 5 651 | 36 | 14 880 |
| | Buffalo city | 375 | 122 | 131 | 4 233 | 2 434 | 3 560 | 19 | 10 874 |
| | Cacadu | 187 | 61 | 37 | 1 628 | 1 096 | 1 619 | 11 | 4 639 |
| | Chris Hani | 360 | 157 | 107 | 3 559 | 2 019 | 3 218 | 28 | 9 448 |
| | Nelson Mandela Bay Metro | 233 | 49 | 62 | 2 282 | 1 499 | 2 124 | 15 | 6 264 |
| | O R Tambo | 407 | 367 | 453 | 6 631 | 2 529 | 4 080 | 31 | 14 498 |
| | Unspecified | 55 | 29 | 26 | 599 | 344 | 614 | 5 | 1 672 |
| | Total | 2 478 | 1 209 | 1 281 | 28 745 | 14 901 | 24 246 | 175 | 73 035 |
| Northern Cape | Frances Baard | 211 | 99 | 44 | 1 483 | 899 | 1 066 | 13 | 3 815 |
| | John Taolo Gaetsewe | 200 | 60 | 38 | 1 007 | 463 | 636 | 4 | 2 408 |
| | Namakwa | 45 | 7 | 11 | 289 | 250 | 472 | 4 | 1 078 |
| | Pixley ka Seme | 217 | 69 | 42 | 1 514 | 965 | 1 203 | 16 | 4 026 |
| | Siyanda | 169 | 79 | 39 | 1 089 | 661 | 810 | 8 | 2 855 |
| | Unspecified | 48 | 18 | 7 | 195 | 120 | 144 | 4 | 536 |
| | Total | 890 | 332 | 181 | 5 577 | 3 358 | 4 331 | 49 | 14 718 |
| Free State | Fezile Dabi | 357 | 109 | 67 | 2 216 | 1 207 | 1 610 | 17 | 5 583 |
| | Lejweleputswa | 758 | 212 | 98 | 4 006 | 2 236 | 2 182 | 31 | 9 523 |
| | Mangaung | 666 | 160 | 123 | 4 166 | 2 388 | 2 762 | 28 | 10 293 |
| | Thabo Mofutsanyane | 1 006 | 246 | 181 | 5 074 | 2 325 | 2 851 | 59 | 11 742 |
| | Xhariep | 144 | 56 | 45 | 1 284 | 660 | 868 | 8 | 3 065 |
| | Unspecified | 32 | 8 | 6 | 180 | 88 | 112 | 3 | 429 |
| | Total | 2 963 | 791 | 520 | 16 926 | 8 904 | 10 385 | 146 | 40 635 |
| KwaZulu-Natal | Amajuba | 281 | 84 | 74 | 2 337 | 1 105 | 1 302 | 19 | 5 202 |
| | Sisonke | 336 | 126 | 151 | 2 743 | 1 139 | 1 453 | 26 | 5 974 |
| | UMgungundlovu | 385 | 135 | 185 | 4 767 | 2 169 | 3 069 | 13 | 10 723 |
| | Ugu | 415 | 218 | 294 | 4 596 | 1 894 | 2 931 | 31 | 10 379 |
| | Umkhanyakude | 218 | 98 | 149 | 2 003 | 746 | 1 191 | 15 | 4 420 |
| | Umzinyathi | 320 | 135 | 163 | 2 239 | 968 | 1 363 | 28 | 5 216 |
| | Uthukela | 422 | 172 | 186 | 3 205 | 1 347 | 1 909 | 25 | 7 266 |
| | Uthungulu | 577 | 171 | 220 | 4 054 | 1 513 | 2 146 | 77 | 8 758 |
| | Zululand | 594 | 212 | 282 | 3 629 | 1 333 | 1 844 | 35 | 7 929 |
| | eThekweni | 1 114 | 380 | 486 | 11 631 | 5 617 | 8 206 | 102 | 27 536 |
| | iLembe | 331 | 116 | 170 | 2 475 | 974 | 1 325 | 30 | 5 421 |
| | Unspecified | 232 | 122 | 146 | 2 563 | 1 106 | 1 626 | 33 | 5 828 |
| | Total | 5 225 | 1 969 | 2 506 | 46 242 | 19 911 | 28 365 | 434 | 104 652 |

*Excluding 2 524 deaths with unspecified province of death occurrence.

**Appendix I: Number of deaths by age, province and district municipality of death occurrence, 2011*
(concluded)**

| Province of death occurrence | District municipality of death occurrence | Age | | | | | | | |
|------------------------------|---|--------------|--------------|--------------|---------------|---------------|---------------|------------|----------------|
| | | 0 | 1-4 | 5-14 | 15-49 | 50-64 | 65+ | Unsp. | Total |
| North West | Bojanala Platinum | 930 | 293 | 195 | 5 281 | 2 702 | 3 836 | 72 | 13 309 |
| | Dr Kenneth Kaunda | 616 | 158 | 96 | 3 059 | 1 763 | 2 132 | 36 | 7 860 |
| | Dr Ruth Segomotsi Mompati | 507 | 178 | 74 | 2 173 | 1 085 | 1 646 | 14 | 5 677 |
| | Ngaka Modiri Molema | 814 | 266 | 158 | 4 023 | 2 030 | 2 777 | 33 | 10 101 |
| | Unspecified | 53 | 15 | 11 | 221 | 118 | 183 | 7 | 608 |
| | Total | 2 920 | 910 | 534 | 14 757 | 7 698 | 10 574 | 162 | 37 555 |
| Gauteng | City of Johannesburg | 2 038 | 445 | 321 | 11 336 | 6 256 | 8 779 | 294 | 29 469 |
| | City of Tshwane | 1 010 | 428 | 214 | 7 063 | 4 261 | 6 557 | 41 | 19 574 |
| | Ekurhuleni | 2 008 | 474 | 295 | 11 337 | 5 529 | 6 859 | 222 | 26 724 |
| | Sedibeng | 666 | 187 | 102 | 4 627 | 2 770 | 3 242 | 29 | 11 623 |
| | West Rand | 593 | 175 | 102 | 3 793 | 2 051 | 2 759 | 96 | 9 569 |
| | Unspecified | 239 | 67 | 57 | 1 612 | 821 | 945 | 51 | 3 792 |
| | Total | 6 554 | 1 776 | 1 091 | 39 768 | 21 688 | 29 141 | 733 | 100 751 |
| Mpu-malanga | Ehlanzeni | 661 | 407 | 339 | 7 006 | 2 749 | 3 727 | 84 | 14 973 |
| | Gert Sibande | 814 | 235 | 199 | 5 107 | 2 170 | 2 365 | 45 | 10 935 |
| | Nkangala | 542 | 217 | 181 | 4 465 | 2 303 | 2 857 | 48 | 10 613 |
| | Unspecified | 63 | 37 | 35 | 708 | 271 | 393 | 9 | 1 516 |
| | Total | 2 080 | 896 | 754 | 17 286 | 7 493 | 9 342 | 186 | 38 037 |
| Limpopo | Capricorn | 600 | 303 | 206 | 4 345 | 2 111 | 3 736 | 23 | 11 324 |
| | Greater Sekhukhune | 382 | 286 | 170 | 3 395 | 1 534 | 2 837 | 17 | 8 621 |
| | Mopani | 637 | 296 | 150 | 3 528 | 1 582 | 2 681 | 27 | 8 901 |
| | Vhembe | 556 | 321 | 195 | 3 102 | 1 646 | 3 395 | 50 | 9 265 |
| | Waterberg | 343 | 139 | 67 | 1 977 | 923 | 1 507 | 19 | 4 975 |
| | Unspecified | 209 | 132 | 90 | 1 697 | 774 | 1 346 | 13 | 4 261 |
| | Total | 2 727 | 1 477 | 878 | 18 044 | 8 570 | 15 502 | 149 | 47 347 |
| Foreign | Total | 10 | 7 | 4 | 341 | 182 | 258 | 4 | 806 |

*Excluding 2 524 deaths with unspecified province of death occurrence.

Appendix I1: Percentage distribution of deaths by age, province and district municipality of death occurrence, 2011*

| Province of death occurrence | District municipality of death occurrence | Age | | | | | | | |
|------------------------------|---|------------|------------|------------|-------------|-------------|-------------|------------|--------------|
| | | 0 | 1-4 | 5-14 | 15-49 | 50-64 | 65+ | Unsp. | Total |
| Western Cape | Cape Winelands | 4,1 | 1,1 | 0,6 | 30,2 | 24,9 | 38,6 | 0,4 | 100,0 |
| | Central Karoo | 4,4 | 0,8 | 1,0 | 34,9 | 24,1 | 34,6 | 0,2 | 100,0 |
| | City of Cape Town | 4,5 | 1,2 | 0,8 | 32,7 | 22,6 | 37,8 | 0,5 | 100,0 |
| | Eden | 3,7 | 0,8 | 0,8 | 27,9 | 25,3 | 41,3 | 0,3 | 100,0 |
| | Overberg | 3,8 | 1,0 | 0,9 | 30,4 | 21,6 | 42,1 | 0,1 | 100,0 |
| | West Coast | 3,9 | 1,0 | 0,6 | 30,2 | 26,3 | 37,9 | 0,2 | 100,0 |
| | Unspecified | 4,3 | 1,2 | 0,6 | 32,3 | 25,1 | 35,5 | 1,0 | 100,0 |
| | Total | 4,3 | 1,1 | 0,7 | 31,5 | 23,5 | 38,4 | 0,4 | 100,0 |
| Eastern Cape | Joe Gqabi | 4,7 | 1,6 | 1,6 | 38,0 | 21,4 | 32,4 | 0,3 | 100,0 |
| | Alfred Nzo | 4,0 | 2,0 | 2,3 | 42,6 | 18,2 | 30,7 | 0,2 | 100,0 |
| | Amatole | 2,7 | 1,5 | 1,7 | 36,5 | 19,3 | 38,0 | 0,2 | 100,0 |
| | Buffalo city | 3,4 | 1,1 | 1,2 | 38,9 | 22,4 | 32,7 | 0,2 | 100,0 |
| | Cacadu | 4,0 | 1,3 | 0,8 | 35,1 | 23,6 | 34,9 | 0,2 | 100,0 |
| | Chris Hani | 3,8 | 1,7 | 1,1 | 37,7 | 21,4 | 34,1 | 0,3 | 100,0 |
| | Nelson Mandela Bay Metro | 3,7 | 0,8 | 1,0 | 36,4 | 23,9 | 33,9 | 0,2 | 100,0 |
| | O R Tambo | 2,8 | 2,5 | 3,1 | 45,7 | 17,4 | 28,1 | 0,2 | 100,0 |
| | Unspecified | 3,3 | 1,7 | 1,6 | 35,8 | 20,6 | 36,7 | 0,3 | 100,0 |
| | Total | 3,4 | 1,7 | 1,8 | 39,4 | 20,4 | 33,2 | 0,2 | 100,0 |
| Northern Cape | Frances Baard | 5,5 | 2,6 | 1,2 | 38,9 | 23,6 | 27,9 | 0,3 | 100,0 |
| | John Taolo Gaetsewe | 8,3 | 2,5 | 1,6 | 41,8 | 19,2 | 26,4 | 0,2 | 100,0 |
| | Namakwa | 4,2 | 0,6 | 1,0 | 26,8 | 23,2 | 43,8 | 0,4 | 100,0 |
| | Pixley ka Seme | 5,4 | 1,7 | 1,0 | 37,6 | 24,0 | 29,9 | 0,4 | 100,0 |
| | Siyanda | 5,9 | 2,8 | 1,4 | 38,1 | 23,2 | 28,4 | 0,3 | 100,0 |
| | Unspecified | 9,0 | 3,4 | 1,3 | 36,4 | 22,4 | 26,9 | 0,7 | 100,0 |
| | Total | 6,0 | 2,3 | 1,2 | 37,9 | 22,8 | 29,4 | 0,3 | 100,0 |
| Free State | Fezile Dabi | 6,4 | 2,0 | 1,2 | 39,7 | 21,6 | 28,8 | 0,3 | 100,0 |
| | Lejweleputswa | 8,0 | 2,2 | 1,0 | 42,1 | 23,5 | 22,9 | 0,3 | 100,0 |
| | Mangaung | 6,5 | 1,6 | 1,2 | 40,5 | 23,2 | 26,8 | 0,3 | 100,0 |
| | Thabo Mofutsanyane | 8,6 | 2,1 | 1,5 | 43,2 | 19,8 | 24,3 | 0,5 | 100,0 |
| | Xhariep | 4,7 | 1,8 | 1,5 | 41,9 | 21,5 | 28,3 | 0,3 | 100,0 |
| | Unspecified | 7,5 | 1,9 | 1,4 | 42,0 | 20,5 | 26,1 | 0,7 | 100,0 |
| | Total | 7,3 | 1,9 | 1,3 | 41,7 | 21,9 | 25,6 | 0,4 | 100,0 |
| KwaZulu-Natal | Amajuba | 5,4 | 1,6 | 1,4 | 44,9 | 21,2 | 25,0 | 0,4 | 100,0 |
| | Sisonke | 5,6 | 2,1 | 2,5 | 45,9 | 19,1 | 24,3 | 0,4 | 100,0 |
| | UMgungundlovu | 3,6 | 1,3 | 1,7 | 44,5 | 20,2 | 28,6 | 0,1 | 100,0 |
| | Ugu | 4,0 | 2,1 | 2,8 | 44,3 | 18,2 | 28,2 | 0,3 | 100,0 |
| | Umkhanyakude | 4,9 | 2,2 | 3,4 | 45,3 | 16,9 | 26,9 | 0,3 | 100,0 |
| | Umzinyathi | 6,1 | 2,6 | 3,1 | 42,9 | 18,6 | 26,1 | 0,5 | 100,0 |
| | Uthukela | 5,8 | 2,4 | 2,6 | 44,1 | 18,5 | 26,3 | 0,3 | 100,0 |
| | Uthungulu | 6,6 | 2,0 | 2,5 | 46,3 | 17,3 | 24,5 | 0,9 | 100,0 |
| | Zululand | 7,5 | 2,7 | 3,6 | 45,8 | 16,8 | 23,3 | 0,4 | 100,0 |
| | eThekwini | 4,0 | 1,4 | 1,8 | 42,2 | 20,4 | 29,8 | 0,4 | 100,0 |
| | iLembe | 6,1 | 2,1 | 3,1 | 45,7 | 18,0 | 24,4 | 0,6 | 100,0 |
| | Unspecified | 4,0 | 2,1 | 2,5 | 44,0 | 19,0 | 27,9 | 0,6 | 100,0 |
| | Total | 5,0 | 1,9 | 2,4 | 44,2 | 19,0 | 27,1 | 0,4 | 100,0 |

*Excluding 2 524 deaths with unspecified province of death occurrence.

Appendix I1: Percentage distribution of deaths by age, province and district municipality of death occurrence, 2011* (concluded)

| Province of death occurrence | District municipality of death occurrence | Age | | | | | | | |
|------------------------------|---|-----|-----|------|-------|-------|------|-------|-------|
| | | 0 | 1-4 | 5-14 | 15-49 | 50-64 | 65+ | Unsp. | Total |
| North West | Bojanala Platinum | 7,0 | 2,2 | 1,5 | 39,7 | 20,3 | 28,8 | 0,5 | 100,0 |
| | Dr Kenneth Kaunda | 7,8 | 2,0 | 1,2 | 38,9 | 22,4 | 27,1 | 0,5 | 100,0 |
| | Dr Ruth Segomotsi Mompati | 8,9 | 3,1 | 1,3 | 38,3 | 19,1 | 29,0 | 0,2 | 100,0 |
| | Ngaka Modiri Molema | 8,1 | 2,6 | 1,6 | 39,8 | 20,1 | 27,5 | 0,3 | 100,0 |
| | Unspecified | 8,7 | 2,5 | 1,8 | 36,3 | 19,4 | 30,1 | 1,2 | 100,0 |
| | Total | 7,8 | 2,4 | 1,4 | 39,3 | 20,5 | 28,2 | 0,4 | 100,0 |
| Gauteng | City of Johannesburg | 6,9 | 1,5 | 1,1 | 38,5 | 21,2 | 29,8 | 1,0 | 100,0 |
| | City of Tshwane | 5,2 | 2,2 | 1,1 | 36,1 | 21,8 | 33,5 | 0,2 | 100,0 |
| | Ekurhuleni | 7,5 | 1,8 | 1,1 | 42,4 | 20,7 | 25,7 | 0,8 | 100,0 |
| | Sedibeng | 5,7 | 1,6 | 0,9 | 39,8 | 23,8 | 27,9 | 0,2 | 100,0 |
| | West Rand | 6,2 | 1,8 | 1,1 | 39,6 | 21,4 | 28,8 | 1,0 | 100,0 |
| | Unspecified | 6,3 | 1,8 | 1,5 | 42,5 | 21,7 | 24,9 | 1,3 | 100,0 |
| | Total | 6,5 | 1,8 | 1,1 | 39,5 | 21,5 | 28,9 | 0,7 | 100,0 |
| Mpu-malanga | Ehlanzeni | 4,4 | 2,7 | 2,3 | 46,8 | 18,4 | 24,9 | 0,6 | 100,0 |
| | Gert Sibande | 7,4 | 2,1 | 1,8 | 46,7 | 19,8 | 21,6 | 0,4 | 100,0 |
| | Nkangala | 5,1 | 2,0 | 1,7 | 42,1 | 21,7 | 26,9 | 0,5 | 100,0 |
| | Unspecified | 4,2 | 2,4 | 2,3 | 46,7 | 17,9 | 25,9 | 0,6 | 100,0 |
| | Total | 5,5 | 2,4 | 2,0 | 45,4 | 19,7 | 24,6 | 0,5 | 100,0 |
| Limpopo | Capricorn | 5,3 | 2,7 | 1,8 | 38,4 | 18,6 | 33,0 | 0,2 | 100,0 |
| | Greater Sekhukhune | 4,4 | 3,3 | 2,0 | 39,4 | 17,8 | 32,9 | 0,2 | 100,0 |
| | Mopani | 7,2 | 3,3 | 1,7 | 39,6 | 17,8 | 30,1 | 0,3 | 100,0 |
| | Vhembe | 6,0 | 3,5 | 2,1 | 33,5 | 17,8 | 36,6 | 0,5 | 100,0 |
| | Waterberg | 6,9 | 2,8 | 1,3 | 39,7 | 18,6 | 30,3 | 0,4 | 100,0 |
| | Unspecified | 4,9 | 3,1 | 2,1 | 39,8 | 18,2 | 31,6 | 0,3 | 100,0 |
| | Total | 5,8 | 3,1 | 1,9 | 38,1 | 18,1 | 32,7 | 0,3 | 100,0 |
| Foreign | Total | 1,2 | 0,9 | 0,5 | 42,3 | 22,6 | 32,0 | 0,5 | 100,0 |

*Excluding 2 524 deaths with unspecified province of death occurrence.

Appendix J: Number of deaths by sex, province and district municipality of death occurrence, 2011*

| Province of death occurrence | District Municipality of death occurrence | Sex | | | | Sex Ratio at death** |
|------------------------------|---|---------------|---------------|-------------|----------------|----------------------|
| | | Male | Female | Unspecified | Total | |
| Western Cape | Cape Winelands | 3 577 | 3 059 | 13 | 6 649 | 117 |
| | Central Karoo | 425 | 443 | 3 | 871 | 96 |
| | City of Cape Town | 14 251 | 12 091 | 124 | 26 466 | 118 |
| | Eden | 2 692 | 2 356 | 3 | 5 051 | 114 |
| | Overberg | 1 250 | 961 | 2 | 2 213 | 130 |
| | West Coast | 1 834 | 1 462 | 4 | 3 300 | 125 |
| | Unspecified | 634 | 550 | 9 | 1 193 | 115 |
| | Total | 24 663 | 20 922 | 158 | 45 743 | 118 |
| Eastern Cape | Joe Gqabi | 2 296 | 2 177 | 13 | 4 486 | 105 |
| | Alfred Nzo | 3 078 | 3 179 | 17 | 6 274 | 97 |
| | Amatole | 7 650 | 7 191 | 39 | 14 880 | 106 |
| | Buffalo city | 5 621 | 5 231 | 22 | 10 874 | 107 |
| | Cacadu | 2 370 | 2 257 | 12 | 4 639 | 105 |
| | Chris Hani | 4 744 | 4 683 | 21 | 9 448 | 101 |
| | Nelson Mandela Bay Metro | 3 271 | 2 978 | 15 | 6 264 | 110 |
| | O R Tambo | 7 091 | 7 351 | 56 | 14 498 | 96 |
| | Unspecified | 835 | 833 | 4 | 1 672 | 100 |
| | Total | 36 956 | 35 880 | 199 | 73 035 | 103 |
| Northern Cape | Frances Baard | 1 971 | 1 821 | 23 | 3 815 | 108 |
| | John Taolo Gaetsewe | 1 325 | 1 080 | 3 | 2 408 | 123 |
| | Namakwa | 603 | 474 | 1 | 1 078 | 127 |
| | Pixley ka Seme | 2 073 | 1 936 | 17 | 4 026 | 107 |
| | Siyanda | 1 513 | 1 338 | 4 | 2 855 | 113 |
| | Unspecified | 278 | 256 | 2 | 536 | 109 |
| | Total | 7 763 | 6 905 | 50 | 14 718 | 112 |
| Free State | Fezile Dabi | 2 870 | 2 700 | 13 | 5 583 | 106 |
| | Lejweleputswa | 4 977 | 4 529 | 17 | 9 523 | 110 |
| | Mangaung | 5 344 | 4 907 | 42 | 10 293 | 109 |
| | Thabo Mofutsanyane | 5 794 | 5 933 | 15 | 11 742 | 98 |
| | Xhariep | 1 610 | 1 450 | 5 | 3 065 | 111 |
| | Unspecified | 242 | 185 | 2 | 429 | 131 |
| | Total | 20 837 | 19 704 | 94 | 40 635 | 106 |
| KwaZulu-Natal | Amajuba | 2 625 | 2 562 | 15 | 5 202 | 102 |
| | Sisonke | 2 943 | 3 011 | 20 | 5 974 | 98 |
| | UMgungundlovu | 5 461 | 5 234 | 28 | 10 723 | 104 |
| | Ugu | 5 239 | 5 116 | 24 | 10 379 | 102 |
| | Umkhanyakude | 2 219 | 2 167 | 34 | 4 420 | 102 |
| | Umzinyathi | 2 558 | 2 642 | 16 | 5 216 | 97 |
| | Uthukela | 3 572 | 3 668 | 26 | 7 266 | 97 |
| | Uthungulu | 4 422 | 4 308 | 28 | 8 758 | 103 |
| | Zululand | 3 871 | 4 033 | 25 | 7 929 | 96 |
| | eThekwini | 14 169 | 13 310 | 57 | 27 536 | 106 |
| | iLembe | 2 744 | 2 656 | 21 | 5 421 | 103 |
| | Unspecified | 2 934 | 2 864 | 30 | 5 828 | 102 |
| | Total | 52 757 | 51 571 | 324 | 104 652 | 102 |

*Excluding 2 524 deaths with unspecified province of death occurrence. ** Male deaths per 100 female deaths.

**Appendix J: Number of deaths by sex, province and district municipality of death occurrence, 2011*
(concluded)**

| Province of death occurrence | District Municipality of death occurrence | Sex | | | | Sex Ratio at death** |
|------------------------------|---|---------------|---------------|-------------|----------------|----------------------|
| | | Male | Female | Unspecified | Total | |
| North West | Bojanala Platinum | 7 160 | 6 108 | 41 | 13 309 | 117 |
| | Dr Kenneth Kaunda | 4 233 | 3 601 | 26 | 7 860 | 118 |
| | Dr Ruth Segomotsi Mompati | 3 011 | 2 654 | 12 | 5 677 | 113 |
| | Ngaka Modiri Molema | 5 271 | 4 798 | 32 | 10 101 | 110 |
| | Unspecified | 313 | 289 | 6 | 608 | 108 |
| | Total | 19 988 | 17 450 | 117 | 37 555 | 115 |
| Gauteng | City of Johannesburg | 15 339 | 13 850 | 280 | 29 469 | 111 |
| | City of Tshwane | 10 252 | 9 263 | 59 | 19 574 | 111 |
| | Ekurhuleni | 14 017 | 12 535 | 172 | 26 724 | 112 |
| | Sedibeng | 6 118 | 5 489 | 16 | 11 623 | 111 |
| | West Rand | 5 154 | 4 317 | 98 | 9 569 | 119 |
| | Unspecified | 1 970 | 1 780 | 42 | 3 792 | 111 |
| | Total | 52 850 | 47 234 | 667 | 100 751 | 112 |
| Mpumalanga | Ehlanzeni | 7 492 | 7 406 | 75 | 14 973 | 101 |
| | Gert Sibande | 5 626 | 5 286 | 23 | 10 935 | 106 |
| | Nkangala | 5 574 | 5 016 | 23 | 10 613 | 111 |
| | Unspecified | 799 | 711 | 6 | 1 516 | 112 |
| | Total | 19 491 | 18 419 | 127 | 38 037 | 106 |
| Limpopo | Capricorn | 5 657 | 5 634 | 33 | 11 324 | 100 |
| | Greater Sekhukhune | 4 151 | 4 438 | 32 | 8 621 | 94 |
| | Mopani | 4 333 | 4 544 | 24 | 8 901 | 95 |
| | Vhembe | 4 550 | 4 696 | 19 | 9 265 | 97 |
| | Waterberg | 2 611 | 2 354 | 10 | 4 975 | 111 |
| | Unspecified | 2 149 | 2 097 | 15 | 4 261 | 102 |
| | Total | 23 451 | 23 763 | 133 | 47 347 | 99 |
| Foreign | Total | 528 | 276 | 2 | 806 | 191 |

*Excluding 2 524 deaths with unspecified province of death occurrence. ** Male deaths per 100 female deaths.

Appendix K: All underlying causes of death, 2011

| Causes of death (based on the 10th revision, International Classification of Disease, 1992) | Number | Percent |
|---|----------------|--------------|
| All causes | 505 803 | 100,0 |
| Ill-defined and unknown causes of mortality (R95-R99) | 65 327 | 12,9 |
| Tuberculosis (A15-A19) | 54 112 | 10,7 |
| Influenza and pneumonia (J09-J18) | 33 381 | 6,6 |
| Other external causes of accidental injury (W00-X59) | 28 044 | 5,5 |
| Cerebrovascular diseases (I60-I69) | 25 732 | 5,1 |
| Other forms of heart disease (I30-I52) | 23 564 | 4,7 |
| Diabetes mellitus (E10-E14) | 20 171 | 4,0 |
| Intestinal infectious diseases (A00-A09) | 19 376 | 3,8 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 17 012 | 3,4 |
| Hypertensive diseases (I10-I15) | 15 529 | 3,1 |
| Other viral diseases (B25-B34) | 14 557 | 2,9 |
| Chronic lower respiratory diseases (J40-J47) | 13 084 | 2,6 |
| Ischaemic heart diseases (I20-I25) | 11 942 | 2,4 |
| Certain disorders involving the immune mechanism (D80-D89) | 11 163 | 2,2 |
| Malignant neoplasm of digestive organs (C15-C26) | 9 409 | 1,9 |
| Renal failure (N17-N19) | 6 942 | 1,4 |
| Other acute lower respiratory infections (J20-J22) | 6 635 | 1,3 |
| Event of undetermined intent (Y10-Y34) | 6 275 | 1,2 |
| Inflammatory diseases of the central nervous system (G00-G09) | 5 879 | 1,2 |
| Other bacterial diseases (A30-A49) | 5 878 | 1,2 |
| Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 5 245 | 1,0 |
| Transport accidents (V01-V99) | 5 088 | 1,0 |
| Assault (X85-Y09) | 4 888 | 1,0 |
| Diseases of liver (K70-K77) | 4 770 | 0,9 |
| Malignant neoplasm of female genital organs (C51-C58) | 4 312 | 0,9 |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 4 267 | 0,8 |
| Other diseases of the respiratory system (J95-J99) | 3 805 | 0,8 |
| Metabolic disorders (E70-E90) | 3 461 | 0,7 |
| Malignant neoplasms of ill-defined, secondary & unspecified sites (C76-C80) | 3 291 | 0,7 |
| Episodic and paroxysmal disorders (G40-G47) | 3 254 | 0,6 |
| General symptoms and signs (R50-R69) | 3 172 | 0,6 |
| Protozoal diseases (B50-B64) | 3 036 | 0,6 |
| Malignant neoplasm of breast (C50) | 2 985 | 0,6 |
| Malignant neoplasm of male genital organs (C60-C63) | 2 690 | 0,5 |
| Aplastic and other anaemias (D60-D64) | 2 639 | 0,5 |
| Malignant neoplasms stated or presumed primary of lymphoid, haematopoietic & related tissue (C81-C96) | 2 625 | 0,5 |
| Pulmonary heart disease and diseases of pulmonary circulation (I26-I28) | 2 559 | 0,5 |
| Diseases of oesophagus, stomach and duodenum (K20-K31) | 2 177 | 0,4 |
| Noninfective enteritis and colitis (K50-K52) | 2 060 | 0,4 |
| Malnutrition (E40-E46) | 1 848 | 0,4 |
| Other disorders originating in the perinatal period (P90-P96) | 1 648 | 0,3 |
| Other respiratory diseases principally affecting the interstitium (J80-J84) | 1 644 | 0,3 |
| Disorders related to length of gestation and fetal growth (P05-P08) | 1 442 | 0,3 |
| Other diseases of intestines (K55-K63) | 1 433 | 0,3 |
| Diseases of arteries, arterioles and capillaries (I70-I79) | 1 404 | 0,3 |

Appendix K: All underlying causes of death, 2011 (continued)

| Causes of death (based on the 10th revision, International Classification of Disease, 1992) | Number | Percent |
|---|----------------|--------------|
| All causes | 505 803 | 100,0 |
| Malignant neoplasm of mesothelial and soft tissue (C45-C49) | 1 341 | 0,3 |
| Complications of medical and surgical care (Y40-Y84) | 1 285 | 0,3 |
| Mycoses (B35-B49) | 1 213 | 0,2 |
| Other disorders of glucose regulation and pancreatic internal secretion (E15-E16) | 1 210 | 0,2 |
| Other diseases of the digestive system (K90-K93) | 1 160 | 0,2 |
| Infections specific to the perinatal period (P35-P39) | 1 109 | 0,2 |
| Organic, including symptomatic, mental disorders (F00-F09) | 1 093 | 0,2 |
| Malignant neoplasm of lip, oral cavity and pharynx (C00-C14) | 1 074 | 0,2 |
| Other disorders of the nervous system (G90-G99) | 1 044 | 0,2 |
| Neoplasms of uncertain or unknown behaviour (D37-D48) | 1 020 | 0,2 |
| Disorders of gallbladder, biliary tract and pancreas (K80-K87) | 966 | 0,2 |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 851 | 0,2 |
| Malignant neoplasm of urinary tract (C64-C68) | 836 | 0,2 |
| Arthropathies (M00-M25) | 807 | 0,2 |
| Other degenerative diseases of the nervous system (G30-G32) | 766 | 0,2 |
| Cerebral palsy and other paralytic syndromes (G80-G83) | 737 | 0,1 |
| Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80-I89) | 687 | 0,1 |
| E00-E14 | 650 | 0,1 |
| Lung diseases due to external agents (J60-J70) | 636 | 0,1 |
| Sequelae of infectious and parasitic diseases (B90-B94) | 616 | 0,1 |
| Congenital malformations of the circulatory system (Q20-Q28) | 558 | 0,1 |
| Malignant neoplasm of skin (C43-C44) | 546 | 0,1 |
| Malignant neoplasm of eye, brain and other parts of central nervous system (C69-C72) | 521 | 0,1 |
| Other diseases of pleura (J90-J94) | 486 | 0,1 |
| Coagulation defects, purpura and other haemorrhagic conditions (D65-D69) | 482 | 0,1 |
| Other obstetric conditions, not elsewhere classified (O95-O99) | 475 | 0,1 |
| Malignant neoplasms of independent multiple sites (C97) | 461 | 0,1 |
| Chronic rheumatic heart diseases (I05-I09) | 454 | 0,1 |
| Haemorrhagic and haematological disorders of fetus and newborn (P50-P61) | 424 | 0,1 |
| Infections of the skin and subcutaneous tissue (L00-L08) | 409 | 0,1 |
| Soft tissue disorders (M60-M79) | 402 | 0,1 |
| Intentional self-harm (X60-X84) | 359 | 0,1 |
| Mental and behavioural disorders due to psychoactive substance use (F10-F19) | 357 | 0,1 |
| Other congenital malformations (Q80-Q89) | 352 | 0,1 |
| Systemic connective tissue disorders (M30-M36) | 347 | 0,1 |
| Other diseases of urinary system (N30-N39) | 346 | 0,1 |
| Other disorders of kidney and ureter (N25-N29) | 322 | 0,1 |
| Obesity and other hyperalimentation (E65-E68) | 311 | 0,1 |
| Extrapyramidal and movement disorders (G20-G26) | 310 | 0,1 |
| Chromosomal abnormalities, not elsewhere classified (Q90-Q99) | 297 | 0,1 |
| Disorders of thyroid gland (E00-E07) | 286 | 0,1 |
| Viral infections characterized by skin and mucous membrane lesions (B00-B09) | 284 | 0,1 |
| Renal tubulo-interstitial diseases (N10-N16) | 283 | 0,1 |
| Digestive system disorders of fetus and newborn (P75-P78) | 283 | 0,1 |
| Viral hepatitis (B15-B19) | 279 | 0,1 |

Appendix K: All underlying causes of death, 2011 (continued)

| Causes of death (based on the 10th revision, International Classification of Disease, 1992) | Number | Percent |
|--|----------------|--------------|
| All causes | 505 803 | 100,0 |
| Suppurative and necrotic conditions of lower respiratory tract (J85-J86) | 278 | 0,1 |
| Other disorders of the skin and subcutaneous tissue (L80-L99) | 278 | 0,1 |
| Diseases of male genital organs (N40-N51) | 269 | 0,1 |
| Glomerular diseases (N00-N08) | 245 | 0,0 |
| Viral infections of the central nervous system (A80-A89) | 243 | 0,0 |
| Congenital malformations of the nervous system (Q00-Q07) | 237 | 0,0 |
| Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium (O10-O16) | 229 | 0,0 |
| Schizophrenia, schizotypal and delusional disorders (F20-F29) | 226 | 0,0 |
| Hernia (K40-K46) | 211 | 0,0 |
| Benign neoplasms (D10-D36) | 205 | 0,0 |
| Diseases of peritoneum (K65-K67) | 197 | 0,0 |
| Other congenital malformations of the digestive system (Q38-Q45) | 187 | 0,0 |
| Acute upper respiratory infections (J00-J06) | 182 | 0,0 |
| Systemic atrophies primarily affecting the central nervous system (G10-G13) | 172 | 0,0 |
| Polyneuropathies and other disorders of the peripheral nervous system (G60-G64) | 166 | 0,0 |
| Malignant neoplasm of thyroid and other endocrine glands (C73-C75) | 165 | 0,0 |
| Noninflammatory disorders of female genital tract (N80-N98) | 150 | 0,0 |
| Complications predominantly related to the puerperium (O85-O92) | 150 | 0,0 |
| Infections with a predominantly sexual mode of transmission (A50-A64) | 148 | 0,0 |
| Complications of labour and delivery (O60-O75) | 148 | 0,0 |
| Urticaria and erythema (L50-L54) | 147 | 0,0 |
| Other and unspecified disorders of the circulatory system (I95-I99) | 136 | 0,0 |
| Symptoms and signs involving the circulatory and respiratory systems (R00-R09) | 129 | 0,0 |
| Malignant neoplasm of bone and articular cartilage (C40-C41) | 123 | 0,0 |
| Osteopathies and chondropathies (M80-M94) | 123 | 0,0 |
| Disorders of other endocrine glands (E20-E35) | 120 | 0,0 |
| Other infectious diseases (B99) | 117 | 0,0 |
| Diseases of appendix (K35-K38) | 116 | 0,0 |
| Inflammatory diseases of female pelvic organs (N70-N77) | 116 | 0,0 |
| Pregnancy with abortive outcome (O00-O08) | 111 | 0,0 |
| Dorsopathies (M40-M54) | 109 | 0,0 |
| Other diseases of upper respiratory tract (J30-J39) | 104 | 0,0 |
| Congenital malformations and deformations of the musculoskeletal system (Q65-Q79) | 99 | 0,0 |
| Diseases of myoneural junction and muscle (G70-G73) | 92 | 0,0 |
| Other diseases of blood and blood-forming organs (D70-D77) | 88 | 0,0 |
| Arthropod-borne viral fevers and viral haemorrhagic fevers (A90-A99) | 84 | 0,0 |
| Other nutritional deficiencies (E50-E64) | 84 | 0,0 |
| Conditions involving the integument and temperature regulation of fetus and newborn (P80-P83) | 80 | 0,0 |
| Nutritional anaemias (D50-D53) | 76 | 0,0 |
| Other maternal disorders predominantly related to pregnancy (O20-O29) | 76 | 0,0 |
| Congenital malformations of the urinary system (Q60-Q64) | 75 | 0,0 |
| Helminthiasis (B65-B83) | 74 | 0,0 |
| Demyelinating diseases of the central nervous system (G35-G37) | 61 | 0,0 |
| Diseases of middle ear and mastoid (H65-H75) | 60 | 0,0 |
| Maternal care related to the fetus and amniotic cavity and possible delivery problems (O30-O48) | 60 | 0,0 |
| Symptoms and signs involving the digestive system and abdomen (R10-R19) | 58 | 0,0 |
| Diseases of oral cavity, salivary glands and jaws (K00-K14) | 56 | 0,0 |
| Congenital malformations of the respiratory system (Q30-Q34) | 56 | 0,0 |
| Haemolytic anaemias (D55-D59) | 51 | 0,0 |

Appendix K: All underlying causes of death, 2011 (concluded)

| Causes of death (based on the 10th revision, International Classification of Disease, 1992) | Number | Percent |
|--|----------------|--------------|
| Total | 505 803 | 100,0 |
| Acute rheumatic fever (I00-I02) | 51 | 0,0 |
| Sequelae of external causes of morbidity and mortality (Y85-Y89) | 51 | 0,0 |
| Abnormal findings on examination of blood, without diagnosis (R70-R79) | 38 | 0,0 |
| Dermatitis and eczema (L20-L30) | 29 | 0,0 |
| In situ neoplasms (D00-D09) | 28 | 0,0 |
| Disorders of breast (N60-N64) | 28 | 0,0 |
| Birth trauma (P10-P15) | 24 | 0,0 |
| Abnormal findings on examination of other body fluids, substances and tissues, without diagnosis (R83-R89) | 24 | 0,0 |
| Transitory endocrine and metabolic disorders specific to fetus and newborn (P70-P74) | 20 | 0,0 |
| Unspecified mental disorder (F99) | 18 | 0,0 |
| Nerve, nerve root and plexus disorders (G50-G59) | 18 | 0,0 |
| Behavioural syndromes associated with physiological disturbances and physical factors (F50-F59) | 17 | 0,0 |
| Bullous disorders (L10-L14) | 17 | 0,0 |
| Other spirochaetal diseases (A65-A69) | 16 | 0,0 |
| Urolithiasis (N20-N23) | 14 | 0,0 |
| Symptoms and signs involving the urinary system (R30-R39) | 13 | 0,0 |
| Disorders of eyelid, lacrimal system and orbit (H00-H06) | 11 | 0,0 |
| Abnormal findings on diagnostic imaging and in function studies, without diagnosis (R90-R94) | 11 | 0,0 |
| Certain zoonotic bacterial diseases (A20-A28) | 9 | 0,0 |
| Neurotic, stress-related and somatoform disorders (F40-F48) | 8 | 0,0 |
| Papulosquamous disorders (L40-L45) | 8 | 0,0 |
| Congenital malformations of eye, ear, face and neck (Q10-Q18) | 8 | 0,0 |
| Cleft lip and cleft palate (Q35-Q37) | 8 | 0,0 |
| Pediculosis, acariasis and other infestations (B85-B89) | 7 | 0,0 |
| Disorders of sclera, cornea, iris and ciliary body (H15-H22) | 7 | 0,0 |
| Symptoms and signs involving cognition, perception, emotional state and behaviour (R40-R46) | 7 | 0,0 |
| Rickettsioses (A75-A79) | 6 | 0,0 |
| Symptoms and signs involving the nervous and musculoskeletal systems (R25-R29) | 5 | 0,0 |
| Other diseases caused by chlamydiae (A70-A74) | 4 | 0,0 |
| Mood [affective] disorders (F30-F39) | 4 | 0,0 |
| Visual disturbances and blindness (H53-H54) | 4 | 0,0 |
| Symptoms and signs involving speech and voice (R47-R49) | 4 | 0,0 |
| Disorders of adult personality and behaviour (F60-F69) | 3 | 0,0 |
| Behavioural and emotional disorders with onset usually occurring in childhood and adolescence (F90-F98) | 3 | 0,0 |
| Disorders of conjunctiva (H10-H13) | 3 | 0,0 |
| Disorders of skin appendages (L60-L75) | 3 | 0,0 |
| Disorders of psychological development (F80-F89) | 2 | 0,0 |
| Other disorders of eye and adnexa (H55-H59) | 2 | 0,0 |
| Other disorders of the musculoskeletal system (M95-M99) | 2 | 0,0 |
| Symptoms and signs involving the skin and subcutaneous tissue (R20-R23) | 2 | 0,0 |
| Disorders of lens (H25-H28) | 1 | 0,0 |
| Disorders of choroid and retina (H30-H36) | 1 | 0,0 |
| Disorders of vitreous body and globe (H43-H45) | 1 | 0,0 |
| Disorders of ocular muscles, binocular movement, accommodation and refraction (H49-H52) | 1 | 0,0 |
| Diseases of external ear (H60-H62) | 1 | 0,0 |
| Other disorders of ear (H90-H95) | 1 | 0,0 |
| O94-O99 | 1 | 0,0 |
| P20-P30 | 1 | 0,0 |
| Congenital malformations of genital organs (Q50-Q56) | 1 | 0,0 |

Appendix L: Detailed description of the broad groups of natural causes of death which were among the ten leading causes in 2011

| Causes of death (based on ICD-10) | | Number | % |
|---|---|---------------|--------------|
| Intestinal infectious diseases (A00-A09) | | | |
| A00 | Cholera (A00) | 6 | 0,0 |
| A01 | Typhoid and paratyphoid fevers (A01) | 9 | 0,0 |
| A02 | Other salmonella infections(A02) | 19 | 0,1 |
| A03 | Shigellosis (A03) | 10 | 0,1 |
| A04 | Other bacterial intestinal infections (A04) | 13 | 0,1 |
| A05 | Other bacterial foodborne intoxications (A05) | 2 | 0,0 |
| A06 | Amoebiasis (A06) | 30 | 0,2 |
| A07 | Other protozoal intestinal diseases (A07) | 19 | 0,1 |
| A08 | Viral and other specified intestinal infections (A08) | 49 | 0,3 |
| A09 | Diarrhoea and gastroenteritis of presumed infectious origin (A09) | 19 211 | 99,2 |
| Total | | 19 368 | 100,0 |
| Tuberculosis (A15-A19) | | | |
| A15 | Respiratory tuberculosis, bacteriologically and histologically confirmed (A15) | 1 | 0,0 |
| A16 | Respiratory tuberculosis, not confirmed bacteriologically or histologically (A16) | 43 281 | 80,0 |
| A17 | Tuberculosis of nervous system (A17) | 3 000 | 5,5 |
| A18 | Tuberculosis of other organs (A18) | 1 684 | 3,1 |
| A19 | Miliary tuberculosis (A19) | 5 237 | 9,7 |
| Drug-resistant tuberculosis | | | |
| U51 | Multidrug-resistant tuberculosis (U51) | 747 | 1,4 |
| U52 | Extensively drug-resistant tuberculosis (U52) | 162 | 0,3 |
| Total | | 54 112 | 100 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | | | |
| B20 | Human immunodeficiency virus (HIV) disease resulting in infectious and parasitic diseases (B20) | 11 242 | 66,1 |
| B21 | Human immunodeficiency virus (HIV) disease resulting in malignant neoplasms (B21) | 454 | 2,7 |
| B22 | Human immunodeficiency virus (HIV) disease resulting in other specified diseases (B22) | 986 | 5,8 |
| B23 | Human immunodeficiency virus (HIV) disease resulting in other conditions (B23) | 2 051 | 12,1 |
| B24 | Unspecified human immunodeficiency virus (HIV) disease (B24) | 2 279 | 13,4 |
| Total | | 17 012 | 100,0 |
| Other viral diseases (B25-B34) | | | |
| B25 | Cytomegaloviral disease (B25) | 60 | 0,4 |
| B26 | Mumps (B26) | 3 | 0,0 |
| B27 | Infectious mononucleosis (B27) | 4 | 0,0 |
| B33 | Other viral diseases, not elsewhere classified (B33) | 14 310 | 98,3 |
| B34 | Viral infection of unspecified site (B34) | 180 | 1,2 |
| Total | | 14 557 | 100,0 |
| Diabetes mellitus (E10-E14) | | | |
| E10 | Insulin-dependent diabetes mellitus (E10) | 232 | 1,2 |
| E11 | Non-insulin-dependent diabetes mellitus (E11) | 1 112 | 5,5 |
| E12 | Malnutrition-related diabetes mellitus (E12) | 11 | 0,1 |
| E13 | Other specified diabetes mellitus (E13) | 1 | 0,0 |
| E14 | Unspecified diabetes mellitus (E14) | 18 815 | 93,3 |
| Total | | 20 171 | 100,0 |

Appendix L: Detailed description of the broad groups of natural causes of death which were among the ten leading causes in 2011 (continued)

| Causes of death (based on ICD-10) | | Number | % |
|---|---|---------------|--------------|
| Hypertensive diseases (I10-I15) | | | |
| I10 | Essential (primary) hypertension (I10) | 7 557 | 48,7 |
| I11 | Hypertensive heart disease (I11) | 6 401 | 41,2 |
| I12 | Hypertensive renal disease (I12) | 1 252 | 8,1 |
| I13 | Hypertensive heart and renal disease (I13) | 319 | 2,1 |
| Total | | 15 529 | 100,0 |
| Other forms of heart disease (I30-I52) | | | |
| I30 | Acute pericarditis (I30) | 30 | 0,1 |
| I31 | Other diseases of pericardium (I31) | 159 | 0,7 |
| I33 | Acute and subacute endocarditis (I33) | 66 | 0,3 |
| I34 | Nonrheumatic mitral valve disorders (I34) | 98 | 0,4 |
| I35 | Nonrheumatic aortic valve disorders (I35) | 212 | 0,9 |
| I36 | Nonrheumatic tricuspid valve disorders (I36) | 4 | 0,0 |
| I38 | Endocarditis, valve unspecified (I38) | 188 | 0,8 |
| I40 | Acute myocarditis (I40) | 38 | 0,2 |
| I42 | Cardiomyopathy (I42) | 2 899 | 12,3 |
| I44 | Atrioventricular and left bundle-branch block (I44) | 28 | 0,1 |
| I45 | Other conduction disorders (I45) | 71 | 0,3 |
| I46 | Cardiac arrest (I46) | 3 861 | 16,4 |
| I47 | Paroxysmal tachycardia (I47) | 21 | 0,1 |
| I48 | Atrial fibrillation and flutter (I48) | 338 | 1,4 |
| I49 | Other cardiac arrhythmias (I49) | 298 | 1,3 |
| I50 | Heart failure (I50) | 14 306 | 60,7 |
| I51 | Complications and ill-defined descriptions of heart disease (I51) | 947 | 4,0 |
| Total | | 23 564 | 100,0 |
| Cerebrovascular diseases (I60-I69) | | | |
| I60 | Subarachnoid haemorrhage (I60) | 364 | 1,4 |
| I61 | Intracerebral haemorrhage (I61) | 1 499 | 5,8 |
| I62 | Other nontraumatic intracranial haemorrhage (I62) | 679 | 2,6 |
| I63 | Cerebral infarction (I63) | 623 | 2,4 |
| I64 | Stroke, not specified as haemorrhage or infarction (I64) | 21 507 | 83,6 |
| I67 | Other cerebrovascular diseases (I67) | 763 | 3,0 |
| I69 | Sequelae of cerebrovascular disease (I69) | 297 | 1,2 |
| Total | | 25 732 | 100,0 |
| Influenza and pneumonia (J09-J18) | | | |
| J09 | Influenza due to identified avian influenza virus (J09) | 21 | 0,1 |
| J10 | Influenza due to identified influenza virus (J10) | 89 | 0,3 |
| J11 | Influenza, virus not identified (J11) | 648 | 1,9 |
| J12 | Viral pneumonia, not elsewhere classified (J12) | 46 | 0,1 |
| J13 | Pneumonia due to Streptococcus pneumoniae (J13) | 6 | 0,0 |
| J14 | Pneumonia due to Haemophilus influenzae (J14) | 4 | 0,0 |
| J15 | Bacterial pneumonia, not elsewhere classified (J15) | 155 | 0,5 |
| J16 | Pneumonia due to other infectious organisms, not elsewhere classified (J16) | 2 | 0,0 |
| J18 | Pneumonia, organism unspecified (J18) | 32 410 | 97,1 |
| Total | | 33 381 | 100,0 |

Appendix L: Detailed description of the broad groups of natural causes of death which were among the ten leading causes in 2011 (concluded)

| Causes of death (based on ICD-10) | | Number | % |
|-----------------------------------|---|---------------|--------------|
| | Chronic lower respiratory diseases (J40-J47) | | |
| J40 | Bronchitis, not specified as acute or chronic (J40) | 535 | 4,1 |
| J42 | Unspecified chronic bronchitis (J42) | 330 | 2,5 |
| J43 | Emphysema (J43) | 838 | 6,4 |
| J44 | Other chronic obstructive pulmonary disease (J44) | 6 716 | 51,3 |
| J45 | Asthma (J45) | 3 736 | 28,6 |
| J46 | Status asthmaticus (J46) | 729 | 5,6 |
| J47 | Bronchiectasis (J47) | 200 | 1,5 |
| Total | | 13 084 | 100,0 |

Appendix M: The ten leading underlying natural causes of death by age and sex: South Africa, 2011

| All provinces, both sexes, all ages | | | All provinces, males, all ages | | | All provinces, females, all ages | | |
|---|----------------|--------------|---|----------------|--------------|---|----------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 54 112 | 10.7 | 1 Tuberculosis (A15-A19)* | 30 807 | 11.8 | 1 Tuberculosis (A15-A19)* | 23 112 | 9.5 |
| 2 Influenza and pneumonia (J09-J18) | 33 381 | 6.6 | 2 Influenza and pneumonia (J09-J18) | 16 955 | 6.5 | 2 Influenza and pneumonia (J09-J18) | 16 300 | 6.7 |
| 3 Cerebrovascular diseases (I60-I69) | 25 732 | 5.1 | 3 Other forms of heart disease (I30-I52) | 10 796 | 4.1 | 3 Cerebrovascular diseases (I60-I69) | 14 983 | 6.2 |
| 4 Other forms of heart disease (I30-I52) | 23 564 | 4.7 | 4 Cerebrovascular diseases (I60-I69) | 10 715 | 4.1 | 4 Other forms of heart disease (I30-I52) | 12 731 | 5.2 |
| 5 Diabetes mellitus (E10-E14) | 20 171 | 4.0 | 5 Intestinal infectious diseases (A00-A09) | 9 147 | 3.5 | 5 Diabetes mellitus (E10-E14) | 12 139 | 5.0 |
| 6 Intestinal infectious diseases (A00-A09) | 19 376 | 3.8 | 6 Human immunodeficiency virus [HIV] disease (B20-B24) | 8 255 | 3.2 | 6 Intestinal infectious diseases (A00-A09) | 10 132 | 4.2 |
| 7 Human immunodeficiency virus [HIV] disease (B20-B24) | 17 012 | 3.4 | 7 Diabetes mellitus (E10-E14) | 8 014 | 3.1 | 7 Hypertensive diseases (I10-I15) | 9 634 | 4.0 |
| 8 Hypertensive diseases (I10-I15) | 15 529 | 3.1 | 8 Chronic lower respiratory diseases (J40-J47) | 7 812 | 3.0 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 8 702 | 3.6 |
| 9 Other viral diseases (B25-B34) | 14 557 | 2.9 | 9 Ischaemic heart diseases (I20-I25) | 6 891 | 2.6 | 9 Other viral diseases (B25-B34) | 7 914 | 3.3 |
| 10 Chronic lower respiratory diseases (J40-J47) | 13 084 | 2.6 | 10 Other viral diseases (B25-B34) | 6 590 | 2.5 | 10 Certain disorders involving the immune mechanism (D80-D89) | 5 728 | 2.4 |
| Other natural causes | 223 295 | 44.1 | Other natural causes | 110 014 | 42.2 | Other natural causes | 110 808 | 45.6 |
| Non-natural causes | 45 990 | 9.1 | Non-natural causes | 34 573 | 13.3 | Non-natural causes | 11 054 | 4.5 |
| All causes | 505 803 | 100.0 | All causes | 260 569 | 100.0 | All causes | 243 237 | 100.0 |
| All provinces, both sexes, 0-14 | | | All provinces, males, 0-14 | | | All provinces, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 6 250 | 13.6 | 1 Intestinal infectious diseases (A00-A09) | 3 254 | 13.5 | 1 Intestinal infectious diseases (A00-A09) | 2 939 | 13.8 |
| 2 Influenza and pneumonia (J09-J18) | 4 771 | 10.4 | 2 Influenza and pneumonia (J09-J18) | 2 411 | 10.0 | 2 Influenza and pneumonia (J09-J18) | 2 329 | 10.9 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 4 072 | 8.8 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 2 202 | 9.1 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1 769 | 8.3 |
| 4 Other disorders originating in the perinatal period (P90-P96) | 1 562 | 3.4 | 4 Other disorders originating in the perinatal period (P90-P96) | 830 | 3.4 | 4 Malnutrition (E40-E46) | 722 | 3.4 |
| 5 Malnutrition (E40-E46) | 1 503 | 3.3 | 5 Malnutrition (E40-E46) | 770 | 3.2 | 5 Tuberculosis (A15-A19)* | 691 | 3.2 |
| 6 Tuberculosis (A15-A19)* | 1 426 | 3.1 | 6 Tuberculosis (A15-A19)* | 731 | 3.0 | 6 Other disorders originating in the perinatal period (P90-P96) | 674 | 3.2 |
| 7 Disorders related to length of gestation and fetal growth (P05-P08) | 1 340 | 2.9 | 7 Disorders related to length of gestation and fetal growth (P05-P08) | 694 | 2.9 | 7 Disorders related to length of gestation and fetal growth (P05-P08) | 619 | 2.9 |
| 8 Infections specific to the perinatal period (P35-P39) | 1 090 | 2.4 | 8 Infections specific to the perinatal period (P35-P39) | 572 | 2.4 | 8 Infections specific to the perinatal period (P35-P39) | 505 | 2.4 |
| 9 Other viral diseases (B25-B34) | 830 | 1.8 | 9 Other viral diseases (B25-B34) | 431 | 1.8 | 9 Other acute lower respiratory infections (J20-J22) | 412 | 1.9 |
| 10 Other acute lower respiratory infections (J20-J22) | 800 | 1.7 | 10 Fetus and newborn affected by maternal factors and by complications of pregnancy, | 395 | 1.6 | 10 Other viral diseases (B25-B34) | 389 | 1.8 |
| Other natural causes | 17 989 | 39.1 | Other natural causes | 9 219 | 38.2 | Other natural causes | 8 560 | 40.1 |
| Non-natural causes | 4 412 | 9.6 | Non-natural causes | 2 656 | 11.0 | Non-natural causes | 1 729 | 8.1 |
| All causes | 46 045 | 100.0 | All causes | 24 165 | 100.0 | All causes | 21 338 | 100.0 |
| All provinces, both sexes, 15-49 | | | All provinces, males, 15-49 | | | All provinces, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 36 728 | 18.1 | 1 Tuberculosis (A15-A19) | 19 632 | 17.9 | 1 Tuberculosis (A15-A19) | 16 976 | 18.3 |
| 2 Influenza and pneumonia (J09-J18) | 14 759 | 7.3 | 2 Influenza and pneumonia (J09-J18) | 7 180 | 6.5 | 2 Influenza and pneumonia (J09-J18) | 7 532 | 8.1 |
| 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 13 431 | 6.6 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 6 314 | 5.8 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 7 084 | 7.6 |
| 4 Other viral diseases (B25-B34) | 11 226 | 5.5 | 4 Other viral diseases (B25-B34) | 4 863 | 4.4 | 4 Other viral diseases (B25-B34) | 6 329 | 6.8 |
| 5 Certain disorders involving the immune mechanism (D80-D89) | 8 473 | 4.2 | 5 Certain disorders involving the immune mechanism (D80-D89) | 3 948 | 3.6 | 5 Certain disorders involving the immune mechanism (D80-D89) | 4 509 | 4.9 |
| 6 Intestinal infectious diseases (A00-A09) | 7 248 | 3.6 | 6 Intestinal infectious diseases (A00-A09) | 3 287 | 3.0 | 6 Intestinal infectious diseases (A00-A09) | 3 933 | 4.2 |
| 7 Other forms of heart disease (I30-I52) | 4 838 | 2.4 | 7 Other forms of heart disease (I30-I52) | 2 360 | 2.2 | 7 Other forms of heart disease (I30-I52) | 2 459 | 2.7 |
| 8 Inflammatory diseases of the central nervous system (G00-G09) | 4 133 | 2.0 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 1 998 | 1.8 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 2 125 | 2.3 |
| 9 Cerebrovascular diseases (I60-I69) | 3 295 | 1.6 | 9 Cerebrovascular diseases (I60-I69) | 1 633 | 1.5 | 9 Cerebrovascular diseases (I60-I69) | 1 654 | 1.8 |
| 10 Other acute lower respiratory infections (J20-J22) | 3 053 | 1.5 | 10 Other acute lower respiratory infections (J20-J22) | 1 534 | 1.4 | 10 Other acute lower respiratory infections (J20-J22) | 1 511 | 1.6 |
| Other natural causes | 64 597 | 31.8 | Other natural causes | 31 546 | 28.8 | Other natural causes | 32 867 | 35.4 |
| Non-natural causes | 31 277 | 15.4 | Non-natural causes | 25 383 | 23.1 | Non-natural causes | 5 760 | 6.2 |
| All causes | 203 058 | 100.0 | All causes | 109 678 | 100.0 | All causes | 92 739 | 100.0 |
| All provinces, both sexes, 50-64 | | | All provinces, males, 50-64 | | | All provinces, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 10 983 | 10.6 | 1 Tuberculosis (A15-A19) | 7 477 | 12.3 | 1 Diabetes mellitus (E10-E14) | 3 622 | 8.5 |
| 2 Diabetes mellitus (E10-E14) | 6 648 | 6.4 | 2 Influenza and pneumonia (J09-J18) | 3 741 | 6.1 | 2 Tuberculosis (A15-A19) | 3 485 | 8.1 |
| 3 Cerebrovascular diseases (I60-I69) | 6 429 | 6.2 | 3 Cerebrovascular diseases (I60-I69) | 3 393 | 5.6 | 3 Cerebrovascular diseases (I60-I69) | 3 026 | 7.1 |
| 4 Influenza and pneumonia (J09-J18) | 5 919 | 5.7 | 4 Other forms of heart disease (I30-I52) | 3 123 | 5.1 | 4 Other forms of heart disease (I30-I52) | 2 410 | 5.6 |
| 5 Other forms of heart disease (I30-I52) | 5 534 | 5.3 | 5 Diabetes mellitus (E10-E14) | 3 021 | 5.0 | 5 Influenza and pneumonia (J09-J18) | 2 160 | 5.0 |
| 6 Chronic lower respiratory diseases (J40-J47) | 4 104 | 3.9 | 6 Chronic lower respiratory diseases (J40-J47) | 2 779 | 4.6 | 6 Hypertensive diseases (I10-I15) | 2 049 | 4.8 |
| 7 Hypertensive diseases (I10-I15) | 3 947 | 3.8 | 7 Ischaemic heart diseases (I20-I25) | 2 271 | 3.7 | 7 Malignant neoplasm of female genital organs (C51-C58) | 1 498 | 3.5 |
| 8 Ischaemic heart diseases (I20-I25) | 3 326 | 3.2 | 8 Malignant neoplasm of digestive organs (C15-C26) | 2 053 | 3.4 | 8 Chronic lower respiratory diseases (J40-J47) | 1 323 | 3.1 |
| 9 Malignant neoplasm of digestive organs (C15-C26) | 3 293 | 3.2 | 9 Hypertensive diseases (I10-I15) | 1 893 | 3.1 | 9 Intestinal infectious diseases (A00-A09) | 1 245 | 2.9 |
| 10 Intestinal infectious diseases (A00-A09) | 2 638 | 2.5 | 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 1 604 | 2.6 | 10 Malignant neoplasm of digestive organs (C15-C26) | 1 237 | 2.9 |
| Other natural causes | 45 357 | 43.6 | Other natural causes | 25 356 | 41.6 | Other natural causes | 19 256 | 44.9 |
| Non-natural causes | 5 739 | 5.5 | Non-natural causes | 4 176 | 6.9 | Non-natural causes | 1 548 | 3.6 |
| All causes | 103 917 | 100.0 | All causes | 60 887 | 100.0 | All causes | 42 859 | 100.0 |
| All provinces, both sexes, 65+ | | | All provinces, males, 65+ | | | All provinces, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Cerebrovascular diseases (I60-I69) | 15 867 | 10.6 | 1 Cerebrovascular diseases (I60-I69) | 5 609 | 8.7 | 1 Cerebrovascular diseases (I60-I69) | 10 244 | 12.0 |
| 2 Other forms of heart disease (I30-I52) | 12 632 | 8.4 | 2 Other forms of heart disease (I30-I52) | 5 029 | 7.8 | 2 Other forms of heart disease (I30-I52) | 7 598 | 8.9 |
| 3 Diabetes mellitus (E10-E14) | 11 026 | 7.3 | 3 Diabetes mellitus (E10-E14) | 3 858 | 6.0 | 3 Diabetes mellitus (E10-E14) | 7 159 | 8.4 |
| 4 Hypertensive diseases (I10-I15) | 9 931 | 6.6 | 4 Chronic lower respiratory diseases (J40-J47) | 3 837 | 5.9 | 4 Hypertensive diseases (I10-I15) | 6 641 | 7.7 |
| 5 Influenza and pneumonia (J09-J18) | 7 822 | 5.2 | 5 Influenza and pneumonia (J09-J18) | 3 571 | 5.5 | 5 Influenza and pneumonia (J09-J18) | 4 245 | 5.0 |
| 6 Ischaemic heart diseases (I20-I25) | 7 035 | 4.7 | 6 Ischaemic heart diseases (I20-I25) | 3 537 | 5.5 | 6 Ischaemic heart diseases (I20-I25) | 3 494 | 4.1 |
| 7 Chronic lower respiratory diseases (J40-J47) | 6 801 | 4.5 | 7 Hypertensive diseases (I10-I15) | 3 286 | 5.1 | 7 Chronic lower respiratory diseases (J40-J47) | 2 960 | 3.5 |
| 8 Tuberculosis (A15-A19) | 4 771 | 3.2 | 8 Tuberculosis (A15-A19) | 2 850 | 4.4 | 8 Malignant neoplasm of digestive organs (C15-C26) | 2 223 | 2.6 |
| 9 Malignant neoplasm of digestive organs (C15-C26) | 4 627 | 3.1 | 9 Malignant neoplasm of digestive organs (C15-C26) | 2 400 | 3.7 | 9 Intestinal infectious diseases (A00-A09) | 1 999 | 2.3 |
| 10 Intestinal infectious diseases (A00-A09) | 3 186 | 2.1 | 10 Malignant neoplasm of male genital organs (C60-C63) | 2 132 | 3.3 | 10 Tuberculosis (A15-A19) | 1 917 | 2.2 |
| Other natural causes | 62 673 | 41.7 | Other natural causes | 26 430 | 40.9 | Other natural causes | 35 261 | 41.1 |
| Non-natural causes | 4 011 | 2.7 | Non-natural causes | 2 047 | 3.2 | Non-natural causes | 1 958 | 2.3 |
| All causes | 150 382 | 100.0 | All causes | 64 586 | 100.0 | All causes | 85 699 | 100.0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M1: The ten leading underlying natural causes of death by age and sex: Western Cape, 2011

| Western Cape, both sexes, all ages | | | Western Cape, males, all ages | | | Western Cape, females, all ages | | |
|---|---------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 3 225 | 7,1 | 1 Tuberculosis (A15-A19) | 1 947 | 7,9 | 1 Diabetes mellitus (E10-E14) | 1 752 | 8,4 |
| 2 Diabetes mellitus (E10-E14) | 2 897 | 6,3 | 2 Ischaemic heart diseases (I20-I25) | 1 576 | 6,4 | 2 Cerebrovascular diseases (I60-I69) | 1 584 | 7,6 |
| 3 Cerebrovascular diseases (I60-I69) | 2 832 | 6,2 | 3 Cerebrovascular diseases (I60-I69) | 1 245 | 5,0 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 345 | 6,4 |
| 4 Ischaemic heart diseases (I20-I25) | 2 766 | 6,0 | 4 Chronic lower respiratory diseases (J40-J47) | 1 240 | 5,0 | 4 Tuberculosis (A15-A19) | 1 262 | 6,0 |
| 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 590 | 5,7 | 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 230 | 5,0 | 5 Ischaemic heart diseases (I20-I25) | 1 184 | 5,7 |
| 6 Chronic lower respiratory diseases (J40-J47) | 2 058 | 4,5 | 6 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 1 200 | 4,9 | 6 Hypertensive diseases (I10-I15) | 968 | 4,6 |
| 7 Malignant neoplasm of digestive organs (C15-C26) | 1 950 | 4,3 | 7 Diabetes mellitus (E10-E14) | 1 143 | 4,6 | 7 Malignant neoplasm of digestive organs (C15-C26) | 854 | 4,1 |
| 8 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 1 833 | 4,0 | 8 Malignant neoplasm of digestive organs (C15-C26) | 1 092 | 4,4 | 8 Chronic lower respiratory diseases (J40-J47) | 814 | 3,9 |
| 9 Hypertensive diseases (I10-I15) | 1 603 | 3,5 | 9 Other forms of heart disease (I30-I52) | 648 | 2,6 | 9 Other forms of heart disease (I30-I52) | 716 | 3,4 |
| 10 Other forms of heart disease (I30-I52) | 1 364 | 3,0 | 10 Hypertensive diseases (I10-I15) | 634 | 2,6 | 10 Malignant neoplasm of breast (C50) | 688 | 3,3 |
| Other natural causes | 17 311 | 37,8 | Other natural causes | 8 613 | 34,9 | Other natural causes | 8 570 | 41,0 |
| Non-natural causes | 5 314 | 11,6 | Non-natural causes | 4 095 | 16,6 | Non-natural causes | 1 185 | 5,7 |
| All causes | 45 743 | 100,0 | All causes | 24 663 | 100,0 | All causes | 20 922 | 100,0 |
| Western Cape, both sexes, 0-14 | | | Western Cape, males, 0-14 | | | Western Cape, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 219 | 7,8 | 1 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 110 | 7,5 | 1 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 105 | 8,1 |
| 2 Intestinal infectious diseases (A00-A09) | 189 | 6,7 | 2 Intestinal infectious diseases (A00-A09) | 106 | 7,3 | 2 Intestinal infectious diseases (A00-A09) | 80 | 6,2 |
| 3 Disorders related to length of gestation and fetal growth (P05-P08) | 161 | 5,7 | 3 Disorders related to length of gestation and fetal growth (P05-P08) | 79 | 5,4 | 3 Disorders related to length of gestation and fetal growth (P05-P08) | 79 | 6,1 |
| 4 Influenza and pneumonia (J09-J18) | 149 | 5,3 | 4 Influenza and pneumonia (J09-J18) | 76 | 5,2 | 4 Influenza and pneumonia (J09-J18) | 71 | 5,5 |
| 5 Other disorders originating in the perinatal period (P90-P96) | 140 | 5,0 | 5 Other disorders originating in the perinatal period (P90-P96) | 71 | 4,9 | 5 Other disorders originating in the perinatal period (P90-P96) | 62 | 4,8 |
| 6 Congenital malformations of the circulatory system (Q20-Q28) | 93 | 3,3 | 6 Fetus and newborn affected by maternal factors and by complications of pregnancy, | 50 | 3,4 | 6 Congenital malformations of the circulatory system (Q20-Q28) | 53 | 4,1 |
| 7 Fetus and newborn affected by maternal factors and by complications of pregnancy, | 84 | 3,0 | 7 Infections specific to the perinatal period (P35-P39) | 39 | 2,7 | 7 Infections specific to the perinatal period (P35-P39) | 38 | 2,9 |
| 8 Infections specific to the perinatal period (P35-P39) | 77 | 2,7 | 8 Congenital malformations of the circulatory system (Q20-Q28) | 38 | 2,6 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 33 | 2,5 |
| 9 Malnutrition (E40-E46) | 61 | 2,2 | 9 Malnutrition (E40-E46) | 33 | 2,3 | 9 Fetus and newborn affected by maternal factors and by complications of pregnancy, | 32 | 2,5 |
| 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 56 | 2,0 | 10 Digestive system disorders of fetus and newborn (P75-P78) | 27 | 1,8 | 10 Malnutrition (E40-E46) | 28 | 2,2 |
| Other natural causes | 1 194 | 42,6 | Other natural causes | 602 | 41,2 | Other natural causes | 571 | 44,0 |
| Non-natural causes | 379 | 13,5 | Non-natural causes | 231 | 15,8 | Non-natural causes | 145 | 11,2 |
| All causes | 2 802 | 100,0 | All causes | 1 462 | 100,0 | All causes | 1 297 | 100,0 |
| Western Cape, both sexes, 15-49 | | | Western Cape, males, 15-49 | | | Western Cape, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 106 | 14,6 | 1 Tuberculosis (A15-A19) | 1 151 | 13,2 | 1 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 115 | 19,9 |
| 2 Tuberculosis (A15-A19) | 2 006 | 13,9 | 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 980 | 11,2 | 2 Tuberculosis (A15-A19) | 845 | 15,1 |
| 3 Other viral diseases (B25-B34) | 438 | 3,0 | 3 Other viral diseases (B25-B34) | 202 | 2,3 | 3 Other viral diseases (B25-B34) | 234 | 4,2 |
| 4 Cerebrovascular diseases (I60-I69) | 320 | 2,2 | 4 Ischaemic heart diseases (I20-I25) | 199 | 2,3 | 4 Malignant neoplasm of breast (C50) | 162 | 2,9 |
| 5 Ischaemic heart diseases (I20-I25) | 275 | 1,9 | 5 Malignant neoplasm of digestive organs (C15-C26) | 159 | 1,8 | 5 Cerebrovascular diseases (I60-I69) | 161 | 2,9 |
| 6 Influenza and pneumonia (J09-J18) | 261 | 1,8 | 6 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 159 | 1,8 | 6 Influenza and pneumonia (J09-J18) | 135 | 2,4 |
| 7 Malignant neoplasm of digestive organs (C15-C26) | 253 | 1,8 | 7 Cerebrovascular diseases (I60-I69) | 157 | 1,8 | 7 Certain disorders involving the immune mechanism (D80-D89) | 130 | 2,3 |
| 8 Certain disorders involving the immune mechanism (D80-D89) | 248 | 1,7 | 8 Chronic lower respiratory diseases (J40-J47) | 152 | 1,7 | 8 Diabetes mellitus (E10-E14) | 129 | 2,3 |
| 9 Diabetes mellitus (E10-E14) | 238 | 1,6 | 9 Other forms of heart disease (I30-I52) | 131 | 1,5 | 9 Malignant neoplasm of female genital organs (C51-C58) | 123 | 2,2 |
| 10 Chronic lower respiratory diseases (J40-J47) | 238 | 1,6 | 10 Influenza and pneumonia (J09-J18) | 126 | 1,4 | 10 Hypertensive diseases (I10-I15) | 98 | 1,7 |
| Other causes | 4 257 | 29,5 | Other natural causes | 2 215 | 25,3 | Other natural causes | 1 837 | 32,7 |
| Non-natural causes | 3 786 | 26,2 | Non-natural causes | 3 115 | 35,6 | Non-natural causes | 644 | 11,5 |
| All causes | 14 426 | 100,0 | All causes | 8 746 | 100,0 | All causes | 5 613 | 100,0 |
| Western Cape, both sexes, 50-64 | | | Western Cape, males, 50-64 | | | Western Cape, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Diabetes mellitus (E10-E14) | 953 | 8,9 | 1 Tuberculosis (A15-A19) | 546 | 8,7 | 1 Diabetes mellitus (E10-E14) | 517 | 11,56 |
| 2 Tuberculosis (A15-A19) | 814 | 7,6 | 2 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 541 | 8,6 | 2 Cerebrovascular diseases (I60-I69) | 299 | 6,7 |
| 3 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 771 | 7,2 | 3 Ischaemic heart diseases (I20-I25) | 483 | 7,7 | 3 Malignant neoplasm of digestive organs (C15-C26) | 297 | 6,6 |
| 4 Ischaemic heart diseases (I20-I25) | 728 | 6,8 | 4 Chronic lower respiratory diseases (J40-J47) | 460 | 7,3 | 4 Chronic lower respiratory diseases (J40-J47) | 268 | 6,0 |
| 5 Chronic lower respiratory diseases (J40-J47) | 728 | 6,8 | 5 Diabetes mellitus (E10-E14) | 436 | 6,9 | 5 Tuberculosis (A15-A19) | 265 | 5,9 |
| 6 Malignant neoplasm of digestive organs (C15-C26) | 697 | 6,5 | 6 Malignant neoplasm of digestive organs (C15-C26) | 399 | 6,4 | 6 Malignant neoplasm of breast (C50) | 258 | 5,8 |
| 7 Cerebrovascular diseases (I60-I69) | 652 | 6,1 | 7 Cerebrovascular diseases (I60-I69) | 353 | 5,6 | 7 Ischaemic heart diseases (I20-I25) | 242 | 5,4 |
| 8 Hypertensive diseases (I10-I15) | 414 | 3,8 | 8 Hypertensive diseases (I10-I15) | 209 | 3,3 | 8 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 227 | 5,1 |
| 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 363 | 3,4 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 191 | 3,0 | 9 Hypertensive diseases (I10-I15) | 205 | 4,6 |
| 10 Malignant neoplasm of breast (C50) | 260 | 2,4 | 10 Other forms of heart disease (I30-I52) | 153 | 2,4 | 10 Malignant neoplasm of female genital organs (C51-C58) | 191 | 4,3 |
| Other natural causes | 3 765 | 35,0 | Other natural causes | 2 038 | 32,5 | Other natural causes | 1 550 | 34,7 |
| Non-natural causes | 621 | 5,8 | Non-natural causes | 467 | 7,4 | Non-natural causes | 153 | 3,4 |
| All causes | 10 766 | 100,0 | All causes | 6 276 | 100,0 | All causes | 4 472 | 100,0 |
| Western Cape, both sexes, 65+ | | | Western Cape, males, 65+ | | | Western Cape, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Cerebrovascular diseases (I60-I69) | 1 853 | 10,6 | 1 Ischaemic heart diseases (I20-I25) | 893 | 11,1 | 1 Cerebrovascular diseases (I60-I69) | 1 122 | 11,8 |
| 2 Ischaemic heart diseases (I20-I25) | 1 755 | 10,0 | 2 Cerebrovascular diseases (I60-I69) | 730 | 9,1 | 2 Diabetes mellitus (E10-E14) | 1 106 | 11,6 |
| 3 Diabetes mellitus (E10-E14) | 1 704 | 9,7 | 3 Chronic lower respiratory diseases (J40-J47) | 619 | 7,7 | 3 Ischaemic heart diseases (I20-I25) | 861 | 9,1 |
| 4 Chronic lower respiratory diseases (J40-J47) | 1 080 | 6,2 | 4 Diabetes mellitus (E10-E14) | 597 | 7,4 | 4 Hypertensive diseases (I10-I15) | 662 | 7,0 |
| 5 Hypertensive diseases (I10-I15) | 1 009 | 5,7 | 5 Malignant neoplasm of digestive organs (C15-C26) | 532 | 6,6 | 5 Other forms of heart disease (I30-I52) | 530 | 5,6 |
| 6 Malignant neoplasm of digestive organs (C15-C26) | 997 | 5,7 | 6 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 498 | 6,2 | 6 Malignant neoplasm of digestive organs (C15-C26) | 464 | 4,9 |
| 7 Other forms of heart disease (I30-I52) | 879 | 5,0 | 7 Malignant neoplasm of male genital organs (C60-C63) | 428 | 5,3 | 7 Chronic lower respiratory diseases (J40-J47) | 458 | 4,8 |
| 8 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 843 | 4,8 | 8 Other forms of heart disease (I30-I52) | 349 | 4,3 | 8 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 345 | 3,6 |
| 9 Influenza and pneumonia (J09-J18) | 510 | 2,9 | 9 Hypertensive diseases (I10-I15) | 347 | 4,3 | 9 Influenza and pneumonia (J09-J18) | 304 | 3,2 |
| 10 Malignant neoplasm of male genital organs (C60-C63) | 428 | 2,4 | 10 Tuberculosis (A15-A19) | 219 | 2,7 | 10 Malignant neoplasm of breast (C50) | 268 | 2,8 |
| Other natural causes | 6 011 | 34,2 | Other natural causes | 2 586 | 32,1 | Other natural causes | 3 143 | 33,1 |
| Non-natural causes | 490 | 2,8 | Non-natural causes | 250 | 3,1 | Non-natural causes | 240 | 2,5 |
| All causes | 17 559 | 100,0 | All causes | 8 048 | 100,0 | All causes | 9 503 | 100,0 |

*Including deaths due to MDR-TB and XDR-TB.

Appendix M2: The ten leading underlying natural causes of death by age and sex: Eastern Cape, 2011

| Eastern Cape, both sexes, all ages | | | Eastern Cape, males, all ages | | | Eastern Cape, females, all ages | | |
|---|---------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 8 315 | 11,4 | 1 Tuberculosis (A15-A19)* | 4 696 | 12,7 | 1 Tuberculosis (A15-A19)* | 3 600 | 10,0 |
| 2 Cerebrovascular diseases (I60-I69) | 3 378 | 4,6 | 2 Chronic lower respiratory diseases (J40-J47) | 1 582 | 4,3 | 2 Cerebrovascular diseases (I60-I69) | 2 013 | 5,6 |
| 3 Other forms of heart disease (I30-I52) | 3 242 | 4,4 | 3 Influenza and pneumonia (J09-J18) | 1 494 | 4,0 | 3 Other forms of heart disease (I30-I52) | 1 768 | 4,9 |
| 4 Influenza and pneumonia (J09-J18) | 2 903 | 4,0 | 4 Other forms of heart disease (I30-I52) | 1 469 | 4,0 | 4 Other viral diseases (B25-B34) | 1 648 | 4,6 |
| 5 Chronic lower respiratory diseases (J40-J47) | 2 754 | 3,8 | 5 Cerebrovascular diseases (I60-I69) | 1 361 | 3,7 | 5 Diabetes mellitus (E10-E14) | 1 542 | 4,3 |
| 6 Other viral diseases (B25-B34) | 2 569 | 3,5 | 6 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 093 | 3,0 | 6 Influenza and pneumonia (J09-J18) | 1 398 | 3,9 |
| 7 Diabetes mellitus (E10-E14) | 2 527 | 3,5 | 7 Diabetes mellitus (E10-E14) | 981 | 2,7 | 7 Hypertensive diseases (I10-I15) | 1 369 | 3,8 |
| 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 264 | 3,1 | 8 Other viral diseases (B25-B34) | 917 | 2,5 | 8 Chronic lower respiratory diseases (J40-J47) | 1 168 | 3,3 |
| 9 Hypertensive diseases (I10-I15) | 2 081 | 2,8 | 9 Malignant neoplasm of digestive organs (C15-C26) | 889 | 2,4 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 167 | 3,3 |
| 10 Intestinal infectious diseases (A00-A09) | 1 903 | 2,6 | 10 Intestinal infectious diseases (A00-A09) | 876 | 2,4 | 10 Intestinal infectious diseases (A00-A09) | 1 018 | 2,8 |
| Other natural causes | 34 130 | 46,7 | Other natural causes | 16 349 | 44,2 | Other natural causes | 17 496 | 48,8 |
| Non-natural causes | 6 969 | 9,5 | Non-natural causes | 5 249 | 14,2 | Non-natural causes | 1 693 | 4,7 |
| All causes | 73 035 | 100,0 | All causes | 36 956 | 100,0 | All causes | 35 880 | 100,0 |
| Eastern Cape, both sexes, 0-14 | | | Eastern Cape, males, 0-14 | | | Eastern Cape, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 587 | 11,8 | 1 Intestinal infectious diseases (A00-A09) | 316 | 12,1 | 1 Intestinal infectious diseases (A00-A09) | 267 | 11,5 |
| 2 Influenza and pneumonia (J09-J18) | 443 | 8,9 | 2 Influenza and pneumonia (J09-J18) | 234 | 9,0 | 2 Influenza and pneumonia (J09-J18) | 204 | 8,8 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 238 | 4,8 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 121 | 4,6 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 108 | 4,7 |
| 4 Tuberculosis (A15-A19)* | 177 | 3,6 | 4 Tuberculosis (A15-A19)* | 84 | 3,2 | 4 Tuberculosis (A15-A19)* | 92 | 4,0 |
| 5 Malnutrition (E40-E46) | 155 | 3,1 | 5 Malnutrition (E40-E46) | 79 | 3,0 | 5 Malnutrition (E40-E46) | 76 | 3,3 |
| 6 Other disorders originating in the perinatal period (P90-P96) | 129 | 2,6 | 6 Other disorders originating in the perinatal period (P90-P96) | 71 | 2,7 | 6 Other viral diseases (B25-B34) | 53 | 2,3 |
| 7 Other viral diseases (B25-B34) | 97 | 2,0 | 7 Other viral diseases (B25-B34) | 44 | 1,7 | 7 Other disorders originating in the perinatal period (P90-P96) | 52 | 2,2 |
| 8 Disorders related to length of gestation and fetal growth (P05-P08) | 80 | 1,6 | 8 Other acute lower respiratory infections (J20-J22) | 38 | 1,5 | 8 Disorders related to length of gestation and fetal growth (P05-P08) | 42 | 1,8 |
| 9 Other acute lower respiratory infections (J20-J22) | 77 | 1,5 | 9 Inflammatory diseases of the central nervous system (G00-G09) | 37 | 1,4 | 9 Other acute lower respiratory infections (J20-J22) | 39 | 1,7 |
| 10 Inflammatory diseases of the central nervous system (G00-G09) | 75 | 1,5 | 10 Disorders related to length of gestation and fetal growth (P05-P08) | 36 | 1,4 | 10 Inflammatory diseases of the central nervous system (G00-G09) | 38 | 1,6 |
| Other natural causes | 2 270 | 45,7 | Other natural causes | 1 176 | 45,1 | Other natural causes | 1 074 | 46,4 |
| Non-natural causes | 640 | 12,9 | Non-natural causes | 370 | 14,2 | Non-natural causes | 268 | 11,6 |
| All causes | 4 968 | 100,0 | All causes | 2 606 | 100,0 | All causes | 2 313 | 100,0 |
| Eastern Cape, both sexes, 15-49 | | | Eastern Cape, males, 15-49 | | | Eastern Cape, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 5 067 | 17,6 | 1 Tuberculosis (A15-A19) | 2 618 | 17,3 | 1 Tuberculosis (A15-A19) | 2 433 | 17,9 |
| 2 Other viral diseases (B25-B34) | 2 055 | 7,1 | 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 838 | 5,5 | 2 Other viral diseases (B25-B34) | 1 364 | 10,1 |
| 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 785 | 6,2 | 3 Other viral diseases (B25-B34) | 687 | 4,5 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 945 | 7,0 |
| 4 Certain disorders involving the immune mechanism (D80-D89) | 1 227 | 4,3 | 4 Influenza and pneumonia (J09-J18) | 565 | 3,7 | 4 Certain disorders involving the immune mechanism (D80-D89) | 677 | 5,0 |
| 5 Influenza and pneumonia (J09-J18) | 1 144 | 4,0 | 5 Certain disorders involving the immune mechanism (D80-D89) | 546 | 3,6 | 5 Influenza and pneumonia (J09-J18) | 576 | 4,2 |
| 6 Intestinal infectious diseases (A00-A09) | 720 | 2,5 | 6 Intestinal infectious diseases (A00-A09) | 301 | 2,0 | 6 Intestinal infectious diseases (A00-A09) | 415 | 3,1 |
| 7 Other forms of heart disease (I30-I52) | 593 | 2,1 | 7 Other forms of heart disease (I30-I52) | 279 | 1,8 | 7 Other forms of heart disease (I30-I52) | 311 | 2,3 |
| 8 Inflammatory diseases of the central nervous system (G00-G09) | 531 | 1,8 | 8 Episodic and paroxysmal disorders (G40-G47) | 258 | 1,7 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 307 | 2,3 |
| 9 Cerebrovascular diseases (I60-I69) | 383 | 1,3 | 9 Inflammatory diseases of the central nervous system (G00-G09) | 223 | 1,5 | 9 Diabetes mellitus (E10-E14) | 196 | 1,4 |
| 10 Episodic and paroxysmal disorders (G40-G47) | 371 | 1,3 | 10 Chronic lower respiratory diseases (J40-J47) | 197 | 1,3 | 10 Cerebrovascular diseases (I60-I69) | 192 | 1,4 |
| Other natural causes | 10 115 | 35,2 | Other natural causes | 4 706 | 31,2 | Other natural causes | 5 283 | 39,0 |
| Non-natural causes | 4 754 | 16,5 | Non-natural causes | 3 883 | 25,7 | Non-natural causes | 856 | 6,3 |
| All causes | 28 745 | 100,0 | All causes | 15 101 | 100,0 | All causes | 13 555 | 100,0 |
| Eastern Cape, both sexes, 50-64 | | | Eastern Cape, males, 50-64 | | | Eastern Cape, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 1 845 | 12,4 | 1 Tuberculosis (A15-A19) | 1 282 | 14,7 | 1 Tuberculosis (A15-A19) | 563 | 9,1 |
| 2 Cerebrovascular diseases (I60-I69) | 805 | 5,4 | 2 Chronic lower respiratory diseases (J40-J47) | 514 | 5,9 | 2 Diabetes mellitus (E10-E14) | 473 | 7,7 |
| 3 Diabetes mellitus (E10-E14) | 802 | 5,4 | 3 Other forms of heart disease (I30-I52) | 419 | 4,8 | 3 Cerebrovascular diseases (I60-I69) | 410 | 6,6 |
| 4 Chronic lower respiratory diseases (J40-J47) | 744 | 5,0 | 4 Cerebrovascular diseases (I60-I69) | 393 | 4,5 | 4 Other forms of heart disease (I30-I52) | 322 | 5,2 |
| 5 Other forms of heart disease (I30-I52) | 741 | 5,0 | 5 Malignant neoplasm of digestive organs (C15-C26) | 348 | 4,0 | 5 Hypertensive diseases (I10-I15) | 278 | 4,5 |
| 6 Malignant neoplasm of digestive organs (C15-C26) | 563 | 3,8 | 6 Diabetes mellitus (E10-E14) | 328 | 3,8 | 6 Chronic lower respiratory diseases (J40-J47) | 229 | 3,7 |
| 7 Influenza and pneumonia (J09-J18) | 491 | 3,3 | 7 Influenza and pneumonia (J09-J18) | 324 | 3,7 | 7 Malignant neoplasm of digestive organs (C15-C26) | 215 | 3,5 |
| 8 Hypertensive diseases (I10-I15) | 480 | 3,2 | 8 Hypertensive diseases (I10-I15) | 201 | 2,3 | 8 Other viral diseases (B25-B34) | 191 | 3,1 |
| 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 356 | 2,4 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 196 | 2,3 | 9 Malignant neoplasm of female genital organs (C51-C58) | 165 | 2,7 |
| 10 Other viral diseases (B25-B34) | 355 | 2,4 | 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-C39) | 191 | 2,2 | 10 Influenza and pneumonia (J09-J18) | 165 | 2,7 |
| Other natural causes | 6 831 | 45,8 | Other natural causes | 3 880 | 44,6 | Other natural causes | 2 908 | 47,1 |
| Non-natural causes | 888 | 6,0 | Non-natural causes | 625 | 7,2 | Non-natural causes | 260 | 4,2 |
| All causes | 14 901 | 100,0 | All causes | 8 701 | 100,0 | All causes | 6 179 | 100,0 |
| Eastern Cape, both sexes, 65+ | | | Eastern Cape, males, 65+ | | | Eastern Cape, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Cerebrovascular diseases (I60-I69) | 2 176 | 9,0 | 1 Chronic lower respiratory diseases (J40-J47) | 852 | 8,2 | 1 Cerebrovascular diseases (I60-I69) | 1 408 | 10,2 |
| 2 Other forms of heart disease (I30-I52) | 1 848 | 7,6 | 2 Cerebrovascular diseases (I60-I69) | 767 | 7,3 | 2 Other forms of heart disease (I30-I52) | 1 109 | 8,0 |
| 3 Chronic lower respiratory diseases (J40-J47) | 1 620 | 6,7 | 3 Other forms of heart disease (I30-I52) | 737 | 7,1 | 3 Hypertensive diseases (I10-I15) | 976 | 7,1 |
| 4 Diabetes mellitus (E10-E14) | 1 419 | 5,9 | 4 Tuberculosis (A15-A19) | 703 | 6,7 | 4 Diabetes mellitus (E10-E14) | 873 | 6,3 |
| 5 Hypertensive diseases (I10-I15) | 1 406 | 5,8 | 5 Diabetes mellitus (E10-E14) | 544 | 5,2 | 5 Chronic lower respiratory diseases (J40-J47) | 767 | 5,6 |
| 6 Tuberculosis (A15-A19) | 1 212 | 5,0 | 6 Hypertensive diseases (I10-I15) | 429 | 4,1 | 6 Tuberculosis (A15-A19) | 508 | 3,7 |
| 7 Malignant neoplasm of digestive organs (C15-C26) | 886 | 3,7 | 7 Malignant neoplasm of digestive organs (C15-C26) | 406 | 3,9 | 7 Malignant neoplasm of digestive organs (C15-C26) | 480 | 3,5 |
| 8 Influenza and pneumonia (J09-J18) | 820 | 3,4 | 8 Influenza and pneumonia (J09-J18) | 369 | 3,5 | 8 Influenza and pneumonia (J09-J18) | 450 | 3,3 |
| 9 Ischaemic heart diseases (I20-I25) | 563 | 2,3 | 9 Malignant neoplasm of male genital organs (C60-C63) | 270 | 2,6 | 9 Ischaemic heart diseases (I20-I25) | 308 | 2,2 |
| 10 Intestinal infectious diseases (A00-A09) | 344 | 1,4 | 10 Ischaemic heart diseases (I20-I25) | 255 | 2,4 | 10 Intestinal infectious diseases (A00-A09) | 204 | 1,5 |
| Other natural causes | 11 313 | 46,7 | Other natural causes | 4 781 | 45,7 | Other natural causes | 6 395 | 46,4 |
| Non-natural causes | 639 | 2,6 | Non-natural causes | 338 | 3,2 | Non-natural causes | 301 | 2,2 |
| All causes | 24 246 | 100,0 | All causes | 10 451 | 100,0 | All causes | 13 779 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M3: The ten leading underlying natural causes of death by age and sex: Northern Cape, 2011

| Northern Cape, both sexes, all ages | | | Northern Cape, males, all ages | | | Northern Cape, females, all ages | | |
|---|---------------|--------------|---|--------------|--------------|---|--------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 1 246 | 8.5 | 1 Tuberculosis (A15-A19)* | 733 | 9.4 | 1 Tuberculosis (A15-A19)* | 507 | 7.3 |
| 2 Influenza and pneumonia (J09-J18) | 761 | 5.2 | 2 Influenza and pneumonia (J09-J18) | 413 | 5.3 | 2 Cerebrovascular diseases (I60-I69) | 411 | 6.0 |
| 3 Cerebrovascular diseases (I60-I69) | 689 | 4.7 | 3 Chronic lower respiratory diseases (J40-J47) | 346 | 4.5 | 3 Influenza and pneumonia (J09-J18) | 340 | 4.9 |
| 4 Human immunodeficiency virus [HIV] disease (B20-B24) | 660 | 4.5 | 4 Human immunodeficiency virus [HIV] disease (B20-B24) | 320 | 4.1 | 4 Human immunodeficiency virus [HIV] disease (B20-B24) | 336 | 4.9 |
| 5 Chronic lower respiratory diseases (J40-J47) | 550 | 3.7 | 5 Cerebrovascular diseases (I60-I69) | 278 | 3.6 | 5 Other forms of heart disease (I30-I52) | 298 | 4.3 |
| 6 Other forms of heart disease (I30-I52) | 535 | 3.6 | 6 Other forms of heart disease (I30-I52) | 236 | 3.0 | 6 Hypertensive diseases (I10-I15) | 288 | 4.2 |
| 7 Intestinal infectious diseases (A00-A09) | 448 | 3.0 | 7 Intestinal infectious diseases (A00-A09) | 225 | 2.9 | 7 Diabetes mellitus (E10-E14) | 234 | 3.4 |
| 8 Hypertensive diseases (I10-I15) | 432 | 2.9 | 8 Certain disorders involving the immune mechanism (D80-D89) | 200 | 2.6 | 8 Intestinal infectious diseases (A00-A09) | 220 | 3.2 |
| 9 Certain disorders involving the immune mechanism (D80-D89) | 395 | 2.7 | 9 Ischaemic heart diseases (I20-I25) | 173 | 2.2 | 9 Chronic lower respiratory diseases (J40-J47) | 204 | 3.0 |
| 10 Diabetes mellitus (E10-E14) | 381 | 2.6 | 10 Malignant neoplasm of digestive organs (C15-C26) | 153 | 2.0 | 10 Certain disorders involving the immune mechanism (D80-D89) | 194 | 2.8 |
| Other natural causes | 7 386 | 50.2 | Other natural causes | 3 792 | 48.8 | Other natural causes | 3 539 | 51.3 |
| Non-natural causes | 1 235 | 8.4 | Non-natural causes | 894 | 11.5 | Non-natural causes | 334 | 4.8 |
| All causes | 14 718 | 100.0 | All causes | 7 763 | 100.0 | All causes | 6 905 | 100.0 |
| Northern Cape, both sexes, 0-14 | | | Northern Cape, males, 0-14 | | | Northern Cape, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 207 | 14.8 | 1 Intestinal infectious diseases (A00-A09) | 120 | 15.5 | 1 Intestinal infectious diseases (A00-A09) | 85 | 13.8 |
| 2 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 116 | 8.3 | 2 Influenza and pneumonia (J09-J18) | 62 | 8.0 | 2 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 55 | 8.9 |
| 3 Influenza and pneumonia (J09-J18) | 109 | 7.8 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 59 | 7.6 | 3 Influenza and pneumonia (J09-J18) | 45 | 7.3 |
| 4 Other disorders originating in the perinatal period (P90-P96) | 73 | 5.2 | 4 Disorders related to length of gestation and fetal growth (P05-P08) | 45 | 5.8 | 4 Other disorders originating in the perinatal period (P90-P96) | 35 | 5.7 |
| 5 Disorders related to length of gestation and fetal growth (P05-P08) | 71 | 5.1 | 5 Other disorders originating in the perinatal period (P90-P96) | 37 | 4.8 | 5 Malnutrition (E40-E46) | 32 | 5.2 |
| 6 Malnutrition (E40-E46) | 60 | 4.3 | 6 Malnutrition (E40-E46) | 28 | 3.6 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 26 | 4.2 |
| 7 Tuberculosis (A15-A19)* | 34 | 2.4 | 7 Other acute lower respiratory infections (J20-J22) | 18 | 2.3 | 7 Tuberculosis (A15-A19)* | 21 | 3.4 |
| 8 Other acute lower respiratory infections (J20-J22) | 33 | 2.4 | 8 Fetus and newborn affected by maternal factors and by complications of pregnancy, | 16 | 2.1 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 17 | 2.8 |
| 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 32 | 2.3 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 14 | 1.8 | 9 Other acute lower respiratory infections (J20-J22) | 15 | 2.4 |
| 10 Fetus and newborn affected by maternal factors and by complications of pregnancy, | 20 | 1.4 | 10 Tuberculosis (A15-A19) | 12 | 1.5 | 10 Certain disorders involving the immune mechanism (D80-D89) | 8 | 1.3 |
| Other natural causes | 509 | 36.3 | Other natural causes | 282 | 36.4 | Other natural causes | 223 | 36.1 |
| Non-natural causes | 139 | 9.9 | Non-natural causes | 82 | 10.6 | Non-natural causes | 55 | 8.9 |
| All causes | 1 403 | 100.0 | All causes | 775 | 100.0 | All causes | 617 | 100.0 |
| Northern Cape, both sexes, 15-49 | | | Northern Cape, males, 15-49 | | | Northern Cape, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 816 | 14.6 | 1 Tuberculosis (A15-A19) | 452 | 14.9 | 1 Tuberculosis (A15-A19) | 360 | 14.3 |
| 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 515 | 9.2 | 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 246 | 8.1 | 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 266 | 10.5 |
| 3 Influenza and pneumonia (J09-J18) | 289 | 5.2 | 3 Influenza and pneumonia (J09-J18) | 137 | 4.5 | 3 Certain disorders involving the immune mechanism (D80-D89) | 148 | 5.9 |
| 4 Certain disorders involving the immune mechanism (D80-D89) | 284 | 5.1 | 4 Certain disorders involving the immune mechanism (D80-D89) | 136 | 4.5 | 4 Influenza and pneumonia (J09-J18) | 148 | 5.9 |
| 5 Other viral diseases (B25-B34) | 154 | 2.8 | 5 Other viral diseases (B25-B34) | 63 | 2.1 | 5 Other viral diseases (B25-B34) | 90 | 3.6 |
| 6 Other acute lower respiratory infections (J20-J22) | 120 | 2.2 | 6 Chronic lower respiratory diseases (J40-J47) | 58 | 1.9 | 6 Other acute lower respiratory infections (J20-J22) | 65 | 2.6 |
| 7 Other forms of heart disease (I30-I52) | 109 | 2.0 | 7 Other acute lower respiratory infections (J20-J22) | 55 | 1.8 | 7 Other forms of heart disease (I30-I52) | 61 | 2.4 |
| 8 Intestinal infectious diseases (A00-A09) | 108 | 1.9 | 8 Cerebrovascular diseases (I60-I69) | 49 | 1.6 | 8 Intestinal infectious diseases (A00-A09) | 59 | 2.3 |
| 9 Cerebrovascular diseases (I60-I69) | 106 | 1.9 | 9 Intestinal infectious diseases (A00-A09) | 48 | 1.6 | 9 Cerebrovascular diseases (I60-I69) | 57 | 2.3 |
| 10 Chronic lower respiratory diseases (J40-J47) | 92 | 1.6 | 9 Other forms of heart disease (I30-I52) | 48 | 1.6 | 10 Diseases of liver (K70-K77) | 39 | 1.5 |
| Other natural causes | 2 133 | 38.2 | Other natural causes | 1 072 | 35.4 | Other natural causes | 1 050 | 41.6 |
| Non-natural causes | 851 | 15.3 | Non-natural causes | 667 | 22.0 | Non-natural causes | 181 | 7.2 |
| All causes | 5 577 | 100.0 | All causes | 3 031 | 100.0 | All causes | 2 524 | 100.0 |
| Northern Cape, both sexes, 50-64 | | | Northern Cape, males, 50-64 | | | Northern Cape, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 287 | 8.5 | 1 Tuberculosis (A15-A19) | 200 | 10.3 | 1 Cerebrovascular diseases (I60-I69) | 90 | 6.4 |
| 2 Chronic lower respiratory diseases (J40-J47) | 229 | 6.8 | 2 Chronic lower respiratory diseases (J40-J47) | 141 | 7.2 | 2 Chronic lower respiratory diseases (J40-J47) | 88 | 6.3 |
| 3 Cerebrovascular diseases (I60-I69) | 176 | 5.2 | 3 Influenza and pneumonia (J09-J18) | 101 | 5.2 | 3 Tuberculosis (A15-A19) | 86 | 6.1 |
| 4 Influenza and pneumonia (J09-J18) | 153 | 4.6 | 4 Cerebrovascular diseases (I60-I69) | 86 | 4.4 | 4 Diabetes mellitus (E10-E14) | 79 | 5.6 |
| 5 Other forms of heart disease (I30-I52) | 152 | 4.5 | 5 Other forms of heart disease (I30-I52) | 76 | 3.9 | 5 Other forms of heart disease (I30-I52) | 76 | 5.4 |
| 6 Diabetes mellitus (E10-E14) | 137 | 4.1 | 6 Malignant neoplasm of digestive organs (C15-C26) | 61 | 3.1 | 6 Hypertensive diseases (I10-I15) | 60 | 4.3 |
| 7 Hypertensive diseases (I10-I15) | 105 | 3.1 | 7 Diabetes mellitus (E10-E14) | 58 | 3.0 | 7 Influenza and pneumonia (J09-J18) | 52 | 3.7 |
| 8 Malignant neoplasm of digestive organs (C15-C26) | 104 | 3.1 | 8 Ischaemic heart diseases (I20-I25) | 56 | 2.9 | 8 Malignant neoplasm of female genital organs (C51-C58) | 50 | 3.6 |
| 9 Ischaemic heart diseases (I20-I25) | 103 | 3.1 | 9 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 55 | 2.8 | 9 Ischaemic heart diseases (I20-I25) | 47 | 3.3 |
| 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 97 | 2.9 | 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 51 | 2.6 | 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 46 | 3.3 |
| Other natural causes | 1 672 | 49.8 | Other natural causes | 971 | 49.8 | Other natural causes | 680 | 48.5 |
| Non-natural causes | 143 | 4.3 | Non-natural causes | 94 | 4.8 | Non-natural causes | 49 | 3.5 |
| All causes | 3 358 | 100.0 | All causes | 1 950 | 100.0 | All causes | 1 403 | 100.0 |
| Northern Cape, both sexes, 65+ | | | Northern Cape, males, 65+ | | | Northern Cape, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Cerebrovascular diseases (I60-I69) | 405 | 9.4 | 1 Chronic lower respiratory diseases (J40-J47) | 147 | 7.4 | 1 Cerebrovascular diseases (I60-I69) | 263 | 11.2 |
| 2 Hypertensive diseases (I10-I15) | 289 | 6.7 | 2 Cerebrovascular diseases (I60-I69) | 142 | 7.2 | 2 Hypertensive diseases (I10-I15) | 203 | 8.6 |
| 3 Other forms of heart disease (I30-I52) | 265 | 6.1 | 3 Influenza and pneumonia (J09-J18) | 113 | 5.7 | 3 Other forms of heart disease (I30-I52) | 160 | 6.8 |
| 4 Chronic lower respiratory diseases (J40-J47) | 227 | 5.2 | 4 Other forms of heart disease (I30-I52) | 105 | 5.3 | 4 Diabetes mellitus (E10-E14) | 120 | 5.1 |
| 5 Influenza and pneumonia (J09-J18) | 208 | 4.8 | 5 Ischaemic heart diseases (I20-I25) | 93 | 4.7 | 5 Ischaemic heart diseases (I20-I25) | 104 | 4.4 |
| 6 Ischaemic heart diseases (I20-I25) | 197 | 4.5 | 6 Hypertensive diseases (I10-I15) | 86 | 4.3 | 6 Influenza and pneumonia (J09-J18) | 95 | 4.0 |
| 7 Diabetes mellitus (E10-E14) | 187 | 4.3 | 7 Malignant neoplasm of male genital organs (C60-C63) | 74 | 3.7 | 7 Chronic lower respiratory diseases (J40-J47) | 80 | 3.4 |
| 8 Tuberculosis (A15-A19) | 107 | 2.5 | 8 Tuberculosis (A15-A19) | 67 | 3.4 | 8 Intestinal infectious diseases (A00-A09) | 51 | 2.2 |
| 9 Malignant neoplasm of digestive organs (C15-C26) | 106 | 2.4 | 9 Diabetes mellitus (E10-E14) | 67 | 3.4 | 9 Malignant neoplasm of digestive organs (C15-C26) | 46 | 2.0 |
| 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 90 | 2.1 | 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 63 | 3.2 | 10 Tuberculosis (A15-A19) | 40 | 1.7 |
| Other natural causes | 2 155 | 49.8 | Other natural causes | 976 | 49.3 | Other natural causes | 1 138 | 48.5 |
| Non-natural causes | 95 | 2.2 | Non-natural causes | 47 | 2.4 | Non-natural causes | 20 | 0.7 |
| All causes | 4 331 | 100.0 | All causes | 1 980 | 100.0 | All causes | 2 348 | 100.0 |
| Northern Cape, both sexes, all ages | | | Northern Cape, males, all ages | | | Northern Cape, females, all ages | | |
| | No. | % | | No. | % | | No. | % |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M4: The ten leading underlying natural causes of death by age and sex: Free State, 2011

| Free State, both sexes, all ages | | | Free State, males, all ages | | | Free State, females, all ages | | |
|---|---------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Influenza and pneumonia (J09-J18) | 4 376 | 10.8 | 1 Influenza and pneumonia (J09-J18) | 2 287 | 11.0 | 1 Influenza and pneumonia (J09-J18) | 2 081 | 10.6 |
| 2 Tuberculosis (A15-A19)* | 3 903 | 9.6 | 2 Tuberculosis (A15-A19)* | 2 243 | 10.8 | 2 Tuberculosis (A15-A19)* | 1 654 | 8.4 |
| 3 Other forms of heart disease (I30-I52) | 2 240 | 5.5 | 3 Other forms of heart disease (I30-I52) | 990 | 4.8 | 3 Other forms of heart disease (I30-I52) | 1 249 | 6.3 |
| 4 Intestinal infectious diseases (A00-A09) | 2 089 | 5.1 | 4 Intestinal infectious diseases (A00-A09) | 956 | 4.6 | 4 Cerebrovascular diseases (I60-I69) | 1 179 | 6.0 |
| 5 Cerebrovascular diseases (I60-I69) | 1 973 | 4.9 | 5 Cerebrovascular diseases (I60-I69) | 794 | 3.8 | 5 Intestinal infectious diseases (A00-A09) | 1 125 | 5.7 |
| 6 Certain disorders involving the immune mechanism (D80-D89) | 1 425 | 3.5 | 6 Certain disorders involving the immune mechanism (D80-D89) | 646 | 3.1 | 6 Certain disorders involving the immune mechanism (D80-D89) | 776 | 3.9 |
| 7 Hypertensive diseases (I10-I15) | 1 187 | 2.9 | 7 Chronic lower respiratory diseases (J40-J47) | 556 | 2.7 | 7 Diabetes mellitus (E10-E14) | 756 | 3.8 |
| 8 Diabetes mellitus (E10-E14) | 1 169 | 2.9 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 454 | 2.2 | 8 Hypertensive diseases (I10-I15) | 744 | 3.8 |
| 9 Chronic lower respiratory diseases (J40-J47) | 865 | 2.1 | 9 Ischaemic heart diseases (I20-I25) | 454 | 2.2 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 396 | 2.0 |
| 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 850 | 2.1 | 10 Hypertensive diseases (I10-I15) | 441 | 2.1 | 10 Other viral diseases (B25-B34) | 361 | 1.8 |
| Other natural causes | 17 430 | 42.9 | Other natural causes | 8 678 | 41.6 | Other natural causes | 8 607 | 43.7 |
| Non-natural causes | 3 128 | 7.7 | Non-natural causes | 2 338 | 11.2 | Non-natural causes | 776 | 3.9 |
| All causes | 40 635 | 100.0 | All causes | 20 837 | 100.0 | All causes | 19 704 | 100.0 |
| Free State, both sexes, 0-14 | | | Free State, males, 0-14 | | | Free State, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 660 | 15.4 | 1 Intestinal infectious diseases (A00-A09) | 337 | 15.1 | 1 Intestinal infectious diseases (A00-A09) | 319 | 15.9 |
| 2 Influenza and pneumonia (J09-J18) | 636 | 14.9 | 2 Influenza and pneumonia (J09-J18) | 319 | 14.3 | 2 Influenza and pneumonia (J09-J18) | 316 | 15.7 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 421 | 9.9 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 226 | 10.1 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 192 | 9.6 |
| 4 Malnutrition (E40-E46) | 254 | 5.9 | 4 Malnutrition (E40-E46) | 134 | 6.0 | 4 Malnutrition (E40-E46) | 118 | 5.9 |
| 5 Other disorders originating in the perinatal period (P90-P96) | 148 | 3.5 | 5 Other disorders originating in the perinatal period (P90-P96) | 81 | 3.6 | 5 Other disorders originating in the perinatal period (P90-P96) | 66 | 3.3 |
| 6 Disorders related to length of gestation and fetal growth (P05-P08) | 140 | 3.3 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 75 | 3.4 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 65 | 3.2 |
| 7 Tuberculosis (A15-A19)* | 109 | 2.6 | 7 Tuberculosis (A15-A19)* | 53 | 2.4 | 7 Other acute lower respiratory infections (J20-J22) | 59 | 2.9 |
| 8 Other acute lower respiratory infections (J20-J22) | 101 | 2.4 | 8 Infections specific to the perinatal period (P35-P39) | 49 | 2.2 | 8 Tuberculosis (A15-A19)* | 56 | 2.8 |
| 9 Infections specific to the perinatal period (P35-P39) | 98 | 2.3 | 9 Other acute lower respiratory infections (J20-J22) | 42 | 1.9 | 9 Infections specific to the perinatal period (P35-P39) | 47 | 2.3 |
| 10 Other viral diseases (B25-B34) | 66 | 1.5 | 10 Other viral diseases (B25-B34) | 40 | 1.8 | 10 Other bacterial diseases (A30-A49) | 33 | 1.6 |
| Other natural causes | 1 348 | 31.5 | Other natural causes | 702 | 31.4 | Other natural causes | 623 | 31.0 |
| Non-natural causes | 293 | 6.9 | Non-natural causes | 178 | 8.0 | Non-natural causes | 115 | 5.7 |
| All causes | 4 274 | 100.0 | All causes | 2 236 | 100.0 | All causes | 2 009 | 100.0 |
| Free State, both sexes, 15-49 | | | Free State, males, 15-49 | | | Free State, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 2 751 | 16.3 | 1 Tuberculosis (A15-A19)* | 1 513 | 16.7 | 1 Tuberculosis (A15-A19)* | 1 233 | 15.7 |
| 2 Influenza and pneumonia (J09-J18) | 2 014 | 11.9 | 2 Influenza and pneumonia (J09-J18) | 1 031 | 11.4 | 2 Influenza and pneumonia (J09-J18) | 978 | 12.5 |
| 3 Certain disorders involving the immune mechanism (D80-D89) | 1 098 | 6.5 | 3 Certain disorders involving the immune mechanism (D80-D89) | 488 | 5.4 | 3 Certain disorders involving the immune mechanism (D80-D89) | 609 | 7.8 |
| 4 Intestinal infectious diseases (A00-A09) | 835 | 4.9 | 4 Intestinal infectious diseases (A00-A09) | 364 | 4.0 | 4 Intestinal infectious diseases (A00-A09) | 469 | 6.0 |
| 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 645 | 3.8 | 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 329 | 3.6 | 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 316 | 4.0 |
| 6 Other viral diseases (B25-B34) | 525 | 3.1 | 6 Other viral diseases (B25-B34) | 249 | 2.7 | 6 Other viral diseases (B25-B34) | 276 | 3.5 |
| 7 Other forms of heart disease (I30-I52) | 465 | 2.7 | 7 Other forms of heart disease (I30-I52) | 225 | 2.5 | 7 Other forms of heart disease (I30-I52) | 239 | 3.0 |
| 8 Inflammatory diseases of the central nervous system (G00-G09) | 313 | 1.8 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 178 | 2.0 | 8 Other acute lower respiratory infections (J20-J22) | 154 | 2.0 |
| 9 Other acute lower respiratory infections (J20-J22) | 301 | 1.8 | 9 Other acute lower respiratory infections (J20-J22) | 146 | 1.6 | 9 Cerebrovascular diseases (I60-I69) | 141 | 1.8 |
| 10 Cerebrovascular diseases (I60-I69) | 278 | 1.6 | 10 Cerebrovascular diseases (I60-I69) | 137 | 1.5 | 10 Aplastic and other anaemias (D60-D64) | 139 | 1.8 |
| Other natural causes | 5 538 | 32.7 | Other natural causes | 2 686 | 29.7 | Other natural causes | 2 836 | 36.2 |
| Non-natural causes | 2 163 | 12.8 | Non-natural causes | 1 709 | 18.9 | Non-natural causes | 448 | 5.7 |
| All causes | 16 926 | 100.0 | All causes | 9 055 | 100.0 | All causes | 7 838 | 100.0 |
| Free State, both sexes, 50-64 | | | Free State, males, 50-64 | | | Free State, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Influenza and pneumonia (J09-J18) | 895 | 10.1 | 1 Tuberculosis (A15-A19) | 544 | 10.7 | 1 Influenza and pneumonia (J09-J18) | 354 | 9.3 |
| 2 Tuberculosis (A15-A19) | 827 | 9.3 | 2 Influenza and pneumonia (J09-J18) | 541 | 10.7 | 2 Other forms of heart disease (I30-I52) | 309 | 8.1 |
| 3 Other forms of heart disease (I30-I52) | 623 | 7.0 | 3 Other forms of heart disease (I30-I52) | 314 | 6.2 | 3 Cerebrovascular diseases (I60-I69) | 297 | 7.8 |
| 4 Cerebrovascular diseases (I60-I69) | 578 | 6.5 | 4 Cerebrovascular diseases (I60-I69) | 281 | 5.5 | 4 Tuberculosis (A15-A19) | 282 | 7.4 |
| 5 Diabetes mellitus (E10-E14) | 403 | 4.5 | 5 Chronic lower respiratory diseases (J40-J47) | 222 | 4.4 | 5 Diabetes mellitus (E10-E14) | 242 | 6.3 |
| 6 Hypertensive diseases (I10-I15) | 338 | 3.8 | 6 Intestinal infectious diseases (A00-A09) | 165 | 3.3 | 6 Hypertensive diseases (I10-I15) | 182 | 4.8 |
| 7 Intestinal infectious diseases (A00-A09) | 330 | 3.7 | 7 Diabetes mellitus (E10-E14) | 161 | 3.2 | 7 Intestinal infectious diseases (A00-A09) | 165 | 4.3 |
| 8 Chronic lower respiratory diseases (J40-J47) | 321 | 3.6 | 8 Hypertensive diseases (I10-I15) | 155 | 3.1 | 8 Certain disorders involving the immune mechanism (D80-D89) | 118 | 3.1 |
| 9 Certain disorders involving the immune mechanism (D80-D89) | 238 | 2.7 | 9 Ischaemic heart diseases (I20-I25) | 140 | 2.8 | 9 Malignant neoplasm of female genital organs (C51-C58) | 110 | 2.9 |
| 10 Ischaemic heart diseases (I20-I25) | 208 | 2.3 | 10 Malignant neoplasm of digestive organs (C15-C26) | 122 | 2.4 | 10 Chronic lower respiratory diseases (J40-J47) | 99 | 2.6 |
| Other natural causes | 3 715 | 41.7 | Other natural causes | 2 116 | 41.7 | Other natural causes | 1 547 | 40.5 |
| Non-natural causes | 428 | 4.8 | Non-natural causes | 314 | 6.2 | Non-natural causes | 112 | 2.9 |
| All causes | 8 904 | 100.0 | All causes | 5 075 | 100.0 | All causes | 3 817 | 100.0 |
| Free State, both sexes, 65+ | | | Free State, males, 65+ | | | Free State, males, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Other forms of heart disease (I30-I52) | 1 117 | 10.8 | 1 Other forms of heart disease (I30-I52) | 434 | 9.9 | 1 Cerebrovascular diseases (I60-I69) | 738 | 12.3 |
| 2 Cerebrovascular diseases (I60-I69) | 1 110 | 10.7 | 2 Influenza and pneumonia (J09-J18) | 394 | 9.0 | 2 Other forms of heart disease (I30-I52) | 683 | 11.4 |
| 3 Influenza and pneumonia (J09-J18) | 824 | 7.9 | 3 Cerebrovascular diseases (I60-I69) | 372 | 8.5 | 3 Hypertensive diseases (I10-I15) | 476 | 7.9 |
| 4 Hypertensive diseases (I10-I15) | 700 | 6.7 | 4 Chronic lower respiratory diseases (J40-J47) | 266 | 6.1 | 4 Diabetes mellitus (E10-E14) | 433 | 7.2 |
| 5 Diabetes mellitus (E10-E14) | 609 | 5.9 | 5 Ischaemic heart diseases (I20-I25) | 233 | 5.3 | 5 Influenza and pneumonia (J09-J18) | 428 | 7.1 |
| 6 Ischaemic heart diseases (I20-I25) | 458 | 4.4 | 6 Hypertensive diseases (I10-I15) | 224 | 5.1 | 6 Ischaemic heart diseases (I20-I25) | 224 | 3.7 |
| 7 Chronic lower respiratory diseases (J40-J47) | 420 | 4.0 | 7 Diabetes mellitus (E10-E14) | 176 | 4.0 | 7 Intestinal infectious diseases (A00-A09) | 172 | 2.9 |
| 8 Intestinal infectious diseases (A00-A09) | 260 | 2.5 | 8 Malignant neoplasm of male genital organs (C60-C63) | 145 | 3.3 | 8 Chronic lower respiratory diseases (J40-J47) | 154 | 2.6 |
| 9 Malignant neoplasm of digestive organs (C15-C26) | 219 | 2.1 | 9 Tuberculosis (A15-A19) | 131 | 3.0 | 9 Renal failure (N17-N19) | 121 | 2.0 |
| 10 Tuberculosis (A15-A19) | 213 | 2.1 | 10 Malignant neoplasm of digestive organs (C15-C26) | 121 | 2.8 | 10 Malignant neoplasm of female genital organs (C51-C58) | 99 | 1.7 |
| Other natural causes | 4 246 | 40.9 | Other natural causes | 1 779 | 40.5 | Other natural causes | 2 367 | 39.5 |
| Non-natural causes | 209 | 2.0 | Non-natural causes | 116 | 2.6 | Non-natural causes | 93 | 1.6 |
| All causes | 10 385 | 100.0 | All causes | 4 391 | 100.0 | All causes | 5 988 | 100.0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M5: The ten leading underlying natural causes of death by age and sex: KwaZulu-Natal, 2011

| KwaZulu-Natal, both sexes, all ages | | | KwaZulu-Natal, males, all ages | | | KwaZulu-Natal, females, all ages | | |
|---|----------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 15 034 | 14.4 | 1 Tuberculosis (A15-A19)* | 8 427 | 16.0 | 1 Tuberculosis (A15-A19)* | 6 563 | 12.7 |
| 2 Cerebrovascular diseases (I60-I69) | 5 753 | 5.5 | 2 Influenza and pneumonia (J09-J18) | 2 732 | 5.2 | 2 Cerebrovascular diseases (I60-I69) | 3 510 | 6.8 |
| 3 Influenza and pneumonia (J09-J18) | 5 280 | 5.0 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 374 | 4.5 | 3 Diabetes mellitus (E10-E14) | 3 162 | 6.1 |
| 4 Other forms of heart disease (I30-I52) | 5 227 | 5.0 | 4 Other forms of heart disease (I30-I52) | 2 312 | 4.4 | 4 Other forms of heart disease (I30-I52) | 2 908 | 5.6 |
| 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 4 956 | 4.7 | 5 Cerebrovascular diseases (I60-I69) | 2 238 | 4.2 | 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 569 | 5.0 |
| 6 Diabetes mellitus (E10-E14) | 4 925 | 4.7 | 6 Intestinal infectious diseases (A00-A09) | 2 090 | 4.0 | 6 Influenza and pneumonia (J09-J18) | 2 531 | 4.9 |
| 7 Intestinal infectious diseases (A00-A09) | 4 389 | 4.2 | 7 Other viral diseases (B25-B34) | 1 913 | 3.6 | 7 Intestinal infectious diseases (A00-A09) | 2 284 | 4.4 |
| 8 Other viral diseases (B25-B34) | 4 164 | 4.0 | 8 Diabetes mellitus (E10-E14) | 1 759 | 3.3 | 8 Other viral diseases (B25-B34) | 2 231 | 4.3 |
| 9 Hypertensive diseases (I10-I15) | 2 867 | 2.7 | 9 Ischaemic heart diseases (I20-I25) | 1 369 | 2.6 | 9 Hypertensive diseases (I10-I15) | 1 844 | 3.6 |
| 10 Ischaemic heart diseases (I20-I25) | 2 471 | 2.4 | 10 Chronic lower respiratory diseases (J40-J47) | 1 158 | 2.2 | 10 Ischaemic heart diseases (I20-I25) | 1 101 | 2.1 |
| Other natural causes | 40 309 | 38.5 | Other natural causes | 19 362 | 36.7 | Other natural causes | 20 643 | 40.0 |
| Non-natural causes | 9 277 | 8.9 | Non-natural causes | 7 023 | 13.3 | Non-natural causes | 2 225 | 4.3 |
| All causes | 104 652 | 100.0 | All causes | 52 757 | 100.0 | All causes | 51 571 | 100.0 |
| KwaZulu-Natal, both sexes, 0-14 | | | KwaZulu-Natal, males, 0-14 | | | KwaZulu-Natal, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 1 288 | 13.3 | 1 Intestinal infectious diseases (A00-A09) | 660 | 13.2 | 1 Intestinal infectious diseases (A00-A09) | 621 | 13.5 |
| 2 Influenza and pneumonia (J09-J18) | 874 | 9.0 | 2 Influenza and pneumonia (J09-J18) | 429 | 8.6 | 2 Influenza and pneumonia (J09-J18) | 439 | 9.6 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 764 | 7.9 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 394 | 7.9 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 349 | 7.6 |
| 4 Tuberculosis (A15-A19)* | 437 | 4.5 | 4 Tuberculosis (A15-A19)* | 232 | 4.6 | 4 Tuberculosis (A15-A19)* | 205 | 4.5 |
| 5 Disorders related to length of gestation and fetal growth (P05-P08) | 330 | 3.4 | 5 Disorders related to length of gestation and fetal growth (P05-P08) | 165 | 3.3 | 5 Disorders related to length of gestation and fetal growth (P05-P08) | 159 | 3.5 |
| 6 Other disorders originating in the perinatal period (P90-P96) | 280 | 2.9 | 6 Other disorders originating in the perinatal period (P90-P96) | 155 | 3.1 | 6 Malnutrition (E40-E46) | 135 | 2.9 |
| 7 Malnutrition (E40-E46) | 265 | 2.7 | 7 Infections specific to the perinatal period (P35-P39) | 140 | 2.8 | 7 Other disorders originating in the perinatal period (P90-P96) | 116 | 2.5 |
| 8 Infections specific to the perinatal period (P35-P39) | 249 | 2.6 | 8 Malnutrition (E40-E46) | 127 | 2.5 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 113 | 2.5 |
| 9 Other viral diseases (B25-B34) | 208 | 2.1 | 9 Other viral diseases (B25-B34) | 110 | 2.2 | 9 Infections specific to the perinatal period (P35-P39) | 106 | 2.3 |
| 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 207 | 2.1 | 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 88 | 1.8 | 10 Other viral diseases (B25-B34) | 94 | 2.0 |
| Other natural causes | 3 842 | 39.6 | Other natural causes | 1 923 | 38.5 | Other natural causes | 1 877 | 40.9 |
| Non-natural causes | 956 | 9.9 | Non-natural causes | 575 | 11.5 | Non-natural causes | 376 | 8.2 |
| All causes | 9 700 | 100.0 | All causes | 4 998 | 100.0 | All causes | 4 590 | 100.0 |
| KwaZulu-Natal, both sexes, 15-49 | | | KwaZulu-Natal, males, 15-49 | | | KwaZulu-Natal, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 10 782 | 23.3 | 1 Tuberculosis (A15-A19)* | 5 762 | 23.0 | 1 Tuberculosis (A15-A19)* | 4 990 | 23.6 |
| 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 4 011 | 8.7 | 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 856 | 7.4 | 2 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 151 | 10.2 |
| 3 Other viral diseases (B25-B34) | 3 343 | 7.2 | 3 Other viral diseases (B25-B34) | 1 486 | 5.9 | 3 Other viral diseases (B25-B34) | 1 842 | 8.7 |
| 4 Influenza and pneumonia (J09-J18) | 2 327 | 5.0 | 4 Influenza and pneumonia (J09-J18) | 1 196 | 4.8 | 4 Influenza and pneumonia (J09-J18) | 1 124 | 5.3 |
| 5 Intestinal infectious diseases (A00-A09) | 1 812 | 3.9 | 5 Intestinal infectious diseases (A00-A09) | 881 | 3.5 | 5 Intestinal infectious diseases (A00-A09) | 925 | 4.4 |
| 6 Certain disorders involving the immune mechanism (D80-D89) | 1 479 | 3.2 | 6 Certain disorders involving the immune mechanism (D80-D89) | 694 | 2.8 | 6 Certain disorders involving the immune mechanism (D80-D89) | 779 | 3.7 |
| 7 Inflammatory diseases of the central nervous system (G00-G09) | 1 086 | 2.3 | 7 Inflammatory diseases of the central nervous system (G00-G09) | 513 | 2.1 | 7 Inflammatory diseases of the central nervous system (G00-G09) | 572 | 2.7 |
| 8 Other forms of heart disease (I30-I52) | 982 | 2.1 | 8 Other acute lower respiratory infections (J20-J22) | 476 | 1.9 | 8 Other forms of heart disease (I30-I52) | 519 | 2.5 |
| 9 Other acute lower respiratory infections (J20-J22) | 877 | 1.9 | 9 Other forms of heart disease (I30-I52) | 462 | 1.8 | 9 Other acute lower respiratory infections (J20-J22) | 398 | 1.9 |
| 10 Cerebrovascular diseases (I60-I69) | 676 | 1.5 | 10 Cerebrovascular diseases (I60-I69) | 347 | 1.4 | 10 Protozoal diseases (B50-B64) | 367 | 1.7 |
| Other natural causes | 12 467 | 27.0 | Other natural causes | 6 078 | 24.3 | Other natural causes | 6 322 | 29.9 |
| Non-natural causes | 6 400 | 13.8 | Non-natural causes | 5 267 | 21.1 | Non-natural causes | 1 121 | 5.3 |
| All causes | 46 242 | 100.0 | All causes | 25 018 | 100.0 | All causes | 21 110 | 100.0 |
| KwaZulu-Natal, both sexes, 50-64 | | | KwaZulu-Natal, males, 50-64 | | | KwaZulu-Natal, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 2 599 | 13.1 | 1 Tuberculosis (A15-A19)* | 1 754 | 15.2 | 1 Diabetes mellitus (E10-E14) | 987 | 11.8 |
| 2 Diabetes mellitus (E10-E14) | 1 690 | 8.5 | 2 Cerebrovascular diseases (I60-I69) | 740 | 6.4 | 2 Tuberculosis (A15-A19)* | 840 | 10.1 |
| 3 Cerebrovascular diseases (I60-I69) | 1 418 | 7.1 | 3 Diabetes mellitus (E10-E14) | 701 | 6.1 | 3 Cerebrovascular diseases (I60-I69) | 678 | 8.1 |
| 4 Other forms of heart disease (I30-I52) | 1 207 | 6.1 | 4 Other forms of heart disease (I30-I52) | 699 | 6.1 | 4 Other forms of heart disease (I30-I52) | 507 | 6.1 |
| 5 Influenza and pneumonia (J09-J18) | 883 | 4.4 | 5 Influenza and pneumonia (J09-J18) | 564 | 4.9 | 5 Hypertensive diseases (I10-I15) | 402 | 4.8 |
| 6 Ischaemic heart diseases (I20-I25) | 751 | 3.8 | 6 Ischaemic heart diseases (I20-I25) | 511 | 4.4 | 6 Influenza and pneumonia (J09-J18) | 317 | 3.8 |
| 7 Hypertensive diseases (I10-I15) | 739 | 3.7 | 7 Chronic lower respiratory diseases (J40-J47) | 423 | 3.7 | 7 Malignant neoplasm of female genital organs (C51-C58) | 288 | 3.5 |
| 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 609 | 3.1 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 360 | 3.1 | 8 Intestinal infectious diseases (A00-A09) | 271 | 3.2 |
| 9 Intestinal infectious diseases (A00-A09) | 574 | 2.9 | 9 Hypertensive diseases (I10-I15) | 337 | 2.9 | 9 Other viral diseases (B25-B34) | 248 | 3.0 |
| 10 Chronic lower respiratory diseases (J40-J47) | 573 | 2.9 | 10 Intestinal infectious diseases (A00-A09) | 303 | 2.6 | 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 247 | 3.0 |
| Other natural causes | 7 770 | 39.0 | Other natural causes | 4 372 | 37.9 | Other natural causes | 3 240 | 38.8 |
| Non-natural causes | 1 098 | 5.5 | Non-natural causes | 779 | 6.7 | Non-natural causes | 318 | 3.8 |
| All causes | 19 911 | 100.0 | All causes | 11 543 | 100.0 | All causes | 8 343 | 100.0 |
| KwaZulu-Natal, both sexes, 65+ | | | KwaZulu-Natal, males, 65+ | | | KwaZulu-Natal, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Cerebrovascular diseases (I60-I69) | 3 618 | 12.8 | 1 Cerebrovascular diseases (I60-I69) | 1 131 | 10.3 | 1 Cerebrovascular diseases (I60-I69) | 2 485 | 14.3 |
| 2 Other forms of heart disease (I30-I52) | 2 902 | 10.2 | 2 Other forms of heart disease (I30-I52) | 1 078 | 9.8 | 2 Diabetes mellitus (E10-E14) | 1 894 | 10.9 |
| 3 Diabetes mellitus (E10-E14) | 2 714 | 9.6 | 3 Diabetes mellitus (E10-E14) | 819 | 7.5 | 3 Other forms of heart disease (I30-I52) | 1 824 | 10.5 |
| 4 Hypertensive diseases (I10-I15) | 1 824 | 6.4 | 4 Tuberculosis (A15-A19) | 639 | 5.8 | 4 Hypertensive diseases (I10-I15) | 1 270 | 7.3 |
| 5 Ischaemic heart diseases (I20-I25) | 1 394 | 4.9 | 5 Ischaemic heart diseases (I20-I25) | 624 | 5.7 | 5 Ischaemic heart diseases (I20-I25) | 770 | 4.4 |
| 6 Influenza and pneumonia (J09-J18) | 1 179 | 4.2 | 6 Hypertensive diseases (I10-I15) | 553 | 5.0 | 6 Influenza and pneumonia (J09-J18) | 645 | 3.7 |
| 7 Tuberculosis (A15-A19) | 1 156 | 4.1 | 7 Influenza and pneumonia (J09-J18) | 534 | 4.9 | 7 Tuberculosis (A15-A19) | 516 | 3.0 |
| 8 Chronic lower respiratory diseases (J40-J47) | 937 | 3.3 | 8 Chronic lower respiratory diseases (J40-J47) | 496 | 4.5 | 8 Intestinal infectious diseases (A00-A09) | 460 | 2.6 |
| 9 Intestinal infectious diseases (A00-A09) | 697 | 2.5 | 9 Malignant neoplasm of digestive organs (C15-C26) | 315 | 2.9 | 9 Chronic lower respiratory diseases (J40-J47) | 441 | 2.5 |
| 10 Malignant neoplasm of digestive organs (C15-C26) | 691 | 2.4 | 10 Malignant neoplasm of male genital organs (C60-C63) | 276 | 2.5 | 10 Malignant neoplasm of digestive organs (C15-C26) | 375 | 2.2 |
| Other natural causes | 10 490 | 37.0 | Other natural causes | 4 130 | 37.7 | Other natural causes | 6 317 | 36.3 |
| Non-natural causes | 763 | 2.7 | Non-natural causes | 361 | 3.3 | Non-natural causes | 401 | 2.3 |
| All causes | 28 365 | 100.0 | All causes | 10 956 | 100.0 | All causes | 17 398 | 100.0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M6: The ten leading underlying natural causes of death by age and sex: North West, 2011

| North West, both sexes, all ages | | | North West, males, all ages | | | North West, females, all ages | | |
|---|---------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 4 235 | 11,3 | 1 Tuberculosis (A15-A19)* | 2 501 | 12,5 | 1 Tuberculosis (A15-A19)* | 1 726 | 9,9 |
| 2 Influenza and pneumonia (J09-J18) | 3 149 | 8,4 | 2 Influenza and pneumonia (J09-J18) | 1 633 | 8,2 | 2 Influenza and pneumonia (J09-J18) | 1 508 | 8,6 |
| 3 Other forms of heart disease (I30-I52) | 2 196 | 5,8 | 3 Other forms of heart disease (I30-I52) | 1 082 | 5,4 | 3 Other forms of heart disease (I30-I52) | 1 110 | 6,4 |
| 4 Cerebrovascular diseases (I60-I69) | 1 740 | 4,6 | 4 Cerebrovascular diseases (I60-I69) | 834 | 4,2 | 4 Hypertensive diseases (I10-I15) | 1 008 | 5,8 |
| 5 Hypertensive diseases (I10-I15) | 1 706 | 4,5 | 5 Intestinal infectious diseases (A00-A09) | 759 | 3,8 | 5 Cerebrovascular diseases (I60-I69) | 902 | 5,2 |
| 6 Intestinal infectious diseases (A00-A09) | 1 549 | 4,1 | 6 Other viral diseases (B25-B34) | 707 | 3,5 | 6 Intestinal infectious diseases (A00-A09) | 783 | 4,5 |
| 7 Other viral diseases (B25-B34) | 1 360 | 3,6 | 7 Hypertensive diseases (I10-I15) | 698 | 3,5 | 7 Diabetes mellitus (E10-E14) | 688 | 3,9 |
| 8 Certain disorders involving the immune mechanism (D80-D89) | 1 264 | 3,4 | 8 Certain disorders involving the immune mechanism (D80-D89) | 642 | 3,2 | 8 Other viral diseases (B25-B34) | 646 | 3,7 |
| 9 Diabetes mellitus (E10-E14) | 1 168 | 3,1 | 9 Chronic lower respiratory diseases (J40-J47) | 584 | 2,9 | 9 Certain disorders involving the immune mechanism (D80-D89) | 622 | 3,6 |
| 10 Chronic lower respiratory diseases (J40-J47) | 981 | 2,6 | 10 Diabetes mellitus (E10-E14) | 480 | 2,4 | 10 Human immunodeficiency virus [HIV] disease (B20-B24) | 473 | 2,7 |
| Other natural causes | 15 445 | 41,1 | Other natural causes | 7 907 | 39,6 | Other natural causes | 7 393 | 42,4 |
| Non-natural causes | 2 762 | 7,4 | Non-natural causes | 2 161 | 10,8 | Non-natural causes | 591 | 3,4 |
| All causes | 37 555 | 100,0 | All causes | 19 988 | 100,0 | All causes | 17 450 | 100,0 |
| North West, both sexes, 0-14 | | | North West, males, 0-14 | | | North West, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 711 | 16,3 | 1 Intestinal infectious diseases (A00-A09) | 362 | 15,7 | 1 Intestinal infectious diseases (A00-A09) | 345 | 17,1 |
| 2 Influenza and pneumonia (J09-J18) | 571 | 13,1 | 2 Influenza and pneumonia (J09-J18) | 282 | 12,3 | 2 Influenza and pneumonia (J09-J18) | 286 | 14,2 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 423 | 9,7 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 246 | 10,7 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 164 | 8,1 |
| 4 Malnutrition (E40-E46) | 194 | 4,4 | 4 Malnutrition (E40-E46) | 106 | 4,6 | 4 Malnutrition (E40-E46) | 86 | 4,3 |
| 5 Tuberculosis (A15-A19)* | 168 | 3,8 | 5 Tuberculosis (A15-A19)* | 90 | 3,9 | 5 Other disorders originating in the perinatal period (P90-P96) | 81 | 4,0 |
| 6 Other disorders originating in the perinatal period (P90-P96) | 160 | 3,7 | 6 Other disorders originating in the perinatal period (P90-P96) | 75 | 3,3 | 6 Tuberculosis (A15-A19)* | 77 | 3,8 |
| 7 Disorders related to length of gestation and fetal growth (P05-P08) | 127 | 2,9 | 7 Disorders related to length of gestation and fetal growth (P05-P08) | 66 | 2,9 | 7 Disorders related to length of gestation and fetal growth (P05-P08) | 58 | 2,9 |
| 8 Infections specific to the perinatal period (P35-P39) | 124 | 2,8 | 8 Infections specific to the perinatal period (P35-P39) | 66 | 2,9 | 8 Infections specific to the perinatal period (P35-P39) | 58 | 2,9 |
| 9 Other acute lower respiratory infections (J20-J22) | 96 | 2,2 | 9 Other acute lower respiratory infections (J20-J22) | 47 | 2,0 | 9 Other acute lower respiratory infections (J20-J22) | 47 | 2,3 |
| 10 Other bacterial diseases (A30-A49) | 74 | 1,7 | 10 Fetus and newborn affected by maternal factors and by complications of | 39 | 1,7 | 10 Other bacterial diseases (A30-A49) | 37 | 1,8 |
| Other natural causes | 1 423 | 32,6 | Other natural causes | 718 | 31,2 | Other natural causes | 687 | 34,1 |
| Non-natural causes | 293 | 6,7 | Non-natural causes | 202 | 8,8 | Non-natural causes | 90 | 4,5 |
| All causes | 4 364 | 100,0 | All causes | 2 299 | 100,0 | All causes | 2 016 | 100,0 |
| North West, both sexes, 15-49 | | | North West, males, 15-49 | | | North West, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 2 801 | 19,0 | 1 Tuberculosis (A15-A19)* | 1 541 | 19,5 | 1 Tuberculosis (A15-A19)* | 1 254 | 18,4 |
| 2 Influenza and pneumonia (J09-J18) | 1 506 | 10,2 | 2 Influenza and pneumonia (J09-J18) | 734 | 9,3 | 2 Influenza and pneumonia (J09-J18) | 770 | 11,3 |
| 3 Other viral diseases (B25-B34) | 1 028 | 7,0 | 3 Other viral diseases (B25-B34) | 525 | 6,6 | 3 Other viral diseases (B25-B34) | 499 | 7,3 |
| 4 Certain disorders involving the immune mechanism (D80-D89) | 949 | 6,4 | 4 Certain disorders involving the immune mechanism (D80-D89) | 472 | 6,0 | 4 Certain disorders involving the immune mechanism (D80-D89) | 477 | 7,0 |
| 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 689 | 4,7 | 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 322 | 4,1 | 5 Human immunodeficiency virus [HIV] disease (B20-B24) | 366 | 5,4 |
| 6 Other forms of heart disease (I30-I52) | 448 | 3,0 | 6 Other forms of heart disease (I30-I52) | 211 | 2,7 | 6 Intestinal infectious diseases (A00-A09) | 244 | 3,6 |
| 7 Intestinal infectious diseases (A00-A09) | 447 | 3,0 | 7 Intestinal infectious diseases (A00-A09) | 200 | 2,5 | 7 Other forms of heart disease (I30-I52) | 235 | 3,4 |
| 8 Other acute lower respiratory infections (J20-J22) | 256 | 1,7 | 8 Other acute lower respiratory infections (J20-J22) | 133 | 1,7 | 8 Other bacterial diseases (A30-A49) | 135 | 2,0 |
| 9 Other bacterial diseases (A30-A49) | 220 | 1,5 | 9 Inflammatory diseases of the central nervous system (G00-G09) | 106 | 1,3 | 9 Other acute lower respiratory infections (J20-J22) | 122 | 1,8 |
| 10 Cerebrovascular diseases (I60-I69) | 202 | 1,4 | 10 Cerebrovascular diseases (I60-I69) | 93 | 1,2 | 10 Cerebrovascular diseases (I60-I69) | 108 | 1,6 |
| Other natural causes | 4 378 | 29,7 | Other natural causes | 2 063 | 26,1 | Other natural causes | 2 284 | 33,5 |
| Non-natural causes | 1 833 | 12,4 | Non-natural causes | 1 510 | 19,1 | Non-natural causes | 320 | 4,7 |
| All causes | 14 757 | 100,0 | All causes | 7 910 | 100,0 | All causes | 6 814 | 100,0 |
| North West, both sexes, 50-64 | | | North West, males, 50-64 | | | North West, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 939 | 12,2 | 1 Tuberculosis (A15-A19) | 651 | 13,9 | 1 Tuberculosis (A15-A19) | 288 | 9,5 |
| 2 Influenza and pneumonia (J09-J18) | 556 | 7,2 | 2 Influenza and pneumonia (J09-J18) | 344 | 7,4 | 2 Influenza and pneumonia (J09-J18) | 209 | 6,9 |
| 3 Other forms of heart disease (I30-I52) | 516 | 6,7 | 3 Other forms of heart disease (I30-I52) | 308 | 6,6 | 3 Other forms of heart disease (I30-I52) | 208 | 6,9 |
| 4 Cerebrovascular diseases (I60-I69) | 463 | 6,0 | 4 Cerebrovascular diseases (I60-I69) | 270 | 5,8 | 4 Diabetes mellitus (E10-E14) | 193 | 6,4 |
| 5 Hypertensive diseases (I10-I15) | 396 | 5,1 | 5 Chronic lower respiratory diseases (J40-J47) | 212 | 4,5 | 5 Hypertensive diseases (I10-I15) | 192 | 6,4 |
| 6 Diabetes mellitus (E10-E14) | 385 | 5,0 | 6 Hypertensive diseases (I10-I15) | 204 | 4,4 | 6 Cerebrovascular diseases (I60-I69) | 191 | 6,3 |
| 7 Chronic lower respiratory diseases (J40-J47) | 315 | 4,1 | 7 Diabetes mellitus (E10-E14) | 192 | 4,1 | 7 Malignant neoplasm of female genital organs (C51-C58) | 111 | 3,7 |
| 8 Certain disorders involving the immune mechanism (D80-D89) | 229 | 3,0 | 8 Malignant neoplasm of digestive organs (C15-C26) | 142 | 3,0 | 8 Certain disorders involving the immune mechanism (D80-D89) | 105 | 3,5 |
| 9 Other viral diseases (B25-B34) | 208 | 2,7 | 9 Certain disorders involving the immune mechanism (D80-D89) | 124 | 2,7 | 9 Chronic lower respiratory diseases (J40-J47) | 103 | 3,4 |
| 10 Malignant neoplasm of digestive organs (C15-C26) | 202 | 2,6 | 10 Ischaemic heart diseases (I20-I25) | 119 | 2,5 | 10 Other viral diseases (B25-B34) | 95 | 3,1 |
| Other natural causes | 3 110 | 40,4 | Other natural causes | 1 806 | 38,7 | Other natural causes | 1 247 | 41,3 |
| Non-natural causes | 379 | 4,9 | Non-natural causes | 299 | 6,4 | Non-natural causes | 80 | 2,6 |
| All causes | 7 698 | 100,0 | All causes | 4 671 | 100,0 | All causes | 3 022 | 100,0 |
| North West, both sexes, 65+ | | | North West, males, 65+ | | | North West, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Other forms of heart disease (I30-I52) | 1 175 | 11,1 | 1 Other forms of heart disease (I30-I52) | 540 | 10,8 | 1 Hypertensive diseases (I10-I15) | 720 | 12,9 |
| 2 Hypertensive diseases (I10-I15) | 1 144 | 10,8 | 2 Cerebrovascular diseases (I60-I69) | 468 | 9,3 | 2 Other forms of heart disease (I30-I52) | 635 | 11,4 |
| 3 Cerebrovascular diseases (I60-I69) | 1 068 | 10,1 | 3 Hypertensive diseases (I10-I15) | 424 | 8,5 | 3 Cerebrovascular diseases (I60-I69) | 599 | 10,8 |
| 4 Diabetes mellitus (E10-E14) | 623 | 5,9 | 4 Chronic lower respiratory diseases (J40-J47) | 274 | 5,5 | 4 Diabetes mellitus (E10-E14) | 407 | 7,3 |
| 5 Influenza and pneumonia (J09-J18) | 513 | 4,9 | 5 Influenza and pneumonia (J09-J18) | 271 | 5,4 | 5 Influenza and pneumonia (J09-J18) | 242 | 4,4 |
| 6 Chronic lower respiratory diseases (J40-J47) | 455 | 4,3 | 6 Diabetes mellitus (E10-E14) | 216 | 4,3 | 6 Chronic lower respiratory diseases (J40-J47) | 181 | 3,3 |
| 7 Tuberculosis (A15-A19) | 319 | 3,0 | 7 Tuberculosis (A15-A19) | 215 | 4,3 | 7 Ischaemic heart diseases (I20-I25) | 141 | 2,5 |
| 8 Ischaemic heart diseases (I20-I25) | 307 | 2,9 | 8 Ischaemic heart diseases (I20-I25) | 166 | 3,3 | 8 Intestinal infectious diseases (A00-A09) | 114 | 2,1 |
| 9 Malignant neoplasm of digestive organs (C15-C26) | 235 | 2,2 | 9 Malignant neoplasm of digestive organs (C15-C26) | 147 | 2,9 | 9 Tuberculosis (A15-A19) | 104 | 1,9 |
| 10 Intestinal infectious diseases (A00-A09) | 201 | 1,9 | 10 Malignant neoplasm of male genital organs (C60-C63) | 129 | 2,6 | 10 Malignant neoplasm of digestive organs (C15-C26) | 88 | 1,6 |
| Other natural causes | 4 303 | 40,7 | Other natural causes | 2 030 | 40,5 | Other natural causes | 2 230 | 40,1 |
| Non-natural causes | 231 | 2,2 | Non-natural causes | 131 | 2,6 | Non-natural causes | 99 | 1,8 |
| All causes | 10 574 | 100,0 | All causes | 5 011 | 100,0 | All causes | 5 560 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M7: The ten leading underlying natural causes of death by age and sex: Gauteng, 2011

| Gauteng, both sexes, all ages | | | Gauteng, males, all ages | | | Gauteng, females, all ages | | |
|--|----------------|--------------|--|---------------|--------------|--|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 8 438 | 8,4 | 1 Tuberculosis (A15-A19)* | 4 816 | 9,1 | 1 Tuberculosis (A15-A19)* | 3 560 | 7,5 |
| 2 Influenza and pneumonia (J09-J18) | 7 159 | 7,1 | 2 Influenza and pneumonia (J09-J18) | 3 600 | 6,8 | 2 Influenza and pneumonia (J09-J18) | 3 519 | 7,5 |
| 3 Other forms of heart disease (I30-I52) | 5 340 | 5,3 | 3 Other forms of heart disease (I30-I52) | 2 511 | 4,8 | 3 Other forms of heart disease (I30-I52) | 2 814 | 6,0 |
| 4 Cerebrovascular diseases (I60-I69) | 4 678 | 4,6 | 4 Cerebrovascular diseases (I60-I69) | 2 072 | 3,9 | 4 Cerebrovascular diseases (I60-I69) | 2 594 | 5,5 |
| 5 Diabetes mellitus (E10-E14) | 3 603 | 3,6 | 5 Ischaemic heart diseases (I20-I25) | 1 738 | 3,3 | 5 Diabetes mellitus (E10-E14) | 1 962 | 4,2 |
| 6 Ischaemic heart diseases (I20-I25) | 2 863 | 2,8 | 6 Diabetes mellitus (E10-E14) | 1 636 | 3,1 | 6 Hypertensive diseases (I10-I15) | 1 701 | 3,6 |
| 7 Intestinal infectious diseases (A00-A09) | 2 810 | 2,8 | 7 Chronic lower respiratory diseases (J40-J47) | 1 393 | 2,6 | 7 Intestinal infectious diseases (A00-A09) | 1 480 | 3,1 |
| 8 Hypertensive diseases (I10-I15) | 2 748 | 2,7 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 346 | 2,5 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 310 | 2,8 |
| 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 667 | 2,6 | 9 Intestinal infectious diseases (A00-A09) | 1 308 | 2,5 | 9 Ischaemic heart diseases (I20-I25) | 1 118 | 2,4 |
| 10 Chronic lower respiratory diseases (J40-J47) | 2 343 | 2,3 | 10 Malignant neoplasm of digestive organs (C15-C26) | 1 204 | 2,3 | 10 Other viral diseases (B25-B34) | 1 042 | 2,2 |
| Other natural causes | 48 362 | 48,0 | Other natural causes | 23 940 | 45,3 | Other natural causes | 23 834 | 50,5 |
| Non-natural causes | 9 740 | 9,7 | Non-natural causes | 7 286 | 13,8 | Non-natural causes | 2 300 | 4,9 |
| All causes | 100 751 | 100,0 | All causes | 52 850 | 100,0 | All causes | 47 234 | 100,0 |
| Gauteng, both sexes, 0-14 | | | Gauteng, males, 0-14 | | | Gauteng, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Respiratory and cardiovascular disorders specific to the perinatal period (P20-) | 1 132 | 12,0 | 1 Respiratory and cardiovascular disorders specific to the perinatal period (P20-) | 619 | 12,4 | 1 Respiratory and cardiovascular disorders specific to the perinatal period (P20-) | 491 | 11,5 |
| 2 Intestinal infectious diseases (A00-A09) | 942 | 10,0 | 2 Intestinal infectious diseases (A00-A09) | 500 | 10,0 | 2 Intestinal infectious diseases (A00-A09) | 429 | 10,0 |
| 3 Influenza and pneumonia (J09-J18) | 822 | 8,7 | 3 Influenza and pneumonia (J09-J18) | 422 | 8,4 | 3 Influenza and pneumonia (J09-J18) | 397 | 9,3 |
| 4 Other disorders originating in the perinatal period (P90-P96) | 430 | 4,6 | 4 Other disorders originating in the perinatal period (P90-P96) | 227 | 4,5 | 4 Other disorders originating in the perinatal period (P90-P96) | 186 | 4,3 |
| 5 Infections specific to the perinatal period (P35-P39) | 326 | 3,5 | 5 Infections specific to the perinatal period (P35-P39) | 163 | 3,3 | 5 Infections specific to the perinatal period (P35-P39) | 159 | 3,7 |
| 6 Disorders related to length of gestation and fetal growth (P05-P08) | 198 | 2,1 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 114 | 2,3 | 6 Malnutrition (E40-E46) | 103 | 2,4 |
| 7 Malnutrition (E40-E46) | 194 | 2,1 | 7 Other bacterial diseases (A30-A49) | 102 | 2,0 | 7 Other bacterial diseases (A30-A49) | 88 | 2,1 |
| 8 Other bacterial diseases (A30-A49) | 191 | 2,0 | 8 Other diseases of the respiratory system (J95-J99) | 98 | 2,0 | 8 Other viral diseases (B25-B34) | 85 | 2,0 |
| 9 Other viral diseases (B25-B34) | 181 | 1,9 | 9 Other viral diseases (B25-B34) | 96 | 1,9 | 9 Other diseases of the respiratory system (J95-J99) | 80 | 1,9 |
| 10 Other diseases of the respiratory system (J95-J99) | 180 | 1,9 | 10 Malnutrition (E40-E46) | 89 | 1,8 | 10 Disorders related to length of gestation and fetal growth (P05-P08) | 79 | 1,8 |
| Other natural causes | 3 990 | 42,4 | Other natural causes | 2 081 | 41,6 | Other natural causes | 1 851 | 43,2 |
| Non-natural causes | 835 | 8,9 | Non-natural causes | 489 | 9,8 | Non-natural causes | 336 | 7,8 |
| All causes | 9 421 | 100,0 | All causes | 5 000 | 100,0 | All causes | 4 284 | 100,0 |
| Gauteng, both sexes, 15-49 | | | Gauteng, males, 15-49 | | | Gauteng, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 6 024 | 15,1 | 1 Tuberculosis (A15-A19)* | 3 276 | 14,8 | 1 Tuberculosis (A15-A19)* | 2 715 | 15,6 |
| 2 Influenza and pneumonia (J09-J18) | 3 437 | 8,6 | 2 Influenza and pneumonia (J09-J18) | 1 696 | 7,6 | 2 Influenza and pneumonia (J09-J18) | 1 726 | 9,9 |
| 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 2 048 | 5,1 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 001 | 4,5 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 039 | 6,0 |
| 4 Certain disorders involving the immune mechanism (D80-D89) | 1 534 | 3,9 | 4 Certain disorders involving the immune mechanism (D80-D89) | 754 | 3,4 | 4 Other viral diseases (B25-B34) | 783 | 4,5 |
| 5 Other viral diseases (B25-B34) | 1 516 | 3,8 | 5 Other viral diseases (B25-B34) | 729 | 3,3 | 5 Certain disorders involving the immune mechanism (D80-D89) | 777 | 4,5 |
| 6 Other forms of heart disease (I30-I52) | 1 303 | 3,3 | 6 Other forms of heart disease (I30-I52) | 682 | 3,1 | 6 Other forms of heart disease (I30-I52) | 611 | 3,5 |
| 7 Intestinal infectious diseases (A00-A09) | 1 022 | 2,6 | 7 Inflammatory diseases of the central nervous system (G00-G09) | 511 | 2,3 | 7 Intestinal infectious diseases (A00-A09) | 543 | 3,1 |
| 8 Inflammatory diseases of the central nervous system (G00-G09) | 1 009 | 2,5 | 8 Intestinal infectious diseases (A00-A09) | 474 | 2,1 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 493 | 2,8 |
| 9 Cerebrovascular diseases (I60-I69) | 753 | 1,9 | 9 Cerebrovascular diseases (I60-I69) | 382 | 1,7 | 9 Cerebrovascular diseases (I60-I69) | 369 | 2,1 |
| 10 Renal failure (N17-N19) | 636 | 1,6 | 10 Renal failure (N17-N19) | 344 | 1,5 | 10 Protozoal diseases (B50-B64) | 341 | 2,0 |
| Other natural causes | 13 942 | 35,1 | Other natural causes | 7 001 | 31,5 | Other natural causes | 6 823 | 39,3 |
| Non-natural causes | 6 544 | 16,5 | Non-natural causes | 5 345 | 24,1 | Non-natural causes | 1 156 | 6,7 |
| All causes | 39 768 | 100,0 | All causes | 22 195 | 100,0 | All causes | 17 376 | 100,0 |
| Gauteng, both sexes, 50-64 | | | Gauteng, males, 50-64 | | | Gauteng, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19)* | 1 716 | 7,9 | 1 Tuberculosis (A15-A19)* | 1 140 | 9,0 | 1 Cerebrovascular diseases (I60-I69) | 585 | 6,5 |
| 2 Influenza and pneumonia (J09-J18) | 1 356 | 6,3 | 2 Influenza and pneumonia (J09-J18) | 808 | 6,4 | 2 Tuberculosis (A15-A19)* | 569 | 6,3 |
| 3 Cerebrovascular diseases (I60-I69) | 1 312 | 6,0 | 3 Other forms of heart disease (I30-I52) | 746 | 5,9 | 3 Diabetes mellitus (E10-E14) | 566 | 6,3 |
| 4 Other forms of heart disease (I30-I52) | 1 303 | 6,0 | 4 Cerebrovascular diseases (I60-I69) | 723 | 5,7 | 4 Other forms of heart disease (I30-I52) | 557 | 6,2 |
| 5 Diabetes mellitus (E10-E14) | 1 185 | 5,5 | 5 Diabetes mellitus (E10-E14) | 618 | 4,9 | 5 Influenza and pneumonia (J09-J18) | 541 | 6,0 |
| 6 Ischaemic heart diseases (I20-I25) | 750 | 3,5 | 6 Ischaemic heart diseases (I20-I25) | 537 | 4,3 | 6 Hypertensive diseases (I10-I15) | 357 | 4,0 |
| 7 Malignant neoplasm of digestive organs (C15-C26) | 705 | 3,3 | 7 Chronic lower respiratory diseases (J40-J47) | 463 | 3,7 | 7 Malignant neoplasm of female genital organs (C51-C58) | 344 | 3,8 |
| 8 Hypertensive diseases (I10-I15) | 703 | 3,2 | 8 Malignant neoplasm of digestive organs (C15-C26) | 442 | 3,5 | 8 Malignant neoplasm of breast (C50) | 278 | 3,1 |
| 9 Chronic lower respiratory diseases (J40-J47) | 693 | 3,2 | 9 Hypertensive diseases (I10-I15) | 344 | 2,7 | 9 Malignant neoplasm of digestive organs (C15-C26) | 261 | 2,9 |
| 10 Renal failure (N17-N19) | 464 | 2,1 | 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 288 | 2,3 | 10 Chronic lower respiratory diseases (J40-J47) | 230 | 2,6 |
| Other natural causes | 10 273 | 47,4 | Other natural causes | 5 606 | 44,5 | Other natural causes | 4 402 | 48,8 |
| Non-natural causes | 1 228 | 5,7 | Non-natural causes | 894 | 7,1 | Non-natural causes | 329 | 3,6 |
| All causes | 21 688 | 100,0 | All causes | 12 609 | 100,0 | All causes | 9 019 | 100,0 |
| Gauteng, both sexes, 65+ | | | Gauteng, males, 65+ | | | Gauteng, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Other forms of heart disease (I30-I52) | 2 587 | 8,9 | 1 Other forms of heart disease (I30-I52) | 1 008 | 7,9 | 1 Cerebrovascular diseases (I60-I69) | 1 632 | 10,0 |
| 2 Cerebrovascular diseases (I60-I69) | 2 581 | 8,9 | 2 Ischaemic heart diseases (I20-I25) | 961 | 7,6 | 2 Other forms of heart disease (I30-I52) | 1 578 | 9,6 |
| 3 Diabetes mellitus (E10-E14) | 1 892 | 6,5 | 3 Cerebrovascular diseases (I60-I69) | 944 | 7,4 | 3 Hypertensive diseases (I10-I15) | 1 159 | 7,1 |
| 4 Ischaemic heart diseases (I20-I25) | 1 774 | 6,1 | 4 Diabetes mellitus (E10-E14) | 741 | 5,8 | 4 Diabetes mellitus (E10-E14) | 1 148 | 7,0 |
| 5 Hypertensive diseases (I10-I15) | 1 720 | 5,9 | 5 Chronic lower respiratory diseases (J40-J47) | 741 | 5,8 | 5 Influenza and pneumonia (J09-J18) | 845 | 5,2 |
| 6 Influenza and pneumonia (J09-J18) | 1 505 | 5,2 | 6 Influenza and pneumonia (J09-J18) | 657 | 5,2 | 6 Ischaemic heart diseases (I20-I25) | 811 | 4,9 |
| 7 Chronic lower respiratory diseases (J40-J47) | 1 333 | 4,6 | 7 Malignant neoplasm of digestive organs (C15-C26) | 572 | 4,5 | 7 Chronic lower respiratory diseases (J40-J47) | 592 | 3,6 |
| 8 Malignant neoplasm of digestive organs (C15-C26) | 1 040 | 3,6 | 8 Hypertensive diseases (I10-I15) | 560 | 4,4 | 8 Malignant neoplasm of digestive organs (C15-C26) | 467 | 2,9 |
| 9 Renal failure (N17-N19) | 643 | 2,2 | 9 Malignant neoplasm of male genital organs (C60-C63) | 507 | 4,0 | 9 Renal failure (N17-N19) | 335 | 2,0 |
| 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 586 | 2,0 | 10 Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 351 | 2,8 | 10 Other bacterial diseases (A30-A49) | 326 | 2,0 |
| Other natural causes | 12 532 | 43,0 | Other natural causes | 5 201 | 40,9 | Other natural causes | 7 030 | 42,9 |
| Non-natural causes | 948 | 3,3 | Non-natural causes | 484 | 3,8 | Non-natural causes | 461 | 2,8 |
| All causes | 29 141 | 100,0 | All causes | 12 727 | 100,0 | All causes | 16 384 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*

Appendix M8: The ten leading underlying natural causes of death by age and sex: Mpumalanga, 2011

| Mpumalanga, both sexes, all ages | | | Mpumalanga, males, all ages | | | Mpumalanga, females, all ages | | |
|---|---------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | No. | % | | No. | % | |
| 1 Tuberculosis (A15-A19)* | 5 103 | 13,4 | 1 Tuberculosis (A15-A19)* | 2 852 | 14,6 | 1 Tuberculosis (A15-A19)* | 2 238 | 12,2 |
| 2 Influenza and pneumonia (J09-J18) | 3 083 | 8,1 | 2 Influenza and pneumonia (J09-J18) | 1 607 | 8,2 | 2 Influenza and pneumonia (J09-J18) | 1 468 | 8,0 |
| 3 Intestinal infectious diseases (A00-A09) | 2 213 | 5,8 | 3 Intestinal infectious diseases (A00-A09) | 1 070 | 5,5 | 3 Cerebrovascular diseases (I60-I69) | 1 254 | 6,8 |
| 4 Cerebrovascular diseases (I60-I69) | 2 161 | 5,7 | 4 Cerebrovascular diseases (I60-I69) | 904 | 4,6 | 4 Intestinal infectious diseases (A00-A09) | 1 132 | 6,1 |
| 5 Other forms of heart disease (I30-I52) | 1 564 | 4,1 | 5 Other forms of heart disease (I30-I52) | 713 | 3,7 | 5 Diabetes mellitus (E10-E14) | 938 | 5,1 |
| 6 Diabetes mellitus (E10-E14) | 1 513 | 4,0 | 6 Other viral diseases (B25-B34) | 605 | 3,1 | 6 Hypertensive diseases (I10-I15) | 854 | 4,6 |
| 7 Hypertensive diseases (I10-I15) | 1 437 | 3,8 | 7 Human immunodeficiency virus [HIV] disease (B20-B24) | 600 | 3,1 | 7 Other forms of heart disease (I30-I52) | 850 | 4,6 |
| 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 308 | 3,4 | 8 Certain disorders involving the immune mechanism (D80-D89) | 584 | 3,0 | 8 Human immunodeficiency virus [HIV] disease (B20-B24) | 703 | 3,8 |
| 9 Certain disorders involving the immune mechanism (D80-D89) | 1 219 | 3,2 | 9 Hypertensive diseases (I10-I15) | 582 | 3,0 | 9 Certain disorders involving the immune mechanism (D80-D89) | 635 | 3,4 |
| 10 Other viral diseases (B25-B34) | 1 194 | 3,1 | 10 Diabetes mellitus (E10-E14) | 572 | 2,9 | 10 Other viral diseases (B25-B34) | 587 | 3,2 |
| Other natural causes | 13 877 | 36,5 | Other natural causes | 6 877 | 35,3 | Other natural causes | 6 941 | 37,7 |
| Non-natural causes | 3 365 | 8,8 | Non-natural causes | 2 525 | 13,0 | Non-natural causes | 819 | 4,4 |
| All causes | 38 037 | 100,0 | All causes | 19 491 | 100,0 | All causes | 18 419 | 100,0 |
| Mpumalanga, both sexes, 0-14 | | | Mpumalanga, males, 0-14 | | | Mpumalanga, females, 0-14 | | |
| | No. | % | No. | % | | No. | % | |
| 1 Intestinal infectious diseases (A00-A09) | 733 | 19,7 | 1 Intestinal infectious diseases (A00-A09) | 377 | 19,0 | 1 Intestinal infectious diseases (A00-A09) | 347 | 20,4 |
| 2 Influenza and pneumonia (J09-J18) | 432 | 11,6 | 2 Influenza and pneumonia (J09-J18) | 218 | 11,0 | 2 Influenza and pneumonia (J09-J18) | 212 | 12,4 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P96) | 327 | 8,8 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P96) | 185 | 9,3 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P96) | 131 | 7,7 |
| 4 Tuberculosis (A15-A19)* | 160 | 4,3 | 4 Tuberculosis (A15-A19)* | 88 | 4,4 | 4 Tuberculosis (A15-A19)* | 72 | 4,2 |
| 5 Malnutrition (E40-E46) | 109 | 2,9 | 5 Malnutrition (E40-E46) | 61 | 3,1 | 5 Other acute lower respiratory infections (J20-J22) | 58 | 3,4 |
| 6 Disorders related to length of gestation and fetal growth (P05-P08) | 98 | 2,6 | 6 Other disorders originating in the perinatal period (P90-P96) | 55 | 2,8 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 50 | 2,9 |
| 7 Other disorders originating in the perinatal period (P90-P96) | 96 | 2,6 | 7 Disorders related to length of gestation and fetal growth (P05-P08) | 47 | 2,4 | 7 Malnutrition (E40-E46) | 47 | 2,8 |
| 8 Other acute lower respiratory infections (J20-J22) | 95 | 2,5 | 8 Other viral diseases (B25-B34) | 40 | 2,0 | 8 Other disorders originating in the perinatal period (P90-P96) | 41 | 2,4 |
| 9 Other viral diseases (B25-B34) | 76 | 2,0 | 9 Other acute lower respiratory infections (J20-J22) | 37 | 1,9 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 36 | 2,1 |
| 10 Fetus and newborn affected by maternal factors and by complications of | 67 | 1,8 | 10 Fetus and newborn affected by maternal factors and by complications of | 35 | 1,8 | 10 Other viral diseases (B25-B34) | 35 | 2,1 |
| Other natural causes | 1 173 | 31,4 | Other natural causes | 620 | 31,2 | Other natural causes | 536 | 31,5 |
| Non-natural causes | 364 | 9,8 | Non-natural causes | 224 | 11,3 | Non-natural causes | 139 | 8,2 |
| All causes | 3 730 | 100,0 | All causes | 1 987 | 100,0 | All causes | 1 704 | 100,0 |
| Mpumalanga, both sexes, 15-49 | | | Mpumalanga, males, 15-49 | | | Mpumalanga, females, 15-49 | | |
| | No. | % | No. | % | | No. | % | |
| 1 Tuberculosis (A15-A19)* | 3 452 | 20,0 | 1 Tuberculosis (A15-A19)* | 1 779 | 19,9 | 1 Tuberculosis (A15-A19)* | 1 667 | 20,0 |
| 2 Influenza and pneumonia (J09-J18) | 1 569 | 9,1 | 2 Influenza and pneumonia (J09-J18) | 746 | 8,4 | 2 Influenza and pneumonia (J09-J18) | 820 | 9,9 |
| 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 1 017 | 5,9 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 455 | 5,1 | 3 Human immunodeficiency virus [HIV] disease (B20-B24) | 560 | 6,7 |
| 4 Certain disorders involving the immune mechanism (D80-D89) | 939 | 5,4 | 4 Other viral diseases (B25-B34) | 451 | 5,0 | 4 Certain disorders involving the immune mechanism (D80-D89) | 520 | 6,3 |
| 5 Other viral diseases (B25-B34) | 898 | 5,2 | 5 Certain disorders involving the immune mechanism (D80-D89) | 419 | 4,7 | 5 Other viral diseases (B25-B34) | 446 | 5,4 |
| 6 Intestinal infectious diseases (A00-A09) | 824 | 4,8 | 6 Intestinal infectious diseases (A00-A09) | 377 | 4,2 | 6 Intestinal infectious diseases (A00-A09) | 445 | 5,4 |
| 7 Inflammatory diseases of the central nervous system (G00-G09) | 477 | 2,8 | 7 Other acute lower respiratory infections (J20-J22) | 204 | 2,3 | 7 Inflammatory diseases of the central nervous system (G00-G09) | 277 | 3,3 |
| 8 Other acute lower respiratory infections (J20-J22) | 431 | 2,5 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 199 | 2,2 | 8 Other acute lower respiratory infections (J20-J22) | 224 | 2,7 |
| 9 Other forms of heart disease (I30-I52) | 344 | 2,0 | 9 Cerebrovascular diseases (I60-I69) | 160 | 1,8 | 9 Other forms of heart disease (I30-I52) | 194 | 2,3 |
| 10 Cerebrovascular diseases (I60-I69) | 331 | 1,9 | 10 Other forms of heart disease (I30-I52) | 149 | 1,7 | 10 Cerebrovascular diseases (I60-I69) | 171 | 2,1 |
| Other natural causes | 4 731 | 27,4 | Other natural causes | 2 177 | 24,4 | Other natural causes | 2 547 | 30,6 |
| Non-natural causes | 2 273 | 13,1 | Non-natural causes | 1 817 | 20,3 | Non-natural causes | 444 | 5,3 |
| All causes | 17 286 | 100,0 | All causes | 8 933 | 100,0 | All causes | 8 315 | 100,0 |
| Mpumalanga, both sexes, 50-64 | | | Mpumalanga, males, 50-64 | | | Mpumalanga, females, 50-64 | | |
| | No. | % | No. | % | | No. | % | |
| 1 Tuberculosis (A15-A19)* | 990 | 13,2 | 1 Tuberculosis (A15-A19)* | 676 | 15,4 | 1 Tuberculosis (A15-A19)* | 311 | 10,1 |
| 2 Influenza and pneumonia (J09-J18) | 528 | 7,0 | 2 Influenza and pneumonia (J09-J18) | 363 | 8,3 | 2 Diabetes mellitus (E10-E14) | 298 | 9,6 |
| 3 Diabetes mellitus (E10-E14) | 522 | 7,0 | 3 Cerebrovascular diseases (I60-I69) | 273 | 6,2 | 3 Cerebrovascular diseases (I60-I69) | 233 | 7,5 |
| 4 Cerebrovascular diseases (I60-I69) | 507 | 6,8 | 4 Diabetes mellitus (E10-E14) | 223 | 5,1 | 4 Hypertensive diseases (I10-I15) | 188 | 6,1 |
| 5 Other forms of heart disease (I30-I52) | 376 | 5,0 | 5 Other forms of heart disease (I30-I52) | 206 | 4,7 | 5 Other forms of heart disease (I30-I52) | 170 | 5,5 |
| 6 Hypertensive diseases (I10-I15) | 374 | 5,0 | 6 Hypertensive diseases (I10-I15) | 185 | 4,2 | 6 Influenza and pneumonia (J09-J18) | 163 | 5,3 |
| 7 Intestinal infectious diseases (A00-A09) | 298 | 4,0 | 7 Chronic lower respiratory diseases (J40-J47) | 176 | 4,0 | 7 Intestinal infectious diseases (A00-A09) | 123 | 4,0 |
| 8 Chronic lower respiratory diseases (J40-J47) | 262 | 3,5 | 8 Intestinal infectious diseases (A00-A09) | 175 | 4,0 | 8 Malignant neoplasm of female genital organs (C51-C58) | 110 | 3,6 |
| 9 Other viral diseases (B25-B34) | 187 | 2,5 | 9 Ischaemic heart diseases (I20-I25) | 128 | 2,9 | 9 Human immunodeficiency virus [HIV] disease (B20-B24) | 87 | 2,8 |
| 10 Certain disorders involving the immune mechanism (D80-D89) | 187 | 2,5 | 10 Certain disorders involving the immune mechanism (D80-D89) | 114 | 2,6 | 10 Other viral diseases (B25-B34) | 87 | 2,8 |
| Other natural causes | 2 811 | 37,5 | Other natural causes | 1 538 | 35,1 | Other natural causes | 1 200 | 38,8 |
| Non-natural causes | 451 | 6,0 | Non-natural causes | 330 | 7,5 | Non-natural causes | 120 | 3,9 |
| All causes | 7 493 | 100,0 | All causes | 4 387 | 100,0 | All causes | 3 090 | 100,0 |
| Mpumalanga, both sexes, 65+ | | | Mpumalanga, males, 65+ | | | Mpumalanga, females, 65+ | | |
| | No. | % | No. | % | | No. | % | |
| 1 Cerebrovascular diseases (I60-I69) | 1 307 | 14,0 | 1 Cerebrovascular diseases (I60-I69) | 462 | 11,4 | 1 Cerebrovascular diseases (I60-I69) | 843 | 16,0 |
| 2 Hypertensive diseases (I10-I15) | 925 | 9,9 | 2 Hypertensive diseases (I10-I15) | 334 | 8,2 | 2 Hypertensive diseases (I10-I15) | 591 | 11,2 |
| 3 Other forms of heart disease (I30-I52) | 797 | 8,5 | 3 Other forms of heart disease (I30-I52) | 329 | 8,1 | 3 Diabetes mellitus (E10-E14) | 513 | 9,7 |
| 4 Diabetes mellitus (E10-E14) | 775 | 8,3 | 4 Tuberculosis (A15-A19) | 293 | 7,2 | 4 Other forms of heart disease (I30-I52) | 468 | 8,9 |
| 5 Influenza and pneumonia (J09-J18) | 541 | 5,8 | 5 Influenza and pneumonia (J09-J18) | 274 | 6,7 | 5 Influenza and pneumonia (J09-J18) | 267 | 5,1 |
| 6 Tuberculosis (A15-A19) | 479 | 5,1 | 6 Diabetes mellitus (E10-E14) | 260 | 6,4 | 6 Intestinal infectious diseases (A00-A09) | 216 | 4,1 |
| 7 Intestinal infectious diseases (A00-A09) | 353 | 3,8 | 7 Chronic lower respiratory diseases (J40-J47) | 206 | 5,1 | 7 Tuberculosis (A15-A19) | 185 | 3,5 |
| 8 Chronic lower respiratory diseases (J40-J47) | 318 | 3,4 | 8 Ischaemic heart diseases (I20-I25) | 158 | 3,9 | 8 Ischaemic heart diseases (I20-I25) | 133 | 2,5 |
| 9 Ischaemic heart diseases (I20-I25) | 291 | 3,1 | 9 Intestinal infectious diseases (A00-A09) | 137 | 3,4 | 9 Malignant neoplasm of female genital organs (C51-C58) | 119 | 2,3 |
| 10 Other acute lower respiratory infections (J20-J22) | 166 | 1,8 | 10 Malignant neoplasm of male genital organs (C60-C63) | 116 | 2,9 | 10 Chronic lower respiratory diseases (J40-J47) | 112 | 2,1 |
| Other natural causes | 3 152 | 33,7 | Other natural causes | 1 372 | 33,8 | Other natural causes | 1 706 | 32,4 |
| Non-natural causes | 238 | 2,5 | Non-natural causes | 122 | 3,0 | Non-natural causes | 116 | 2,2 |
| All causes | 9 342 | 100,0 | All causes | 4 063 | 100,0 | All causes | 5 269 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix M9: The ten leading underlying natural causes of death by age and sex: Limpopo, 2011

| Limpopo, both sexes, all ages | | | Limpopo, males, all ages | | | Limpopo, females, all ages | | |
|---|---------------|--------------|---|---------------|--------------|---|---------------|--------------|
| | No. | % | | No. | % | | No. | % |
| 1 Influenza and pneumonia (J09-J18) | 5 376 | 11,4 | 1 Influenza and pneumonia (J09-J18) | 2 590 | 11,0 | 1 Influenza and pneumonia (J09-J18) | 2 771 | 11,7 |
| 2 Tuberculosis (A15-A19) | 4 311 | 9,1 | 2 Tuberculosis (A15-A19) | 2 409 | 10,3 | 2 Tuberculosis (A15-A19) | 1 895 | 8,0 |
| 3 Intestinal infectious diseases (A00-A09) | 3 369 | 7,1 | 3 Intestinal infectious diseases (A00-A09) | 1 573 | 6,7 | 3 Intestinal infectious diseases (A00-A09) | 1 782 | 7,5 |
| 4 Cerebrovascular diseases (I60-I69) | 2 384 | 5,0 | 4 Cerebrovascular diseases (I60-I69) | 923 | 3,9 | 4 Cerebrovascular diseases (I60-I69) | 1 459 | 6,1 |
| 5 Diabetes mellitus (E10-E14) | 1 879 | 4,0 | 5 Diabetes mellitus (E10-E14) | 825 | 3,5 | 5 Diabetes mellitus (E10-E14) | 1 054 | 4,4 |
| 6 Other forms of heart disease (I30-I52) | 1 692 | 3,6 | 6 Other forms of heart disease (I30-I52) | 760 | 3,2 | 6 Other viral diseases (B25-B34) | 965 | 4,1 |
| 7 Other viral diseases (B25-B34) | 1 636 | 3,5 | 7 Other viral diseases (B25-B34) | 666 | 2,8 | 7 Other forms of heart disease (I30-I52) | 930 | 3,9 |
| 8 Hypertensive diseases (I10-I15) | 1 371 | 2,9 | 8 Hypertensive diseases (I10-I15) | 573 | 2,4 | 8 Hypertensive diseases (I10-I15) | 797 | 3,4 |
| 9 Certain disorders involving the immune mechanism (D80-D89) | 937 | 2,0 | 9 Chronic lower respiratory diseases (J40-J47) | 471 | 2,0 | 9 Certain disorders involving the immune mechanism (D80-D89) | 477 | 2,0 |
| 10 Chronic lower respiratory diseases (J40-J47) | 792 | 1,7 | 10 Certain disorders involving the immune mechanism (D80-D89) | 459 | 2,0 | 10 Malignant neoplasm of female genital organs (C51-C58) | 427 | 1,8 |
| Other natural causes | 19 812 | 41,8 | Other natural causes | 9 487 | 40,5 | Other natural causes | 10 151 | 42,7 |
| Non-natural causes | 3 788 | 8,0 | Non-natural causes | 2 715 | 11,6 | Non-natural causes | 1 055 | 4,4 |
| All causes | 47 347 | 100,0 | All causes | 23 451 | 100,0 | All causes | 23 763 | 100,0 |
| Limpopo, both sexes, 0-14 | | | Limpopo, males, 0-14 | | | Limpopo, females, 0-14 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Intestinal infectious diseases (A00-A09) | 892 | 17,6 | 1 Intestinal infectious diseases (A00-A09) | 454 | 17,1 | 1 Intestinal infectious diseases (A00-A09) | 430 | 18,1 |
| 2 Influenza and pneumonia (J09-J18) | 713 | 14,0 | 2 Influenza and pneumonia (J09-J18) | 361 | 13,6 | 2 Influenza and pneumonia (J09-J18) | 345 | 14,6 |
| 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 407 | 8,0 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 229 | 8,6 | 3 Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 164 | 6,9 |
| 4 Malnutrition (E40-E46) | 199 | 3,9 | 4 Malnutrition (E40-E46) | 106 | 4,0 | 4 Malnutrition (E40-E46) | 93 | 3,9 |
| 5 Tuberculosis (A15-A19) | 130 | 2,6 | 5 Tuberculosis (A15-A19) | 62 | 2,3 | 5 Tuberculosis (A15-A19) | 68 | 2,9 |
| 6 Disorders related to length of gestation and fetal growth (P05-P08) | 125 | 2,5 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 62 | 2,3 | 6 Disorders related to length of gestation and fetal growth (P05-P08) | 57 | 2,4 |
| 7 Other disorders originating in the perinatal period (P90-P96) | 96 | 1,9 | 7 Other disorders originating in the perinatal period (P90-P96) | 51 | 1,9 | 7 Other viral diseases (B25-B34) | 50 | 2,1 |
| 8 Other viral diseases (B25-B34) | 92 | 1,8 | 8 Other viral diseases (B25-B34) | 41 | 1,5 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 42 | 1,8 |
| 9 Inflammatory diseases of the central nervous system (G00-G09) | 81 | 1,6 | 9 Infections specific to the perinatal period (P35-P39) | 40 | 1,5 | 9 Other disorders originating in the perinatal period (P90-P96) | 35 | 1,5 |
| 10 Infections specific to the perinatal period (P35-P39) | 68 | 1,3 | 10 Inflammatory diseases of the central nervous system (G00-G09) | 39 | 1,5 | Fetus and newborn affected by maternal factors and by complications of | 31 | 1,3 |
| Other natural causes | 1 803 | 35,5 | Other natural causes | 923 | 34,8 | Other natural causes | 866 | 36,5 |
| Non-natural causes | 476 | 9,4 | Non-natural causes | 286 | 10,8 | Non-natural causes | 190 | 8,0 |
| All causes | 5 082 | 100,0 | All causes | 2 654 | 100,0 | All causes | 2 371 | 100,0 |
| Limpopo, both sexes, 15-49 | | | Limpopo, males, 15-49 | | | Limpopo, females, 15-49 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 2 838 | 15,7 | 1 Tuberculosis (A15-A19) | 1 430 | 16,1 | 1 Tuberculosis (A15-A19) | 1 402 | 15,4 |
| 2 Influenza and pneumonia (J09-J18) | 2 125 | 11,8 | 2 Influenza and pneumonia (J09-J18) | 909 | 10,2 | 2 Influenza and pneumonia (J09-J18) | 1 208 | 13,3 |
| 3 Intestinal infectious diseases (A00-A09) | 1 324 | 7,3 | 3 Intestinal infectious diseases (A00-A09) | 577 | 6,5 | 3 Other viral diseases (B25-B34) | 765 | 8,4 |
| 4 Other viral diseases (B25-B34) | 1 217 | 6,7 | 4 Other viral diseases (B25-B34) | 449 | 5,0 | 4 Intestinal infectious diseases (A00-A09) | 743 | 8,2 |
| 5 Certain disorders involving the immune mechanism (D80-D89) | 686 | 3,8 | 5 Certain disorders involving the immune mechanism (D80-D89) | 308 | 3,5 | 5 Certain disorders involving the immune mechanism (D80-D89) | 378 | 4,2 |
| 6 Human immunodeficiency virus [HIV] disease (B20-B24) | 557 | 3,1 | 6 Human immunodeficiency virus [HIV] disease (B20-B24) | 251 | 2,8 | 6 Human immunodeficiency virus [HIV] disease (B20-B24) | 304 | 3,3 |
| 7 Other forms of heart disease (I30-I52) | 358 | 2,0 | 7 Inflammatory diseases of the central nervous system (G00-G09) | 159 | 1,8 | 7 Other forms of heart disease (I30-I52) | 208 | 2,3 |
| 8 Inflammatory diseases of the central nervous system (G00-G09) | 345 | 1,9 | 8 Other forms of heart disease (I30-I52) | 149 | 1,7 | 8 Inflammatory diseases of the central nervous system (G00-G09) | 186 | 2,0 |
| 9 Diabetes mellitus (E10-E14) | 295 | 1,6 | 9 Diabetes mellitus (E10-E14) | 132 | 1,5 | 9 Diabetes mellitus (E10-E14) | 163 | 1,8 |
| 10 Protozoal diseases (B50-B64) | 255 | 1,4 | 10 Protozoal diseases (B50-B64) | 114 | 1,3 | 10 Malignant neoplasm of female genital organs (C51-C58) | 147 | 1,6 |
| Other natural causes | 5 604 | 31,1 | Other natural causes | 2 541 | 28,5 | Other natural causes | 3 053 | 33,5 |
| Non-natural causes | 2 440 | 13,5 | Non-natural causes | 1 882 | 21,1 | Non-natural causes | 546 | 6,0 |
| All causes | 18 044 | 100,0 | All causes | 8 901 | 100,0 | All causes | 9 103 | 100,0 |
| Limpopo, both sexes, 50-64 | | | Limpopo, males, 50-64 | | | Limpopo, females, 50-64 | | |
| | No. | % | | No. | % | | No. | % |
| 1 Tuberculosis (A15-A19) | 910 | 10,6 | 1 Tuberculosis (A15-A19) | 643 | 12,2 | 1 Influenza and pneumonia (J09-J18) | 282 | 8,6 |
| 2 Influenza and pneumonia (J09-J18) | 863 | 10,1 | 2 Influenza and pneumonia (J09-J18) | 581 | 11,0 | 2 Tuberculosis (A15-A19) | 267 | 8,1 |
| 3 Diabetes mellitus (E10-E14) | 540 | 6,3 | 3 Diabetes mellitus (E10-E14) | 283 | 5,4 | 3 Diabetes mellitus (E10-E14) | 257 | 7,8 |
| 4 Cerebrovascular diseases (I60-I69) | 482 | 5,6 | 4 Intestinal infectious diseases (A00-A09) | 271 | 5,1 | 4 Cerebrovascular diseases (I60-I69) | 228 | 6,9 |
| 5 Intestinal infectious diseases (A00-A09) | 470 | 5,5 | 5 Cerebrovascular diseases (I60-I69) | 253 | 4,8 | 5 Intestinal infectious diseases (A00-A09) | 199 | 6,0 |
| 6 Hypertensive diseases (I10-I15) | 368 | 4,3 | 6 Hypertensive diseases (I10-I15) | 198 | 3,8 | 6 Hypertensive diseases (I10-I15) | 170 | 5,2 |
| 7 Other forms of heart disease (I30-I52) | 321 | 3,7 | 7 Other forms of heart disease (I30-I52) | 183 | 3,5 | 7 Other forms of heart disease (I30-I52) | 138 | 4,2 |
| 8 Other viral diseases (B25-B34) | 267 | 3,1 | 8 Chronic lower respiratory diseases (J40-J47) | 156 | 3,0 | 8 Malignant neoplasm of female genital organs (C51-C58) | 126 | 3,8 |
| 9 Chronic lower respiratory diseases (J40-J47) | 219 | 2,6 | 9 Other viral diseases (B25-B34) | 147 | 2,8 | 9 Other viral diseases (B25-B34) | 120 | 3,6 |
| 10 Malignant neoplasm of digestive organs (C15-C26) | 188 | 2,2 | 10 Malignant neoplasm of digestive organs (C15-C26) | 128 | 2,4 | 10 Chronic lower respiratory diseases (J40-J47) | 63 | 1,9 |
| Other natural causes | 3 491 | 40,7 | Other natural causes | 2 098 | 39,8 | Other natural causes | 1 323 | 40,2 |
| Non-natural causes | 451 | 5,3 | Non-natural causes | 332 | 6,3 | Non-natural causes | 118 | 3,6 |
| All causes | 8 570 | 100,0 | All causes | 5 273 | 100,0 | All causes | 3 291 | 100,0 |
| Limpopo, both sexes, 65+ | | | Limpopo, males, 65+ | | | Limpopo, females, 65+ | | |
| | No. | % | | No. | % | | No. | % |
| 1 Influenza and pneumonia (J09-J18) | 1 665 | 10,7 | 1 Influenza and pneumonia (J09-J18) | 731 | 11,2 | 1 Cerebrovascular diseases (I60-I69) | 1 100 | 12,3 |
| 2 Cerebrovascular diseases (I60-I69) | 1 660 | 10,7 | 2 Cerebrovascular diseases (I60-I69) | 559 | 8,5 | 2 Influenza and pneumonia (J09-J18) | 934 | 10,4 |
| 3 Diabetes mellitus (E10-E14) | 1 042 | 6,7 | 3 Other forms of heart disease (I30-I52) | 419 | 6,4 | 3 Diabetes mellitus (E10-E14) | 632 | 7,1 |
| 4 Other forms of heart disease (I30-I52) | 980 | 6,3 | 4 Diabetes mellitus (E10-E14) | 410 | 6,3 | 4 Other forms of heart disease (I30-I52) | 560 | 6,3 |
| 5 Hypertensive diseases (I10-I15) | 862 | 5,6 | 5 Hypertensive diseases (I10-I15) | 315 | 4,8 | 5 Hypertensive diseases (I10-I15) | 547 | 6,1 |
| 6 Intestinal infectious diseases (A00-A09) | 678 | 4,4 | 6 Tuberculosis (A15-A19) | 272 | 4,2 | 6 Intestinal infectious diseases (A00-A09) | 410 | 4,6 |
| 7 Tuberculosis (A15-A19) | 427 | 2,8 | 7 Intestinal infectious diseases (A00-A09) | 268 | 4,1 | 7 Chronic lower respiratory diseases (J40-J47) | 156 | 1,7 |
| 8 Chronic lower respiratory diseases (J40-J47) | 381 | 2,5 | 8 Chronic lower respiratory diseases (J40-J47) | 225 | 3,4 | 8 Tuberculosis (A15-A19) | 155 | 1,7 |
| 9 Malignant neoplasm of digestive organs (C15-C26) | 267 | 1,7 | 9 Malignant neoplasm of male genital organs (C60-C63) | 180 | 2,7 | 9 Malignant neoplasm of female genital organs (C51-C58) | 153 | 1,7 |
| 10 Ischaemic heart diseases (I20-I25) | 260 | 1,7 | 10 Malignant neoplasm of digestive organs (C15-C26) | 144 | 2,2 | 10 Ischaemic heart diseases (I20-I25) | 125 | 1,4 |
| Other natural causes | 6 897 | 44,5 | Other natural causes | 2 831 | 43,2 | Other natural causes | 3 989 | 44,6 |
| Non-natural causes | 383 | 2,5 | Non-natural causes | 192 | 2,9 | Non-natural causes | 191 | 2,1 |
| All causes | 15 502 | 100,0 | All causes | 6 546 | 100,0 | All causes | 8 952 | 100,0 |

Including deaths due to *MDR-TB* and *XDR-TB*

Appendix N: Number of deaths by main groups of causes of death and district municipality of death occurrence (Western Cape, Eastern Cape and Northern Cape), 2011

| Province of death | District municipality of death occurrence | Certain infectious and parasitic diseases | Neoplasms | Diseases of the blood and immune mechanism | Endocrine, nutritional and metabolic diseases | Diseases of the nervous system | Diseases of the circulatory system | Diseases of the respiratory system | Diseases of the digestive system | Perinatal conditions | Other natural causes | External causes of morbidity and mortality | Total |
|-------------------|---|---|--------------|--|---|--------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------|----------------------|--|---------------|
| | | A00–B99* | C00–D48 | D50–D89 | E00–E90 | G00–G99 | I00–I99 | J00–J99 | K00–K93 | P00–P96 | Other | V01–Y98 | |
| Western Cape | Cape Winelands | 1 272 | 1 050 | 49 | 500 | 110 | 1 256 | 649 | 194 | 99 | 722 | 748 | 6 649 |
| | Central Karoo | 154 | 101 | 11 | 52 | 16 | 182 | 98 | 17 | 21 | 76 | 143 | 871 |
| | City of Cape Town | 4 495 | 4 622 | 271 | 2 162 | 603 | 5 179 | 1 926 | 639 | 488 | 2 947 | 3 134 | 26 466 |
| | Eden | 819 | 864 | 63 | 408 | 101 | 1 180 | 516 | 132 | 84 | 369 | 515 | 5 051 |
| | Overberg | 324 | 417 | 18 | 155 | 40 | 490 | 211 | 45 | 26 | 212 | 275 | 2 213 |
| | West Coast | 554 | 530 | 35 | 221 | 66 | 741 | 343 | 57 | 68 | 312 | 373 | 3 300 |
| | Unspecified | 222 | 221 | 12 | 100 | 20 | 198 | 97 | 31 | 15 | 151 | 126 | 1 193 |
| | Total | 7 840 | 7 805 | 459 | 3 598 | 956 | 9 226 | 3 840 | 1 115 | 801 | 4 789 | 5 314 | 45 743 |
| Eastern Cape | Joe Gqabi | 831 | 180 | 212 | 161 | 112 | 610 | 544 | 107 | 47 | 1 318 | 364 | 4 486 |
| | Alfred Nzo | 1 090 | 114 | 140 | 139 | 119 | 394 | 429 | 89 | 81 | 3 246 | 433 | 6 274 |
| | Amatole | 3 365 | 768 | 378 | 660 | 460 | 2 397 | 2 126 | 305 | 90 | 2 877 | 1 454 | 14 880 |
| | Buffalo city | 2 576 | 1 344 | 235 | 658 | 264 | 1 969 | 1 130 | 287 | 82 | 988 | 1 341 | 10 874 |
| | Cacadu | 1 052 | 402 | 109 | 243 | 88 | 852 | 423 | 88 | 56 | 904 | 422 | 4 639 |
| | Chris Hani | 2 247 | 467 | 307 | 476 | 307 | 1 552 | 1 373 | 249 | 128 | 1 505 | 837 | 9 448 |
| | Nelson Mandela Bay Metro | 1 376 | 759 | 240 | 474 | 167 | 1 239 | 562 | 199 | 105 | 574 | 569 | 6 264 |
| | O R Tambo | 3 405 | 574 | 256 | 456 | 357 | 1 267 | 1 023 | 333 | 56 | 5 338 | 1 433 | 14 498 |
| | Unspecified | 341 | 90 | 52 | 63 | 41 | 248 | 191 | 33 | 11 | 486 | 116 | 1 672 |
| | Total | 16 283 | 4 698 | 1 929 | 3 330 | 1 915 | 10 528 | 7 801 | 1 690 | 656 | 17 236 | 6 969 | 73 035 |
| Northern Cape | Frances Baard | 789 | 300 | 190 | 196 | 83 | 603 | 445 | 129 | 68 | 685 | 327 | 3 815 |
| | John Taolo Gaetsewe | 343 | 81 | 47 | 53 | 38 | 193 | 345 | 16 | 74 | 1 041 | 177 | 2 408 |
| | Namakwa | 85 | 88 | 7 | 30 | 15 | 125 | 77 | 15 | 24 | 538 | 74 | 1 078 |
| | Pixley ka Seme | 817 | 355 | 132 | 284 | 94 | 770 | 539 | 131 | 94 | 475 | 335 | 4 026 |
| | Siyanda | 696 | 239 | 139 | 136 | 60 | 450 | 358 | 79 | 65 | 348 | 285 | 2 855 |
| | Unspecified | 91 | 24 | 13 | 26 | 10 | 60 | 67 | 15 | 15 | 178 | 37 | 536 |
| | Total | 2 821 | 1 087 | 528 | 725 | 300 | 2 201 | 1 831 | 385 | 340 | 3 265 | 1 235 | 14 718 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix N1: Number of deaths by main groups of causes of death and district municipality of death occurrence (Free State, KwaZulu-Natal and North West), 2011

| Province of death | District municipality of death occurrence | Certain infectious and parasitic diseases | Neoplasms | Diseases of the blood and immune mechanism | Endocrine, nutritional and metabolic diseases | Diseases of the nervous system | Diseases of the circulatory system | Diseases of the respiratory system | Diseases of the digestive system | Perinatal conditions | Other natural causes | External causes of morbidity and mortality | Total |
|-------------------|---|---|--------------|--|---|--------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------|----------------------|--|----------------|
| | | A00–B99* | C00–D48 | D50–D89 | E00–E90 | G00–G99 | I00–I99 | J00–J99 | K00–K93 | P00–P96 | Other | V01–Y98 | |
| Free State | Fezile Dabi | 1 112 | 289 | 316 | 324 | 146 | 1 104 | 1 076 | 134 | 126 | 458 | 498 | 5 583 |
| | Lejweleputswa | 1 949 | 385 | 307 | 538 | 234 | 1 470 | 1 795 | 225 | 237 | 1 646 | 737 | 9 523 |
| | Mangaung | 1 876 | 843 | 365 | 424 | 195 | 1 452 | 1 155 | 256 | 236 | 2 705 | 786 | 10 293 |
| | Thabo Mofutsanyane | 2 966 | 464 | 630 | 696 | 295 | 2 087 | 2 030 | 339 | 346 | 1 082 | 807 | 11 742 |
| | Xhariep | 546 | 220 | 149 | 132 | 71 | 420 | 407 | 84 | 36 | 733 | 267 | 3 065 |
| | Unspecified | 91 | 23 | 18 | 26 | 7 | 68 | 75 | 11 | 12 | 65 | 33 | 429 |
| | Total | 8 540 | 2 224 | 1 785 | 2 140 | 948 | 6 601 | 6 538 | 1 049 | 993 | 6 689 | 3 128 | 40 635 |
| KwaZulu-Natal | Amajuba | 1 341 | 255 | 153 | 285 | 145 | 1 034 | 948 | 166 | 104 | 426 | 345 | 5 202 |
| | Sisonke | 1 815 | 243 | 175 | 366 | 179 | 763 | 672 | 150 | 140 | 1 036 | 435 | 5 974 |
| | UMgungundlovu | 2 898 | 809 | 183 | 787 | 246 | 1 863 | 986 | 329 | 138 | 1 526 | 958 | 10 723 |
| | Ugu | 3 493 | 504 | 229 | 649 | 272 | 1 592 | 1 169 | 266 | 139 | 1 244 | 822 | 10 379 |
| | Umkhanyakude | 1 745 | 225 | 54 | 192 | 86 | 561 | 244 | 103 | 66 | 789 | 355 | 4 420 |
| | Umzinyathi | 1 589 | 172 | 232 | 262 | 141 | 790 | 524 | 115 | 122 | 806 | 463 | 5 216 |
| | Uthukela | 2 048 | 298 | 376 | 392 | 217 | 1 460 | 863 | 184 | 165 | 622 | 641 | 7 266 |
| | Uthungulu | 2 788 | 424 | 242 | 487 | 213 | 1 198 | 757 | 277 | 285 | 1 221 | 866 | 8 758 |
| | Zululand | 2 890 | 280 | 176 | 362 | 265 | 929 | 812 | 165 | 176 | 1 242 | 632 | 7 929 |
| | eThekwini | 6 673 | 2 215 | 383 | 2 008 | 628 | 5 230 | 2 331 | 727 | 490 | 4 087 | 2 764 | 27 536 |
| | iLembe | 1 876 | 237 | 188 | 338 | 165 | 749 | 390 | 142 | 141 | 721 | 474 | 5 421 |
| | Unspecified | 1 803 | 330 | 94 | 306 | 147 | 945 | 572 | 119 | 69 | 921 | 522 | 5 828 |
| | Total | 30 959 | 5 992 | 2 485 | 6 434 | 2 704 | 17 114 | 10 268 | 2 743 | 2 035 | 14 641 | 9 277 | 104 652 |
| North West | Bojanala Platinum | 2 881 | 577 | 519 | 671 | 246 | 2 367 | 1 640 | 264 | 299 | 2 678 | 1 167 | 13 309 |
| | Dr Kenneth Kaunda | 2 106 | 774 | 294 | 376 | 161 | 1 243 | 863 | 200 | 223 | 976 | 644 | 7 860 |
| | Dr Ruth Segomotsi Mompati | 1 383 | 245 | 413 | 252 | 98 | 946 | 923 | 97 | 157 | 858 | 305 | 5 677 |
| | Ngaka Modiri Molema | 2 440 | 405 | 335 | 486 | 198 | 1 826 | 1 845 | 233 | 338 | 1 403 | 592 | 10 101 |
| | Unspecified | 130 | 32 | 8 | 31 | 7 | 129 | 102 | 5 | 11 | 99 | 54 | 608 |
| | Total | 8 940 | 2 033 | 1 569 | 1 816 | 710 | 6 511 | 5 373 | 799 | 1 028 | 6 014 | 2 762 | 37 555 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix N2: Number of deaths by main groups of causes of death and district municipality of death occurrence (Gauteng, Mpumalanga and Limpopo), 2011

| Province of death | District municipality of death occurrence | Certain infectious and parasitic diseases | Neoplasms | Diseases of the blood and immune mechanism | Endocrine, nutritional and metabolic diseases | Diseases of the nervous system | Diseases of the circulatory system | Diseases of the respiratory system | Diseases of the digestive system | Perinatal conditions | Other natural causes | External causes of morbidity and mortality | Total |
|-------------------|---|---|--------------|--|---|--------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------|----------------------|--|----------------|
| | | A00–B99* | C00–D48 | D50–D89 | E00–E90 | G00–G99 | I00–I99 | J00–J99 | K00–K93 | P00–P96 | Other | V01–Y98 | |
| Gauteng | City of Johannesburg | 5 113 | 2 981 | 700 | 1 256 | 711 | 4 303 | 2 885 | 753 | 906 | 6 949 | 2 912 | 29 469 |
| | City of Tshwane | 3 640 | 2 118 | 687 | 1 299 | 490 | 4 310 | 2 357 | 573 | 343 | 1 955 | 1 802 | 19 574 |
| | Ekurhuleni | 5 340 | 1 775 | 785 | 1 386 | 826 | 4 006 | 3 351 | 728 | 795 | 5 288 | 2 444 | 26 724 |
| | Sedibeng | 2 326 | 800 | 309 | 663 | 399 | 2 431 | 1 975 | 355 | 266 | 1 122 | 977 | 11 623 |
| | West Rand | 1 757 | 750 | 271 | 461 | 241 | 1 563 | 1 131 | 295 | 235 | 1 744 | 1 121 | 9 569 |
| | Unspecified | 764 | 392 | 138 | 175 | 111 | 541 | 386 | 97 | 83 | 621 | 484 | 3 792 |
| | Total | 18 940 | 8 816 | 2 890 | 5 240 | 2 778 | 17 154 | 12 085 | 2 801 | 2 628 | 17 679 | 9 740 | 100 751 |
| Mpu–malanga | Ehlanzeni | 5 009 | 805 | 582 | 787 | 509 | 2 321 | 1 629 | 457 | 245 | 1 407 | 1 222 | 14 973 |
| | Gert Sibande | 2 883 | 416 | 565 | 647 | 295 | 1 430 | 1 634 | 357 | 279 | 1 459 | 970 | 10 935 |
| | Nkangala | 2 596 | 465 | 367 | 639 | 225 | 2 046 | 1 658 | 278 | 177 | 1 143 | 1 019 | 10 613 |
| | Unspecified | 446 | 49 | 38 | 76 | 38 | 221 | 218 | 62 | 21 | 193 | 154 | 1 516 |
| | Total | 10 934 | 1 735 | 1 552 | 2 149 | 1 067 | 6 018 | 5 139 | 1 154 | 722 | 4 202 | 3 365 | 38 037 |
| Limpopo | Capricorn | 2 632 | 779 | 199 | 656 | 255 | 1 712 | 1 661 | 385 | 220 | 1 919 | 906 | 11 324 |
| | Greater Sekhukhune | 2 230 | 279 | 298 | 437 | 147 | 1 470 | 2 056 | 180 | 80 | 799 | 645 | 8 621 |
| | Mopani | 2 302 | 360 | 292 | 444 | 322 | 913 | 1 128 | 286 | 208 | 2 062 | 584 | 8 901 |
| | Vhembe | 1 839 | 445 | 158 | 588 | 144 | 883 | 825 | 294 | 196 | 3 208 | 685 | 9 265 |
| | Waterberg | 1 098 | 295 | 165 | 219 | 91 | 651 | 613 | 124 | 102 | 1 118 | 499 | 4 975 |
| | Unspecified | 1 080 | 161 | 125 | 220 | 89 | 569 | 742 | 82 | 64 | 660 | 469 | 4 261 |
| | Total | 11 181 | 2 319 | 1 237 | 2 564 | 1 048 | 6 198 | 7 025 | 1 351 | 870 | 9 766 | 3 788 | 47 347 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix O: Percentage distribution of deaths by main groups of causes of death and district municipality of death occurrence (Western Cape, Eastern Cape and Northern Cape), 2011

| Province of death | District municipality of death occurrence | Certain infectious and parasitic diseases | Neoplasms | Diseases of the blood and immune mechanism | Endocrine, nutritional and metabolic diseases | Diseases of the nervous system | Diseases of the circulatory system | Diseases of the respiratory system | Diseases of the digestive system | Perinatal conditions | Other natural causes | External causes of morbidity and mortality | Total |
|-------------------|---|---|-------------|--|---|--------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------|----------------------|--|--------------|
| | | A00–B99* | C00–D48 | D50–D89 | E00–E90 | G00–G99 | I00–I99 | J00–J99 | K00–K93 | P00–P96 | Other | V01–Y98 | |
| Western Cape | Cape Winelands | 19,1 | 15,8 | 0,7 | 7,5 | 1,7 | 18,9 | 9,8 | 2,9 | 1,5 | 10,9 | 11,2 | 100,0 |
| | Central Karoo | 17,7 | 11,6 | 1,3 | 6,0 | 1,8 | 20,9 | 11,3 | 2,0 | 2,4 | 8,7 | 16,4 | 100,0 |
| | City of Cape Town | 17,0 | 17,5 | 1,0 | 8,2 | 2,3 | 19,6 | 7,3 | 2,4 | 1,8 | 11,1 | 11,8 | 100,0 |
| | Eden | 16,2 | 17,1 | 1,2 | 8,1 | 2,0 | 23,4 | 10,2 | 2,6 | 1,7 | 7,3 | 10,2 | 100,0 |
| | Overberg | 14,6 | 18,8 | 0,8 | 7,0 | 1,8 | 22,1 | 9,5 | 2,0 | 1,2 | 9,6 | 12,4 | 100,0 |
| | West Coast | 16,8 | 16,1 | 1,1 | 6,7 | 2,0 | 22,5 | 10,4 | 1,7 | 2,1 | 9,5 | 11,3 | 100,0 |
| | Unspecified | 18,6 | 18,5 | 1,0 | 8,4 | 1,7 | 16,6 | 8,1 | 2,6 | 1,3 | 12,7 | 10,6 | 100,0 |
| | Total | 17,1 | 17,1 | 1,0 | 7,9 | 2,1 | 20,2 | 8,4 | 2,4 | 1,8 | 10,5 | 11,6 | 100,0 |
| Eastern Cape | Joe Gqabi | 18,5 | 4,0 | 4,7 | 3,6 | 2,5 | 13,6 | 12,1 | 2,4 | 1,0 | 29,4 | 8,1 | 100,0 |
| | Alfred Nzo | 17,4 | 1,8 | 2,2 | 2,2 | 1,9 | 6,3 | 6,8 | 1,4 | 1,3 | 51,7 | 6,9 | 100,0 |
| | Amatole | 22,6 | 5,2 | 2,5 | 4,4 | 3,1 | 16,1 | 14,3 | 2,0 | 0,6 | 19,3 | 9,8 | 100,0 |
| | Buffalo city | 23,7 | 12,4 | 2,2 | 6,1 | 2,4 | 18,1 | 10,4 | 2,6 | 0,8 | 9,1 | 12,3 | 100,0 |
| | Cacadu | 22,7 | 8,7 | 2,3 | 5,2 | 1,9 | 18,4 | 9,1 | 1,9 | 1,2 | 19,5 | 9,1 | 100,0 |
| | Chris Hani | 23,8 | 4,9 | 3,2 | 5,0 | 3,2 | 16,4 | 14,5 | 2,6 | 1,4 | 15,9 | 8,9 | 100,0 |
| | Nelson Mandela Bay Metro | 22,0 | 12,1 | 3,8 | 7,6 | 2,7 | 19,8 | 9,0 | 3,2 | 1,7 | 9,2 | 9,1 | 100,0 |
| | O R Tambo | 23,5 | 4,0 | 1,8 | 3,1 | 2,5 | 8,7 | 7,1 | 2,3 | 0,4 | 36,8 | 9,9 | 100,0 |
| | Unspecified | 20,4 | 5,4 | 3,1 | 3,8 | 2,5 | 14,8 | 11,4 | 2,0 | 0,7 | 29,1 | 6,9 | 100,0 |
| | Total | 22,3 | 6,4 | 2,6 | 4,6 | 2,6 | 14,4 | 10,7 | 2,3 | 0,9 | 23,6 | 9,5 | 100,0 |
| Northern Cape | Frances Baard | 20,7 | 7,9 | 5,0 | 5,1 | 2,2 | 15,8 | 11,7 | 3,4 | 1,8 | 18,0 | 8,6 | 100,0 |
| | John Taolo Gaetsewe | 14,2 | 3,4 | 2,0 | 2,2 | 1,6 | 8,0 | 14,3 | 0,7 | 3,1 | 43,2 | 7,4 | 100,0 |
| | Namakwa | 7,9 | 8,2 | 0,6 | 2,8 | 1,4 | 11,6 | 7,1 | 1,4 | 2,2 | 49,9 | 6,9 | 100,0 |
| | Pixley ka Seme | 20,3 | 8,8 | 3,3 | 7,1 | 2,3 | 19,1 | 13,4 | 3,3 | 2,3 | 11,8 | 8,3 | 100,0 |
| | Siyanda | 24,4 | 8,4 | 4,9 | 4,8 | 2,1 | 15,8 | 12,5 | 2,8 | 2,3 | 12,2 | 10,0 | 100,0 |
| | Unspecified | 17,0 | 4,5 | 2,4 | 4,9 | 1,9 | 11,2 | 12,5 | 2,8 | 2,8 | 33,2 | 6,9 | 100,0 |
| | Total | 19,2 | 7,4 | 3,6 | 4,9 | 2,0 | 15,0 | 12,4 | 2,6 | 2,3 | 22,2 | 8,4 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix O1: Percentage distribution of deaths by main groups of causes of death and district municipality of death occurrence (Free State, KwaZulu-Natal and North West), 2011

| Province of death | District municipality of death occurrence | Certain infectious and parasitic diseases | Neoplasms | Diseases of the blood and immune mechanism | Endocrine, nutritional and metabolic diseases | Diseases of the nervous system | Diseases of the circulatory system | Diseases of the respiratory system | Diseases of the digestive system | Perinatal conditions | Other natural causes | External causes of morbidity and mortality | Total |
|-------------------|---|---|------------|--|---|--------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------|----------------------|--|--------------|
| | | A00–B99* | C00–D48 | D50–D89 | E00–E90 | G00–G99 | I00–I99 | J00–J99 | K00–K93 | P00–P96 | Other | V01–Y98 | |
| Free State | Fezile Dabi | 19,9 | 5,2 | 5,7 | 5,8 | 2,6 | 19,8 | 19,3 | 2,4 | 2,3 | 8,2 | 8,9 | 100,0 |
| | Lejweleputswa | 20,5 | 4,0 | 3,2 | 5,6 | 2,5 | 15,4 | 18,8 | 2,4 | 2,5 | 17,3 | 7,7 | 100,0 |
| | Mangaung | 18,2 | 8,2 | 3,5 | 4,1 | 1,9 | 14,1 | 11,2 | 2,5 | 2,3 | 26,3 | 7,6 | 100,0 |
| | Thabo Mofutsanyane | 25,3 | 4,0 | 5,4 | 5,9 | 2,5 | 17,8 | 17,3 | 2,9 | 2,9 | 9,2 | 6,9 | 100,0 |
| | Xhariep | 17,8 | 7,2 | 4,9 | 4,3 | 2,3 | 13,7 | 13,3 | 2,7 | 1,2 | 23,9 | 8,7 | 100,0 |
| | Unspecified | 21,2 | 5,4 | 4,2 | 6,1 | 1,6 | 15,9 | 17,5 | 2,6 | 2,8 | 15,2 | 7,7 | 100,0 |
| | Total | 21,0 | 5,5 | 4,4 | 5,3 | 2,3 | 16,2 | 16,1 | 2,6 | 2,4 | 16,5 | 7,7 | 100,0 |
| KwaZulu-Natal | Amajuba | 25,8 | 4,9 | 2,9 | 5,5 | 2,8 | 19,9 | 18,2 | 3,2 | 2,0 | 8,2 | 6,6 | 100,0 |
| | Sisonke | 30,4 | 4,1 | 2,9 | 6,1 | 3,0 | 12,8 | 11,2 | 2,5 | 2,3 | 17,3 | 7,3 | 100,0 |
| | UMgungundlovu | 27,0 | 7,5 | 1,7 | 7,3 | 2,3 | 17,4 | 9,2 | 3,1 | 1,3 | 14,2 | 8,9 | 100,0 |
| | Ugu | 33,7 | 4,9 | 2,2 | 6,3 | 2,6 | 15,3 | 11,3 | 2,6 | 1,3 | 12,0 | 7,9 | 100,0 |
| | Umkhanyakude | 39,5 | 5,1 | 1,2 | 4,3 | 1,9 | 12,7 | 5,5 | 2,3 | 1,5 | 17,9 | 8,0 | 100,0 |
| | Umzinyathi | 30,5 | 3,3 | 4,4 | 5,0 | 2,7 | 15,1 | 10,0 | 2,2 | 2,3 | 15,5 | 8,9 | 100,0 |
| | Uthukela | 28,2 | 4,1 | 5,2 | 5,4 | 3,0 | 20,1 | 11,9 | 2,5 | 2,3 | 8,6 | 8,8 | 100,0 |
| | Uthungulu | 31,8 | 4,8 | 2,8 | 5,6 | 2,4 | 13,7 | 8,6 | 3,2 | 3,3 | 13,9 | 9,9 | 100,0 |
| | Zululand | 36,4 | 3,5 | 2,2 | 4,6 | 3,3 | 11,7 | 10,2 | 2,1 | 2,2 | 15,7 | 8,0 | 100,0 |
| | eThekwini | 24,2 | 8,0 | 1,4 | 7,3 | 2,3 | 19,0 | 8,5 | 2,6 | 1,8 | 14,8 | 10,0 | 100,0 |
| | iLembe | 34,6 | 4,4 | 3,5 | 6,2 | 3,0 | 13,8 | 7,2 | 2,6 | 2,6 | 13,3 | 8,7 | 100,0 |
| | Unspecified | 30,9 | 5,7 | 1,6 | 5,3 | 2,5 | 16,2 | 9,8 | 2,0 | 1,2 | 15,8 | 9,0 | 100,0 |
| | Total | 29,6 | 5,7 | 2,4 | 6,1 | 2,6 | 16,4 | 9,8 | 2,6 | 1,9 | 14,0 | 8,9 | 100,0 |
| North West | Bojanala Platinum | 21,6 | 4,3 | 3,9 | 5,0 | 1,8 | 17,8 | 12,3 | 2,0 | 2,2 | 20,1 | 8,8 | 100,0 |
| | Dr Kenneth Kaunda | 26,8 | 9,8 | 3,7 | 4,8 | 2,0 | 15,8 | 11,0 | 2,5 | 2,8 | 12,4 | 8,2 | 100,0 |
| | Dr Ruth Segomotsi Mompati | 24,4 | 4,3 | 7,3 | 4,4 | 1,7 | 16,7 | 16,3 | 1,7 | 2,8 | 15,1 | 5,4 | 100,0 |
| | Ngaka Modiri Molema | 24,2 | 4,0 | 3,3 | 4,8 | 2,0 | 18,1 | 18,3 | 2,3 | 3,3 | 13,9 | 5,9 | 100,0 |
| | Unspecified | 21,4 | 5,3 | 1,3 | 5,1 | 1,2 | 21,2 | 16,8 | 0,8 | 1,8 | 16,3 | 8,9 | 100,0 |
| | Total | 23,8 | 5,4 | 4,2 | 4,8 | 1,9 | 17,3 | 14,3 | 2,1 | 2,7 | 16,0 | 7,4 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix O2: Percentage distribution of deaths by main groups of causes of death and district municipality of death occurrence (Gauteng, Mpumalanga and Limpopo), 2011

| Province of death | District municipality of death occurrence | Certain infectious and parasitic diseases | Neoplasms | Diseases of the blood and immune mechanism | Endocrine, nutritional and metabolic diseases | Diseases of the nervous system | Diseases of the circulatory system | Diseases of the respiratory system | Diseases of the digestive system | Perinatal conditions | Other natural causes | External causes of morbidity and mortality | Total |
|-------------------|---|---|------------|--|---|--------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------|----------------------|--|--------------|
| | | A00–B99* | C00–D48 | D50–D89 | E00–E90 | G00–G99 | I00–I99 | J00–J99 | K00–K93 | P00–P96 | Other | V01–Y98 | |
| Gauteng | City of Johannesburg | 17,4 | 10,1 | 2,4 | 4,3 | 2,4 | 14,6 | 9,8 | 2,6 | 3,1 | 23,6 | 9,9 | 100,0 |
| | City of Tshwane | 18,6 | 10,8 | 3,5 | 6,6 | 2,5 | 22,0 | 12,0 | 2,9 | 1,8 | 10,0 | 9,2 | 100,0 |
| | Ekurhuleni | 20,0 | 6,6 | 2,9 | 5,2 | 3,1 | 15,0 | 12,5 | 2,7 | 3,0 | 19,8 | 9,1 | 100,0 |
| | Sedibeng | 20,0 | 6,9 | 2,7 | 5,7 | 3,4 | 20,9 | 17,0 | 3,1 | 2,3 | 9,7 | 8,4 | 100,0 |
| | West Rand | 18,4 | 7,8 | 2,8 | 4,8 | 2,5 | 16,3 | 11,8 | 3,1 | 2,5 | 18,2 | 11,7 | 100,0 |
| | Unspecified | 20,1 | 10,3 | 3,6 | 4,6 | 2,9 | 14,3 | 10,2 | 2,6 | 2,2 | 16,4 | 12,8 | 100,0 |
| | Total | 18,8 | 8,8 | 2,9 | 5,2 | 2,8 | 17,0 | 12,0 | 2,8 | 2,6 | 17,5 | 9,7 | 100,0 |
| Mpu–malanga | Ehlanzeni | 33,5 | 5,4 | 3,9 | 5,3 | 3,4 | 15,5 | 10,9 | 3,1 | 1,6 | 9,4 | 8,2 | 100,0 |
| | Gert Sibande | 26,4 | 3,8 | 5,2 | 5,9 | 2,7 | 13,1 | 14,9 | 3,3 | 2,6 | 13,3 | 8,9 | 100,0 |
| | Nkangala | 24,5 | 4,4 | 3,5 | 6,0 | 2,1 | 19,3 | 15,6 | 2,6 | 1,7 | 10,8 | 9,6 | 100,0 |
| | Unspecified | 29,4 | 3,2 | 2,5 | 5,0 | 2,5 | 14,6 | 14,4 | 4,1 | 1,4 | 12,7 | 10,2 | 100,0 |
| | Total | 28,7 | 4,6 | 4,1 | 5,6 | 2,8 | 15,8 | 13,5 | 3,0 | 1,9 | 11,0 | 8,8 | 100,0 |
| Limpopo | Capricorn | 23,2 | 6,9 | 1,8 | 5,8 | 2,3 | 15,1 | 14,7 | 3,4 | 1,9 | 16,9 | 8,0 | 100,0 |
| | Greater Sekhukhune | 25,9 | 3,2 | 3,5 | 5,1 | 1,7 | 17,1 | 23,8 | 2,1 | 0,9 | 9,3 | 7,5 | 100,0 |
| | Mopani | 25,9 | 4,0 | 3,3 | 5,0 | 3,6 | 10,3 | 12,7 | 3,2 | 2,3 | 23,2 | 6,6 | 100,0 |
| | Vhembe | 19,8 | 4,8 | 1,7 | 6,3 | 1,6 | 9,5 | 8,9 | 3,2 | 2,1 | 34,6 | 7,4 | 100,0 |
| | Waterberg | 22,1 | 5,9 | 3,3 | 4,4 | 1,8 | 13,1 | 12,3 | 2,5 | 2,1 | 22,5 | 10,0 | 100,0 |
| | Unspecified | 25,3 | 3,8 | 2,9 | 5,2 | 2,1 | 13,4 | 17,4 | 1,9 | 1,5 | 15,5 | 11,0 | 100,0 |
| | Total | 23,6 | 4,9 | 2,6 | 5,4 | 2,2 | 13,1 | 14,8 | 2,9 | 1,8 | 20,6 | 8,0 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P: The ten leading underlying natural causes of death by district municipality of death occurrence, Western Cape, 2011*

| Cape Wineland | | No. | % | Central Karoo | | No. | % | City of Cape Town | | No. | % |
|---------------|---|-------|-------|---------------|---|-------|-------|-------------------|---|--------|-------|
| 1 | Human immunodeficiency virus [HIV] disease (B20-B24) | 495 | 7,4 | 1 | Tuberculosis (A15-A19)** | 77 | 8,8 | 1 | Diabetes mellitus (E10-E14) | 1 764 | 6,7 |
| 2 | Tuberculosis (A15-A19)** | 473 | 7,1 | 2 | Chronic lower respiratory diseases (J40-J47) | 60 | 6,9 | 2 | Tuberculosis (A15-A19)** | 1 752 | 6,6 |
| 3 | Cerebrovascular diseases (I60-I69) | 454 | 6,8 | 3 | Cerebrovascular diseases (I60-I69) | 57 | 6,5 | 3 | Ischaemic heart diseases (I20-I25) | 1 601 | 6,0 |
| 4 | Diabetes mellitus (E10-E14) | 391 | 5,9 | 4 | Human immunodeficiency virus [HIV] disease (B20-B24) | 39 | 4,5 | 4 | Human immunodeficiency virus [HIV] disease (B20-B24) | 1 513 | 5,7 |
| 5 | Chronic lower respiratory diseases (J40-J47) | 389 | 5,9 | 4 | Other forms of heart disease (I30-I52) | 39 | 4,5 | 5 | Cerebrovascular diseases (I60-I69) | 1 425 | 5,4 |
| 6 | Ischaemic heart diseases (I20-I25) | 362 | 5,4 | 6 | Hypertensive diseases (I10-I15) | 38 | 4,4 | 6 | Malignant neoplasm of digestive organs (C15-C26) | 1 147 | 4,3 |
| 7 | Malignant neoplasm of digestive organs (C15-C26) | 268 | 4,0 | 7 | Diabetes mellitus (E10-E14) | 37 | 4,2 | 7 | Hypertensive diseases (I10-I15) | 1 022 | 3,9 |
| 8 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 265 | 4,0 | 8 | Ischaemic heart diseases (I20-I25) | 34 | 3,9 | 8 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 1 014 | 3,8 |
| 9 | Hypertensive diseases (I10-I15) | 193 | 2,9 | 9 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 32 | 3,7 | 9 | Chronic lower respiratory diseases (J40-J47) | 984 | 3,7 |
| 10 | Influenza and pneumonia (J09-J18) | 173 | 2,6 | 10 | Malignant neoplasm of digestive organs (C15-C26) | 25 | 2,9 | 10 | Other forms of heart disease (I30-I52) | 767 | 2,9 |
| | Other natural causes | 2 438 | 36,7 | | Other natural causes | 290 | 33,3 | | Other natural causes | 10 343 | 39,1 |
| | Non-natural causes | 748 | 11,2 | | Non-natural causes | 143 | 16,4 | | Non-natural causes | 3 134 | 11,8 |
| | All causes | 6 649 | 100,0 | | All causes | 871 | 100,0 | | All causes | 26 466 | 100,0 |
| Eden | | No. | % | Overberg | | No. | % | West Coast | | No. | % |
| 1 | Cerebrovascular diseases (I60-I69) | 424 | 8,4 | 1 | Ischaemic heart diseases (I20-I25) | 165 | 7,5 | 1 | Tuberculosis (A15-A19)** | 319 | 9,7 |
| 2 | Tuberculosis (A15-A19)** | 373 | 7,4 | 2 | Cerebrovascular diseases (I60-I69) | 148 | 6,7 | 2 | Cerebrovascular diseases (I60-I69) | 256 | 7,8 |
| 3 | Ischaemic heart diseases (I20-I25) | 330 | 6,5 | 3 | Tuberculosis (A15-A19)** | 144 | 6,5 | 3 | Ischaemic heart diseases (I20-I25) | 226 | 6,8 |
| 4 | Diabetes mellitus (E10-E14) | 327 | 6,5 | 4 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 123 | 5,6 | 4 | Chronic lower respiratory diseases (J40-J47) | 196 | 5,9 |
| 5 | Chronic lower respiratory diseases (J40-J47) | 272 | 5,4 | 5 | Diabetes mellitus (E10-E14) | 120 | 5,4 | 5 | Diabetes mellitus (E10-E14) | 179 | 5,4 |
| 6 | Human immunodeficiency virus [HIV] disease (B20-B24) | 265 | 5,2 | 6 | Chronic lower respiratory diseases (J40-J47) | 116 | 5,2 | 6 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 151 | 4,6 |
| 7 | Malignant neoplasm of digestive organs (C15-C26) | 216 | 4,3 | 7 | Malignant neoplasm of digestive organs (C15-C26) | 108 | 4,9 | 7 | Malignant neoplasm of digestive organs (C15-C26) | 126 | 3,8 |
| 8 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 203 | 4,0 | 8 | Human immunodeficiency virus [HIV] disease (B20-B24) | 95 | 4,3 | 8 | Human immunodeficiency virus [HIV] disease (B20-B24) | 107 | 3,2 |
| 9 | Other forms of heart disease (I30-I52) | 200 | 4,0 | 9 | Other forms of heart disease (I30-I52) | 69 | 3,1 | 9 | Hypertensive diseases (I10-I15) | 105 | 3,2 |
| 10 | Influenza and pneumonia (J09-J18) | 169 | 3,3 | 10 | Hypertensive diseases (I10-I15) | 67 | 3,0 | 10 | Other forms of heart disease (I30-I52) | 105 | 3,2 |
| | Other natural causes | 1 757 | 34,8 | | Other natural causes | 783 | 35,4 | | Other natural causes | 1 157 | 35,1 |
| | Non-natural causes | 515 | 10,2 | | Non-natural causes | 275 | 12,4 | | Non-natural causes | 373 | 11,3 |
| | All causes | 5 051 | 100,0 | | All causes | 2 213 | 100,0 | | All causes | 3 300 | 100,0 |

*Excluding 1 193 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P1: The ten leading underlying natural causes of death by district municipality of death occurrence, Eastern Cape, 2011*

| Alfred Nzo | | No. | % | Amathole | | No. | % | Buffalo City Metro | | No. | % |
|------------|--|--------------|--------------|------------|--|---------------|--------------|--------------------|--|---------------|--------------|
| 1 | Tuberculosis (A15-A19)** | 557 | 8,9 | 1 | Tuberculosis (A15-A19)** | 1 606 | 10,8 | 1 | Tuberculosis (A15-A19)** | 1 571 | 14,4 |
| 2 | Other viral diseases (B25-B34) | 226 | 3,6 | 2 | Chronic lower respiratory diseases (J40-J47) | 869 | 5,8 | 2 | Cerebrovascular diseases (I60-I69) | 624 | 5,7 |
| 3 | Intestinal infectious diseases (A00-A09) | 167 | 2,7 | 3 | Other forms of heart disease (I30-I52) | 776 | 5,2 | 3 | Other forms of heart disease (I30-I52) | 549 | 5,0 |
| 4 | Influenza and pneumonia (J09-J18) | 164 | 2,6 | 4 | Cerebrovascular diseases (I60-I69) | 767 | 5,2 | 4 | Diabetes mellitus (E10-E14) | 529 | 4,9 |
| 5 | Cerebrovascular diseases (I60-I69) | 146 | 2,3 | 5 | Influenza and pneumonia (J09-J18) | 707 | 4,8 | 5 | Malignant neoplasm of digestive organs (C15-C26) | 485 | 4,5 |
| 6 | Other forms of heart disease (I30-I52) | 119 | 1,9 | 6 | Other viral diseases (B25-B34) | 575 | 3,9 | 6 | Chronic lower respiratory diseases (J40-J47) | 448 | 4,1 |
| 7 | Certain disorders involving the immune mechanism (D80-D89) | 104 | 1,7 | 7 | Hypertensive diseases (I10-I15) | 550 | 3,7 | 7 | Influenza and pneumonia (J09-J18) | 382 | 3,5 |
| 8 | Other acute lower respiratory infections (J20-J22) | 95 | 1,5 | 8 | Human immunodeficiency virus [HIV] disease (B20-B24) | 502 | 3,4 | 8 | Hypertensive diseases (I10-I15) | 373 | 3,4 |
| 9 | Other diseases of the respiratory system (J95-J99) | 79 | 1,3 | 9 | Diabetes mellitus (E10-E14) | 490 | 3,3 | 9 | Other viral diseases (B25-B34) | 339 | 3,1 |
| 10 | Diabetes mellitus (E10-E14) | 78 | 1,2 | 10 | Intestinal infectious diseases (A00-A09) | 434 | 2,9 | 10 | Ischaemic heart diseases (I20-I25) | 245 | 2,3 |
| | Other natural causes | 4 106 | 65,4 | | Other natural causes | 6 150 | 41,3 | | Other natural causes | 3 988 | 36,7 |
| | Non-natural causes | 433 | 6,9 | | Non-natural causes | 1 454 | 9,8 | | Non-natural causes | 1 341 | 12,3 |
| | All causes | 6 274 | 100,0 | | All causes | 14 880 | 100,0 | | All causes | 10 874 | 100,0 |
| Cacadu | | No. | % | Chris Hani | | No. | % | Joe Gqabi | | No. | % |
| 1 | Tuberculosis (A15-A19)** | 586 | 12,6 | 1 | Tuberculosis (A15-A19)** | 1 246 | 13,2 | 1 | Tuberculosis (A15-A19)** | 374 | 8,3 |
| 2 | Cerebrovascular diseases (I60-I69) | 279 | 6,0 | 2 | Other forms of heart disease (I30-I52) | 588 | 6,2 | 2 | Influenza and pneumonia (J09-J18) | 291 | 6,5 |
| 3 | Human immunodeficiency virus [HIV] disease (B20-B24) | 251 | 5,4 | 3 | Influenza and pneumonia (J09-J18) | 541 | 5,7 | 3 | Other forms of heart disease (I30-I52) | 204 | 4,5 |
| 4 | Other forms of heart disease (I30-I52) | 205 | 4,4 | 4 | Chronic lower respiratory diseases (J40-J47) | 482 | 5,1 | 4 | Certain disorders involving the immune mechanism (D80-D89) | 194 | 4,3 |
| 5 | Chronic lower respiratory diseases (J40-J47) | 185 | 4,0 | 5 | Cerebrovascular diseases (I60-I69) | 446 | 4,7 | 5 | Cerebrovascular diseases (I60-I69) | 177 | 3,9 |
| 6 | Diabetes mellitus (E10-E14) | 172 | 3,7 | 6 | Intestinal infectious diseases (A00-A09) | 374 | 4,0 | 6 | Intestinal infectious diseases (A00-A09) | 141 | 3,1 |
| 7 | Hypertensive diseases (I10-I15) | 162 | 3,5 | 7 | Diabetes mellitus (E10-E14) | 364 | 3,9 | 7 | Human immunodeficiency virus [HIV] disease (B20-B24) | 122 | 2,7 |
| 8 | Influenza and pneumonia (J09-J18) | 159 | 3,4 | 8 | Other viral diseases (B25-B34) | 338 | 3,6 | 8 | Diabetes mellitus (E10-E14) | 121 | 2,7 |
| 9 | Ischaemic heart diseases (I20-I25) | 150 | 3,2 | 9 | Hypertensive diseases (I10-I15) | 283 | 3,0 | 9 | Other viral diseases (B25-B34) | 118 | 2,6 |
| 10 | Malignant neoplasm of digestive organs (C15-C26) | 115 | 2,5 | 10 | Certain disorders involving the immune mechanism (D80-D89) | 253 | 2,7 | 10 | Hypertensive diseases (I10-I15) | 109 | 2,4 |
| | Other natural causes | 1 953 | 42,1 | | Other natural causes | 3 696 | 39,1 | | Other natural causes | 2 271 | 50,6 |
| | Non-natural causes | 422 | 9,1 | | Non-natural causes | 837 | 8,9 | | Non-natural causes | 364 | 8,1 |
| | All causes | 4 639 | 100,0 | | All causes | 9 448 | 100,0 | | All causes | 4 486 | 100,0 |

*Excluding 1 672 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P1: The ten leading underlying natural causes of death by district municipality of death occurrence, Eastern Cape, 2011* (concluded)

| Nelson Mandela Bay Metro | | No. | % | O. R. Tambo | | No. | % |
|--------------------------|--|--------------|--------------|-------------|--|---------------|--------------|
| 1 | Tuberculosis (A15-A19)** | 788 | 12,6 | 1 | Tuberculosis (A15-A19)** | 1 428 | 9,8 |
| 2 | Diabetes mellitus (E10-E14) | 400 | 6,4 | 2 | Other viral diseases (B25-B34) | 708 | 4,9 |
| 3 | Cerebrovascular diseases (I60-I69) | 399 | 6,4 | 3 | Human immunodeficiency virus [HIV] disease (B20-B24) | 684 | 4,7 |
| 4 | Hypertensive diseases (I10-I15) | 318 | 5,1 | 4 | Other forms of heart disease (I30-I52) | 485 | 3,3 |
| 5 | Chronic lower respiratory diseases (J40-J47) | 294 | 4,7 | 5 | Cerebrovascular diseases (I60-I69) | 465 | 3,2 |
| 6 | Human immunodeficiency virus [HIV] disease (B20-B24) | 236 | 3,8 | 6 | Influenza and pneumonia (J09-J18) | 412 | 2,8 |
| 7 | Other forms of heart disease (I30-I52) | 228 | 3,6 | 7 | Intestinal infectious diseases (A00-A09) | 371 | 2,6 |
| 8 | Ischaemic heart diseases (I20-I25) | 217 | 3,5 | 8 | Diabetes mellitus (E10-E14) | 325 | 2,2 |
| 9 | Malignant neoplasm of digestive organs (C15-C26) | 210 | 3,4 | 9 | Chronic lower respiratory diseases (J40-J47) | 250 | 1,7 |
| 10 | Certain disorders involving the immune mechanism (D80-D89) | 201 | 3,2 | 10 | Malignant neoplasm of digestive organs (C15-C26) | 223 | 1,5 |
| | Other natural causes | 2 404 | 38,4 | | Other natural causes | 7 714 | 53,2 |
| | Non-natural causes | 569 | 9,1 | | Non-natural causes | 1 433 | 9,9 |
| | All causes | 6 264 | 100,0 | | All causes | 14 498 | 100,0 |

*Excluding 1 672 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P2: The ten leading underlying natural causes of death by district municipality of death occurrence, Northern Cape, 2011*

| Frances Baard | | No. | % | John Taolo Gaetsewe | | No. | % | Namakwa | | No. | % |
|----------------|--|--------------|--------------|---------------------|---|--------------|--------------|---------|---|--------------|--------------|
| 1 | Tuberculosis (A15-A19)** | 372 | 9,8 | 1 | Influenza and pneumonia (J09-J18) | 143 | 5,9 | 1 | Chronic lower respiratory diseases (J40-J47) | 44 | 4,1 |
| 2 | Influenza and pneumonia (J09-J18) | 232 | 6,1 | 2 | Tuberculosis (A15-A19)** | 134 | 5,6 | 2 | Tuberculosis (A15-A19)** | 41 | 3,8 |
| 3 | Cerebrovascular diseases (I60-I69) | 188 | 4,9 | 3 | Other acute lower respiratory infections (J20-J22) | 122 | 5,1 | 3 | Cerebrovascular diseases (I60-I69) | 34 | 3,2 |
| 4 | Human immunodeficiency virus [HIV] disease (B20-B24) | 171 | 4,5 | 4 | Intestinal infectious diseases (A00-A09) | 105 | 4,4 | 4 | Ischaemic heart diseases (I20-I25) | 31 | 2,9 |
| 5 | Certain disorders involving the immune mechanism (D80-D89) | 156 | 4,1 | 5 | Human immunodeficiency virus [HIV] disease (B20-B24) | 75 | 3,1 | 5 | Other forms of heart disease (I30-I52) | 24 | 2,2 |
| 6 | Other forms of heart disease (I30-I52) | 152 | 4,0 | 6 | Other forms of heart disease (I30-I52) | 62 | 2,6 | 6 | Hypertensive diseases (I10-I15) | 23 | 2,1 |
| 7 | Hypertensive diseases (I10-I15) | 140 | 3,7 | 7 | Cerebrovascular diseases (I60-I69) | 53 | 2,2 | 7 | Human immunodeficiency virus [HIV] disease (B20-B24) | 20 | 1,9 |
| 8 | Intestinal infectious diseases (A00-A09) | 111 | 2,9 | 8 | Hypertensive diseases (I10-I15) | 50 | 2,1 | 7 | Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | 20 | 1,9 |
| 8 | Chronic lower respiratory diseases (J40-J47) | 111 | 2,9 | 9 | Chronic lower respiratory diseases (J40-J47) | 36 | 1,5 | 9 | Diabetes mellitus (E10-E14) | 18 | 1,7 |
| 10 | Diabetes mellitus (E10-E14) | 108 | 2,8 | 10 | Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 30 | 1,2 | 10 | Malignant neoplasm of digestive organs (C15-C26) | 17 | 1,6 |
| | Other natural causes | 1 747 | 45,8 | | Other natural causes | 1 421 | 59,0 | | Other natural causes | 732 | 67,9 |
| | Non-natural causes | 327 | 8,6 | | Non-natural causes | 177 | 7,4 | | Non-natural causes | 74 | 6,9 |
| | All causes | 3 815 | 100,0 | | All causes | 2 408 | 100,0 | | All causes | 1 078 | 100,0 |
| Pixley ka Seme | | No. | % | Siyanda | | No. | % | | | | |
| 1 | Tuberculosis (A15-A19)** | 397 | 9,9 | 1 | Tuberculosis (A15-A19)** | 263 | 9,2 | | | | |
| 2 | Cerebrovascular diseases (I60-I69) | 260 | 6,5 | 2 | Human immunodeficiency virus [HIV] disease (B20-B24) | 194 | 6,8 | | | | |
| 3 | Influenza and pneumonia (J09-J18) | 214 | 5,3 | 3 | Chronic lower respiratory diseases (J40-J47) | 160 | 5,6 | | | | |
| 4 | Other forms of heart disease (I30-I52) | 200 | 5,0 | 4 | Cerebrovascular diseases (I60-I69) | 129 | 4,5 | | | | |
| 5 | Chronic lower respiratory diseases (J40-J47) | 190 | 4,7 | 5 | Influenza and pneumonia (J09-J18) | 117 | 4,1 | | | | |
| 6 | Human immunodeficiency virus [HIV] disease (B20-B24) | 182 | 4,5 | 6 | Intestinal infectious diseases (A00-A09) | 116 | 4,1 | | | | |
| 7 | Diabetes mellitus (E10-E14) | 129 | 3,2 | 7 | Certain disorders involving the immune mechanism (D80-D89) | 114 | 4,0 | | | | |
| 8 | Ischaemic heart diseases (I20-I25) | 123 | 3,1 | 8 | Hypertensive diseases (I10-I15) | 107 | 3,7 | | | | |
| 9 | Hypertensive diseases (I10-I15) | 106 | 2,6 | 9 | Diabetes mellitus (E10-E14) | 94 | 3,3 | | | | |
| 10 | Malignant neoplasm of digestive organs (C15-C26) | 88 | 2,2 | 10 | Ischaemic heart diseases (I20-I25) | 84 | 2,9 | | | | |
| | Other natural causes | 1 802 | 44,8 | | Other natural causes | 1 192 | 41,8 | | | | |
| | Non-natural causes | 335 | 8,3 | | Non-natural causes | 285 | 10,0 | | | | |
| | All causes | 4 026 | 100,0 | | All causes | 2 855 | 100,0 | | | | |

*Excluding 536 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P3: The ten leading underlying natural causes of death by district municipality of death occurrence, Free State, 2011*

| Fezile Dabi | | No. | % | Lejweleputswa | | No. | % | Mangaung Metro | | No. | % |
|--------------------|--|---------------|--------------|---------------|--|--------------|--------------|----------------|--|---------------|--------------|
| 1 | Influenza and pneumonia (J09-J18) | 733 | 13,1 | 1 | Influenza and pneumonia (J09-J18) | 1 338 | 14,1 | 1 | Tuberculosis (A15-A19)** | 1 076 | 10,5 |
| 2 | Tuberculosis (A15-A19)** | 523 | 9,4 | 2 | Tuberculosis (A15-A19)** | 867 | 9,1 | 2 | Influenza and pneumonia (J09-J18) | 789 | 7,7 |
| 3 | Other forms of heart disease (I30-I52) | 408 | 7,3 | 3 | Other forms of heart disease (I30-I52) | 512 | 5,4 | 3 | Cerebrovascular diseases (I60-I69) | 536 | 5,2 |
| 4 | Cerebrovascular diseases (I60-I69) | 276 | 4,9 | 4 | Intestinal infectious diseases (A00-A09) | 502 | 5,3 | 4 | Other forms of heart disease (I30-I52) | 374 | 3,6 |
| 5 | Intestinal infectious diseases (A00-A09) | 263 | 4,7 | 5 | Cerebrovascular diseases (I60-I69) | 425 | 4,5 | 5 | Intestinal infectious diseases (A00-A09) | 330 | 3,2 |
| 6 | Certain disorders involving the immune mechanism (D80-D89) | 240 | 4,3 | 6 | Hypertensive diseases (I10-I15) | 266 | 2,8 | 6 | Certain disorders involving the immune mechanism (D80-D89) | 294 | 2,9 |
| 7 | Hypertensive diseases (I10-I15) | 215 | 3,9 | 7 | Diabetes mellitus (E10-E14) | 249 | 2,6 | 7 | Hypertensive diseases (I10-I15) | 256 | 2,5 |
| 8 | Diabetes mellitus (E10-E14) | 185 | 3,3 | 8 | Certain disorders involving the immune mechanism (D80-D89) | 221 | 2,3 | 8 | Diabetes mellitus (E10-E14) | 248 | 2,4 |
| 9 | Chronic lower respiratory diseases (J40-J47) | 139 | 2,5 | 9 | Chronic lower respiratory diseases (J40-J47) | 207 | 2,2 | 9 | Ischaemic heart diseases (I20-I25) | 183 | 1,8 |
| 10 | Human immunodeficiency virus [HIV] disease (B20-B24) | 136 | 2,4 | 10 | Ischaemic heart diseases (I20-I25) | 180 | 1,9 | 10 | Renal failure (N17-N19) | 179 | 1,7 |
| | Other natural causes | 1 967 | 35,2 | | Other natural causes | 4 019 | 42,2 | | Other natural causes | 5 242 | 50,9 |
| | Non-natural causes | 498 | 8,9 | | Non-natural causes | 737 | 7,7 | | Non-natural causes | 786 | 7,6 |
| | All causes | 5 583 | 100,0 | | All causes | 9 523 | 100,0 | | All causes | 10 293 | 100,0 |
| Thabo Mofutsanyane | | No. | % | Xhariep | | No. | % | | | | |
| 1 | Influenza and pneumonia (J09-J18) | 1 202 | 10,2 | 1 | Tuberculosis (A15-A19)** | 303 | 9,9 | | | | |
| 2 | Tuberculosis (A15-A19)** | 1 099 | 9,4 | 2 | Influenza and pneumonia (J09-J18) | 266 | 8,7 | | | | |
| 3 | Intestinal infectious diseases (A00-A09) | 864 | 7,4 | 3 | Cerebrovascular diseases (I60-I69) | 155 | 5,1 | | | | |
| 4 | Other forms of heart disease (I30-I52) | 803 | 6,8 | 4 | Certain disorders involving the immune mechanism (D80-D89) | 139 | 4,5 | | | | |
| 5 | Cerebrovascular diseases (I60-I69) | 561 | 4,8 | 5 | Other forms of heart disease (I30-I52) | 125 | 4,1 | | | | |
| 6 | Certain disorders involving the immune mechanism (D80-D89) | 520 | 4,4 | 6 | Intestinal infectious diseases (A00-A09) | 114 | 3,7 | | | | |
| 7 | Diabetes mellitus (E10-E14) | 412 | 3,5 | 7 | Chronic lower respiratory diseases (J40-J47) | 80 | 2,6 | | | | |
| 8 | Other viral diseases (B25-B34) | 398 | 3,4 | 8 | Diabetes mellitus (E10-E14) | 65 | 2,1 | | | | |
| 9 | Hypertensive diseases (I10-I15) | 380 | 3,2 | 9 | Hypertensive diseases (I10-I15) | 53 | 1,7 | | | | |
| 10 | Human immunodeficiency virus [HIV] disease (B20-B24) | 371 | 3,2 | 10 | Ischaemic heart diseases (I20-I25) | 51 | 1,7 | | | | |
| | Other natural causes | 4 325 | 36,8 | | Other natural causes | 1 447 | 47,2 | | | | |
| | Non-natural causes | 807 | 6,9 | | Non-natural causes | 267 | 8,7 | | | | |
| | All causes | 11 742 | 100,0 | | All causes | 3 065 | 100,0 | | | | |

*Excluding 429 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P4: The ten leading underlying natural causes of death by district municipality of death occurrence, KwaZulu-Natal, 2011*

| Amajuba | | No. | % | eThekweni Metro | | No. | % | iLembe | | No. | % |
|---------|--|--------------|--------------|-----------------|--|---------------|--------------|---------------|--|---------------|--------------|
| 1 | Tuberculosis (A15-A19)** | 756 | 14,5 | 1 | Tuberculosis (A15-A19)** | 3 372 | 12,2 | 1 | Tuberculosis (A15-A19)** | 903 | 16,7 |
| 2 | Other forms of heart disease (I30-I52) | 469 | 9,0 | 2 | Other forms of heart disease (I30-I52) | 1 722 | 6,3 | 2 | Intestinal infectious diseases (A00-A09) | 328 | 6,1 |
| 3 | Influenza and pneumonia (J09-J18) | 411 | 7,9 | 3 | Diabetes mellitus (E10-E14) | 1 629 | 5,9 | 3 | Cerebrovascular diseases (I60-I69) | 314 | 5,8 |
| 4 | Other acute lower respiratory infections (J20-J22) | 372 | 7,2 | 4 | Cerebrovascular diseases (I60-I69) | 1 379 | 5,0 | 4 | Other viral diseases (B25-B34) | 280 | 5,2 |
| 5 | Cerebrovascular diseases (I60-I69) | 271 | 5,2 | 5 | Human immunodeficiency virus [HIV] disease (B20-B24) | 1 213 | 4,4 | 5 | Diabetes mellitus (E10-E14) | 247 | 4,6 |
| 6 | Intestinal infectious diseases (A00-A09) | 231 | 4,4 | 6 | Influenza and pneumonia (J09-J18) | 1 157 | 4,2 | 6 | Human immunodeficiency virus [HIV] disease (B20-B24) | 235 | 4,3 |
| 7 | Diabetes mellitus (E10-E14) | 192 | 3,7 | 7 | Ischaemic heart diseases (I20-I25) | 1 143 | 4,2 | 7 | Influenza and pneumonia (J09-J18) | 170 | 3,1 |
| 8 | Hypertensive diseases (I10-I15) | 187 | 3,6 | 8 | Intestinal infectious diseases (A00-A09) | 765 | 2,8 | 8 | Certain disorders involving the immune mechanism (D80-D89) | 160 | 3,0 |
| 9 | Renal failure (N17-N19) | 121 | 2,3 | 9 | Other viral diseases (B25-B34) | 735 | 2,7 | 9 | Other forms of heart disease (I30-I52) | 153 | 2,8 |
| 10 | Other viral diseases (B25-B34) | 112 | 2,2 | 10 | Hypertensive diseases (I10-I15) | 696 | 2,5 | 10 | Hypertensive diseases (I10-I15) | 129 | 2,4 |
| | Other natural causes | 1 735 | 33,4 | | Other natural causes | 10 961 | 39,8 | | Other natural causes | 2 028 | 37,4 |
| | Non-natural causes | 345 | 6,6 | | Non-natural causes | 2 764 | 10,0 | | Non-natural causes | 474 | 8,7 |
| | All causes | 5 202 | 100,0 | | All causes | 27 536 | 100,0 | | All causes | 5 421 | 100,0 |
| Sisonke | | No. | % | Ugu | | No. | % | uMgungundlovu | | No. | % |
| 1 | Tuberculosis (A15-A19)** | 965 | 16,2 | 1 | Tuberculosis (A15-A19)** | 1 684 | 16,2 | 1 | Tuberculosis (A15-A19)** | 1 201 | 11,2 |
| 2 | Influenza and pneumonia (J09-J18) | 338 | 5,7 | 2 | Cerebrovascular diseases (I60-I69) | 725 | 7,0 | 2 | Human immunodeficiency virus [HIV] disease (B20-B24) | 710 | 6,6 |
| 3 | Other viral diseases (B25-B34) | 328 | 5,5 | 3 | Influenza and pneumonia (J09-J18) | 611 | 5,9 | 3 | Diabetes mellitus (E10-E14) | 645 | 6,0 |
| 4 | Cerebrovascular diseases (I60-I69) | 314 | 5,3 | 4 | Other viral diseases (B25-B34) | 585 | 5,6 | 4 | Cerebrovascular diseases (I60-I69) | 566 | 5,3 |
| 5 | Intestinal infectious diseases (A00-A09) | 277 | 4,6 | 5 | Human immunodeficiency virus [HIV] disease (B20-B24) | 554 | 5,3 | 5 | Hypertensive diseases (I10-I15) | 456 | 4,3 |
| 6 | Diabetes mellitus (E10-E14) | 271 | 4,5 | 6 | Diabetes mellitus (E10-E14) | 500 | 4,8 | 6 | Influenza and pneumonia (J09-J18) | 445 | 4,1 |
| 7 | Other forms of heart disease (I30-I52) | 208 | 3,5 | 7 | Intestinal infectious diseases (A00-A09) | 465 | 4,5 | 7 | Other forms of heart disease (I30-I52) | 429 | 4,0 |
| 8 | Chronic lower respiratory diseases (J40-J47) | 185 | 3,1 | 8 | Other forms of heart disease (I30-I52) | 341 | 3,3 | 8 | Intestinal infectious diseases (A00-A09) | 367 | 3,4 |
| 9 | Hypertensive diseases (I10-I15) | 152 | 2,5 | 9 | Hypertensive diseases (I10-I15) | 308 | 3,0 | 9 | Other viral diseases (B25-B34) | 338 | 3,2 |
| 10 | Certain disorders involving the immune mechanism (D80-D89) | 144 | 2,4 | 10 | Chronic lower respiratory diseases (J40-J47) | 300 | 2,9 | 10 | Ischaemic heart diseases (I20-I25) | 311 | 2,9 |
| | Other natural causes | 2 357 | 39,5 | | Other natural causes | 3 484 | 33,6 | | Other natural causes | 4 297 | 40,1 |
| | Non-natural causes | 435 | 7,3 | | Non-natural causes | 822 | 7,9 | | Non-natural causes | 958 | 8,9 |
| | All causes | 5 974 | 100,0 | | All causes | 10 379 | 100,0 | | All causes | 10 723 | 100,0 |

*Excluding 5 828 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P4: The ten leading underlying natural causes of death by district municipality of death occurrence, KwaZulu-Natal, 2011* (concluded)

| uMkhanyakude | | No. | % | uMzinyathi | | No. | % | uThukela | | No. | % |
|--------------|--|--------------|--------------|------------|---|--------------|--------------|----------|--|--------------|--------------|
| 1 | Human immunodeficiency virus [HIV] disease (B20-B24) | 714 | 16,2 | 1 | Tuberculosis (A15-A19)** | 775 | 14,9 | 1 | Tuberculosis (A15-A19)** | 988 | 13,6 |
| 2 | Tuberculosis (A15-A19)** | 616 | 13,9 | 2 | Influenza and pneumonia (J09-J18) | 305 | 5,8 | 2 | Cerebrovascular diseases (I60-I69) | 522 | 7,2 |
| 3 | Cerebrovascular diseases (I60-I69) | 247 | 5,6 | 3 | Intestinal infectious diseases (A00-A09) | 295 | 5,7 | 3 | Influenza and pneumonia (J09-J18) | 477 | 6,6 |
| 4 | Intestinal infectious diseases (A00-A09) | 166 | 3,8 | 4 | Other forms of heart disease (I30-I52) | 286 | 5,5 | 4 | Intestinal infectious diseases (A00-A09) | 462 | 6,4 |
| 5 | Other viral diseases (B25-B34) | 156 | 3,5 | 5 | Cerebrovascular diseases (I60-I69) | 274 | 5,3 | 5 | Other forms of heart disease (I30-I52) | 438 | 6,0 |
| 6 | Other forms of heart disease (I30-I52) | 141 | 3,2 | 6 | Other viral diseases (B25-B34) | 248 | 4,8 | 6 | Certain disorders involving the immune mechanism (D80-D89) | 329 | 4,5 |
| 7 | Diabetes mellitus (E10-E14) | 137 | 3,1 | 7 | Certain disorders involving the immune mechanism (D80-D89) | 203 | 3,9 | 7 | Diabetes mellitus (E10-E14) | 275 | 3,8 |
| 8 | Hypertensive diseases (I10-I15) | 124 | 2,8 | 8 | Diabetes mellitus (E10-E14) | 193 | 3,7 | 8 | Ischaemic heart diseases (I20-I25) | 263 | 3,6 |
| 9 | Influenza and pneumonia (J09-J18) | 108 | 2,4 | 9 | Human immunodeficiency virus [HIV] disease (B20-B24) | 158 | 3,0 | 9 | Human immunodeficiency virus [HIV] disease (B20-B24) | 226 | 3,1 |
| 10 | Malignant neoplasm of female genital organs (C51-C58) | 51 | 1,2 | 10 | Hypertensive diseases (I10-I15) | 106 | 2,0 | 10 | Other acute lower respiratory infections (J20-J22) | 204 | 2,8 |
| | Other natural causes | 1 605 | 36,3 | | Other natural causes | 1 910 | 36,6 | | Other natural causes | 2 441 | 33,6 |
| | Non-natural causes | 355 | 8,0 | | Non-natural causes | 463 | 8,9 | | Non-natural causes | 641 | 8,8 |
| | All causes | 4 420 | 100,0 | | All causes | 5 216 | 100,0 | | All causes | 7 266 | 100,0 |
| uThungulu | | No. | % | Zululand | | No. | % | | | | |
| 1 | Tuberculosis (A15-A19)** | 1 270 | 14,5 | 1 | Tuberculosis (A15-A19)** | 1 622 | 20,5 | | | | |
| 2 | Influenza and pneumonia (J09-J18) | 501 | 5,7 | 2 | Other viral diseases (B25-B34) | 457 | 5,8 | | | | |
| 3 | Other viral diseases (B25-B34) | 462 | 5,3 | 3 | Intestinal infectious diseases (A00-A09) | 448 | 5,7 | | | | |
| 4 | Cerebrovascular diseases (I60-I69) | 442 | 5,0 | 4 | Influenza and pneumonia (J09-J18) | 425 | 5,4 | | | | |
| 5 | Human immunodeficiency virus [HIV] disease (B20-B24) | 418 | 4,8 | 5 | Cerebrovascular diseases (I60-I69) | 380 | 4,8 | | | | |
| 6 | Other forms of heart disease (I30-I52) | 397 | 4,5 | 6 | Other forms of heart disease (I30-I52) | 329 | 4,1 | | | | |
| 7 | Diabetes mellitus (E10-E14) | 364 | 4,2 | 7 | Diabetes mellitus (E10-E14) | 248 | 3,1 | | | | |
| 8 | Intestinal infectious diseases (A00-A09) | 330 | 3,8 | 8 | Other acute lower respiratory infections (J20-J22) | 216 | 2,7 | | | | |
| 9 | Hypertensive diseases (I10-I15) | 237 | 2,7 | 9 | Human immunodeficiency virus [HIV] disease (B20-B24) | 181 | 2,3 | | | | |
| 10 | Certain disorders involving the immune mechanism (D80-D89) | 184 | 2,1 | 10 | Inflammatory diseases of the central nervous system (G00-G09) | 173 | 2,2 | | | | |
| | Other natural causes | 3 287 | 37,5 | | Other natural causes | 2 818 | 35,5 | | | | |
| | Non-natural causes | 866 | 9,9 | | Non-natural causes | 632 | 8,0 | | | | |
| | All causes | 8 758 | 100,0 | | All causes | 7 929 | 100,0 | | | | |

*Excluding 5 828 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P5: The ten leading underlying natural causes of death by district municipality of death occurrence, North West, 2011*

| Bojanala Platinum | | | | Dr Kenneth Kaunda | | | | Dr Ruth Segomotsi Mompati | | | |
|---------------------|--|---------------|--------------|-------------------|--|--------------|--------------|---------------------------|--|--------------|--------------|
| | | No. | % | | | No. | % | | | No. | % |
| 1 | Tuberculosis (A15-A19)** | 1 204 | 9,0 | 1 | Tuberculosis (A15-A19)** | 1 088 | 13,8 | 1 | Tuberculosis (A15-A19)** | 573 | 10,1 |
| 2 | Influenza and pneumonia (J09-J18) | 903 | 6,8 | 2 | Influenza and pneumonia (J09-J18) | 483 | 6,1 | 2 | Influenza and pneumonia (J09-J18) | 519 | 9,1 |
| 3 | Other forms of heart disease (I30-I52) | 865 | 6,5 | 3 | Cerebrovascular diseases (I60-I69) | 386 | 4,9 | 3 | Certain disorders involving the immune mechanism (D80-D89) | 358 | 6,3 |
| 4 | Cerebrovascular diseases (I60-I69) | 614 | 4,6 | 4 | Other viral diseases (B25-B34) | 289 | 3,7 | 4 | Intestinal infectious diseases (A00-A09) | 318 | 5,6 |
| 5 | Hypertensive diseases (I10-I15) | 591 | 4,4 | 5 | Hypertensive diseases (I10-I15) | 283 | 3,6 | 5 | Hypertensive diseases (I10-I15) | 299 | 5,3 |
| 6 | Intestinal infectious diseases (A00-A09) | 549 | 4,1 | 6 | Other forms of heart disease (I30-I52) | 259 | 3,3 | 6 | Other forms of heart disease (I30-I52) | 287 | 5,1 |
| 7 | Other viral diseases (B25-B34) | 519 | 3,9 | 7 | Human immunodeficiency virus [HIV] disease (B20-B24) | 255 | 3,2 | 7 | Cerebrovascular diseases (I60-I69) | 260 | 4,6 |
| 8 | Diabetes mellitus (E10-E14) | 479 | 3,6 | 8 | Certain disorders involving the immune mechanism (D80-D89) | 253 | 3,2 | 8 | Other viral diseases (B25-B34) | 259 | 4,6 |
| 9 | Certain disorders involving the immune mechanism (D80-D89) | 413 | 3,1 | 9 | Intestinal infectious diseases (A00-A09) | 224 | 2,8 | 9 | Other acute lower respiratory infections (J20-J22) | 162 | 2,9 |
| 10 | Chronic lower respiratory diseases (J40-J47) | 326 | 2,4 | 10 | Diabetes mellitus (E10-E14) | 214 | 2,7 | 10 | Human immunodeficiency virus [HIV] disease (B20-B24) | 156 | 2,7 |
| | Other natural causes | 5 679 | 42,7 | | Other natural causes | 3 482 | 44,3 | | Other natural causes | 2 181 | 38,4 |
| | Non-natural causes | 1 167 | 8,8 | | Non-natural causes | 644 | 8,2 | | Non-natural causes | 305 | 5,4 |
| | All causes | 13 309 | 100,0 | | All causes | 7 860 | 100,0 | | All causes | 5 677 | 100,0 |
| Ngaka Modiri Molema | | | | | | | | | | | |
| | | No. | % | | | | | | | | |
| 1 | Tuberculosis (A15-A19)** | 1 298 | 12,9 | | | | | | | | |
| 2 | Influenza and pneumonia (J09-J18) | 1 180 | 11,7 | | | | | | | | |
| 3 | Other forms of heart disease (I30-I52) | 726 | 7,2 | | | | | | | | |
| 4 | Hypertensive diseases (I10-I15) | 505 | 5,0 | | | | | | | | |
| 5 | Cerebrovascular diseases (I60-I69) | 456 | 4,5 | | | | | | | | |
| 6 | Intestinal infectious diseases (A00-A09) | 443 | 4,4 | | | | | | | | |
| 7 | Diabetes mellitus (E10-E14) | 327 | 3,2 | | | | | | | | |
| 8 | Chronic lower respiratory diseases (J40-J47) | 311 | 3,1 | | | | | | | | |
| 9 | Other viral diseases (B25-B34) | 274 | 2,7 | | | | | | | | |
| 10 | Certain disorders involving the immune mechanism (D80-D89) | 236 | 2,3 | | | | | | | | |
| | Other natural causes | 3 753 | 37,2 | | | | | | | | |
| | Non-natural causes | 592 | 5,9 | | | | | | | | |
| | All causes | 10 101 | 100,0 | | | | | | | | |

*Excluding 608 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P6: The ten leading underlying natural causes of death by district municipality of death occurrence, Gauteng, 2011*

| City of Johannesburg Metro | | | | City of Tshwane Metro | | | | Ekurhuleni Metro | | | |
|----------------------------|---|---------------|--------------|-----------------------|--|---------------|--------------|------------------|--|---------------|--------------|
| | | No. | % | | | No. | % | | | No. | % |
| 1 | Tuberculosis (A15-A19)** | 2 108 | 7,2 | 1 | Tuberculosis (A15-A19)** | 1 601 | 8,2 | 1 | Tuberculosis (A15-A19)** | 2 440 | 9,1 |
| 2 | Influenza and pneumonia (J09-J18) | 1 597 | 5,4 | 2 | Other forms of heart disease (I30-I52) | 1 376 | 7,0 | 2 | Influenza and pneumonia (J09-J18) | 2 066 | 7,7 |
| 3 | Other forms of heart disease (I30-I52) | 1 267 | 4,3 | 3 | Influenza and pneumonia (J09-J18) | 1 175 | 6,0 | 3 | Other forms of heart disease (I30-I52) | 1 229 | 4,6 |
| 4 | Cerebrovascular diseases (I60-I69) | 1 141 | 3,9 | 4 | Hypertensive diseases (I10-I15) | 1 130 | 5,8 | 4 | Cerebrovascular diseases (I60-I69) | 938 | 3,5 |
| 5 | Human immunodeficiency virus [HIV] disease (B20-B24) | 926 | 3,1 | 5 | Diabetes mellitus (E10-E14) | 950 | 4,9 | 4 | Diabetes mellitus (E10-E14) | 926 | 3,5 |
| 6 | Diabetes mellitus (E10-E14) | 865 | 2,9 | 6 | Cerebrovascular diseases (I60-I69) | 827 | 4,2 | 6 | Hypertensive diseases (I10-I15) | 918 | 3,4 |
| 7 | Ischaemic heart diseases (I20-I25) | 771 | 2,6 | 7 | Ischaemic heart diseases (I20-I25) | 689 | 3,5 | 7 | Human immunodeficiency virus [HIV] disease (B20-B24) | 763 | 2,9 |
| 8 | Chronic lower respiratory diseases (J40-J47) | 719 | 2,4 | 8 | Intestinal infectious diseases (A00-A09) | 607 | 3,1 | 8 | Intestinal infectious diseases (A00-A09) | 747 | 2,8 |
| 9 | Malignant neoplasm of digestive organs (C15-C26) | 669 | 2,3 | 9 | Certain disorders involving the immune mechanism (D80-D89) | 519 | 2,7 | 9 | Other viral diseases (B25-B34) | 660 | 2,5 |
| 10 | Other bacterial diseases (A30-A49) | 594 | 2,0 | 10 | Human immunodeficiency virus [HIV] disease (B20-B24) | 512 | 2,6 | 10 | Ischaemic heart diseases (I20-I25) | 642 | 2,4 |
| | Other natural causes | 15 900 | 54,0 | | Other natural causes | 8 386 | 42,8 | | Other natural causes | 12 951 | 48,5 |
| | Non-natural causes | 2 912 | 9,9 | | Non-natural causes | 1 802 | 9,2 | | Non-natural causes | 2 444 | 9,1 |
| | All causes | 29 469 | 100,0 | | All causes | 19 574 | 100,0 | | All causes | 26 724 | 100,0 |
| Sedibeng | | | | West Rand | | | | | | | |
| | | No. | % | | | No. | % | | | | |
| 1 | Influenza and pneumonia (J09-J18) | 1 421 | 12,2 | 1 | Tuberculosis (A15-A19)** | 858 | 9,0 | | | | |
| 2 | Tuberculosis (A15-A19)** | 1 056 | 9,1 | 2 | Influenza and pneumonia (J09-J18) | 672 | 7,0 | | | | |
| 3 | Other forms of heart disease (I30-I52) | 829 | 7,1 | 3 | Other forms of heart disease (I30-I52) | 470 | 4,9 | | | | |
| 4 | Hypertensive diseases (I10-I15) | 593 | 5,1 | 4 | Hypertensive diseases (I10-I15) | 344 | 3,6 | | | | |
| 5 | Cerebrovascular diseases (I60-I69) | 544 | 4,7 | 5 | Ischaemic heart diseases (I20-I25) | 326 | 3,4 | | | | |
| 6 | Intestinal infectious diseases (A00-A09) | 492 | 4,2 | 6 | Cerebrovascular diseases (I60-I69) | 314 | 3,3 | | | | |
| 7 | Diabetes mellitus (E10-E14) | 454 | 3,9 | 7 | Intestinal infectious diseases (A00-A09) | 295 | 3,1 | | | | |
| 8 | Ischaemic heart diseases (I20-I25) | 291 | 2,5 | 8 | Diabetes mellitus (E10-E14) | 290 | 3,0 | | | | |
| 9 | Chronic lower respiratory diseases (J40-J47) | 278 | 2,4 | 9 | Other viral diseases (B25-B34) | 237 | 2,5 | | | | |
| 10 | Inflammatory diseases of the central nervous system (G00-G09) | 249 | 2,1 | 10 | Chronic lower respiratory diseases (J40-J47) | 221 | 2,3 | | | | |
| | Other natural causes | 4 439 | 38,2 | | Other natural causes | 4 421 | 46,2 | | | | |
| | Non-natural causes | 977 | 8,4 | | Non-natural causes | 1 121 | 11,7 | | | | |
| | All causes | 11 623 | 100,0 | | All causes | 9 569 | 100,0 | | | | |

*Excluding 3 792 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P7: The ten leading underlying natural causes of death by district municipality of death occurrence, Mpumalanga, 2011*

| Ehlanzeni | | No. | % | Gert Sibande | | No. | % | Nkangala | | No. | % |
|-----------|--|---------------|--------------|--------------|--|---------------|--------------|----------|--|---------------|--------------|
| 1 | Tuberculosis (A15-A19)** | 2 429 | 16,2 | 1 | Tuberculosis (A15-A19)** | 1 320 | 12,1 | 1 | Tuberculosis (A15-A19)** | 1 158 | 10,9 |
| 2 | Influenza and pneumonia (J09-J18) | 973 | 6,5 | 2 | Influenza and pneumonia (J09-J18) | 964 | 8,8 | 2 | Influenza and pneumonia (J09-J18) | 1 016 | 9,6 |
| 3 | Intestinal infectious diseases (A00-A09) | 942 | 6,3 | 3 | Intestinal infectious diseases (A00-A09) | 729 | 6,7 | 3 | Hypertensive diseases (I10-I15) | 817 | 7,7 |
| 4 | Cerebrovascular diseases (I60-I69) | 865 | 5,8 | 4 | Hypertensive diseases (I10-I15) | 502 | 4,6 | 4 | Other forms of heart disease (I30-I52) | 590 | 5,6 |
| 5 | Hypertensive diseases (I10-I15) | 690 | 4,6 | 5 | Certain disorders involving the immune mechanism (D80-D89) | 463 | 4,2 | 5 | Diabetes mellitus (E10-E14) | 480 | 4,5 |
| 6 | Human immunodeficiency virus [HIV] disease (B20-B24) | 604 | 4,0 | 6 | Diabetes mellitus (E10-E14) | 434 | 4,0 | 6 | Intestinal infectious diseases (A00-A09) | 443 | 4,2 |
| 7 | Diabetes mellitus (E10-E14) | 545 | 3,6 | 7 | Other forms of heart disease (I30-I52) | 410 | 3,7 | 7 | Human immunodeficiency virus [HIV] disease (B20-B24) | 395 | 3,7 |
| 7 | Other viral diseases (B25-B34) | 540 | 3,6 | 8 | Cerebrovascular diseases (I60-I69) | 308 | 2,8 | 8 | Cerebrovascular diseases (I60-I69) | 322 | 3,0 |
| 9 | Other forms of heart disease (I30-I52) | 508 | 3,4 | 8 | Other viral diseases (B25-B34) | 304 | 2,8 | 9 | Chronic lower respiratory diseases (J40-J47) | 306 | 2,9 |
| 10 | Certain disorders involving the immune mechanism (D80-D89) | 469 | 3,1 | 10 | Human immunodeficiency virus [HIV] disease (B20-B24) | 273 | 2,5 | 10 | Other viral diseases (B25-B34) | 297 | 2,8 |
| | Other natural causes | 5 186 | 34,6 | | Other natural causes | 4 258 | 38,9 | | Other natural causes | 3 770 | 35,5 |
| | Non-natural causes | 1 222 | 8,2 | | Non-natural causes | 970 | 8,9 | | Non-natural causes | 1 019 | 9,6 |
| | All causes | 14 973 | 100,0 | | All causes | 10 935 | 100,0 | | All causes | 10 613 | 100,0 |

*Excluding 1 516 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix P8: The ten leading underlying natural causes of death by district municipality of death occurrence, Limpopo, 2011*

| Capricorn | | | | Greater Sekhukhune | | | | Mopani | | | |
|-----------|--|---------------|--------------|--------------------|--|--------------|--------------|--------|---|--------------|--------------|
| | | No. | % | | | No. | % | | | No. | % |
| 1 | Influenza and pneumonia (J09-J18) | 1 263 | 11,2 | 1 | Influenza and pneumonia (J09-J18) | 1 789 | 20,8 | 1 | Tuberculosis (A15-A19)** | 914 | 10,3 |
| 2 | Tuberculosis (A15-A19)** | 1 067 | 9,4 | 2 | Intestinal infectious diseases (A00-A09) | 818 | 9,5 | 2 | Influenza and pneumonia (J09-J18) | 759 | 8,5 |
| 3 | Hypertensive diseases (I10-I15) | 707 | 6,2 | 3 | Tuberculosis (A15-A19)** | 682 | 7,9 | 3 | Intestinal infectious diseases (A00-A09) | 746 | 8,4 |
| 4 | Intestinal infectious diseases (A00-A09) | 687 | 6,1 | 4 | Cerebrovascular diseases (I60-I69) | 591 | 6,9 | 4 | Other viral diseases (B25-B34) | 320 | 3,6 |
| 5 | Diabetes mellitus (E10-E14) | 518 | 4,6 | 5 | Hypertensive diseases (I10-I15) | 438 | 5,1 | 4 | Diabetes mellitus (E10-E14) | 318 | 3,6 |
| 6 | Other forms of heart disease (I30-I52) | 448 | 4,0 | 6 | Other viral diseases (B25-B34) | 381 | 4,4 | 6 | Cerebrovascular diseases (I60-I69) | 295 | 3,3 |
| 7 | Other viral diseases (B25-B34) | 365 | 3,2 | 7 | Other forms of heart disease (I30-I52) | 324 | 3,8 | 7 | Other forms of heart disease (I30-I52) | 286 | 3,2 |
| 8 | Cerebrovascular diseases (I60-I69) | 338 | 3,0 | 8 | Diabetes mellitus (E10-E14) | 301 | 3,5 | 8 | Inflammatory diseases of the central nervous system (G00-G09) | 246 | 2,8 |
| 9 | Human immunodeficiency virus [HIV] disease (B20-B24) | 263 | 2,3 | 9 | Certain disorders involving the immune mechanism (D80-D89) | 250 | 2,9 | 9 | Hypertensive diseases (I10-I15) | 235 | 2,6 |
| 10 | Chronic lower respiratory diseases (J40-J47) | 237 | 2,1 | 10 | Chronic lower respiratory diseases (J40-J47) | 147 | 1,7 | 10 | Certain disorders involving the immune mechanism (D80-D89) | 231 | 2,6 |
| | Other natural causes | 4 525 | 40,0 | | Other natural causes | 2 255 | 26,2 | | Other natural causes | 3 967 | 44,6 |
| | Non-natural causes | 906 | 8,0 | | Non-natural causes | 645 | 7,5 | | Non-natural causes | 584 | 6,6 |
| | All causes | 11 324 | 100,0 | | All causes | 8 621 | 100,0 | | All causes | 8 901 | 100,0 |
| Vhembe | | | | Waterberg | | | | | | | |
| | | No. | % | | | No. | % | | | | |
| 1 | Tuberculosis (A15-A19)** | 715 | 7,7 | 1 | Tuberculosis (A15-A19)** | 494 | 9,9 | | | | |
| 2 | Intestinal infectious diseases (A00-A09) | 568 | 6,1 | 2 | Influenza and pneumonia (J09-J18) | 428 | 8,6 | | | | |
| 3 | Influenza and pneumonia (J09-J18) | 525 | 5,7 | 3 | Other viral diseases (B25-B34) | 216 | 4,3 | | | | |
| 4 | Diabetes mellitus (E10-E14) | 427 | 4,6 | 4 | Intestinal infectious diseases (A00-A09) | 206 | 4,1 | | | | |
| 5 | Cerebrovascular diseases (I60-I69) | 325 | 3,5 | 5 | Other forms of heart disease (I30-I52) | 185 | 3,7 | | | | |
| 6 | Other forms of heart disease (I30-I52) | 305 | 3,3 | 6 | Hypertensive diseases (I10-I15) | 174 | 3,5 | | | | |
| 7 | Other viral diseases (B25-B34) | 205 | 2,2 | 7 | Cerebrovascular diseases (I60-I69) | 150 | 3,0 | | | | |
| 8 | Hypertensive diseases (I10-I15) | 188 | 2,0 | 8 | Diabetes mellitus (E10-E14) | 142 | 2,9 | | | | |
| 9 | Diseases of liver (K70-K77) | 175 | 1,9 | 9 | Certain disorders involving the immune mechanism (D80-D89) | 120 | 2,4 | | | | |
| 10 | Other bacterial diseases (A30-A49) | 148 | 1,6 | 10 | Ischaemic heart diseases (I20-I25) | 107 | 2,2 | | | | |
| | Other natural causes | 4 999 | 54,0 | | Other natural causes | 2 254 | 45,3 | | | | |
| | Non-natural causes | 685 | 7,4 | | Non-natural causes | 499 | 10,0 | | | | |
| | All causes | 9 265 | 100,0 | | All causes | 4 975 | 100,0 | | | | |

*Excluding 4 261 cases with unspecified district municipality.

**Including deaths due to *MDR-TB* and *XDR-TB*.

Appendix Q: Population group differences

There were about 17,9% of death notification forms with missing population group information. This was the proportion of deaths where population group was either unspecified or unknown. Although, the percentage of missing information has declined from previous years (around 25% per year since 1997), the analysis was only limited to the appendix section due to the high proportion of missing information. Accordingly, these results do not provide sufficient information to be useful for policy formulation and planning purposes. As such, the results should be interpreted and used with caution.

Appendix Q1 shows the breakdown of the ten leading underlying natural causes of death by population group for 2011. The top ten leading underlying causes of death common for population groups was *cerebrovascular diseases*, *other forms of heart diseases*, *diabetes mellitus* and *hypertensive diseases* although their rankings varied by population group. On the one, hand, *tuberculosis* was among the ten leading underlying causes of death for all population groups except for the white population. On the other hand, *ischaemic heart diseases* appeared in other population groups excluding for the black Africans. Additionally, *intestinal infectious diseases*, *other viral diseases* and *certain disorders of the immune mechanism* were only present in the ten leading causes of death for the black African population.

When considering the top three leading causes among the population groups, *tuberculosis* was the first leading underlying cause of death for both black Africans (12,9%) and the coloured population group (8,0%). *Influenza and pneumonia* was the second highest (7,6%) amongst the black African population while for the coloured population, *diabetes mellitus* (6,7%) was ranked second. The third leading cause of death for both black Africans and the coloured population were *cerebrovascular diseases*.

Among the white population, *ischaemic heart diseases* were ranked first, responsible for 11,3% of deaths. The second leading cause of death among the white population was *other forms of heart disease* responsible for 7,1% of deaths. *Cerebrovascular diseases* were ranked third (6,8%).

Diabetes mellitus was the leading underlying cause of death among the Indian/Asian population group, responsible for 13,5% of deaths in this population group, while *ischaemic heart diseases* were the second leading cause of death (13,0%). The third leading cause of death among the Indian/Asian population group were *other forms of heart disease*, accounting for 7,9% of deaths.

Human immunodeficiency virus [HIV] disease was ranked sixth (4,2%) amongst black Africans and was ranked eighth (3,9%) amongst coloured population. It was not in the top ten leading underlying causes of death for the white and Indian/Asian population groups.

Non-natural causes of death was highest amongst the coloured population group (10,6%) and was less than 10% for the rest of the other population groups.

Appendix Q1: The ten leading underlying natural causes of death by population group, 2011

| Causes of death (based on ICD-10) | Black African | | | White | | | Indian or Asian | | | Coloured | | | Other/Unknown/Unspecified | | |
|---|---------------|----------------|--------------|-------|---------------|--------------|-----------------|--------------|--------------|----------|---------------|--------------|---------------------------|---------------|--------------|
| | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % | Rank | No. | % |
| Tuberculosis (A15-A19)* | 1 | 43 894 | 12,9 | ... | ... | ... | 10 | 179 | 2,3 | 1 | 2 141 | 8,0 | 1 | 7 669 | 8,4 |
| Influenza and pneumonia (J09-J18) | 2 | 25 931 | 7,6 | 6 | 1 651 | 4,2 | 9 | 209 | 2,6 | ... | ... | ... | 2 | 4 798 | 5,3 |
| Cerebrovascular diseases (I60-I69) | 3 | 17 170 | 5,0 | 3 | 2 654 | 6,8 | 4 | 479 | 6,0 | 3 | 1 680 | 6,3 | 3 | 3 749 | 4,1 |
| Intestinal infectious diseases (A00-A09) | 4 | 15 854 | 4,7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | 2 860 | 3,1 |
| Other forms of heart disease (I30-I52) | 5 | 15 810 | 4,6 | 2 | 2 784 | 7,1 | 3 | 629 | 7,9 | 10 | 800 | 3,0 | 4 | 3 541 | 3,9 |
| Human immunodeficiency virus [HIV] disease (B20-B24) | 6 | 14 154 | 4,2 | ... | ... | ... | ... | ... | ... | 8 | 1 040 | 3,9 | ... | ... | ... |
| Diabetes mellitus (E10-E14) | 7 | 12 831 | 3,8 | 7 | 1 543 | 4,0 | 1 | 1 068 | 13,5 | 2 | 1 790 | 6,7 | 5 | 2 939 | 3,2 |
| Other viral diseases (B25-B34) | 8 | 12 061 | 3,5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9 | 2 209 | 2,4 |
| Hypertensive diseases (I10-I15) | 9 | 10 928 | 3,2 | 9 | 977 | 2,5 | 5 | 283 | 3,6 | 6 | 1 067 | 4,0 | 8 | 2 274 | 2,5 |
| Certain disorders involving the immune mechanism (D80-D89) | 10 | 9 207 | 2,7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ischaemic heart diseases (I20-I25) | ... | ... | ... | 1 | 4 399 | 11,3 | 2 | 1 034 | 13,0 | 5 | 1 364 | 5,1 | 10 | 1 800 | 2,0 |
| Chronic lower respiratory diseases (J40-J47) | ... | ... | ... | 4 | 2 119 | 5,4 | 7 | 260 | 3,3 | 4 | 1 664 | 6,2 | 7 | 2 295 | 2,5 |
| Malignant neoplasm of digestive organs (C15-C26) | ... | ... | ... | 5 | 2 075 | 5,3 | 6 | 273 | 3,4 | 9 | 985 | 3,7 | ... | ... | ... |
| Malignant neoplasm of respiratory and intrathoracic organs (C30-39) | ... | ... | ... | 8 | 1 352 | 3,5 | ... | ... | ... | 7 | 1 059 | 4,0 | ... | ... | ... |
| Renal failure (N17-N19) | ... | ... | ... | 10 | 847 | 2,2 | 8 | 241 | 3,0 | ... | ... | ... | ... | ... | ... |
| Other natural causes | | 130 315 | 38,2 | | 15 174 | 38,9 | | 2 543 | 32,1 | | 10 296 | 38,5 | | 50 865 | 55,7 |
| Non-natural causes | | 32 573 | 9,6 | | 3 462 | 8,9 | | 726 | 9,2 | | 2 838 | 10,6 | | 6 391 | 7,0 |
| All causes | | 340 728 | 100,0 | | 39 037 | 100,0 | | 7 924 | 100,0 | | 26 724 | 100,0 | | 91 390 | 100,0 |

*Including deaths due to *MDR-TB* and *XDR-TB*.